

GEOCHEMICAL REPORT

TOC/Rock-Eval Pyrolysis Results

**Mobil N. Kuparuk St. 26-12-12
8,820-8,850 ft**

**BROWN & RUTH LABORATORIES, INC.
1790 West Belt North
Houston, Texas 77049
713/464-3284**

RECEIVED
APR 22 1985
Alaska Oil & Gas Cons. Commission
Anchorage

REPORT FILE NO. 1578

CLIENT I.D.: Kuparuk St. 26-12-12

LOCATION: Alaska

WELL INTERVAL
EVALUATED: 8,670-8,924 ft

SAMPLE MATERIAL

A total of eight samples representing the well interval 8,670-8,924 ft were received. The sample material was generally in good condition with no visual evidence of contamination.

ANALYTICAL PROGRAM

Prior to analysis, a split of each sample was taken and examined under a binocular microscope. The examination included a brief lithologic description and the removal of any contaminants. The sample material was then ground to a fine powder and submitted for total organic carbon (TOC) analysis and pyrolysis.

RESULTS AND INTERPRETATION

The eight samples analyzed consist of dark-colored sandstone and shale. TOC contents are average to high. The Rock-Eval pyrolysis data indicate good source potential to generate oil. The high pyrolysis S1 yields of the sandstone samples suggests the presence of non-indigenous free hydrocarbons.

The Tmax values of the sandstone samples are probably depressed due to the high S1 yields. Based on the Tmax data of the shale samples, the sediments are immature to marginally mature.

REPORT FILE NO. 1656

WELL: Mobil N. Kuparuk St. 26-12-12

LOCATION: Alaska

WELL INTERVAL
EVALUATED: 8,820-8,850 ft

SAMPLE MATERIAL

One cuttings sample from the interval 8,820-8,850 ft of the Mobil N. Kuparuk St. 26-12-12 well was received. The sample material was in good condition with no visual evidence of contamination.

ANALYTICAL PROGRAM

Prior to analysis, a split of the sample was taken and briefly examined under a binocular microscope for contaminants. The sample material was then ground to a fine powder and submitted for total organic carbon (TOC) analysis and Rock-Eval pyrolysis.

RESULTS AND INTERPRETATION

The sample analyzed has high amounts of organic matter. The Rock-Eval pyrolysis data indicate that the sample has good potential to generate light oil-condensate. However, the Tmax data suggest that the sediments are only marginally mature.

TABLE I

Kuparuk St. 26-12-12
AlaskaFile No. 1578
March 4, 1985

Lithologic Descriptions and Organic Carbon (TOC) Results

Sample Number	Depth (ft.)	Lithologic Description	TOC (Wt %)
1578-001	8670-8700	A) 100% shale, olive black	2.13
1578-002	8700-8730	A) 100% shale, dark gray trace pyrite	1.95
1578-003	8760-8790	A) 100% sandstone, argillaceous, medium dark gray	0.40
1578-004	8790-8820	A) 100% sandstone, argillaceous, medium dark gray	0.63
1578-005	8850-8880	A) 85% shale, olive black B) 15% mudstone, calcareous, olive gray	1.77
1578-006	8880-8910	A) 70% shale, olive black B) 30% siltstone, dark yellowish brown	1.90/1.97
1578-007c	8921-8922	A) 100% sandstone, dark yellowish brown	1.01
1578-008c	8923-8924	A) 100% sandstone, dark yellowish brown	1.17

c - denotes core sample.

Kuparuk St. 26-12-12
Alaska

TABLE II

File No. 1578
March 4, 1985

Results of Organic Carbon Analysis and Rock-Eval Pyrolysis

Sample Number	Depth (ft.)	T.O.C. (% Wt.)	S1 (mg/g)	S2 (mg/g)	S3 (mg/g)	Tmax (°C)	Production Index	$\frac{S2}{S3}$	Hydrogen Index	Oxygen Index
1578-001	8670-8700	2.13	0.38	5.43	0.74	435	0.06	7.32	255	35
1578-002	8700-8730	1.95	0.36	5.88	0.45	434	0.06	12.98	302	23
1578-003	8760-8790	0.40	0.20	1.31	0.16	426	0.13	8.19	328	40
1578-004	8790-8820	0.63	1.13	3.19	0.11	428	0.26	29.00	506	17
1578-005	8850-8880	1.77	0.33	5.56	0.52	428	0.06	10.69	314	29
1578-006	8880-8910	1.90	0.45	5.46	0.87	435	0.08	6.28	287	46
1578-007c	8921-8922	1.01	5.59	4.32	0.23	418	0.56	18.78	428	23
1578-008c	8923-8924	1.17	7.34	4.34	0.20	418	0.63	21.70	371	17

c - denotes core sample.

TABLE I

Mobil N. Kuparuk St. 26-12-12
Alaska

File No. 1656
April 12, 1985

Results of Organic Carbon Analysis and Rock-Eval Pyrolysis

Sample Number	Depth (ft.)	T.O.C. (% Wt.)	S1 (mg/g)	S2 (mg/g)	S3 (mg/g)	Tmax (°C)	Production Index	$\frac{S2}{S3}$	Hydrogen Index	Oxygen Index
1656-001	8820-8850	2.00	0.67	5.77	0.65	437	0.10	0.85	289	33