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CRUISE REPORT

Vessel: R/V ASTERIAS

Cruise: AST 83-04

Dates: June 21-July 2, 1983

Area of Operations: Cape May, New Jersey - Northern Delmarva Peninsula

Personnel: Arthur D. Colburn, Jr. (WHOI), Captain
Andrew Grosz (USGS), Geologist
John C. Hathaway (USGS), Chief Scientist
Greg Miller (USGS), Technician
David Nichols (USGS), Technician

Project: Offshore-Atlantic Placers 9470-00932 funded by USGS-SIR

Purpose: To survey examples of bottom morphology off Cape May, New Jersey and using a small vibracorer and Van veen grab, sample these for possible heavy mineral accumulations in order to determine possible correlations of such accumulations with morphology and shallow stratigraphy.

Scientific equipment:

1. Uniboom
2. Sidescan sonar
3. Small (7') portable vibracorer (on loan from CERC)
4. Van-veen grab sampler

Navigational equipment:

Loran C, Northstar 6000 with TI 700 recorder
Time zone used GMT+4

R/V ASTERIAS left Woods Hole June 21 for Cape May, N.J., with Captain Colburn and Greg Miller aboard. John C. Hathaway, David Nichols, and Andrew Grosz joined the ship at Cape May on the morning of June 23, and the ship departed Cape May Coast Guard Station at 0745. The first objective of the cruise was to try out the small (7') portable vibracoring rig borrowed from the Coastal Engineering Research Center (CERC) of the U.S. Army Corps of Engineers. The rig was successful on the first try in 23' of water. Testing in deeper water established that the depth limit for the rig was about 70'. The uniboom, sidescan sonar, and the van veen grab were also tested the first

day. All worked satisfactorily except for the sidescan sonar which produced records of doubtful usefulness. On subsequent days we alternated uniboom surveys with days of sampling. Asterias returned to Cape May Harbor each evening. On June 29, Asterias remained in Cape May Harbor because of northeast winds of more than 20 knots. The cruise was completed on June 30 with a day of sampling. Navigation for the cruise was by Loran C which was recorded on cassette tapes. Tape #1 malfunctioned at an unknown point so some of the navigation data is probably absent. The paper printout was retained so the data is retrievable. All Uniboom data was recorded on analog magnetic tape as well as on paper. Asterias returned to Woods Hole with Captain Colburn and Greg Miller on July 2. John Hathaway and David Nichols drove from Cape May to Woods Hole on July 1. Andrew Grosz returned to Reston, VA via truck carrying the cores and samples obtained with him.

Tabulated information:

Days at sea:	4 days mobilization and transit 7 days surveying and sampling 1 day lost to weather
Data collected:	13 Uniboom lines <u>174</u> km 1 Sidescan sonar line <u>20</u> km 37 sampling stations occupied
Samples collected:	16 Vibracores 35 Van veen grab samples

*Called 3/5 - still working
on*