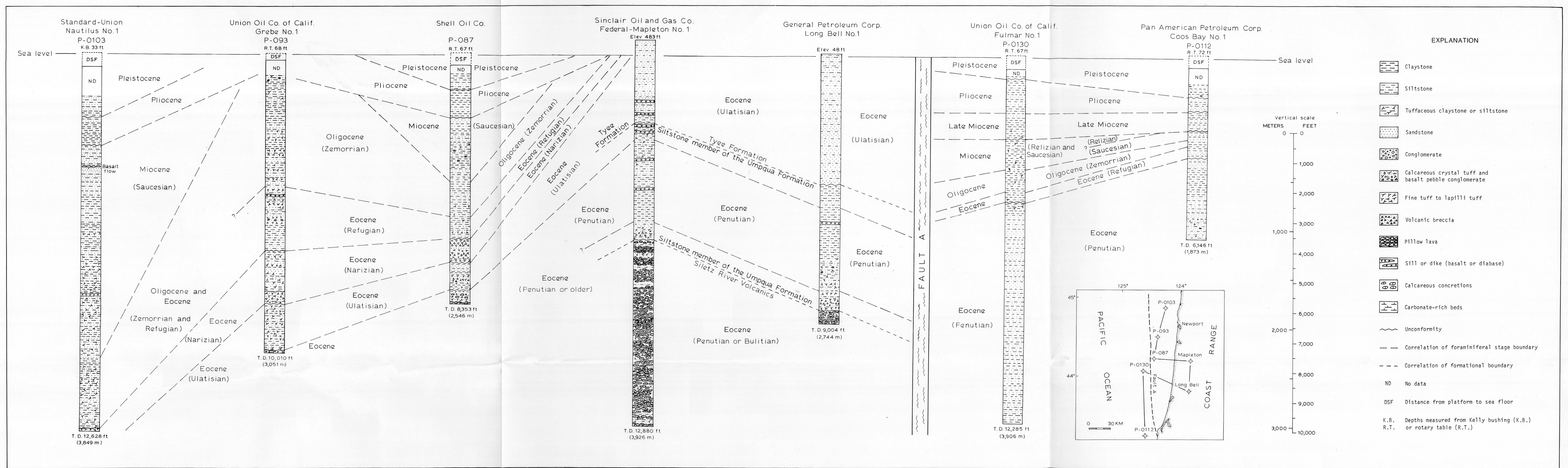

Figure 2.--Time-stratigraphic correlations of Tertiary rocks penetrated in exploratory wells drilled on the southern Oregon continental margin (modified from Snavely and others, 1981a).

Table 1.--Checklist of foraminifers from the Standard-Union Nautilus No. 1 (P-0103) well

Table 2.--Checklist of foraminifers from the Union Oil Company of California Grebe No. 1 (P-093) well

Table 3.--Checklist of foraminifers from the Shell Oil Company P-087 well

Table 4.--Checklist of foraminifers from the General Petroleum Corporation Long Bell No. 1 well

Table 5.--Checklist of foraminifers from the Union Oil Company of California Fulmar No. 1 (P-0130) well

Table 6.--Checklist of foraminifers from Pan American Petroleum Corporation, Coos Bay No. 1 (P-0112) well

Table 7.--Checklist of phytoplankton from the Shell Oil Company P-087 well

Table 8.--Checklist of phytoplankton from the Pan American Petroleum Corporation Coos Bay No. 1 (P-0112) and from the Union Oil Company of California Fulmar No. 1 (P-0130) wells

SECTIONS SHOWING BIOSTRATIGRAPHY AND CORRELATION OF TERTIARY ROCKS PENETRATED IN WELLS DRILLED ON THE SOUTHERN OREGON CONTINENTAL MARGIN

