OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Union Pacific Railroad Corporation's Blacks Fork No. 41-23 Corehole drilled in NE1/4NE1/4 of sec 23, T 17 N, R 109 W of Sweetwater County, Wyoming

Surface elevation 6,374 feet, Kelly bushing 6,380 feet

Sample number		Run	Yield of product						Specific gravity of oil at 60°/60° F	Properties of spent shale	Remarks
			Weight percent				Gal per ton				
Laramie	Their	No.	Oil	Water	Spent shale	Gas + loss	Oil[1/]	Water		Tendency to coke	
SBR74-11755	1570 -1571	95718	3.3	2.2	92.7	1.8	8.7	5.3	0.909	None	
SBR74-11756	1571 -1572	95719	2.3	2.5	93.8	1.4	6.0	6.0	.898	None	
SBR74-11757	1572 -1573	95720	1.1	3.0	94.5	1.4	3.0a	7.2		None	
SBR74-11758	1573 -1574.3	95721	1.6	2.4	95.0	1.0	4.2a	5.8		None	
SBR74-11759	1574.3-1575.4	95722	.8	1.8	96.8	.6	2.0a	4.3		None	
SBR74-11760	1575.4-1576.5	95723	2.5	1.6	94.6	1.3	6.8	3.8	.894	None	
SBR74-11761	1576.5-1577.6	95724	.4	4.0	94.4	1.2	1.1a	9.6		None	
SBR74-11762	1577.6-1578.7	95725	.1	3.3	95.6	1.0	.3a	8.0		None	
SBR74-11763	1578.7-1579.8	95726	.1	3.4	95.9	.6	.3a	8.1		None	
SBR74-11764	1579.8-1580.8	95727	5.0	2.3	89.8	2.9	13.4	5.5	.902	None	
SBR74-11765	1580.8-1581.8	95728	7.0	1.1	89.2	2.7	18.5	2.6	.903	None	
SBR74-11766	1581.8-1582.8	95729	4.3	1.5	90.7	3.5	11.3	3.6	.908	None	
SBR74-11767	1582.8-1584	95741	1.8	4.0	91.9	2.3	4.8a	9.6		None	
SBR74-11768	1584 -1585	95742	.2	4.5	94.3	1.0	.6a	10.8		None	
SBR74-11769	1585 -1586	95743	.1	3.9	94.9	1.1	.3a	9.3		None	
SBR74-11770	1586 -1587	95744	.1	3.2	95.4	1.3	.4a	7.7		None	
SBR74-11771	1587 -1588	95745	1.0	1.6	96.2	1.2	2.6a	3.8		None	
SBR74-11772	1588 -1589	95746	.0	3.4	95.7	.9	.1	8.0		None	
SBR74-11773	1589 -1590	95747	.0	4.5	94.1	1.4	Trace	10.8		None	
SBR74-11774	1590 -1591	95748	.1	5.7	92.9	1.3	.1a	13.7		None	
SBR74-11775	1591 -1592	95749	.7	4.2	92.7	2.4	1.9a	10.1		None	(tuff)
SBR74-11776	1592 -1593	95750	.0	6.3	92.6	1.1	.1	15.0		None	
SBR74-11777	1593 -1594	95751	.0	3.7	93.3	3.0	Trace	8.7		None	
SBR74-11778	1594 -1595	95752	.0	5.3	93.1	1.6	Trace	12.7		None	
SBR74-11779	1595 -1596	95753	.0	4.3	92.2	3.5	.1a	10.3		None	
SBR74-11780	1596 -1597.2	95754	.4	3.4	94.3	1.9	1.0a	8.1		None	
SBR74-11781	1597.2-1598.3	95755	.8	2.6	94.7	1.9	2.0a	6.2		None	
SBR74-11782	1598.3-1599.5	95756	2.6	1.7	93.9	1.8	6.8	4.1	.922	None	
SBR74-11783	1599.5-1601	95757	11.8	2.8	82.1	3.3	31.3	6.7	.900	None	
SBR74-11784	1601 -1602.1	95758	7.2	2.1	88.0	2.7	19.0	5.0	.904	None	

See footnote at end of table.

Core samples received June 26, 1970; assays made on air-dried samples.

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Union Pacific Railroad Corporation's Blacks Fork No. 41-23 (con.)

Surface elevation 6,374 feet, Kelly bushing 6,380 feet

Sample number		Run	Yield of product						Specific gravity of oil at 60°/60° F	Properties of spent shale	
			Weight percent				Gal per ton				
Laramie	Their	No.	Oil	Water	Spent shale	Gas + loss	Oil[1/]	Water		Tendency to coke	Remarks
SBR74-11785	1602.1-1603.3	95759	7.6	2.2	87.3	2.9	20.1	5.3	0.905	None	
SBR74-11786	1603.3-1604.3	95760	2.1	1.7	94.1	2.1	5.6	4.1	.909	None	
SBR74-11787	1604.3-1605.3	95761	3.6	2.4	92.2	1.8	9.4	5.8	.905	None	
SBR74-11788	1605.3-1606.8	95763	13.9	3.0	79.7	3.4	37.2	7.2	.898	None	
SBR74-11789	1606.8-1608	95764	5.5	2.5	89.5	2.5	14.6	6.0	.904	None	
SBR74-11790	1608 -1609	95765	.5	3.4	93.7	2.4	1.4a	8.1		None	
SBR74-11791	1609 -1610.1	95766	.2	3.5	94.7	1.6	.5a	8.4		None	
SBR74-11792	1610.1-1611.1	95767	.7	3.8	93.7	1.8	1.7a	9.1		None	
SBR74-11793	1611.1-1612.2	95768	1.0	2.8	94.9	1.3	2.7a	6.7		None	
SBR74-11794	1612.2-1613.3	95769	3.0	2.5	92.6	1.9	8.0	6.0	.909	None	
SBR74-11795	1613.3-1615.6	95770	.3	19.0	71.0	9.7	.7a	45.5		None	(trona)
SBR74-11796	1615.6-1616.2	95771	14.2	4.1	77.6	4.1	37.7	9.8	.902	None	
SBR74-11797	1616.2-1617	95772	3.1	2.7	92.5	1.7	8.2	6.5	.903	None	
SBR74-11798	1617 -1618	95773	.1	3.5	94.8	1.6	.2a	8.4		None	
SBR74-11799	1618 -1619.2	95774	.8	4.0	93.2	2.0	2.0a	9.6		None	
SBR74-11800	1619.2-1620.4	95775	3.5	2.2	92.6	1.7	9.3	5.3	.897	None	
SBR74-11801	1620.4-1621.4	95776	7.5	2.0	88.3	2.2	19.9	4.8	.899	None	
SBR74-11802	1621.4-1622.4	95777	14.1	2.7	78.0	5.2	37.6	6.5	.901	None	
SBR74-11803	1622.4-1623.8	95778	6.3	1.8	89.6	2.3	16.7	4.3	.904	None	
SBR74-11804	1623.8-1625	95779	.9	2.8	94.5	1.8	2.5a	6.7		None	
SBR74-11805	1625 -1626	95780	.9	2.4	95.3	1.4	2.3a	5.8		None	
SBR74-11806	1626 -1627	95781	.7	1.9	95.8	1.6	1.8a	4.6		None	
SBR74-11807	1638.2-1639.7	95782	7.7	1.4	89.0	1.9	20.8a	3.4	.884	None	
SBR74-11808	1639.7-1640.7	95783	5.3	1.2	91.9	1.6	14.2	2.9	.888	None	
SBR74-11809	1640.7-1641.7	95784	6.5	1.0	90.7	1.8	17.7	2.4	.885	None	
SBR74-11810	1641.7-1642.7	95785	5.3	.8	91.7	2.2	14.5	1.9	.883	None	
SBR74-11811	1642.7-1643.8	95786	6.4	1.1	90.8	1.7	17.5	2.6	.881	None	
SBR74-11812	1643.8-1644.8	95799	8.4	.9	87.7	3.0	22.4	2.2	.899	None	
SBR74-11813	1644.8-1646	95800	3.8	.8	93.8	1.6	10.2	1.9	.899	None	(tuff)
SBR74-11814	1646 -1647	95801	1.1	.9	96.9	1.1	3.0a	2.0		None	

See footnote at end of table.

