Union Oil and Gas Division: Western Region

Union Oil Company of California
P.O. Box 76, Brea, Calif. 92621
Telephone (714) 528-7201

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Palynology Laboratory

October 3, 1973

Mr. Thomas Marshall, Jr.
Chief Petroleum Geologist
State of Alaska
Division of Oil & Gas
3001 Porcupine Drive
Anchorage, Alaska

MOBIL OIL CORPORATION
MIKKELSEN BAY STATE #1
SEC. 13-9N/19E, UPM
ALASKA

Dear Mr. Marshall:

In compliance with your suggestions, and as agreed upon in the letter of May 23, 1973, from Mr. J. P. Chauvel to you, I am outlining here the results of our micropaleontological and palynological examination of core chips from this well.

I regret the delay in sending you this information, but the pressure of other urgent work has been great in the past few months.

Inspection of the slide material previously sent you will show that it was necessary to composite many samples, in order to obtain sufficient material for processing. In all, fifty-two samples were prepared in the intervals summarized below:

Depths			Geologic Age
10,564	-	10,654	- Upper Cretaceous.
11,159	-	11,171	- Upper Cretaceous.

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Mobil Oil Corporation
Mikkelsen Bay State #1 - Continued

Depths			Geologic Age
11,562	- 11,641	-	Upper Cretaceous.
11,641	- 11,741	-	Jurassic or younger Mesozoic, probable Lower Cretaceous.
11,741	- 11,752	-	Upper Mississippian (?).

We hope that this data will be helpful to you and wish, again, to express our appreciation for your kind cooperation in making these samples available to us.

Yours truly,

RAYMOND E. MALLOY
Palynologist

REM;go

Copies to: G. Feister
G. Brown
J. Chauvel <-- THIS COPY FOR

PALYNOLOGICAL ANALYSES
of Core Chips

Mobil Mikkelsen Bay St. #13-9-19
Sec. 13-T9N-R19E (UPM)

Humble East Mikkelsen Bay St. #1
Sec. 7-T9N-R21E (UPM)

Mobil West Staines St. #18-9-23
Sec. 18-T9N-R23E (UPM)

Exxon Alaska St. A-1
Sec. 27-T10N-R24E (UPM)

David I. Wharton
Sohio Petroleum Company
100 Pine Street
San Francisco, California 94111

June 26, 1981

PALYNOLOGICAL ANALYSES

The following are the results of a palynological study of core samples from the indicated four Beaufort Coast wells in the State well library. The study was conducted by David I. Wharton, Sohio Petroleum Company, and reported to the Alaska Oil and Gas Conservation Commission June 26, 1981. The palynologic slides, within the respective intervals for each well, are available for reference in the Commission's well sample library.

MOBIL MIKKELSEN BAY STATE NO.1 (13-9-19)
(8 slides--15,101' to 16,589')

Five samples from cores No. 15 and No. 18 in the lower part of the Endicott Group, and three samples from cores No. 19 and No. 20 in the Neruokpuk Group were examined.

Core samples from the Endicott Group (15101'-15102', 15106'-15109', 15115'-15120', 15123'-15129', and 15905'-15919') yielded poorly-preserved assemblages of miospores including Lycospora spp., Corbulispora spp. Lophozonotriletes rarituberculatus and abundant Densosporites, which indicate a probable Visean (late Osagian to early Chesterian) age for this interval. Core samples from the Neruokpuk Group (16545'-16546', 16573'-16581, 16583'-16598') were devoid of any identifiable palynomorphs.

HUMBLE EAST MIKKELSEN BAY STATE NO.1
(10 slides--12,696' to 14,660')

One sample from core No. 2 in the higher part of the Endicott Group, and nine samples from cores No. 3 and No. 4 in the Neruokpuk Group were examined.

The sample from the Endicott Group (12696'-12698') contained a poor miospore assemblage including the forms Lophozonotriletes raituberculatus Densosporites variomarginatus, and Dibolisporites dictinctus. The latter species is restricted to the late Tournaisian and early Visean (Osagian) of Western Europe. It has not been recorded previously from northern Alaska, nor, as far as I am aware, from Arctic Canada. Its precise stratigraphic significance is therefore not known.

Nine samples from the Neruokpuk Group (13896'-13878', 13885'-13894', 13903'-13908', 14605'-14608', 14611'-14620', 14621'-14629', 14631'-14639', 14641'-14645' and 14657'-14660') contained no palynomorphs considered to be in place. Five of these samples contained very small numbers of Visean miospores presumed to represent contamination, in view of the nature of the accompanying kerogen which was quite atypical of the Endicott Group.

MOBIL WEST STAINES STATE NO.1 (18-9-23)
(8 slides--13,125' to 13,326')

Eight samples from cores No. 12 to No. 16 in the Neruokpuk Group were examined.

These samples (13125'-13132', 13158'-13166', 13177'-13185', 13278'-13281', 13283'-13292', 13297'-13301', 13312'-13316' and 13319'-13326') contained nothing but highly carbonized organic debris of indeterminable origin.

EXXON ALASKA STATE A-1
(40 slides--10,213' to 14,206')

Thirty-five samples from cores No. 1 to No. 9 in the lower part of the Tertiary sequence and five samples from cores No. 12 to No. 14 in the Neruokpuk Group were examined.

The samples from the Tertiary section spanned the intervals 10213'-10871' and 12428'-12756', those from the upper interval being substantially more fossiliferous than those from the lower (oil-producing) interval. The higher interval is characterized by consistent occurrences of the pollen general Alnipollenites, Quercoidites, Tiliaepollenites, Caprifoliipites and Pterocayapollenites with sporadic occurrences of the dinoflagellates Spinidinium densispinatum, Senegalinium microgranulatum, Phelodinium magnificum and Wetzeliella articulata, the fungal spores Pesavis tagluensis and Ctenosporites eskerensis, and the pollen Betulaepollenites and Nudopollis. These assemblages are considered to indicate an early to mid-Eocene age. The lower interval is characterized by generally numerous and diverse fungal spores, including the forms Dicellaesporites, Multicellaesporites, and sporadic Pesavis tagluensis, nondescript disaccate pollen, the pollen Paraalnipollenites, and rare organic-walled microplankton including Spinidinium densispinatum, Oligosphaerdium complex and Palaeoperi dinium sp. The scacity of triprojectate pollen which are generally frequent in the late Campanian to Maastrichtian of Arctic North America, the absence of the pollen Wodehouseia which characterizes the late Maastrichtian to earliest Paleocene of the region, and of the Eocene and younger pollen Tiliaepollenites which occurs consistently in the higher interval, together with the presence of the Paleocene to Eocene dinoflagellate Spinidinium densispinatum and the Paleocene pollen Paraalnipollenites, all support a Paleocene age for this interval.

David I. Wharton
Sohio Petroleum Company
100 Pine Street
San Francisco, California 94111