By

P. D. Snavely, Jr., H. C. Wagner, and W.W. Rau

1982

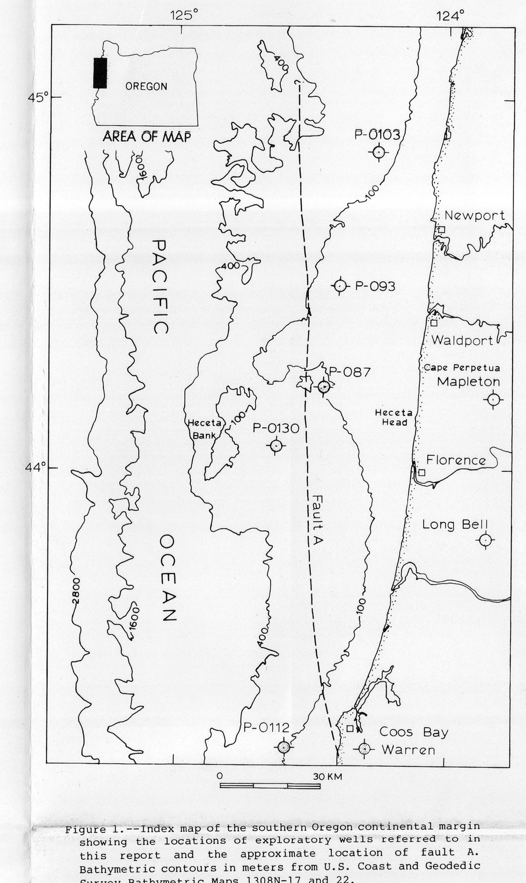

Figure 1.--Index map of the southern Oregon continental margin showing the locations of exploratory wells referred to in this report and the approximate location of fault A. Bathymetric contours in meters from U.S. Coast and Geodedic Survey Bathymetric Maps 1308N-17 and 22.

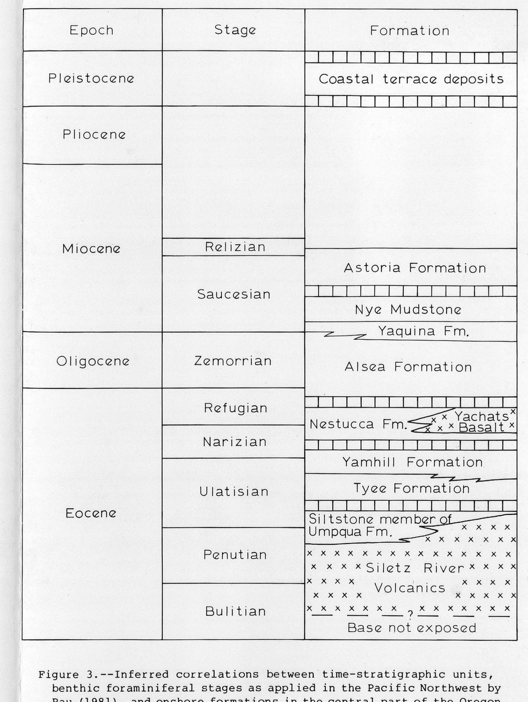

Figure 3.--Inferred correlations between time-stratigraphic units, benthic foraminiferal stages as applied in the Pacific Northwest by Rau (1981), and onshore formations in the central part of the Oregon Coast Range.

Discussion

Two test wells, the Union Fulmar No. 1 (P-0130) and Pan American Coos Bay No. 1 (P-0112) lie west of inferred transform fault A (fig. 1), which is interpreted to have had major dextral movement during middle Eocene to early late Eocene time (Snavely and others, 1980b). Therefore, pre-upper Eocene strata in these two wells cannot be correlated with strata of pre-late Eocene age penetrated in the wells drilled east of the fault (fig. 1). Consequently, on the correlation chart (fig. 2) time-stratigraphic units of this age are not correlated across fault A.

Lithologic descriptions of the time-stratigraphic units penetrated in the five offshore wells and the formations penetrated in the two onshore wells are generalized from studies of sidewall cores and ditch samples made by oil-company geologists supplemented by our studies of many of these samples. These descriptions are as follows:

OFFSHORE UNITS

PLEISTOCENE

Olive-gray massive semiconsolidated foraminiferal clayey to sandy silt with occasional interbeds of fine- to very fine grained micaceous, lithic to quartzose sand.

PLIOCENE

Brownish-gray massive foraminiferal finely micaceous siltstone and claystone with thin interbeds of gray medium- to fine-grained moderately well sorted glauconitic, quartzose, lithic sandstone.

