

1 June 1989

MEMORANDUM FOR RECORD

SUBJECT: Fourth Management and Technical Committees Meeting, National Demonstration Project Feeder and Stable Berms, Mobile Harbor, Alabama

1. PURPOSE: The fourth meeting of the Berm Management and Technical Committees was held on 13 and 14 March 1989 at SAM, Mobile, Alabama. An agenda for the meeting is shown on enclosure 1 and attendees are listed on enclosure 2.

2. FEEDER BERM: The MFR for the third Committee Meeting was approved as written. Mr. Ed Hands then briefed the group on the status of feeder berm activities and provided hand-out information contained as enclosure 3. Results of the Sept/Oct/Dec surveys, which encompassed three significant storm events, continued to display the gradual loss of peaks and retreat of the southern end of the berm northward. Overall, for the two-year monitoring period the southern end of the berm has migrated approximately 300 feet northward and the north end has moved slightly northeast toward shore. This is consistent with the wave pattern which is approximately perpendicular to the south end of the berm and parallel to the north end. The berm is also reacting to the wave action with erosion on the Gulf side and accretion on the landside.

In other aspects of the feeder berm monitoring, Mr. Hands noted that the major concentration of returned sea-bed drifter cards continues to be from the eastern tip of Dauphin Island. He also talked about recovery of drifters in Mobile Bay east of the ship channel and on Mobile Point. He theorized that drifters are entering the bay on flood tides. Some of the drifters cross the channel into the eastern part of the bay and are retrieved by shrimpers, washed ashore, or flushed out on a later tide. Most of the sea-bed drifters found on Mobile Point and farther east, he believes followed this route. Mr. Bradley posed an alternate theory that some of the drifters may be going around the channel south of the bay entrance and flowing with the tides into the eastern part of Mobile Bay. Mr. Hands will check this theory by comparing the dates of retrieval and drifter card numbers for Mobile Point, the eastern coastline, and the eastern section of the bay. This may give us a little more insight on drifter patterns.


Prior to the meeting, CERC distributed copies of the Draft First Year Monitoring Report for review by the committees. Mr. McClellan made the general comment that the Sand/Pelican Island complex appeared to be misnamed. Mr. Hands will check on the appropriate title. It was suggested that Mr. Bill Murden be acknowledged in the report and furnished a courtesy copy. CERC agreed and indicated it will take approximately six months to publish the document.

Mr. Hands also submitted a proposal for one additional year of feeder berm monitoring as outlined on enclosure 4. CERC is particularly interested in continued long-term research in the area since the gradual movement provides a good opportunity to better analyze the transport processes. As such, CERC is willing to fund a major portion of the additional year of monitoring under the National Dredging Research Program. They requested SAM fund the bathymetric surveys and aerial photography. This would include 5 surveys taken quarterly to begin in April 1989 and coincide with surveys for the stable berm to save contractor mobilization costs. Sediment samples would be taken on only 3 of the 5 surveys for additional cost savings. Cost estimates provided by EN subsequent to the meeting show that the additional survey and photography work would cost SAM about \$140,000 spread over FY 89 (\$55,000) and FY 90 (\$85,000). Based upon the cost and Mobile District needs, it was decided that these two work items would be funded with O&M money. Jim Kelly, SAD, concurred with the expenditure. The next feeder berm survey will be conducted in April. SAM will try to have a tide gage reinstalled on the shell well for this survey. (An Indemnity Agreement with Shell Offshore Inc. for equipment installation has been signed and the equipment will be installed before the August survey).

3. Stable Berm: Mr. Imsand led the discussion on the stable berm. He had a draft copy of the 2nd (Dec) monitoring survey. Comparison of the bathymetry with the first post-disposal survey indicates there has been a substantial reduction in the height of the stable berm. Side-scan sonar surveys also show a reduced aerial coverage of the berm. It is uncertain if the berm is winnowing away, settling, and/or mixing with bottom sediments. Further analysis of all the monitoring data and future surveys will answer these questions. There has been some evidence of improved fishery at the berm. SAM is transferring money to NMFS to provide for fishery studies. Also, NMFS and WES will evaluate crustaceans acquired by NMFS during the fishery trawling. Mr. Joe Wilson suggested that the fishery information be coordinated with NMFS in Wash, D.C.