Core samples received June 26, 1974; assays made on air-dried samples

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Union Pacific Railroad Corporation's Blacks Fork No. 41-23 (con.)

Surface elevation 6,374 feet, Kelly bushing 6,380 feet

Sample number		Run	Yield of product						Specific gravity	Properties of spent shale	
			Weight percent				Gal per ton				
Laramie	Their	No.	Oil	Water	Spent shale	Gas + loss	Oil[1/]	Water	of oil at 60°/60° F	Tendency to coke	Remarks
SBR74-11815	1647 -1648	95802	1.0	0.9	97.4	0.7	2.7a	2.2		None	
SBR74-11816	1648 -1649.2	95803	2.1	.8	96.3	.8	5.7	1.8	0.899	None	
SBR74-11817	1649.2-1650.2	95804	11.3	1.6	83.7	3.4	30.0	3.8	.901	None	
SBR74-11818	1650.2-1651.4	95805	.2	1.5	97.6	.7	.6a	3.6		None	(tuff)
SBR74-11819	1651.4-1652.8	95806	.0	1.5	98.1	.4	No oil	3.6		None	
SBR74-11820	1652.8-1654	95807	.0	.9	98.8	.3	No oil	2.1		None	
SBR74-11821	1654 -1655	95808	.0	.7	98.3	1.0	No oil	1.7		None	
SBR74-11822	1655 -1656	95809	.0	1.3	97.9	.8	No oil	3.0		None	
SBR74-11823	1656 -1657	95810	.0	1.5	98.0	.5	No oil	3.7		None	
SBR74-11824	1657 -1658	95811	.0	1.6	97.8	.6	No oil	3.7		None	
SBR74-11825	1658 -1659	95812	.0	1.3	98.2	.5	No oil	3.2		None	
SBR74-11826	1659 -1660	95813	.0	2.0	96.5	1.5	Trace	4.8		None	
SBR74-11827	1660 -1661	95814	.0	1.4	98.2	.4	.1a	3.4		None	
SBR74-11828	1661 -1662	95815	.0	1.5	98.1	.4	No oil	3.5		None	
SBR74-11829	1662 -1663	95816	.0	1.5	98.0	.5	No oil	3.6		None	
SBR74-11830	1663 -1664	95817	.0	2.0	97.5	.5	No oil	4.8		None	
SBR74-11831	1664 -1665	95818	.0	1.5	98.0	.5	No oil	3.5		None	
SBR74-11832	1665 -1666.1	95819	.0	1.6	98.0	.4	No oil	3.8		None	
SBR74-11833	1666.1-1667.2	95820	.0	1.2	98.1	.7	Trace	3.0		None	
SBR74-11834	1667.2-1668.3	95821	.1	1.0	98.0	.9	.4a	2.4		None	
SBR74-11835	1668.3-1669.6	95822	.5	1.5	97.6	.4	1.3a	3.6		None	
SBR74-11836	1669.6-1670.8	95823	2.2	1.2	95.8	.9	5.7	2.9	.902	None	
SBR74-11837	1670.8-1672.3	95824	12.1	1.6	83.2	3.1	32.1	3.8	.903	None	
SBR74-11838	1672.3-1673.6	95825	7.8	1.5	85.8	4.9	20.6	3.6	.905	None	
SBR74-11839	1673.6-1675	95826	2.0	2.2	94.0	1.8	5.4	5.3	.905	None	
SBR74-11840	1675 -1676	95827	.1	2.5	96.2	1.2	.2a	6.0		None	
SBR74-11841	1676 -1677	95828	.1	2.5	95.7	1.7	.2a	6.0		None	
SBR74-11842	1677 -1678	95829	.1	2.4	96.4	1.1	.3a	5.8		None	
SBR74-11843	1678 -1679.3	95830	.4	2.0	96.5	1.1	1.1a	4.8		None	
SBR74-11844	1679.3-1680.3	95831	.3	2.5	96.0	1.2	.8a	6.0		None	

See footnote at end of table.

Core samples received June 26, 1970; assays made on air-dried samples

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Union Pacific Railroad Corporation's Blacks Fork No. 41-23 (con.)

Surface elevation 6,374 feet, Kelly bushing 6,380 feet

Sample number		Run	Yield of product						Specific gravity of oil at 60°/60° F	Properties of spent shale	
			Weight percent				Gal per ton			Tendency to	
Laramie	Their	No.	Oil	Water	Spent shale	Gas + loss	Oil[1/]	Water		coke	Remarks
SBR74-11845	1680.3-1682.5	95832	0.0	15.2	76.2	8.6	Trace	36.5		None	(mostly trona)
SBR74-11846	1683 -1683.6	95833	.0	18.0	70.9	11.1	Trace	43.1		None	(trona)
SBR74-11847	1683.6-1683.9	95834	3.6	3.6	90.4	2.4	9.8	8.6	0.885	None	
SBR74-11848	1683.9-1684.4	95835	.7	17.0	73.6	8.7	1.8a	40.7		None	(trona)
SBR74-11849	1684.4-1685.3	95836	11.7	2.4	82.3	3.6	31.4	5.8	.895	None	
SBR74-11850	1685.3-1685.8	95837	17.1	2.8	74.8	5.3	46.0	6.7	.893	None	
SBR74-11851	1686 -1686.5	95838	18.5	2.2	75.1	4.2	49.2	5.3	.900	None	
SBR74-11852	1686.5-1687.5	95839	11.3	1.8	83.9	3.0	30.3	4.3	.897	None	
SBR74-11853	1687.5-1688.5	95840	1.0	2.2	95.3	1.5	2.6a	5.3		None	
SBR74-11854	1688.5-1690	95841	.7	2.2	95.6	1.5	2.0a	5.3		None	
SBR74-11855	1690 -1691.1	95842	.3	4.2	93.5	2.0	.9a	10.1		None	
SBR74-11856	1691.1-1692.2	95843	.3	4.9	92.8	2.0	.7a	11.7		None	
SBR74-11857	1692.2-1693.5	95844	.1	15.2	76.9	7.8	.3a	36.4		None	(mostly trona)
SBR74-11858	1693.5-1695.5	95845	.0	18.0	71.9	10.1	Trace	43.2		None	(trona)
SBR74-11859	1695.5-1696.8	95846	.0	17.0	74.2	8.8	Trace	40.7		None	(trona)
SBR74-11860	1696.8-1698.5	95847	1.4	14.0	71.9	12.7	3.7a	33.6		None	(mostly trona)
SBR74-11861	1698.5-1699.5	95848	14.5	2.3	78.1	5.1	38.7	5.5	.899	None	
SBR74-11862	1699.5-1701	95849	10.0	1.4	85.1	3.5	26.5	3.4	.904	None	
SBR74-11863	1701 -1702	95850	3.8	5.0	81.9	9.3	10.2	12.0	.904	None	(oil shale & trona)
SBR74-11864	1702 -1703	95851	2.4	6.8	79.2	11.6	6.3	16.3	.904	None	(oil shale & trona)
SBR74-11865	1703 -1704	95852	10.0	3.0	80.0	7.0	26.7	7.2	.898	None	
SBR74-11866	1704 -1705	95853	4.5	7.5	79.4	8.6	11.9	18.0	.901	None	(oil shale & trona)
SBR74-11867	1705 -1706	95881	3.6	2.9	90.5	3.0	9.7	7.0	.888	None	
SBR74-11868	1706 -1707	95855	13.9	4.2	77.9	4.0	37.3	10.1	.896	None	
SBR74-11869	1707 -1708	95882	7.3	3.4	86.2	3.1	19.9	8.1	.884	None	
SBR74-11870	1708 -1709	95857	19.7	2.3	73.0	5.0	52.9	5.5	.893	None	
SBR74-11871	1709 -1710	95858	.8	3.0	93.4	2.8	2.1a	7.2		None	
SBR74-11872	1710 -1711	95859	.0	2.7	95.9	1.4	.1a	6.4		None	
SBR74-11873	1711 -1712	95860	.0	3.1	94.9	2.0	Trace	7.4		None	
SBR74-11874	1712 -1713	95861	.0	4.0	93.1	2.9	Trace	9.5		None	

