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Table 2.--Fischer assays and related data on organic matter for 11 samples of oil shale from central Brooks Range, northern Alaska, and samples of the Green River and Chattanooga Shale

[Analyses by Irving C. Frost. Data in percent]

	Alaska Oil Shale											Green River Shale 1/	Chattanooga Shale 2/
Locality Number	11		13	14		16	[illegible]		21	25	[illegible]		
Field Number	64ATr207A	64ATr207B	64ATr208	64ATr209A	64ATr209B	64ATr210	64ATr305B	64ATr305C	64APa215	64APa208	64APa2 10-1	KR62-350X	LC201
Laboratory Number	D115215	D115216	D115217	D115218	D115[illegible]	D115220	D115221	D115222	D115226	D115225	D11[illegible]	D115183	D112453
Oil, gallons per ton	45.2	26.5	45.1	144.3	88.5	74.6	24.5	21.5	10.6	45.1	2.9	24.1	8.2
Sp. Gr. at 15.6°C / 15.6°C	0.912	0.894	0.973	0.908	0.910	0.903	0.937	0.946	0.924	0.861	-	0.908	0.946
Fischer Assay, percent													
Oil	17.2	9.9	18.3	54.7	33.6	28.1	9.6	8.5	4.1	16.2	1.1	9.1	3.3
Water	4.5	5.0	9.8	6.5	3.0	3.0	4.0	5.6	2.8	4.0	3.8	1.0	1.2
Gas and loss	10.8	5.9	13.2	12.0	5.4	7.9	6.4	7.4	2.6	4.3	2.1	2.1	4.5
Spent shale	67.5	79.2	58.7	26.8	58.0	61.0	80.0	78.5	90.5	75.5	93.0	87.8	91.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Mineral carbon, percent													
Raw shale	.01	.04	<.01	<.01	.02	<.01	3.86	.78	<.01	.01	.39	2.17	-
Raw Shale													
Ash at 900°C (Calc.)	24.2	57.1	14.3	17.4	51.0	54.1	55.1	58.2	74.3	47.3	78.6	78.3	82.6
Total carbon, percent	51.3	28.2	61.1	63.3	38.0	36.0	26.7	26.1	17.6	41.2	12.3	16.3	13.0
Water, percent	4.5	5.0	9.8	6.5	3.0	3.0	4.0	5.6	2.8	4.0	3.8	1.0	1.2
Difference	20.0	9.7	14.8	12.8	8.0	6.9	14.2	10.1	5.3	7.5	5.3	4.4	3.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Organic carbon in spent shale calc. to Raw Shale basis	34.6	15.8	37.7	8.09	5.80	5.37	10.5	14.6	12.5	24.6	9.39	-	-
Percent Organic Carbon evolved as oil & gas	33	44	38	87	85	85	54	42	29	40	21	-	-
Percent Raw Shale extracted with benzene	2.80	1.28	2.26	1.31	0.62	0.53	1.28	-	-	1.01	-	1.65	0.29
Ratio: percent extracted/ percent organic carbon	5.46	4.54	3.70	2.07	1.63	1.47	5.61	-	-	2.45	-	11.7	-
Percent of extracted organic matter as:													
Saturated hydrocarbons	42	34	4	8	11	31	9	-	-	42	-	19	18
Aromatic hydrocarbons	40	45	17	4	7	17	41	-	-	27	-	18	60
Nonhydrocarbons	18	21	79	88	82	52	50	-	-	31	-	63	22
Percent recovery	99.7	98.5	98.0	101.5	101.7	95.5	97.7	-	-	99.4	-	-	-
Oil residue after heating approximately 1 hr. at 55°C with vacuum	93.2	82.4	84.6	88.0	-	87.4	-	-	-	-	-	-	-
Saturated hydrocarbons	26	34	13	23	-	24	-	-	-	-	-	-	-
Aromatic hydrocarbons	58	[illegible]	51	47	-	47	-	-	-	-	-	-	-
Nonhydrocarbons	16	17	30	30	-	29	-	-	-	-	-	-	-
Percent recovery	93.6	104.7	97.3	92.4	-	101.3	-	-	-	-	-	-	-

1/ Average mine-run shale from the Bureau of Mines Demonstration Mine near Rifle, Colorado. See Stanfield and others (1951, "composite sample", p. 4, tables 6, 15-20) for data on properties and composition of a sample of similar but not identical shale.

2/ Adit, about 1 mi. SW. on old Tennessee route 26 (now a boat landing road) from point where it joins Route 26 at top of descent to E. end of Sligo Bridge. See Bates and Strahl (1957) for data on mineralogy of shale from the same locality.