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#9

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TO: Husky/U. S. Geological Survey

RE: Husky/U.S.G.S.
Walakpa #1
Sec. 9, 20N/19W, U.B.M.
North Slope, Alaska

FINAL MICROPALEONTOLOGY REPORT

Enclosed you will find a 1" to 100' faunal distribution log and 2 faunal checklists on the Walakpa #1 well. The conclusions presented in this report are based on the processing, picking and examination of 119 ditch samples, generally composited on 20 to 30 foot intervals, 165 conventional core, and 13 sidewall core samples. Thin sections were prepared on 4 samples from Core #12. A generalized age summary of the well is provided below.

90-900'

A relatively poor fauna consisting of Haplophragmoides excavatus, Bathysiphon vitta, Ammobaculites fragmentarius, Glomospira corona, Glomospirella gaultina and Vaginulina exilis characterizes these strata. The presence of the above forms indicates an Aptian to Albian age for this interval. An inner to middle neritic depositional environment is suggested.

AGE: Early Cretaceous
Aptian to Albian (Undiff.)

ENVIRONMENT: Inner to Middle Neritic

RE: Husky/USGS - Walakpa #1, North Slope, Alaska

900-1690'

A pyritized radiolarian fauna characterizes these strata together with rare occurrences of agglutinated Foraminifera. Pyritized radiolaria of the following genera occur: Cenosphaera spp., Spongodiscus sp., and Lithocampe spp. According to Ramsey (1970) this zone of pyritized radiolaria separates the Verneuilinoides borealis zone from the Gaudryina tailleuri zone, and is probably Aptian to Early Albian in age. 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.

AGE: Early Cretaceous
Aptian to Early Albian (F-11)

ENVIRONMENT: Open Marine

1690-2064' C-6

Occurrences of Haplophragmoides coronis, H. duoflatis, H. goodenoughensis, Trochammina squamata, T. cf. instowensis, Gaudryina tappanae, G. tailleuri, Gavelinella cf. stictata, Conorboides cf. umiatensis, arenaceous spp. (large, coarse), Ammobaculites erectus, A. reophacoides, Bathysiphon scintillata, Reophax tundraensis, Thuramminoides septagonalis, Pseudobolivina rayi, Gaudryina irregularis, Ammodiscus mackenziensis, A. elongatus and common to abundant rounded frosted quartz floaters indicate a Hauterivian to Barremian (F-12 to F-13) age for the strata between 1690 feet and 2037 feet. The presence of Conorboides cf. hofkeri, Gaudryina milleri,

RE: Husky/USGS - Walakpa #1, North Slope, Alaska

1690-2064' C-6 (con't.)

Gaudryina leffingwelli, and Glomospirella S below 2037 feet suggests that these rocks are Berriasian to Valanginian (F-13 to F-14) in age. The abundance and diversity of these assemblages suggests a middle to outer neritic depositional environment associated with fluctuating turbidity.

AGE: Early Cretaceous
Neocomian (F-12 to F-14)

ENVIRONMENT: Middle to Outer Neritic
(fluctuating turbidity)

2064 C-6-2080' C-6

Only three specimens of Foraminifera were recovered from this sandstone interval in Core #6. The Foraminifera found were Ammobaculites alaskensis, Gaudryina milleri, and arenaceous sp. Based on these forms it is not possible to tell whether this interval is Late Jurassic or Neocomian (Berriasian to Valanginian) in age. This sandstone does appear to be associated with a basal Cretaceous unconformity although it is not possible to tell for sure if the unconformity lies above, below or within this interval.

AGE: Indeterminate

ENVIRONMENT: Indeterminate

2080-2370'

This interval is Oxfordian to Kimmeridgian (F-16) in age based on occurrences of: Lenticulina audax, L. quenstedti,

RE: Husky/USGS - Walakpa #1, North Slope, Alaska

2090-2370' (con't.)

Ammodiscus cheradospirus, A. asperus, Frondicularia lustrata, Trochammina canningensis, T. instowensis, T. kumaensis, Reophax densa, Gaudryina milleri, Saracenaria oxfordiana, S. topagorukensis, and Marginulinopsis phragmites. Strata below about 2220 feet are Oxfordian while strata above 2220 feet could be as young as Kimmeridgian. These strata were probably deposited in outer neritic to upper bathyal paleodepths.

AGE: Late Jurassic
Oxfordian to Kimmeridgian (F-16)

ENVIRONMENT: Outer Neritic to Upper Bathyal

2370-3087' C-10

These strata are considered to be Early to Middle Jurassic age based on occurrences of Ammobaculites vetusta, A. barrowensis, Conorboides hofkeri, Ammodiscus siliceus, Astacolus dubius, A. agalmatus, Reophax suevica, Trochammina topagorukensis, Nodosaria radiata, Gaudryina dyscrita, and frequent to common pyritized radiolaria of the genera Cenosphaera spp., Spongodiscus spp., Dictyomitra spp., Lithocampe spp., Patulibracchium sp., Stichomitra sp., and Crucella sp. Very fine-grained sandstones and siltstones between 2370 feet and 2520 feet represent either shallow inner to middle neritic paleodepths or else they could be sediment diluted deeper water deposits (turbidites?). The abundance of radiolaria found below 2520 feet suggest open marine conditions. The depositional environment for strata below 2520 feet was probably outer neritic to bathyal.

RE: Husky/USGS - Walakpa #1, North Slope, Alaska

2370-3087' C-10 (con't.)

AGE: Early to Middle Jurassic (F-17 to F-18)

ENVIRONMENT: 2370-2520' : Possible Inner to Middle Neritic

2520-3087' : Probable Outer Neritic to Bathyal

3087 C-10-3363' C-11

It was necessary to spread the age of this interval since it contains a mixed assemblage. Triassic (F-19) forms were not encountered in the ditch samples until 3440 feet, but the bottom of Core #10 (3087-3111') contains rare to frequent occurrences of such Triassic forms as Astacolus connudatus, Pseudoglandulina simpsonensis, Marginulina prisca, Frondicularia acmaea, Nodosaria larina, N. liratella, and Vaginulinopsis acrulus. Core #11 (3360-3420') contains a good Triassic (F-19) assemblage. Since there were no Triassic (F-19) forms found in the ditch samples between 3111 feet and 3360 feet it could be that the Triassic (F-19) found in the bottom of Core #10 represents a horizon of reworking. These strata probably represent middle neritic to bathyal deposition depending on what is reworked, and what is in place.

AGE: Late Triassic to Early Jurassic (F-18 to F-19)

ENVIRONMENT: Middle Neritic to Bathyal

RE: Husky/USGS - Walakpa #1, North Slope, Alaska

3360 C-11-3620'

Astacolus connudatus, Nodosaria shublikensis, N. larina, Vaginulinopsis acrulus, Frondicularia acmaea, Lingulina borealis, L. alaskensis, Pseudoglandulina simpsonensis, and Monotis/Halobia fragments occur throughout these beds. This association indicates a Triassic (F-19) age for these strata. These faunas appear to represent open marine middle neritic conditions.

AGE: Triassic (F-19)

ENVIRONMENT: Middle Neritic (Open Marine)

3620-3650'

This interval is picked on the basis of a lithologic change to black argillitic shale. No indigenous Foraminifera were found in this interval.

AGE: Indeterminate

ENVIRONMENT: Indeterminate

Interpreted by:

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