See footnote at end of table.

Core samples received June 26, 1970; assays made on air-dried samples

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Union Pacific Railroad Corporation's Blacks Fork No. 41-23 (con.)

Surface elevation 6,374 feet, Kelly bushing 6,380 feet

Sample number		Run	Yield of product						Specific gravity	Properties of spent shale	
			Weight percent				Gal per ton				
Laramie	Their	No.	Oil	Water	Spent shale	Gas + loss	Oil[1/]	Water	of oil at 60°/60° F	Tendency to coke	Remarks
SBR74-11875	1713 -1714	95862	0.0	5.7	91.5	2.8	0.1a	13.5		None	
SBR74-11876	1714 -1715	95863	.1	6.7	90.1	3.1	.2a	16.1		None	
SBR74-11877	1715 -1716	95864	.1	8.1	87.9	3.9	.3a	19.4		None	
SBR74-11878	1716 -1717	95865	11.8	2.0	83.1	3.1	31.6	4.8	0.895	None	
SBR74-11879	1717 -1718.3	95866	11.2	1.8	84.4	2.6	30.1	4.3	.893	None	
SBR74-11880	1718.3-1719.3	95867	3.7	2.4	92.1	1.8	9.9	5.8	.897	None	
SBR74-11881	1719.3-1720.5	95868	.0	3.0	95.9	1.1	Trace	7.1		None	
SBR74-11882	1720.5-1722	95869	.0	2.1	97.2	.7	Trace	5.0		None	
SBR74-11883	1722 -1724	95870	.0	1.9	97.7	.4	Trace	4.5		None	
SBR74-11884	1724 -1726	95871	.1	2.0	96.9	1.0	.3a	4.8		None	
SBR74-11885	1726 -1727	95872	.5	4.4	93.1	2.0	1.2a	10.5		None	
SBR74-11886	1727 -1728	95873	1.5	9.0	84.7	4.8	4.0a	21.6		None	
SBR74-11887	1728 -1729	95874	8.6	8.5	78.9	5.0	20.2	20.4	.903	None	
SBR74-11888	1729 -1729.5	95875	2.0	6.4	87.9	3.7	5.1a	15.3		None	(tuff)
SBR74-11889	1729.5-1730.7	95876	13.0	2.0	81.0	4.0	34.8	4.8	.897	None	
SBR74-11890	1730.7-1731.7	95877	5.2	1.7	90.9	2.2	13.9	4.1	.895	None	
SBR74-11891	1731.7-1733	95920	.3	3.0	95.0	1.7	.8a	7.2		None	
SBR74-11892	1733 -1735	95879	.0	2.5	96.1	1.4	Trace	5.9		None	
SBR74-11893	1735 -1736.2	95880	.0	3.5	94.8	1.7	Trace	8.4		None	
SBR74-11894	1736.2-1738	95901	.4	13.0	79.9	6.7	1.0a	31.2		None	(mostly trona)
SBR74-11895	1738 -1740	95921	.8	15.0	75.7	8.5	2.2a	36.0		None	(mostly trona)
SBR74-11896	1740 -1742	95903	.0	18.5	71.9	9.6	.1a	44.3		None	(mostly trona)
SBR74-11897	1742 -1744	95904	.1	16.8	72.1	11.0	.2a	40.3		None	(mostly trona)
SBR74-11898	1744 -1745.7	95905	.0	17.3	72.2	10.5	.1a	41.5		None	(mostly trona)
SBR74-11899	1745.7-1746.3	95906	14.2	1.9	80.7	3.2	38.1	4.6	.896	None	
SBR74-11900	1746.3-1748	95907	3.3	2.3	92.5	1.9	8.8	5.5	.897	None	
SBR74-11901	1748 -1749	95908	.4	3.0	90.3	6.3	1.1a	7.2		None	
SBR74-11902	1749 -1750	95909	.4	5.8	90.0	3.8	1.2a	13.9		None	
SBR74-11903	1750 -1752	95910	2.2	3.5	91.7	2.6	6.0	8.4	.894	None	
SBR74-11904	1752 -1753	95911	3.5	3.0	90.9	2.6	9.3	7.2	.896	None	

See footnote at end of table.

Core samples received June 26, 1970; assays made on air-dried samples

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Union Pacific Railroad Corporation's Blacks Fork No. 41-23 (con.)

