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February 17, 1977

TO: Tetra Tech, Inc.
RE: Husky/U.S.N.
So. Harrison Bay #1
Sec. 6, 12N/2E
North Slope, Alaska

PALYNOLOGY REPORT

A total of 123 ditch and 22 sidewall core samples were processed and analyzed for palynological age determinations. The samples were taken from the interval 500 feet to the total depth of 11,290 feet.

500-770'

Aquilapollenites magnus (R-F), A. rectus (R), A. scabridus (R), A. fusiformis (R), Wodehouseia spinata (R).

Cyclonephelium distinctum (single, reworked?), Cleistosphaeridium spp. (R).

AGE: Late Cretaceous (Maestrichtian)
ENVIRONMENT: Essentially Nonmarine

770-950'

Aquilapollenites magnus (R), A. rectus (R), A. trialatus (R), Syncolpites sp. (single), Wodehouseia jacutense (single).

AGE: Late Cretaceous (Campanian)
ENVIRONMENT: Nonmarine

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950-2120'

Palaeoperidinium basilium (R-C), Hystrichosphaeridium difficle (R-C), Laciniadinium biconiculum (R-C), Diconodinium arcticum (R), Exochosphaeridium bifidum (R), Deflandrea decorosa (R), D. ditissima (R-C), D. acuminata (R), Australiella spectabilis (R-C), A. sverdrupiana (F), A. granulifera (F), Odontochitina operculata (F-C), Hexagonifera chlamydata (R-F), Wallodinium luna (R).

AGE: Late Cretaceous (Santonian-Campanian)

ENVIRONMENT: Marine

2120-2210'

A significant decrease in the dinoflagellate assemblage occurs in this narrow interval, although many of the same forms present above continued herein. The abrupt decrease of Deflandroid forms by 2120 feet in the ditch samples suggests that the base of the Santonian is at least that high.

AGE: Late Cretaceous (possibly in
?Turonian-?Coniacian)

ENVIRONMENT: Marine

2210-3376'

Gleicheniidites senonicus (R), Vitreisporites pallidus (R).

Cyclonephelium distinctum (R), Odontochitina operculata (F-C), Chlamydophorella nyei (R-C), Cribroperidinium edwardsi (R-F), Apteodinium grande (R), Pseudoceratium cf. expositum (R).

AGE: Late Cretaceous (Cenomanian)

ENVIRONMENT: Marine

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3376-6090'

Gleicheniidites senonicus (R); rare, scattered occurrences of Vitreisporites pallidus, Classopollis classoides, and Trilobosporites apiverrucatus.

Cleistosphaeridium spp. (R-F), Odontochitina operculata (F-C), Oligosphaeridium complex (R), Chlamydophorella nyei (R-F), Cribroperidinium edwardsi (R-F), Broomea jaegeri (R), Astrocysta cretacea (R-F), Luxadinium propatulum (R), Spinidinium vestitum (R, scattered), Gardodinium eisenacki (few, rare occurrences near bottom of interval).

AGE: Early Cretaceous (Albian)

ENVIRONMENT: Marine

The base of the Albian is placed at the lowest occurrence of Spinidinium vestitum and Luxadinium propatulum. These forms occur just above a specimen of Muderongia tetracantha, a species which ranges no younger than Aptian.

6090-7188'

Gleicheniidites senonicus (R), Classopollis classoides (R).

Odontochitina operculata (R-F), Oligosphaeridium complex (R), Cribroperidinium edwardsi (R), Broomea jaegeri (R), Astrocysta cretacea (R-F), Cyclonephelium compactum/membraniphorum (R), Muderongia tetracantha (single), Gardodinium eisenacki (R, sporadic); reworked, rare occurrences of Sirmiodinium grossi, Gonyaulacysta cladophora, Nannoceratopsis gracilis.

AGE: Early Cretaceous (possible Aptian)

ENVIRONMENT: Marine

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6090-7188' (con't.)

There is only weak evidence for the possible Aptian age assignment. Although the Aptian/Albian boundary is tentatively placed at 6090 feet it is possible that this interval may be as young as Early Albian in age.

7188-8230'

Classopollis classoides (R), striated bisaccates (R) (reworked).

Pareodinia ceratophora (R), *P. sp.* (verrucose form) (R-F), *Sirmiodinium grossi* (R), *Scriniodinium crystallinum* (R), *Gonyaulacysta cladophora* (R-C), *Nannoceratopsis pellucida* (R-A).

AGE: Late Jurassic (Oxfordian)
ENVIRONMENT: Marine

8230-9300'

Classopollis classoides (F-C), *Vitreisporites pallidus* (R-F), striated bisaccates (R, reworked).

Micrhystridium spp. (F-C), *Nannoceratopsis gracilis* (C-A); undescribed dinocysts JRD-1 (F-C), JRD-2 (R), JRD-5 (R).

AGE: Early-Middle Jurassic
(Late Pliensbachian-Callovian)
ENVIRONMENT: Marine

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9300-9570'

This interval contains a similar assemblage to the above but in significantly reduced frequencies.

AGE: Indeterminate (probable Triassic-
Early Jurassic)

ENVIRONMENT: Indeterminate

It appears that most or all of the palynomorphs are derived from up-hole.

9570-10,210'

Striated bisaccates (R), Taeniaesporites sp. -(R), Striatites richteri (R-F), Klausipollenites staplini (R-F), ?Lundbladi-spora sp. (R-F), unidentified verrucate spore (R-C).

AGE: Permian-Triassic

ENVIRONMENT: Nonmarine

10,210-11,290' T.D.

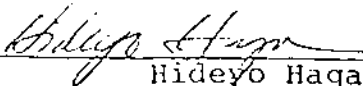
This interval recovered only Permo-Triassic and Jurassic palynomorphs derived from up-hole. No positive palynological evidence for any other age was found.

AGE: Indeterminate

ENVIRONMENT: Indeterminate

The lithologic examination indicates that the Carboniferous units begin at 10,210 feet.

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Hideyo Haga