

79008

CRUISE REPORT

R/V NEECHO

CRUISE NE-3-79

POTOMAC RIVER

MAY 14-30, 1979

## STATISTICS AND OBJECTIVES

1. Ship name - R/V NEECHO
2. Cruise number - NE-3-79
3. Parent project - Small boat surveys 9450-02421
4. Area of operations - Potomac River
5. Cruise period - Begin: May 14, 1979; End: May 30, 1979  
 Ports: Kopel's Marina Inc., Coltons Point, MD (May 16, 28)  
 Cobb Island Marina, Inc., Cobb Island, MD (May 17-19)  
 Clayton Marina Inc., Ridge, MD (May 20-22)  
 Aqualand Marina, LaPlata, MD (May 23-24)  
 Quantico Marine Corps Dock, Quantico, VA (May 25)  
 Old Town Yacht Basin, Alexandria, VA (May 26-27)
6. Chief Scientist - Harley J. Knebel
7. Scientific party -
 

Jerry Glenn	U.S.G.S. WRD Denver	Scientist
Sally Wood	U.S.G.S. Woods Hole	Cruise Curator
Frank Jennings	" " "	Ops. Manager
Paul Loud	" " "	Boat Captain
Ken Parolski	" " "	Electronics Tech.

  
 Visitors -
 

Terry Edgar	U.S.G.S. Reston
Bob Rowland	" "
Jack Reed	" "
Doug Black	" "
Jim Bennett	" "
Wayne Webb	" "
Ward Hickman	" "
Wayne Newell	" "
Andy Miller	U.S.G.S. Johns Hopkins University
Charles Richmond	" " " "
8. Purpose of cruise - The objectives of the acoustic survey of the Potomac River were to define: (1) areas of sediment accumulation; (2) areas of sediment erosion or scour; (3) the thickness of Holocene sediments; (4) the internal structure of the near-surface sediments; (5) the types of bottom topography; and (6) the general geologic history and environmental framework of the estuary.
9. Navigation techniques - Sightings on buoys, landmarks and other navigational aids, Radar fixes, LORAN-C.
10. Scientific equipment - Side-scan sonar
  - 7 kHz system (hull mounted)
  - 2.5 kHz system (batfish)
  - Airgun system (1 m<sup>3</sup>)

11. Tabulated information - Number of days at sea = 10  
Line km of side-scan records = 481  
Line km of 7 kHz records = 481  
Line km of airgun records = 481  
Line km of 2.5 kHz records = 246
12. Track charts - Charts showing the tracklines within the Potomac River are attached (Figs. 1-3).
13. Comments and recommendations - The acoustic study of the Potomac River was quite successful. The boat and equipment functioned quite well, and we were able to gather all the data that we set out to get. The success, in large part, can be attributed to three factors: (1) a very thorough site survey had been performed by Ken Parolski and Paul Loud prior to the survey (during March); (2) the operations group (Frank Jennings, Paul Loud, Ken Parolski) was well prepared, cooperative, and enthusiastic concerning the data collection; and (3) shore-based support and navigational information was provided largely through the efforts of Jerry Glenn. This was the first cruise of the R/V NEECHO where the boat was transported by a commercial trucking company. This method of transportation worked quite well and is recommended for future cruises. Finally, the boat was launched and retrieved by means of a Travelift. This means of deployment is economical in terms of time and money; it also is highly recommended for future operations.

