STRUCTURAL FEATURES OF CONTINENTAL SHELF, SLOPE, AND SCARP, NORTHEASTERN GULF OF MEXICO

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DISCUSSION

Figure 1 shows the location of seismic reflection lines that have been recorded by Texas A&M on the north Florida shelf and slope.

The section N-O (Fig. 2) is a part of a reflection profile begun approximately 50 miles south of Panama City, Florida (point X, Fig. 1).

This record is continuous except for a few breaks during which times the "arcer" unit was being repaired. Extrapolation through the areas where these breaks occurred shows that reflector Z is continuous from the area of the scarp to position X. A series of refraction profiles reported

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by Antoine and Harding (1965) from position X to the vicinity of the Magnolia No. 4 State Bank well, west of Panama City, suggested that reflector Z represents strata of Cretaceous age. If this is correct, then Cretaceous rocks appear to crop out on the scarp at a depth of approximately 800 fathoms.

In an effort to determine the validity of the interpretation of reflector Z as Cretaceous, a long core was taken on the scarp near the line traversed by the reflection profile. During the coring operation the ship drifted south into water with a depth of approximately 4,550 fathoms. 550 fathoms deeper than the anticipated outcrop.

The core taken at this depth contained approximately 20 feet of lutite with indurated, highly fossiliferous limestone at the bottom. The lime-

Since the final preparation of this manuscript, additional data from various oil companies and further interpretation of old refraction data indicate that reflector Z (Fig. 2) is the top of the Lower Cretaceous and that the strong continuous reflector above Z is the top of the Upper Cretaceous.

Fig. 1.—Location of seismic reflection lines, northeast Gulf of Mexico. (Dashed line indicates supposed extent of dome.)