Surface elevation 6,374 feet, Kelly bushing 6,380 feet

Sample number		Run	Yield of product						Specific gravity	Properties of spent shale	
			Weight percent				Gal per ton				
Laramie	Their	No.	Oil	Water	Spent shale	Gas + loss	Oil[1/]	Water	of oil at 60°/60° F	Tendency to coke	Remarks
SBR74-11905	1753 -1754.2	95912	7.0	2.6	86.0	4.4	18.7	6.2	0.896	None	
SBR74-11906	1754.2-1755.2	95913	7.1	2.2	87.4	3.3	19.0	5.3	.896	None	
SBR74-11907	1755.2-1756.6	96086	1.2	1.8	96.2	.8	3.0a	4.3		None	
SBR74-11908	1756.6-1757.9	95915	6.5	2.1	89.0	2.4	17.2	5.0	.903	None	
SBR74-11909	1757.9-1759	95916	6.2	1.8	89.5	2.5	16.5	4.3	.901	None	
SBR74-11910	1759 -1760	95917	5.0	1.6	91.1	2.3	13.3	3.8	.904	None	
SBR74-11911	1760 -1761	95918	4.4	1.6	91.7	2.3	11.5	3.8	.908	None	
SBR74-11912	1761 -1762	95922	2.4	2.7	93.3	1.7	6.5	6.2	.907	None	
SBR74-11913	1762 -1763	95923	3.1	4.5	89.3	3.1	8.3	10.8	.907	None	
SBR74-11914	1763 -1764	95924	9.0	3.4	82.8	4.8	23.7	8.1	.904	None	
SBR74-11915	1764 -1765	95925	1.0	2.4	95.2	1.4	2.6a	5.8		None	
SBR74-11916	1765 -1766.3	95926	3.2	3.0	91.6	2.2	8.6	7.2	.895	None	
SBR74-11917	1766.3-1767.6	95927	.7	4.9	92.0	2.4	1.9a	11.7		None	
SBR74-11918	1767.6-1768.7	95928	.4	4.0	93.6	2.0	1.1a	9.6		None	
SBR74-11919	1768.7-1769.7	95929	.3	3.9	93.4	2.4	.9a	9.3		None	
SBR74-11920	1769.7-1770.7	95930	.0	4.5	93.0	2.5	Trace	10.9		None	
SBR74-11921	1770.7-1773.2	96014	.0	16.1	75.2	8.7	No oil	38.6		None	
SBR74-11922	1773.2-1775.2	95932	.0	19.3	70.9	9.8	No oil	46.3		None	
SBR74-11923	1775.2-1777.3	95933	.0	19.0	71.2	9.8	Trace	45.5		None	
SBR74-11924	1777.3-1778	95934	6.1	1.7	90.0	2.2	16.2	4.1	.899	None	
SBR74-11925	1778 -1779	95935	1.2	3.3	93.9	1.6	3.1a	7.9		None	
SBR74-11926	1779 -1780	95936	1.4	2.6	94.0	2.0	3.6a	6.2		None	
SBR74-11927	1780 -1781	95937	.0	13.4	79.6	7.0	Trace	32.0		None	(mostly trona)
SBR74-11928	1781 -1782.3	95938	3.1	2.0	93.5	1.4	8.3	4.8	.885	None	
SBR74-11929	1782.3-1783.5	95939	3.1	3.5	91.2	2.2	8.2	8.4	.894	None	
SBR74-11930	1783.5-1784.5	95940	.2	2.9	95.4	1.5	.6a	7.0		None	
SBR74-11931	1784.5-1785.5	95941	.4	3.2	94.3	2.1	1.0a	7.7		None	
SBR74-11932	1785.5-1786.6	95943	.5	4.6	92.7	2.2	1.4a	11.0		None	
SBR74-11933	1786.6-1788.8	95944	.4	13.0	79.3	7.3	1.2a	31.2		None	
SBR74-11934	1788.8-1791.3	95945	.0	18.9	70.9	10.2	No oil	45.2		None	

See footnote at end of table.

Core samples received June 26, 1970; assays made on air-dried samples

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Union Pacific Railroad Corporation's Blacks Fork No. 41-23 (con.)

Surface elevation 6,374 feet, Kelly bushing 6,380 feet

Sample number		Run	Yield of product						Specific gravity	Properties of spent shale	
			Weight percent				Gal per ton				
Laramie	Their	No.	Oil	Water	Spent shale	Gas + loss	Oil[1/]	Water	of oil at 60°/60° F	Tendency to coke	Remarks
SBR74-11935	1791.3-1792.3	95946	3.8	2.0	92.1	2.1	10.1	4.8	0.889	None	
SBR74-11936	1792.3-1793.5	95947	2.2	2.5	93.3	2.0	5.8	6.0	.892	None	
SBR74-11937	1793.5-1794.6	95948	1.2	3.0	93.8	2.0	3.1a	7.2		None	
SBR74-11938	1794.6-1795.7	95949	.1	2.2	96.6	1.1	.2a	5.3		None	
SBR74-11939	1795.7-1796.8	95950	1.9	2.4	93.6	2.1	5.0a	5.8		None	
SBR74-11940	1796.8-1798	95951	1.1	4.0	92.7	2.2	2.9a	9.6		None	
SBR74-11941	1798 -1799	95952	.6	7.0	89.1	3.3	1.6a	16.8		None	
SBR74-11942	1799 -1800	95953	.0	9.0	88.6	2.4	Trace	21.5		None	
SBR74-11943	1800 -1801	95954	.0	8.4	89.0	2.6	No oil	20.2		None	
SBR74-11944	1801 -1802	95955	.0	7.0	90.5	2.5	.1a	16.8		None	
SBR74-11945	1802 -1803	95956	1.3	3.4	92.1	3.2	3.3a	8.1		None	
SBR74-11946	1803 -1804	95957	.3	5.4	91.8	2.5	.7a	12.9		None	
SBR74-11947	1804 -1805	95958	.5	5.0	92.5	2.0	1.2a	12.0		None	
SBR74-11948	1805 -1806	95959	.0	4.5	93.7	1.8	Trace	10.7		None	
SBR74-11949	1806 -1807	95960	.0	5.7	91.5	2.8	Trace	13.5		None	
SBR74-11950	1807 -1808	95961	.0	5.8	91.2	3.0	No oil	13.9		None	
SBR74-11951	1808 -1809	95962	.0	2.9	95.9	1.2	Trace	6.9		None	
SBR74-11952	1809 -1810.4	95963	.0	2.7	96.2	1.1	Trace	6.4		None	
SBR74-11953	1811 -1813	95964	.0	17.5	72.8	9.7	No oil	41.9		None	(mostly trona)
SBR74-11954	1813 -1815	95965	.0	15.3	75.9	8.8	Trace	36.8		None	(mostly trona)
SBR74-11955	1815 -1816	95966	.0	2.4	96.3	1.3	Trace	5.8		None	
SBR74-11956	1816 -1817	95967	.5	2.2	95.7	1.6	1.2a	5.3		None	
SBR74-11957	1817 -1818.1	95968	.1	3.4	94.2	2.3	.3a	8.1		None	
SBR74-11958	1818.1-1819.2	95969	.0	3.7	92.9	3.4	Trace	8.7		None	
SBR74-11959	1819.2-1820.3	95970	.4	5.0	91.7	2.9	1.1a	12.0		None	
SBR74-11960	1820.3-1822.3	95971	.0	17.4	72.7	9.9	Trace	41.8		None	(trona)
SBR74-11961	1822.3-1824.3	95972	.0	14.6	76.0	9.4	Trace	34.9		None	(mostly trona)
SBR74-11962	1824.3-1825.5	95973	.3	2.4	95.6	1.7	.9a	5.8		None	
SBR74-11963	1825.5-1827	95974	11.7	2.0	82.6	3.7	31.5	4.8	.887	None	
SBR74-11964	1827 -1828	95975	3.1	1.3	93.5	2.1	8.2	3.1	.893	None	

See footnote at end of table.

Core samples received June 26, 1970; assays made on air-dried samples

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Union Pacific Railroad Corporation's Blacks Fork No. 41-23 (con.)