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FIG. 1

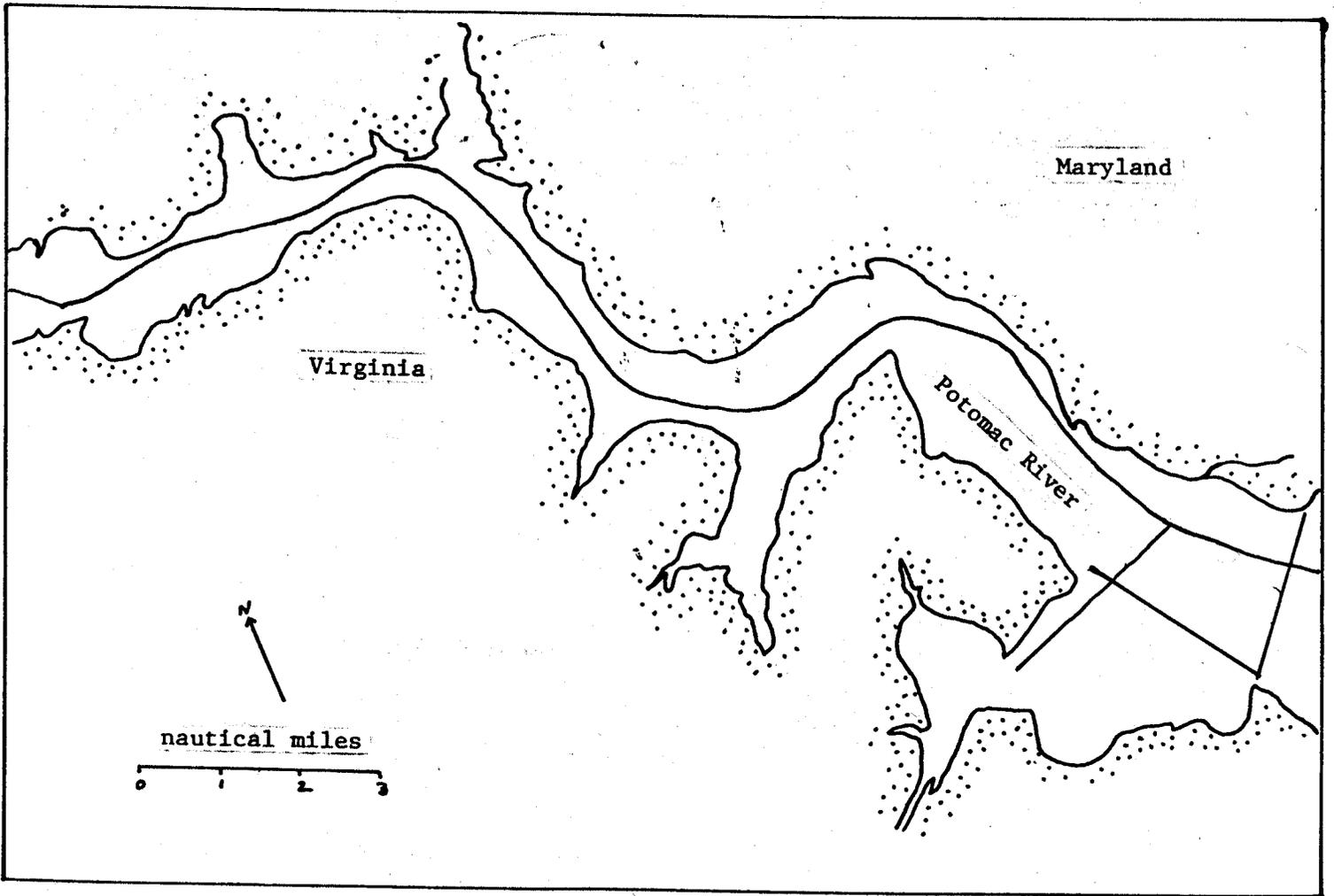
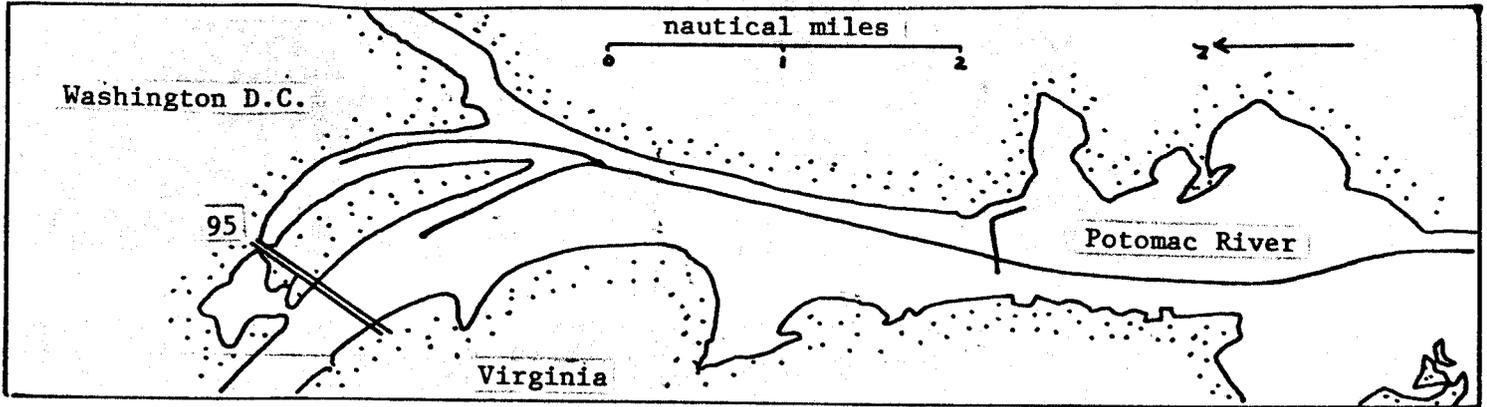


