

Feb. 7 - Feb 15, 1978

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Cruise Report

1. Ship: R/V OCEANUS
2. Cruise No. OCEANUS #39 (Leg II)
3. Area of Operation: Insular Shelf of the U.S. Virgin Island and Virgin Passage
4. Date of Operation: Cruise period from 1500-2-7-78 to 1500-2-15-78
5. Personnel:

Paul C. Howland (WHOI) Master  
Charles W. Holmes - USGS, Chief Scientist  
John Schlee                   "  
John Aaron                   "  
Peter Popenoe               "  
Richard Sylwester          "  
Al Goodman                  "  
Frank Jennings             "  
Jack Kindinger             "  
Kurt Groove                 "  
Betsy Coward               "  
Donna Darlington          "

6. Purpose

The objective of this program was to obtain high resolution seismic data on the northern Virgin Island shelf to provide information for use in the sand resource investigation of the area. This cruise was made as the first step in obtaining information for the judicious selection of sites for subsequent work.

7. Equipment - 1. Del Norte minisparker  
                  2. EDO 2.5 kh subbottom profiler  
                  3. Magnetometer
8. Navigation - Del Norte trisponder and/or radar. Radar was used when the Del Norte system was inoperable.
9. Data Acquired: Approximately 600 km of minisparker, 400 km of 2.5 high resolution data, 600 km of magnetic data (total field).

10. Comments:

a. Minisparker - the array was towed on the port side of the ship with the hydrophone 300' astern. The majority of the time the

separation was approximately 5 meters. The pulse rep rate was .5 sec with a 0.5 sweep analog. In addition, the data recorded on tape through the automatic signal processor, filtered at 30-1500 hertz.

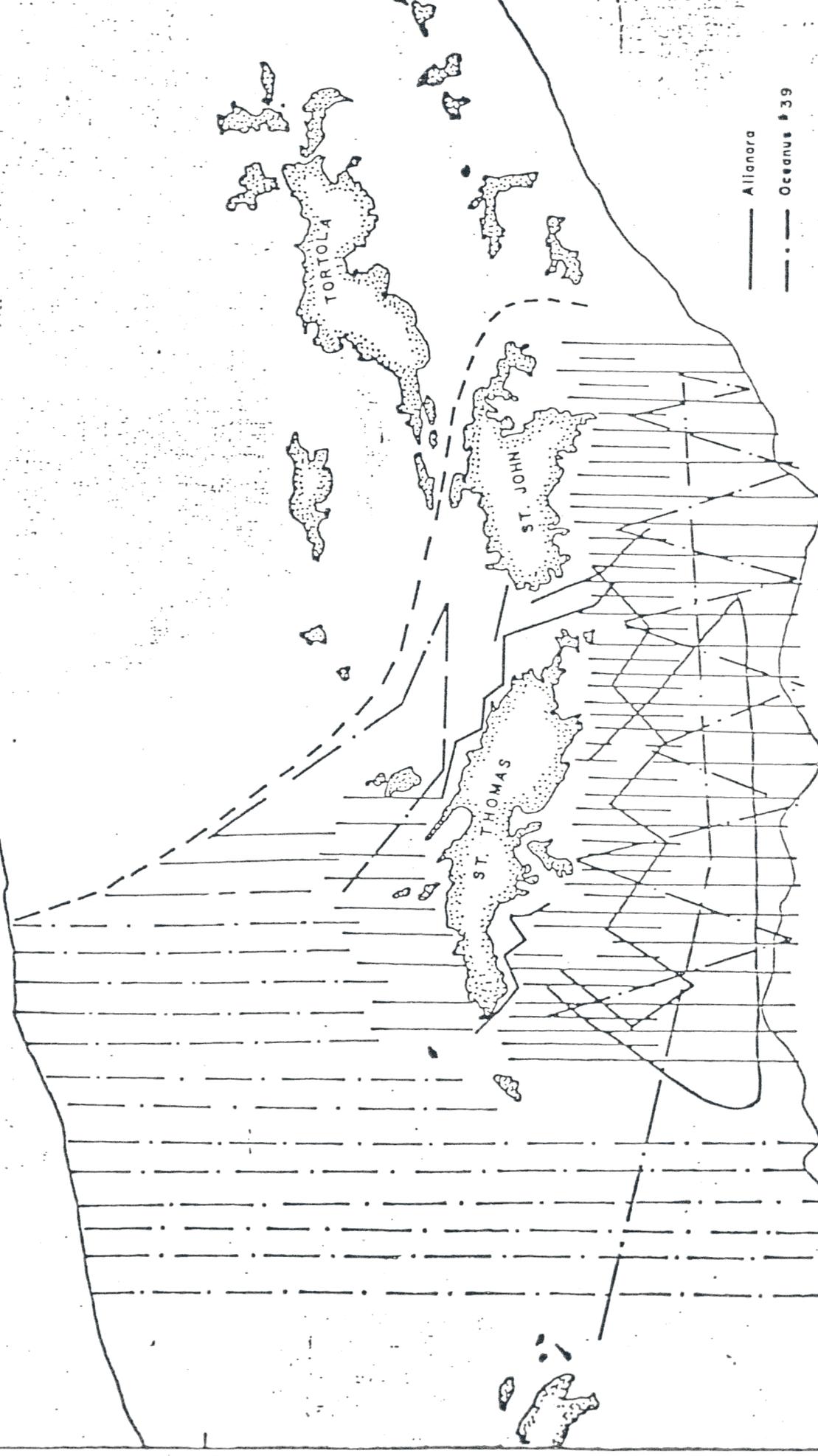
- b. 2.5 kHz system was deployed only when the seas permitted. Thus, only 400 km of record were obtained. Most of these records are fair to poor due to unfavorable sea conditions. However, the data obtained on the 13th of Feb. on the south side of St. Thomas was excellent.
- c. Navigation - due to misinformation and poorly written manual, the navigation system was originally set up wrong. In order not to delay the ship operation longer, radar navigation was used in the Virgin passage. Because of this, these are errors (.25 miles) at the ends of the lines due to distance and position of navigation targets. The Del Norte system was put in operation on the 13th and was operable with the exception of 3 hours until the end of the sea operation 1000-2-15-78.