Surface elevation 6,374 feet, Kelly bushing 6,380 feet

Sample number		Run	Yield of product						Specific gravity of oil at 60°/60° F	Properties of spent shale	
			Weight percent				Gal per ton			Tendency to	
Laramie	Their	No.	Oil	Water	Spent shale	Gas + loss	Oil[1/]	Water		coke	Remarks
SBR74-11965	1828 -1829	95976	2.7	1.2	94.2	1.9	7.3	2.9	0.899	None	
SBR74-11966	1829 -1830	95977	2.5	1.0	94.1	2.4	6.7	2.4	.903	None	
SBR74-11967	1830 -1831.2	95978	.1	1.7	96.6	1.6	.3a	4.1		None	
SBR74-11968	1831.2-1832.5	95979	.7	8.9	81.8	8.6	1.9a	21.3		None	(part trona)
SBR74-11969	1832.5-1833.8	95980	2.9	1.9	92.6	2.6	7.7	4.6	.905	None	
SBR74-11970	1833.8-1835.3	95981	1.6	8.0	81.6	8.8	4.1a	19.2		None	(part trona)
SBR74-11971	1835.3-1836.6	95982	6.6	1.5	89.3	2.6	17.6	3.6	.901	None	
SBR74-11972	1836.6-1838.2	95983	5.2	2.0	90.2	2.6	13.9	4.8	.902	None	(1838-1838.2 tuff)
SBR74-11973	1838.2-1839.2	95984	13.9	2.2	79.8	4.1	37.2	5.3	.898	None	
SBR74-11974	1839.2-1840.2	95985	.2	1.1	97.8	.9	.6a	2.6		None	
SBR74-11975	1840.2-1841.8	95986	2.8	.6	95.0	1.6	7.5	1.4	.899	None	
SBR74-11976	1841.8-1843.3	95987	2.3	1.1	94.9	1.7	6.1	2.6	.903	None	
SBR74-11977	1843.3-1844.6	95988	2.6	3.6	89.8	4.0	6.8	8.6	.903	None	
SBR74-11978	1844.6-1846.9	95989	1.0	10.5	75.4	13.1	2.5a	25.2		None	(part trona)
SBR74-11979	1846.9-1847.4	95990	.9	1.3	96.0	1.8	2.4a	3.1		None	
SBR74-11980	1847.4-1848.5	95991	9.0	1.3	87.3	2.4	24.4	3.1	.888	None	
SBR74-11981	1848.5-1849.5	95992	2.9	3.2	91.0	2.9	7.8	7.7	.890	None	
SBR74-11982	1849.5-1850.8	95993	.3	5.8	89.3	4.6	.7a	13.9		None	
SBR74-11983	1850.8-1852.1	95994	.3	7.0	88.5	4.2	.8a	16.8		None	
SBR74-11984	1852.1-1854.8	95995	.0	16.8	71.8	11.4	.1a	40.3		None	(mostly trona)
SBR74-11985	1854.8-1855.8	95996	8.1	1.8	87.3	2.8	21.8	4.3	.889	None	
SBR74-11986	1855.8-1857.4	95997	.0	2.4	96.1	1.5	No oil	5.8		None	
SBR74-11987	1857.4-1859	95998	.0	2.3	96.5	1.2	No oil	5.4		None	
SBR74-11988	1859 -1861.2	95999	.0	18.6	71.5	9.9	No oil	44.7		None	(trona)
SBR74-11989	1861.2-1863.4	96000	.0	17.3	70.9	11.8	No oil	41.4		None	(trona)
SBR74-11990	1863.4-1864.4	96001	7.3	2.0	88.0	2.7	19.5	4.8	.891	None	
SBR74-11991	1864.4-1865.5	96002	2.7	1.6	92.9	2.8	7.2	3.8	.879	None	
SBR74-11992	1865.5-1866.7	96003	1.0	1.2	96.3	1.5	2.7a	2.9		None	
SBR74-11993	1866.7-1867.8	96004	.6	2.0	95.1	2.3	1.7a	4.8		None	
SBR74-11994	1867.8-1869	96005	.4	3.1	94.0	2.5	1.0a	7.4		None	

See footnote at end of table.

Core samples received June 26, 1970; assays made on air-dried samples

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Union Pacific Railroad Corporation's Blacks Fork No. 41-23 (con.)

Surface elevation 6,374 feet, Kelly bushing 6,380 feet

Sample number		Run	Yield of product						Specific gravity	Properties of spent shale	
			Weight percent				Gal per ton			Tendency to	
Laramie	Their	No.	Oil	Water	Spent shale	Gas + loss	Oil[1/]	Water	of oil at 60°/60° F	coke	Remarks
SBR74-11995	1871 -1872.5	96006	0.0	19.3	70.8	9.9	No oil	46.4		None	trona
SBR74-11996	1872.5-1874	96007	.0	17.7	73.3	9.0	Trace	42.4		None	mostly trona
SBR74-11997	1874 -1876	96008	.0	16.8	74.2	9.0	Trace	40.2		None	mostly trona
SBR74-11998	1876 -1877.5	96009	.0	15.6	75.9	8.5	No oil	37.3		None	mostly trona
SBR74-11999	1877.5-1878.3	96010	3.5	2.1	92.4	2.0	9.4	5.0	0.884	None	
SBR74-12000	1878.3-1879.1	96011	4.8	.8	92.4	2.0	13.2	1.9	.882	None	
SBR74-12001	1879.1-1880.3	96012	3.7	1.6	91.8	2.9	10.0	3.8	.895	None	
SBR74-12002	1880.3-1881.5	96013	3.2	1.2	93.2	2.4	8.5	2.9	.887	None	
SBR74-12003	1881.5-1882.6	96015	6.0	1.8	89.5	2.7	16.0	4.3	.894	None	
SBR74-12004	1882.6-1883.6	96016	3.1	1.3	93.4	2.2	8.1	3.1	.914	None	
SBR74-12005	1883.6-1884.6	96017	2.8	1.8	91.2	4.2	7.4	4.3	.912	None	
SBR74-12006	1884.6-1885.6	96018	5.5	2.1	89.7	2.7	14.4	5.0	.907	None	
SBR74-12007	1885.6-1886.6	96019	2.2	2.4	93.6	1.8	5.8	5.8	.912	None	
SBR74-12008	1886.6-1887.6	96020	3.3	2.8	90.8	3.1	8.6	6.7	.908	None	
SBR74-12009	1887.6-1888.7	96021	.3	1.0	97.9	.8	.7a	2.4		None	
SBR74-12010	1888.7-1890	96022	.6	1.0	97.2	1.2	1.5a	2.4		None	
SBR74-12011	1890 -1891.4	96023	10.9	1.8	84.0	3.3	29.4	4.4	.887	None	
SBR74-12012	1891.4-1892.4	96024	3.4	1.5	93.3	1.8	9.1	3.6	.899	None	
SBR74-12013	1892.4-1893.5	96025	1.1	3.0	93.2	2.7	3.0a	7.2		None	
SBR74-12014	1893.5-1894.6	96026	.3	2.2	96.7	.8	.8a	5.3		None	
SBR74-12015	1894.6-1895.6	96027	.7	6.5	89.5	3.3	1.7a	15.6		None	
SBR74-12016	1895.6-1897	96028	.0	18.8	71.3	9.9	Trace	45.0		None	trona
SBR74-12017	1897 -1898.5	96029	.0	19.1	70.9	10.0	No oil	45.8		None	trona
SBR74-12018	1898.5-1899	96030	2.1	10.0	82.6	5.3	5.4	24.0	.934	None	trona & shale
SBR74-12019	1899 -1900.6	96031	16.4	1.4	79.0	3.2	43.9	3.4	.894	None	
SBR74-12020	1900.6-1901.4	96032	10.4	3.0	81.9	4.7	28.0	7.2	.891	None	
SBR74-12021	1901.4-1902.6	96033	.6	2.1	96.1	1.2	1.4a	5.0		None	
SBR74-12022	1902.6-1903.7	96034	.3	3.6	94.7	1.4	.8a	8.6		None	
SBR74-12023	1903.7-1904.8	96035	.4	3.5	94.6	1.5	1.1a	8.4		None	
SBR74-12024	1904.8-1906.6	96036	.1	12.0	81.3	6.6	.3a	28.8		None	

See footnote at end of table.

