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## Notes

# Siliciclastic foundations of Quaternary reefs in the southernmost Belize Lagoon, British Honduras

DONG RYONG CHOI } *Comparative Sedimentology Laboratory, Rosenstiel School of Marine and Atmospheric Science,*  
 ROBERT N. GINSBURG } *University of Miami, Fisher Island Station, Miami Beach, Florida 33139*

## ABSTRACT

Analyses of a closely spaced lattice of seismic profiles from the southernmost Belize Lagoon, combined with logs of nearby drill holes, reveal that the Quaternary (late Pleistocene plus Holocene) reefs and carbonate sediments are growing on siliciclastic sediments which have an alluvial and delta-like morphology. The residual relief of these coastal-plain deposits localized initial coral growth or an accumulation of calcareous skeletal material; favored sites for these were elevations such as levees and bars of remnant channels, and deltaic lobes.

## INTRODUCTION

The extent of substrate control on the initiation of Quaternary coral reefs is of considerable interest to reef specialists, to those interested in Quaternary sea level, and to carbonate sedimentologists. The Belize (British Honduras) Reef Tract (Fig. 1) is a particularly attractive area for studying the foundations of reefs for two reasons: (1) Belize has the largest, most varied, and most luxuriant array of Holocene reefs in the western Atlantic; (2) it is an area where reefs and carbonate sediments mix and interfinger with siliciclastic sediments, an unusual association of Holocene sediments.

The three works on the foundations of Holocene reefs of Belize have established that both the numerous lagoon reefs and the semicontinuous barrier reef are founded on elevations of Pleistocene limestone. Purdy (1974a, 1974b) used seismic profiles to determine the configurations of the foundations of Holocene barrier and lagoon reefs; complementing this study with core bor-

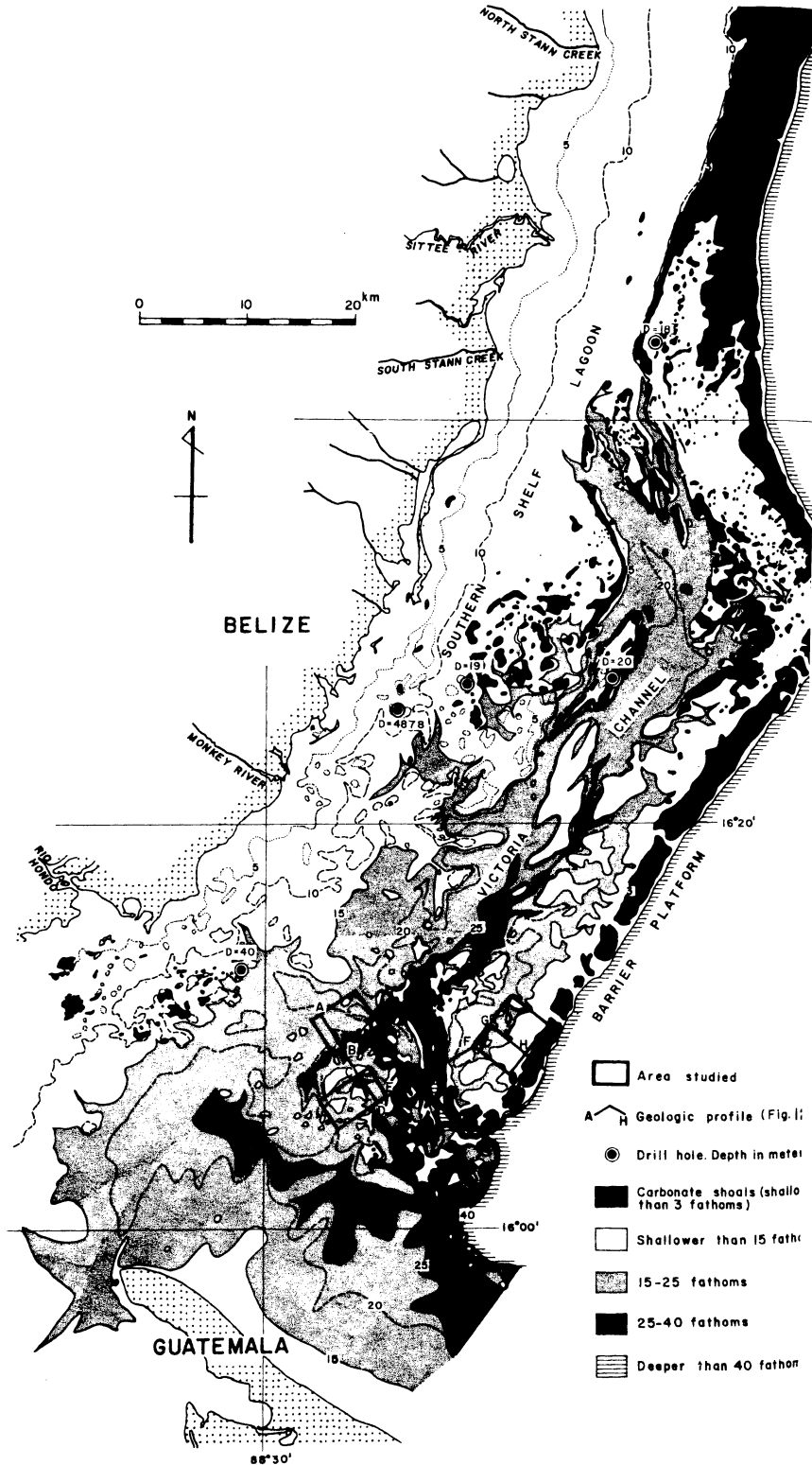


Figure 1. Index map of Southern Belize Shelf, showing study areas. Bathymetry compiled from bathymetric charts by U.S. Naval Oceanographic Office, No. 1496 (1970) and No. 1497 (1965). Locations of drill holes from Purdy (1974b).