4. Conclusions: The next berm committee meeting is targeted for July in Vicksburg, Mississippi. Confirmation of the meeting location was contingent upon the NMFS being able to attend. Mr. Imsand has contacted the NMFS and they have agreed to attend the meeting and give a status report. Also, a briefing for Mr. Elmore on the status of berm monitoring will be a topic of discussion at the next berm committee meeting. Mr. Langan reminded everyone that he is the District POC and any published information or presentations must be provided in advance for his review.

4 Encls


Paul Bradley
Civil Engineer, P.E.
CESAM-OP-OM

AGENDA

MANAGEMENT AND TECHNICAL COMMITTEES MEETING
FEEDER AND STABLE BERMS
MOBILE HARBOR, ALABAMA

13-14 MARCH 1989

- | | | |
|------|--------------------------------------|----------|
| I. | OPENING | LANGAN |
| II. | FEEDER BERM | |
| | A. Approval of MFR for Third Meeting | All |
| | B. Results of Sept/Oct./Dec. Surveys | CERC |
| | C. Feeder Berm First Report | All |
| | D. Future Monitoring Recommendations | CERC |
| | E. Future Monitoring | All |
| III. | STABLE BERM | |
| | A. Status of Bay Dredging | SAM |
| | B. Test Section Monitoring | CERC/SAM |
| IV. | GENERAL | |
| | A. Publications/Presentations | CERC/SAM |
| | B. Briefings | CECW-D |

ENCLOSURE 1

ATTENDANCE

FOURTH BERM COMMITTEE MEETING

Hugh McClellan	CESAMPD-E
Dewayne Imsand	CESAMPD-EC
Charles Calhoun	CEWES-CV-A
Tom Richardson	CEWES-CD
Joan Pope	CEWES-CD-S
Ed Hands	CEWES-CD-S
Neil McLellan	CEWES-CD-S
Dave Mathis	CECW-DE
Joe Wilson	CECW-DE
Jim Kelly	CESAD-CO-O
Paul Bradley	CESAMOP-OM
Pat Langan	CESAMOP-OM
Jim Reaves	CESAMEN-PS