Core samples received June 26, 1970; assays made on air-dried samples

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Union Pacific Railroad Corporation's Blacks Fork No. 41-23 (con.)

Surface elevation 6,374 feet, Kelly bushing 6,380 feet

Sample number		Run	Yield of product						Specific gravity	Properties of spent shale	
			Weight percent				Gal per ton				
Laramie	Their	No.	Oil	Water	Spent shale	Gas + loss	Oil[1/]	Water	of oil at 60°/60° F	Tendency to coke	Remarks
SBR74-12025	1906.6-1908.4	96037	0.0	18.2	71.6	10.2	No oil	43.7		None	
SBR74-12026	1908.4-1910	96038	.1	4.2	93.7	2.0	0.2a	10.1		None	
SBR74-12027	1910 -1911	96039	9.7	2.4	84.4	3.5	25.7	5.8	0.902	None	
SBR74-12028	1911 -1912.2	96040	14.7	2.5	78.2	4.6	39.1	6.0	.900	None	
SBR74-12029	1912.2-1913.4	96041	1.8	2.3	93.6	2.3	4.8a	5.5		None	
SBR74-12030	1913.4-1914.6	96042	.7	2.2	95.9	1.2	1.9a	5.3		None	
SBR74-12031	1914.6-1915.8	96043	.2	2.8	95.8	1.2	.6a	6.7		None	
SBR74-12032	1915.8-1917	96044	.1	6.0	90.8	3.1	.2a	14.4		None	
SBR74-12033	1917 -1919	96045	.0	15.1	76.7	8.2	No oil	36.2		None	mostly trona
SBR74-12034	1919 -1921	96046	.0	14.1	78.4	7.5	No oil	33.9		None	mostly trona
SBR74-12035	1921 -1923	96047	.0	18.3	72.3	9.4	No oil	43.9		None	
SBR74-12036	1923 -1925	96048	.0	14.5	73.5	12.0	No oil	34.9		None	
SBR74-12037	1925 -1927	96049	.0	16.9	74.3	8.8	.1a	40.5		None	
SBR74-12038	1927 -1929.2	96050	.0	16.3	75.2	8.5	No oil	39.2		None	
SBR74-12039	1929.2-1931.1	96051	.0	18.7	70.9	10.4	No oil	44.9		None	
SBR74-12040	1931.1-1932.2	96052	7.7	2.3	85.0	5.0	20.3	5.5	.917	None	
SBR74-12041	1932.2-1933.3	96053	14.3	2.1	77.8	5.8	37.8	5.0	.904	None	
SBR74-12042	1933.3-1934.4	96054	.0	1.1	98.6	.3	No oil	2.7		None	
SBR74-12043	1934.4-1935.4	96055	3.0	1.5	93.1	2.4	7.9	3.6	.918	None	
SBR74-12044	1935.4-1937	96056	.4	1.7	96.8	1.1	1.0a	4.1		None	
SBR74-12045	1937 -1939	96057	.0	1.3	98.1	.6	No oil	3.1		None	
SBR74-12046	1939 -1941	96058	.0	9.4	84.8	5.8	No oil	22.6		None	
SBR74-12047	1941 -1943	96059	.0	11.8	77.5	10.7	No oil	28.2		None	
SBR74-12048	1943 -1945	96060	.0	11.0	79.3	9.7	No oil	26.4		None	
SBR74-12049	1945 -1947	96061	.0	12.7	72.0	15.3	No oil	30.3		None	
SBR74-12050	1947 -1949	96062	.0	8.3	79.4	12.3	No oil	19.9		None	
SBR74-12051	1949 -1950.9	96137	.0	8.1	69.2	22.7	.1a	19.4		None	
SBR74-12052	1950.9-1951.4	96065	5.6	1.2	91.0	2.2	14.8	2.9	.903	None	
SBR74-12053	1951.4-1952.4	96066	10.9	1.3	84.9	2.9	28.8	3.2	.903	None	
SBR74-12054	1952.4-1953.1	96067	.0	1.0	97.3	1.7	No oil	2.4		Slight	

See footnote at end of table.

Core samples received June 26, 1970; assays made on air-dried samples

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Union Pacific Railroad Corporation's Blacks Fork No. 41-23 (con.)

Surface elevation 6,374 feet, Kelly bushing 6,380 feet

Sample number		Run	Yield of product						Specific gravity	Properties of spent shale	
			Weight percent				Gal per ton				
Laramie	Their	No.	Oil	Water	Spent shale	Gas + loss	Oil[1/]	Water	of oil at 60°/60° F	Tendency to coke	Remarks
SBR74-12055	1953.1-1954.4	96068	10.8	1.3	85.3	2.6	28.7	3.1	0.901	None	
SBR74-12056	1954.4-1955.5	96069	13.8	1.2	81.1	3.9	36.3	2.9	.912	None	
SBR74-12057	1955.5-1956.5	96070	5.3	1.4	91.4	1.9	14.0	3.4	.905	None	
SBR74-12058	1956.5-1957.5	96071	13.2	1.5	83.0	2.3	35.3	3.6	.898	None	
SBR74-12059	1957.5-1958.5	96072	.0	.9	99.0	.1	No oil	2.1		None	
SBR74-12060	1958.5-1959.5	96073	10.4	2.1	85.3	2.2	27.7	5.0	.901	None	
SBR74-12061	1959.5-1960.6	96074	6.4	1.1	89.3	3.2	16.9	2.6	.903	None	
SBR74-12062	1960.6-1961.9	96075	.8	1.7	96.7	.8	2.2a	4.1		None	
SBR74-12063	1961.9-1963	96076	9.8	2.0	85.9	2.3	26.1	4.8	.899	None	
SBR74-12064	1963 -1963.5	96064	8.4	1.1	88.7	1.8	22.5	2.6	.891	None	Top of Tipton Member
SBR74-12065	1963.5-1965	96077	7.9	.9	89.3	1.9	21.5	2.2	.885	None	
SBR74-12066	1965 -1966	96078	.0	.2	99.7	.1	No oil	.5		None	
SBR74-12067	1966.1-1967	96079	6.3	.7	91.8	1.2	17.0	1.8	.886	None	
SBR74-12068	1967 -1968	96080	6.5	.7	91.5	1.3	17.5	1.8	.883	None	
SBR74-12069	1968 -1969	96081	2.2	.9	96.3	.6	6.1	2.2	.877	None	
SBR74-12070	1969 -1970.2	96082	10.8	1.4	86.0	1.8	28.7	3.4	.899	None	
SBR74-12071	1970.2-1971.2	96083	.0	.8	99.2	.0	No oil	1.9		None	
SBR74-12072	1971.2-1972.3	96084	6.6	1.2	90.9	1.3	17.5	2.9	.906	None	
SBR74-12073	1972.3-1973	96085	5.3	1.0	92.8	.9	13.8	2.4	.920	None	
SBR74-12074	1973 -1974.2	96087	5.3	.9	92.7	1.1	13.8	2.2	.913	None	
SBR74-12075	1974.2-1975.6	96088	16.9	1.6	77.5	4.0	44.7	3.8	.906	None	
SBR74-12076	1975.6-1977	96089	17.2	1.6	77.0	4.2	45.6	3.8	.905	None	
SBR74-12077	1977 -1978	96090	.0	.5	99.5	.0	No oil	1.2		None	
SBR74-12078	1978 -1978.9	96091	10.7	1.1	85.6	2.6	27.9	2.6	.923	None	
SBR74-12079	1978.9-1979.7	96092	11.6	1.4	85.5	1.5	30.2	3.4	.921	Slight	
SBR74-12080	1979.7-1980.5	96093	.5	1.5	97.2	.8	1.4a	3.6		None	
SBR74-12081	1980.5-1981.7	96094	7.1	1.6	89.8	1.5	19.0	3.8	.891	None	
SBR74-12082	1981.7-1982.9	96121	3.1	1.6	93.6	1.7	8.3	3.8	.889	None	
SBR74-12083	1982.9-1984.1	96122	5.4	2.7	89.8	2.1	14.6	6.5	.894	None	
SBR74-12084	1984.1-1985.2	96097	6.2	2.2	90.3	1.3	16.6	5.3	.898	None	

