

CRUISE REPORT

Submitted by Barbara H. Lidz

- 1. Ship Name (Parent vessel if submersible used)/submersible name:
R/V Suncoaster, Florida Institute of Oceanography**
- 2. Cruise number and leg (if any) - N/A**
- 3. Parent project - 9470-30136**
- 4. Funding amount - N/A**
- 5. Funding agency - University of South Florida (USF)**
- 6. Contract number - US Coop 14-08-0001-R0577**
- 7. Contract start and end date - 9/22/89-9/21/90**
- 8. Area of operations - Shelf margin edge off the lower Florida Keys:
approximately 525 km of seismic profiles, 81 km of 300-m
sidescan, and 22 km of 600-m sidescan sonar profiles were
acquired, and 31 shipek surface sediment samples were taken
along 4 transects. These data supplement the 500 km of high-
resolution seismic profiles obtained in the same area in July 1989.**
- 9. Dates and ports - 8/1/90 port of Key West, Florida
Start and end of cruise - 7/28/90-8/4/90 embarked from St.
Petersburg, Florida**
- 10. Chief scientist - Dr. Albert C. Hine, USF**
- 11. Names and affiliations of scientific party; ship's captain -
Captain Ivan Girard
Albert C. Hine, USF
Stanley Locker, USF
Barbara H. Lidz, USGS
Eugene A. Shinn, USGS
8 USF students**
- 12. Brief statement of purpose of cruise
Scientific objectives were to determine:
• if there are stratigraphic sequences seaward of the Florida Keys
reef tract that would indicate the occurrence of previous**

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- (Pleistocene) sea-level stands (preliminary perusal of data suggest there are);
- if this bank margin has features similar to other windward carbonate margins of the Bahamas, i.e., is there offbank/ downslope sand export opposite a well-developed section of the shallow reef;
 - if there are relatively sediment-starved sections along the upper slope where gaps occur in the shallow reef;
 - if there is a sedimentologic response along the upper slope to gaps in the Florida Key island tract;
 - the dominant sediment type and rate of sediment accumulation along the upper slope;
 - the existence of submarine cementation along the upper slope in response to activity of the Florida current;
 - the extent of downslope sediment movement by mass transfer mechanisms or by sediment gravity flows;
 - the existence of gullies/small canyons within the upper 200 m of water depth ;
 - the size, morphology, and extent of multiple, seaward reef tracts.

Data are currently being analyzed.

13. Navigation - Loran C positioning.

14. Scientific equipment used

Sidescan sonar system, EG&G Model 260

ORE Geopulse system (USF and USGS)

EG&G 1kj sparker/boomer (USF and USGS)

Recording fathometer

Piston corer

Shipek bottom grab sampler

Phantom ROV and small dredge on board were not deployed