11. Tabulated Information:

- a. Number of days at sea - 8
- b. Number of work days - 4
- c. Total ship track - 2840 km
- d. Km of continuous data - 600 km minisparker  
- 400 km 2.5 high resolution  
- 600 km magnetic
- e. No. of stations - NA
- f. Type of samples - NA

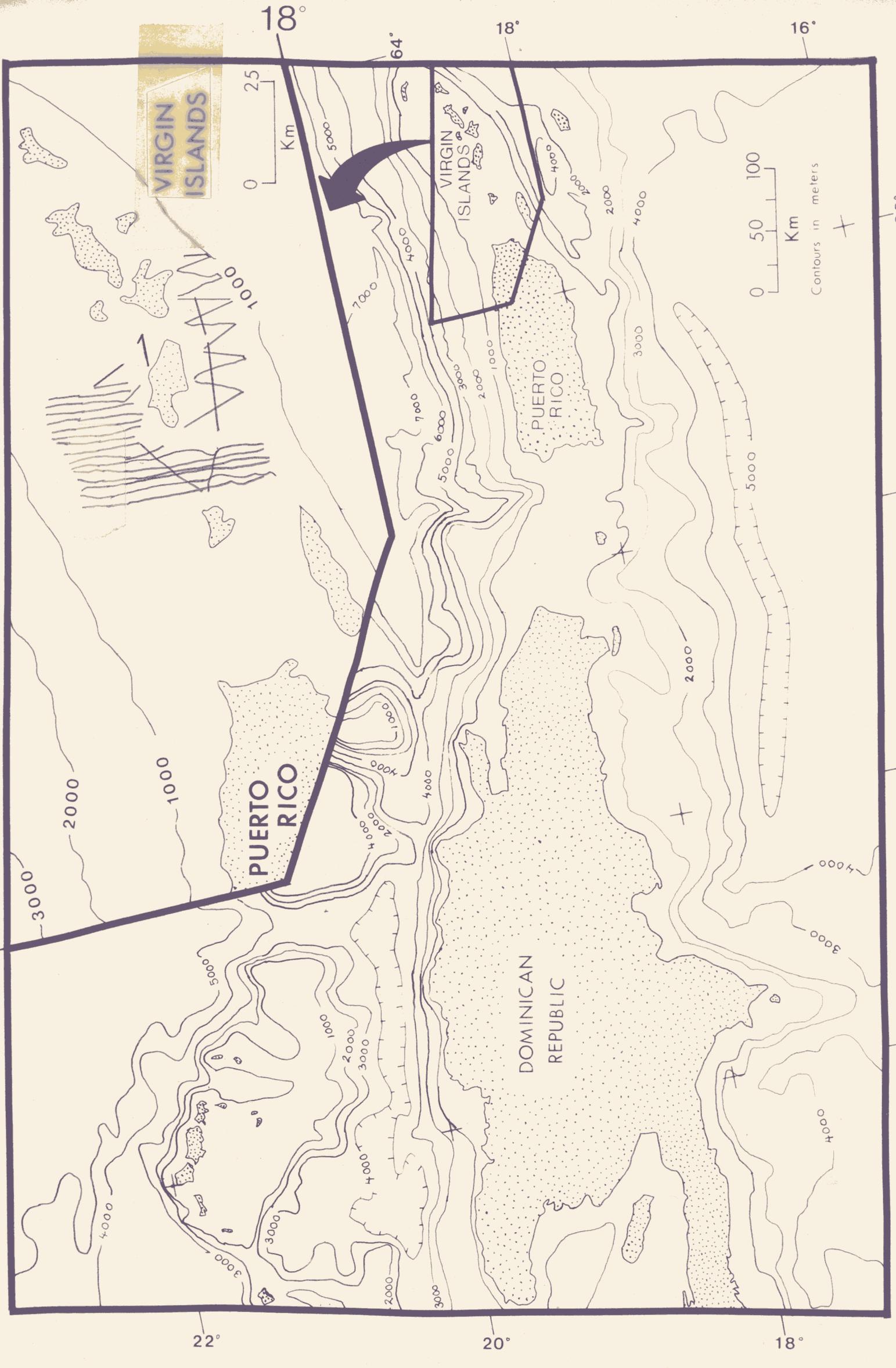
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VIRGIN ISLANDS

VIRGIN ISLANDS

DOMINICAN REPUBLIC

PUERTO RICO

PUERTO RICO

0 50 100  
Km  
Contours in meters

22°

20°

18°

70°

68°

66°

16°

18°

64°

18°