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CONSULTING MICROPALAEONTOLOGY

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May 6, 1980

TO: Husky/U. S. Geological Survey

RE: Husky/USGS
Seabee #1
Sec. 5, 1S/1W, U.B.M.
North Slope, Alaska

FORAMINIFERA REPORT

The following micropaleontological report is based on the examination and checklisting of 521 washed ditch samples, 61 washed conventional core samples, and 1 washed auger sample covering the interval 45 to 15,610 feet (total depth). Four checklists and a faunal distribution log are enclosed for your convenience. The one auger sample appears in an appendix at the end of this report.

Standard techniques were employed in processing the material. All samples were boiled in Quaternary-0 and washed over 20 and 200 mesh screens.

Frequency symbols used in this report correspond to the following numerical values: R = rare (1-5); F = frequent (6-32); C = common (33-99); A = abundant (100-199); and PL = flood (200+).

RE: Husky/USGS - Seabee #1, North Slope

115-2340'

Occurrences of Saccamina lathrami, Verneuilinoides borealis, Miliammina manitobensis, M. awunensis, Psamminopelta subcircularis, P. bowsheri, Ammobaculites fragmentarius, A. wenonahae, Textularia topagorukensis, Bathysiphon vitta, Gaudryina barrowensis, G. cf. tailleuri, Trochammina umiatensis, Gavelinella stictata, Lenticulina muensteri, L. macrodisca, and Ditrupa cornu indicate that these strata may represent Zonule F-9 and/or Zonule F-10. In either case, they probably represent an Albian age in this well. Depositional environments above 630 feet were probably nonmarine to marginal marine. Paleodepths below 630 feet were probably inner to middle neritic.

AGE: Early Cretaceous
Albian (F-9 to F-10)

ENVIRONMENT: Inner to Middle Neritic

2340-4110'

This interval is characterized by occurrences of the following: Gaudryina nanushukensis, G. cf. tailleuri, Lenticulina macrodisca, Verneuilinoides borealis, Bathysiphon vitta, Ammobaculites fragmentarius, A. wenonahae, Psamminopelta subcircularis, P. bowsheri, Textularia topagorukensis, Ammodiscus rotularius, Gavelinella stictata, Haplophragmoides topagorukensis, H. excavatus, H. gigas, and Trochammina umiatensis. The above fauna indicates a Late Aptian to Early Albian (F-10) age. The paleodepths represented by these assemblages were probably turbid middle to outer neritic.

RE: Husky/USGS - Seabee #1, North Slope

2340-4110' (con't.)

AGE: Early Cretaceous
Late Aptian to Early Albian (F-10)

ENVIRONMENT: Middle to Outer Neritic (turbid)

4110-13,100'

A pyritized radiolarian fauna characterizes these strata together with occurrences of; Verneulinoides borealis, Pelosina sp., Gaudryina nanushukensis, Ammobaculites fragmentarius, Haplophragmoides topagorukensis, H. excavatus, and Miliammina manitobensis. Pyritized radiolaria of the following genera occur: Cenosphaera spp., Stichocapsa? sp., Spongodiscus spp., Stichomitra? sp., Lithocampe spp., and Dictyomitra spp. According to Ramsey (1970) this zone of pyritized radiolaria separates the Verneulinoides borealis Zone from the Gaudryina tailleuri Zone, and is probably Aptian to early Albian in age. We feel that it is probably Aptian in age, in this area, but our data is tentative at this time. The top of this unit is placed at 4110 feet at the uppermost significant occurrence of pyritized radiolaria, but it might better be placed at 5990 feet at the top of the continuous occurrence of pyritized radiolaria. Due to the preservation of this fauna, all that can be said about the environment of deposition is that it was marine and open to oceanic currents. These strata may represent deep marine (below compensation depth) slope deposits. This is a possibility since calcareous Foraminifera are very scarce in this interval and could represent caved specimens when they do occur.

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4110-13,100' (con't.)

AGE: Early Cretaceous
Probable Aptian (F-11)

ENVIRONMENT: Open Marine

13,100-15,610' T.D.

Associated occurrences of arenaceous spp. (large, coarse), Haplophragmoides coronis, H. duoflatis, H. goodenoughensis, H. inflatigrandis, Glomospirella arctica, G. S., Ammobaculites reophacoides, Ammodiscus mackenziensis, Gaudryina tailleuri, G. cf. tappanae, Glomospira corona, G. subarctica, Lituotuba irregularis, Trochammina squamata, Pseudobolivina spp., Thuramminoides septagonalis, Trochammina sp. (small, concavo-convex), Lenticulina muensteri, L. aff. ouachensis, Hoeglundina caracolla, and common to abundant rounded frosted quartz floaters indicate that these rocks are Neocomian in age. The entire interval may be Hauterivian to Barremian, but this is based on negative evidence only, and in fact, a few scattered rare specimens could represent Berriasian to Valanginian forms. It is felt that it would be best to consider this interval to be Neocomian (undifferentiated) at this time. The depositional environments for these strata probably ranged from outer neritic to bathyal. These rocks were probably deposited in an area characterized by fluctuating turbidity.

AGE: Early Cretaceous
Neocomian (Undifferentiated)

ENVIRONMENT: Outer Neritic to Bathyal
(fluctuating turbidity)

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Appendix A

43' Auger Core

No Foraminifera found. Megaspores (R), Inoceramus prisms (R) worn, shell fragments (R), coal (R). Brownish-gray micaceous siltstone.


AGE: Possible Cretaceous (but could be younger with reworked Cretaceous)

ENVIRONMENT: Indeterminate

Interpreted by:


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