UPPER MIOCENE

Brown massive to laminated foraminiferal, generally carbonaceous and glauconitic, tuffaceous, sandy siltstone and silty claystone; fine tuff laminae locally common; few interbeds of light-gray fine-grained glauconitic, micaceous, feldspathic, quartzose, lithic sandstone.

MIOCENE

(Saucesian Stage)

Dark-gray to olive-gray massive foraminiferal silty claystone and micaceous, sandy siltstone, and light-gray medium- to fine-grained silty sandstone; contains a few fine tuff beds; pillow-basalt flow and sill in well P-0103.

OLIGOCENE

(Zemorrian Stage)

Light-gray silty claystone and medium-gray foraminiferal, glauconitic, tuffaceous, carbonaceous siltstone. Contains a few beds of gray very fine grained quartzose, lithic sandstone and white tuff.

EOCENE

(Refugian Stage)

Light-gray to grayish-brown massive tuffaceous claystone, and medium-gray finely micaceous, tuffaceous, slightly sandy siltstone. Contains a few gray fine-grained lithic sandstone laminae or interbeds; intruded by basalt sill in well P-093.

(Narizian Stage)

Dark- to light-gray fine- to coarse-grained angular to subangular lithic wacke, with siltstone and claystone rip-up clasts. Lower part of unit contains water-laid tuff breccia, basaltic sandstone, and conglomerate. Description mainly from well P-093.

(Narizian Stage)

Varicolored lapilli tuff and tuff breccia interbedded with pebble conglomerate composed of clasts of porphyritic andesite and basalt in a matrix of coarse- to medium-grained basaltic sandstone; few thin tuffaceous claystone beds. Description mainly from well P-087.

(Ulatisian Stage)

Medium-gray to grayish-brown medium- to very fine grained calcareous, micaceous, quartzose, feldspathic, lithic sandstone and sandy siltstone, and medium-gray to dark olive-gray massive tuffaceous or calcareous silty claystone and varicolored well-indurated zeolitized silty to sandy tuff breccia.

(Ulatisian Stage)

Dark-gray or black aphanitic basalt, with dark-green tint and veined by calcite and zeolite minerals; few interbeds of tuffaceous siltstone. Description from well P-087.

(Penutian Stage)

Medium-gray coarse- to fine-grained angular to subangular carbonaceous and slightly micaceous, feldspathic, quartzose, lithic sandstone in wells P-0112 and P-0130; cemented or veined by calcite, laumontite, and quartz; contains thick interbeds of laumontite- and calcite-cemented conglomeratic sandstone with pebbles and fragments of metamorphic, volcanic, schistose, and ultramafic rocks; also has interbeds of olive-gray tuffaceous, carbonaceous, micaceous siltstone and fissile claystone.

ONSHORE UNITS

UPPER OLIGOCENE AND UPPER EOCENE

Undifferentiated intrusive igneous rocks

Includes basalt feeder dikes for Yachats Basalt of late Eocene age (Snavely and MacLeod, 1974) and granophyric gabbro and diabase sills and dikes of late Oligocene age (Snavely and Wagner, 1961).

MIDDLE EOCENE

Tyee Formation

Medium-gray, fine- to medium-grained, carbonaceous and micaceous, lithic, feldspathic or arkosic sandstone; beds 1/2 to 2 m thick (turbidites); finely micaceous siltstone in upper part of graded beds and in thin interbeds (Snavely and others, 1964).

MIDDLE AND LOWER EOCENE

Siltstone member of Umpqua Formation

Dark-gray well-indurated finely micaceous siltstone; commonly veined by calcite and intruded by basalt and diabase dikes and sills; basal member consists of a 200-m-thick water-laid varicolored vitric and crystal tuff ~~and~~ basaltic sandstone in a calcareous matrix (Diller, 1898; Hoover, 1963; equivalent to Lookingglass Formation of Baldwin (1974).

MIDDLE AND LOWER EOCENE

Siletz River Volcanics

Tholeiitic pillow lava and breccia with minor interbeds of bas~~altic~~ sedimentary rocks; dark-gray porphyritic and amygdaloidal olivine- and augite-rich basalt (Snavely and Baldwin, 1948; Snavely and others, 1968).

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