



BioStratigraphics
Consulting Micropaleontology

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ARCO

NORTH ALEUTIAN SHELF COST NO. 1

BERING SEA, ALASKA

JOB #05820107

BIOSTRATIGRAPHIC SUMMARY

Received
DISTRICT
OIL AND GAS OFFICE

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Minerals Management Service
Alaska

Interpreted by:

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January 24, 1983

ARCO Exploration Company
P.O. Box 360
Anchorage, Alaska 99510

ATTENTION: Mr. David Hite

SUBJECT: Biostratigraphic Summary
ARCO North Aleutian Shelf COST No. 1,
Bering Sea, Alaska

The attached report summarizes all the biostrati-
graphic data from the ARCO North Aleutian Shelf COST No.
1 from the Bering Sea.

Paleontological disciplines examined include calcar-
eous nannoplankton, Foraminifera, palynology, radiolar-
ians, and siliceous microfossils. Data coverage is from
1380 feet to 17,150 feet T.D.

If you have any questions about the report content
give us a call.

Sincerely,

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BIOSTRATIGRAPHIC SUMMARY

This summary incorporates the data from the calcareous nannoplankton, foraminiferal, palynological, radiolarian, and siliceous microfossil analyses. We assigned each interval a best estimate of its age, based on the combined information from all the separate micropaleontological disciplines.

We prefer to follow, as much as possible, the age data gathered from planktonic organisms. In the case of the North Aleutian Shelf COST No. 1, however, planktonic Foraminifera and Radiolaria are essentially absent, and calcareous nannoplankton are very sporadic,† between 4740 and 10,659 feet.

Indigenous marine palynomorphs occur down to about 10,680 feet. Siliceous microfossils are quite abundant down to about 5000 feet. Below this depth they are sparse and sporadic, and often pyritized.

There are several long intervals of essentially non-marine to marginal marine sediments in the well, and the bottom 6500 feet probably represents mostly nonmarine deposition.

1380-1545'

Age.

Early Pleistocene

Remarks.

Siliceous microfossils indicate that the upper part of the well is early Pleistocene in age.

1545-2550'

Age.

Late Pliocene

Remarks.

Continuing good siliceous microfossils suggest a late Pliocene age for this interval. Foraminiferal data largely agree with this interpretation.

2550-3210'

Age.

Early Pliocene

Remarks.

The age for this part of the section is based on siliceous microfossils. Negative evidence from the foraminiferal samples tends to support this age call.

3210-3840'?

Age.

Late Miocene

Remarks.

Good siliceous data, in part supported by palynomorphs, and in part by negative evidence from the Foraminifera, indicate a late Miocene age for this part of the section.

3840?-5010'?

Age.

Oligocene To Miocene

3840?-5010'? (Continued)

Remarks.

This part of the well is very difficult to date with a great deal of precision. Siliceous microfossils suggest the late Miocene persists down to 5010 feet. The new species noted below about 4000 feet can, however, exist in older strata. The late Miocene markers noted in the ditch samples could easily be slumped from uphole.

Palynology data suggest that at 3840 feet the well is no younger than middle Miocene. There is some question, however, about the precise geologic ranges of some of the dinoflagellates present.

Foraminifera and calcareous nannoplankton do not help much in the age question, although the latter fossil group indicates a possible middle to late Oligocene age below 4740 feet.

In summary, it may be that the section between 3840 and 4740 feet is early to middle Miocene in age. The interval below 4740 feet may possibly be middle to late Oligocene.

5010?-9510'

Age.

Oligocene

Results.

Palynomorphs indicate an Oligocene age for this interval. Foraminiferal data tend to support this interpretation, and calcareous nannoplankton suggest Oligocene down to 5550 feet. Sparse siliceous microfossils suggest an Eocene to Oligocene age between 5136 and 8500 feet.

9510-9969.3'

Age.

Late Eocene To Early Oligocene

Remarks.

Dinoflagellates at 9510 feet indicate a late Eocene to early Oligocene age. This age interpretation is supported by rather meager foraminiferal assemblages.

9969.3-14,100'

Age.

Eocene

Remarks.

Eocene dinoflagellate cysts occur in this part of the well. The combination of the foraminiferal and nannoplankton data suggests the interval above 10,659 feet is late Eocene in age; the section below this depth is dated as Eocene undifferentiated.

14,100-17,150'T.D.

Age.

Eocene, Possible Early Eocene

Remarks.

This interval continues to be Eocene in age, but very sparse palynomorph data suggest the possibility that the section may be early Eocene.