See footnote at end of table.

Core samples received June 26, 1970; assays made on air-dried samples

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Union Pacific Railroad Corporation's Blacks Fork No. 41-23 (con.)

Surface elevation 6,374 feet, Kelly bushing 6,380 feet

Sample number		Run	Yield of product						Specific gravity of oil at 60°/60° F	Properties of spent shale	Remarks
			Weight percent				Gal per ton				
Laramie	Their	No.	Oil	Water	Spent shale	Gas + loss	Oil[1/]	Water		Tendency to coke	
SBR74-12085	1985.2-1985.9	96098	4.0	2.3	93.1	0.6	10.7	5.5	0.909	None	
SBR74-12086	1985.9-1986.9	96099	10.3	2.5	85.2	2.0	27.3	6.0	.903	None	
SBR74-12087	1986.9-1987.5	96100	8.5	3.7	85.8	2.0	23.1	8.9	.885	None	
SBR74-12088	1987.5-1988.4	96101	12.8	2.9	80.8	3.5	33.8	7.0	.911	None	
SBR74-12089	1988.4-1989.3	96138	6.1	2.3	89.7	1.9	16.2	5.5	.904	None	
SBR74-12090	1989.3-1990.9	96103	8.1	1.1	89.6	1.2	21.5	2.6	.899	None	
SBR74-12091	1991.0-1992.4	96104	7.2	1.2	89.6	2.0	19.0	2.8	.911	None	
SBR74-12092	1992.4-1993.9	96105	.0	.5	99.2	.3	.1a	1.3		None	
SBR74-12093	1993.9-1995.0	96106	2.5	1.7	95.1	.7	6.8	4.1	.891	None	
SBR74-12094	1995.0-1996.0	96107	.0	.2	99.6	.2	No oil	.4		None	
SBR74-12095	1996.0-1997.0	96108	3.6	.5	94.8	1.1	9.4	1.3	.911	None	
SBR74-12096	1997.0-1998.0	96109	5.7	1.4	91.5	1.4	15.0	3.4	.912	None	
SBR74-12097	1998.0-1999.0	96110	.4	1.0	98.2	.4	1.1a	2.4		None	
SBR74-12098	1999.0-2000.0	96111	8.1	1.8	88.6	1.5	21.5	4.3	.905	None	
SBR74-12099	2000.0-2001.0	96112	6.1	2.0	89.7	1.6	17.8	4.8	.902	None	
SBR74-12100	2001.0-2002.0	96113	3.7	3.0	91.6	1.7	10.1	7.2	.892	None	
SBR74-12101	2002 -2003	96114	3.8	1.7	93.0	1.5	10.2	4.1	.888	None	
SBR74-12102	2003 -2004	96115	3.5	1.7	93.6	1.2	9.3	4.1	.890	None	
SBR74-12103	2004 -2005	96116	3.4	1.6	93.6	1.4	9.2	3.8	.890	None	
SBR74-12104	2005 -2006	96117	2.9	1.2	94.7	1.2	7.8	2.9	.888	None	
SBR74-12105	2006 -2007	96118	3.0	1.9	93.9	1.2	8.0	4.6	.893	None	
SBR74-12106	2007 -2008	96119	3.7	1.7	93.1	1.5	10.0	4.1	.880	None	
SBR74-12107	2008 -2009.2	96120	2.5	1.5	94.8	1.2	6.8	3.6	.891	None	
SBR74-12108	2009.2-2010.2	96123	4.6	2.9	90.8	1.7	12.4	7.0	.899	None	
SBR74-12109	2010.2-2011.2	96124	2.9	2.2	93.8	1.1	7.8	5.3	.897	None	
SBR74-12110	2011.2-2012.6	96125	6.8	2.4	88.2	2.6	18.3	5.6	.896	None	
SBR74-12111	2012.6-2014	96126	2.0	3.5	93.1	1.4	5.4	8.4	.886	None	
SBR74-12112	2014 -2016.9	96127	.0	1.3	98.4	.3	No oil	3.1		None	
SBR74-12113	2020.9-2023.2	96128	.0	1.0	98.6	.4	No oil	2.5		None	
SBR74-12114	2023.2-2025	96129	.3	2.8	96.0	.9	.8a	6.7		None	

See footnote at end of table.

Core samples received June 26, 1970; assays made on air-dried samples

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Union Pacific Railroad Corporation's Blacks Fork No. 41-23 (con.)

