

J. Robb.

Cruise Report
(U.S.G.S. - State of Texas Coop.)

75030

- 1. Ship: R/V H. J. W. FAY
- 2. Cruise No.: 008
- 3. Area of Operation: South Texas inner continental shelf and State of Texas waters from Matagorda Bay to the Rio Grande.
- 4. Dates of Operation: Cruise period from 1500Z 12/1/75 to 2000Z 12/13/75
- 5. Personnel:

James P. Olander	(Tracor) Master
Charles W. Holmes	(U.S.G.S.) Chief Scientist
Michael Dorsey	(U.S.G.S.)
Ronald Miller	(U.S.G.S.)
Robert Vitaglione	(U.S.G.S.)
Cary Pyle	(U.S.G.S.)
Scotty Heald	(U.S.G.S.)
Felicity Ohrm	(U.S.G.S.)
Robert Morton	(U.T.)
Richard Anderson	(U.T.)
David Botts	(Lorac)
Sonny Andrus	(Lorac)

6. Purpose:

The objective of this program is to apply the "Land-use" concept to the sea floor of the Texas inner shelf and to establish an integrated base of geologic data as background for the investigation for shoreline engineering projects, power plant sitings, and port sitings. This cruise was made as the first step in obtaining this information and to provide information needed to judiciously select sites for subsequent sampling.

- 7. Equipment: The records were obtained by both an EDO Western 3.5-7.0 kHz system and a Del Norte Minisparker.
- 8. Navigation: Precision navigation was provided by Lorac Services, Inc. Time for navigation was in the 90° meridian.
- 9. Data Acquired: Approximately 3340 km of minisparker and 1185 km 3.5 records were obtained.

10. Comments:

a). Minisparker - The array was towed on the starboard side of the ship; the hydrophone 150' astern of the sparker tip. The pulse

FAY 008

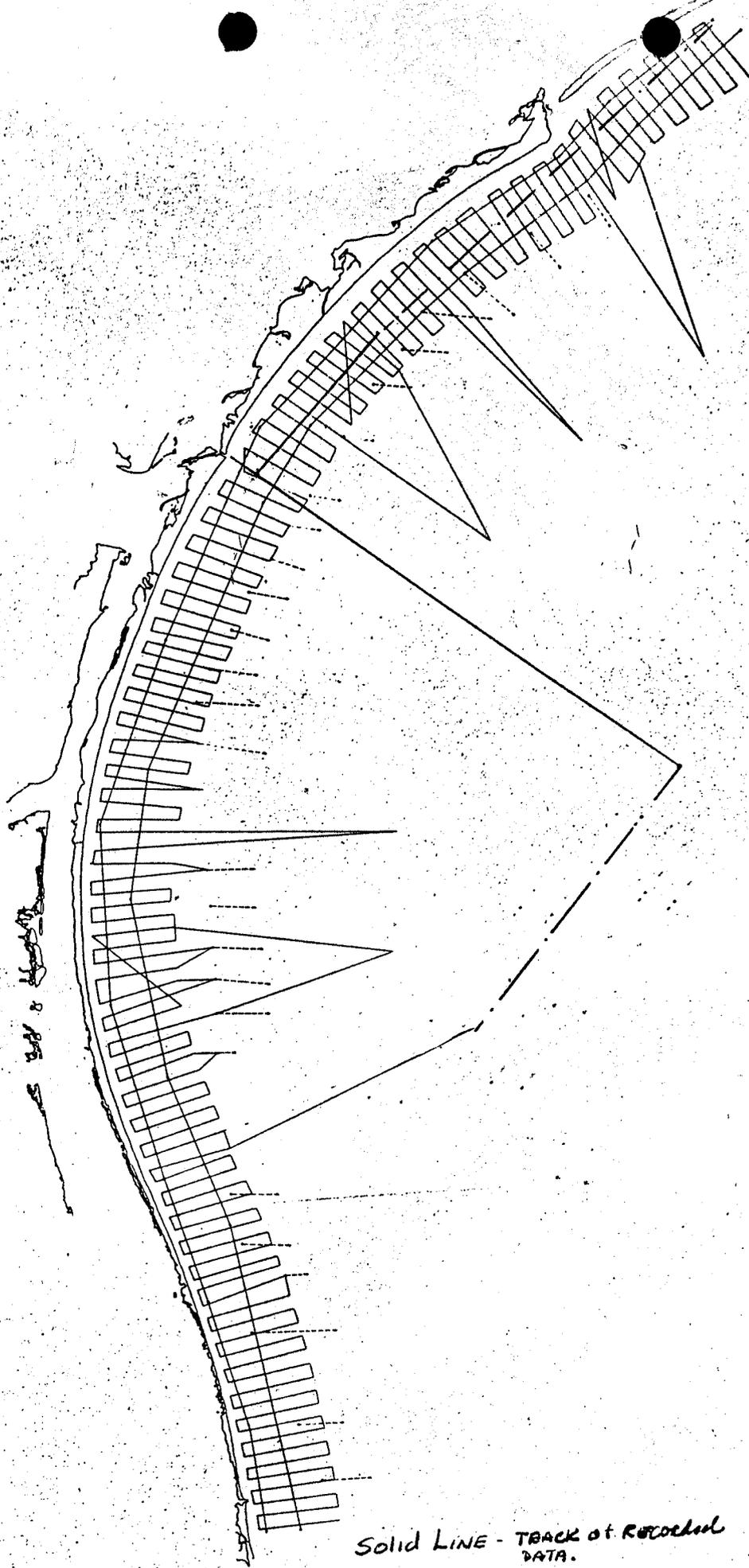
generator was fired at a 1.0 second rep. rate. The signal from the hydrophone was split and placed through two signal processors; one to a recorder which was recording at a 1.0 second sweep rate, the other at a 0.5 second sweep rate. This configuration was allowed to vary the filters and gains for both systems independently to optimize the resolution.

- b) 3.5-7.0 kHz System - The 3.5 kHz range was used exclusively. With the outgoing pulse 0.2 ms long, the signal was recorded at 0.5 second. The time variable gain was used exclusively. The transducer, enclosed in the "batfish", was towed astern below the wash.
- c) Comments: The records obtained were of good to excellent quality. Preliminary examination of the records clearly shows that the study area can be sectioned into 3 areas. The southern area extends south of Corpus Christi Bay to the Rio Grande. Characteristic of this region is the outcropping of the reflectors mapped by Berryhill et al. offshore. The records also show that the topographic ridges that extend oblique to the shore in the Rio Grande region are fault scarps and not distributary ridges as defined by Resnak in the A.P.I. report. The central area from south of Corpus Christi to approximately the latitude of Aransas Bay is very complex with numerous channels. The region to the north is dominated by the Colorado-Brazos river deltaic deposits. Future study of the data obtained will allow for further refinement of these regions and go a long way in meeting the objectives of this program.

11. Tabulated Information:

a) Number of days at sea	13
b) Number of working days	13
c) Total ship track in km	3500 km
d) Km of continuous data	3340 km minisparker 1.0 3000 km minisparker 0.5* 1185 km 3.5
e) Total no. of stations	NA
f) Type of each sample	NA

*Minisparker 1.0 and 0.5 recorded simultaneously.



Solid LINE - TRACK of RECORDED
DATA.