FIG. 2

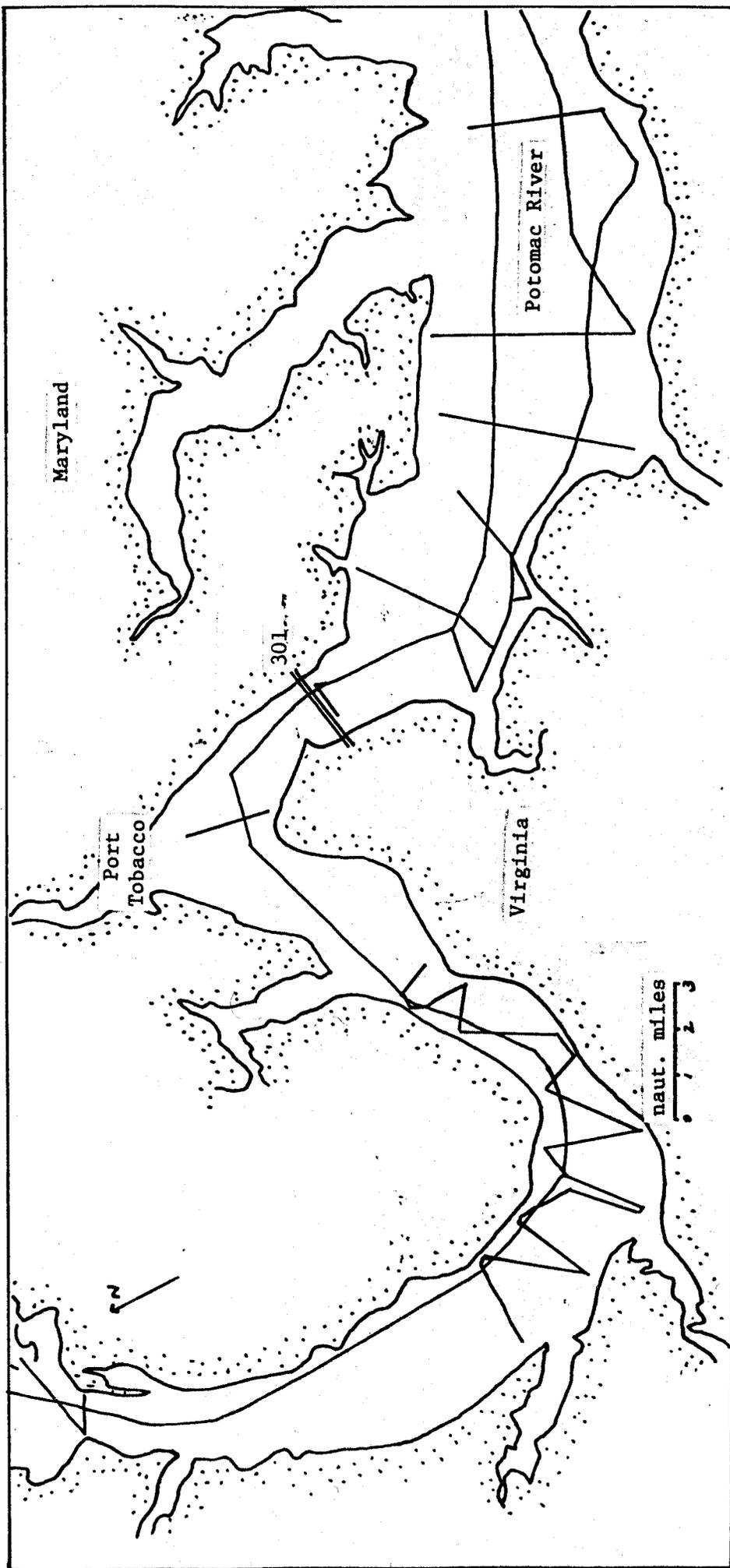


FIG. 3