Surface elevation 6,374 feet, Kelly bushing 6,380 feet

Sample number		Run	Yield of product						Specific gravity	Properties of spent shale	
			Weight percent				Gal per ton				
Laramie	Their	No.	Oil	Water	Spent shale	Gas + loss	Oil[1/]	Water	of oil at 60°/60° F	Tendency to coke	Remarks
SBR74-12115	2025 -2026.2	96130	0.1	3.5	95.7	0.7	0.1a	8.4		None	
SBR74-12116	2026.2-2029	96131	.0	2.1	97.3	.6	Trace	5.0		None	
SBR74-12117	2029 -2032	96132	.0	1.6	98.1	.3	Trace	3.7		None	
SBR74-12118	2032 -2033.7	96133	.0	1.2	98.6	.6	No oil	2.8		None	
SBR74-12119	2033.7-2035.4	96134	1.5	1.5	96.2	.8	3.9a	3.6		None	
SBR74-12120	2035.4-2036.7	96135	.1	1.6	97.6	.7	.2a	3.8		None	
SBR74-12121	2036.7-2039	96136	2.1	2.2	94.3	1.4	5.6	5.3	0.893	None	
SBR74-12122	2039 -2039.9	96141	6.7	2.0	89.4	1.9	18.0	4.8	.891	None	
SBR74-12123	2039.9-2040.8	96142	.1	2.6	96.5	.8	.3a	6.2		None	
SBR74-12124	2040.8-2042.1	96143	3.4	1.6	93.6	1.4	9.2	3.8	.896	None	
SBR74-12125	2042.1-2043.6	96144	.7	.9	95.4	3.0	1.8a	2.2		None	
SBR74-12126	2043.6-2044.6	96145	4.5	1.7	92.4	1.4	12.1	4.1	.886	None	
SBR74-12127	2044.6-2045.6	96146	3.0	2.1	93.7	1.2	8.0	5.0	.892	None	
SBR74-12128	2045.6-2046.7	96147	3.7	2.6	92.3	1.4	9.7	6.2	.906	None	
SBR74-12129	2046.7-2047.8	96148	2.0	1.2	95.4	1.4	5.4	2.9	.902	None	
SBR74-12130	2047.8-2048.8	96149	3.2	1.9	93.4	1.5	8.7	4.6	.895	None	
SBR74-12131	2048.8-2049.9	96150	3.0	2.2	92.8	2.0	8.1	5.3	.892	None	
SBR74-12132	2049.9-2050.9	96151	2.6	2.3	93.7	1.4	7.1	5.5	.886	None	
SBR74-12133	2051 -2052	96152	2.5	1.9	93.8	1.8	6.7	4.6	.891	None	
SBR74-12134	2052 -2053	96153	4.1	2.1	91.2	2.6	10.6	5.0	.917	None	
SBR74-12135	2053 -2054	96154	5.6	3.0	89.7	1.7	14.6	7.2	.915	None	
SBR74-12136	2054 -2055	96155	4.5	2.6	90.7	2.2	12.1	6.2	.902	None	
SBR74-12137	2055 -2056	96156	4.2	2.0	92.4	1.4	11.2	4.8	.902	None	
SBR74-12138	2056 -2057	96157	3.7	1.8	93.3	1.2	9.9	4.3	.903	None	
SBR74-12139	2057.0-2057.9	96158	4.1	3.8	90.9	1.2	11.0	9.1	.892	None	
SBR74-12140	2058 -2059	96159	7.0	3.8	86.9	2.3	18.2	9.1	.919	None	
SBR74-12141	2059.0-2060.1	96160	11.8	2.3	82.7	3.2	31.3	5.5	.904	None	
SBR74-12142	2060.1-2061.3	96161	4.1	1.0	92.9	2.0	10.6	2.4	.919	None	
SBR74-12143	2061.3-2062.3	96162	5.3	1.8	91.4	1.5	13.9	4.3	.907	None	
SBR74-12144	2062.3-2063.3	96163	3.9	2.0	92.6	1.5	10.2	4.8	.906	None	

See footnote at end of table.

Core samples received June 26, 1970; assays made on air-dried samples

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Union Pacific Railroad Corporation's Blacks Fork No. 41-23 (con.)

Surface elevation 6,374 feet, Kelly bushing 6,380 feet

Sample number		Run	Yield of product						Specific gravity of oil at 60°/60° F	Properties of spent shale	Remarks
			Weight percent				Gal per ton				
Laramie	Their	No.	Oil	Water	Spent shale	Gas + loss	Oil[1/]	Water		Tendency to coke	
SBR74-12145	2063.3-2064.3	96164	5.1	2.1	90.8	2.0	13.7	5.0	0.900	None	
SBR74-12146	2064.3-2065.6	96165	10.6	2.2	84.6	2.6	27.6	5.3	.922	None	
SBR74-12147	2065.6-2066.1	96166	4.5	3.0	90.7	1.8	11.7	7.2	.928	None	
SBR74-12148	2066.1-2067.2	96167	1.0	1.7	96.2	1.1	2.6a	4.1		None	
SBR74-12149	2067.2-2068.4	96168	10.0	2.3	85.2	2.5	26.0	5.5	.926	None	
SBR74-12150	2068.4-2069.4	96169	11.1	1.7	84.2	3.0	28.7	4.1	.926	None	
SBR74-12151	2069.4-2070.5	96170	10.7	1.4	85.1	2.8	28.2	3.4	.905	None	
SBR74-12152	2070.5-2071.5	96171	10.1	1.6	85.4	2.9	27.0	3.8	.900	None	
SBR74-12153	2071.5-2072.9	96172	11.7	2.5	82.5	3.3	31.3	6.0	.895	None	
SBR74-12154	2072.9-2073.9	96173	8.2	2.1	86.9	2.8	21.8	5.0	.900	None	
SBR74-12155	2073.9-2074.9	96174	9.1	2.1	86.1	2.7	24.2	5.0	.902	None	
SBR74-12156	2074.9-2075.9	96175	7.2	2.8	87.4	2.6	19.3	6.7	.892	None	
SBR74-12157	2075.9-2076.9	96176	8.7	3.4	84.6	3.3	23.3	8.1	.896	None	
SBR74-12158	2076.9-2077.9	96177	9.5	1.6	86.2	2.7	25.8	3.8	.884	None	
SBR74-12159	2077.9-2078.8	96178	11.2	1.5	84.5	2.8	30.8	3.6	.873	None	
SBR74-12160	2078.8-2080	96179	12.8	1.7	82.9	2.6	34.6	4.0	.887	None	
SBR74-12161	2080 -2081	96180	11.5	3.5	81.8	3.2	21.0	8.4	.893	None	
SBR74-12162	2081 -2082	96181	10.1	1.8	85.5	2.6	27.3	4.3	.888	None	tuff
SBR74-12163	2082 -2083.3	96182	4.8	3.8	89.2	2.2	12.8	9.1	.893	None	
SBR74-12164	2083.3-2084.5	96183	6.4	3.6	87.6	2.4	17.2	8.6	.893	None	
SBR74-12165	2084.5-2085.7	96184	7.5	3.2	87.1	2.2	20.3	7.7	.887	None	
SBR74-12166	2085.7-2086.7	96185	5.7	3.4	88.9	2.0	15.3	8.1	.885	None	
SBR74-12167	2086.7-2087.7	96186	4.9	2.6	90.7	1.8	13.3	6.2	.881	None	
SBR74-12168	2087.7-2088.7	96187	9.3	2.8	85.8	2.1	25.7	6.7	.871	None	
SBR74-12169	2088.7-2089.7	96188	12.8	3.2	81.2	2.8	35.0	7.7	.876	None	
SBR74-12170	2089.7-2090.7	96189	6.7	3.8	86.8	2.7	18.1	9.1	.892	None	
SBR74-12171	2090.7-2091.8	96190	4.0	2.4	92.1	1.5	10.8	5.8	.890	None	
SBR74-12172	2091.8-2092.9	96191	3.0	2.3	93.3	1.4	8.0	5.5	.890	None	
SBR74-12173	2092.9-2094.5	96243	6.2	3.3	87.5	3.0	16.6	7.9	.890	None	
SBR74-12174	2094.5-2095.9	96193	3.2	2.1	93.0	1.7	8.8	5.0	.884	None	

See footnote at end of table.

Core samples received June 26, 1970; assays made on air-dried samples

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Union Pacific Railroad Corporation's Blacks Fork No. 41-23 (con.)

Surface elevation 6,374 feet, Kelly bushing 6,380 feet

Sample number		Run	Yield of product						Specific gravity	Properties of spent shale	
			Weight percent				Gal per ton				
Laramie	Their	No.	Oil	Water	Spent shale	Gas + loss	Oil[1/]	Water	of oil at 60°/60° F	Tendency to coke	Remarks
SBR74-12175	2095.9-2096.9	96194	1.5	1.3	96.3	0.9	3.9a	3.1		None	
SBR74-12176	2097 -2098	96195	.0	1.9	97.8	.3	No oil	4.6		None	

1/ "a"--indicates specific gravity estimated as 0.92.

Core samples received June 26, 1970; assays made on air-dried samples