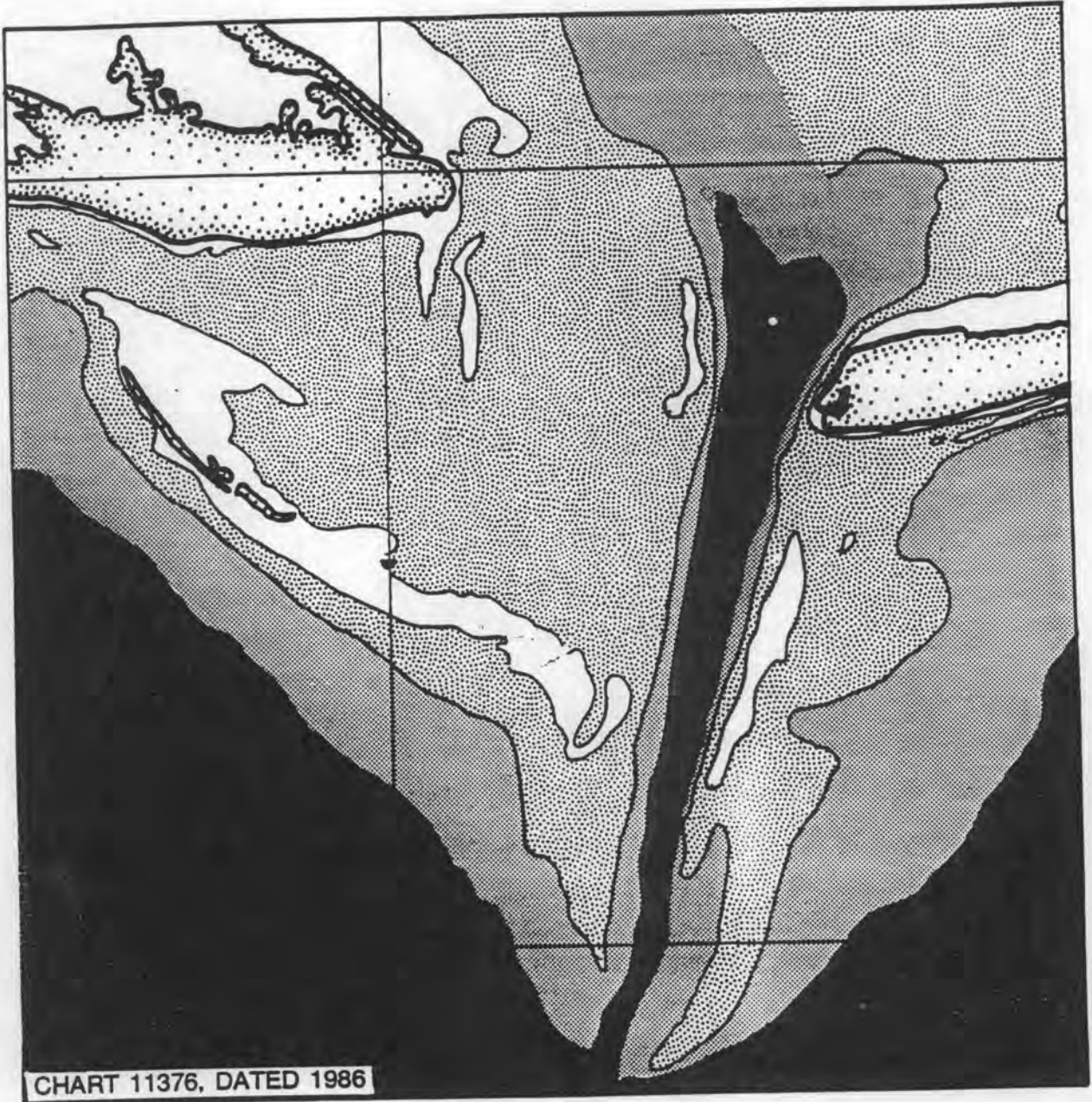
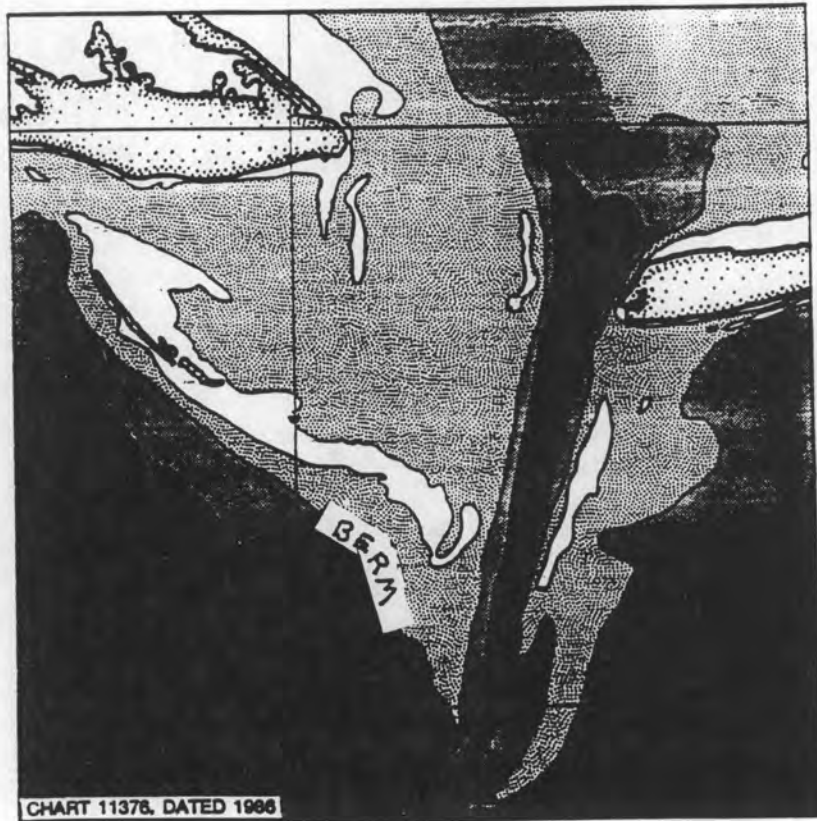
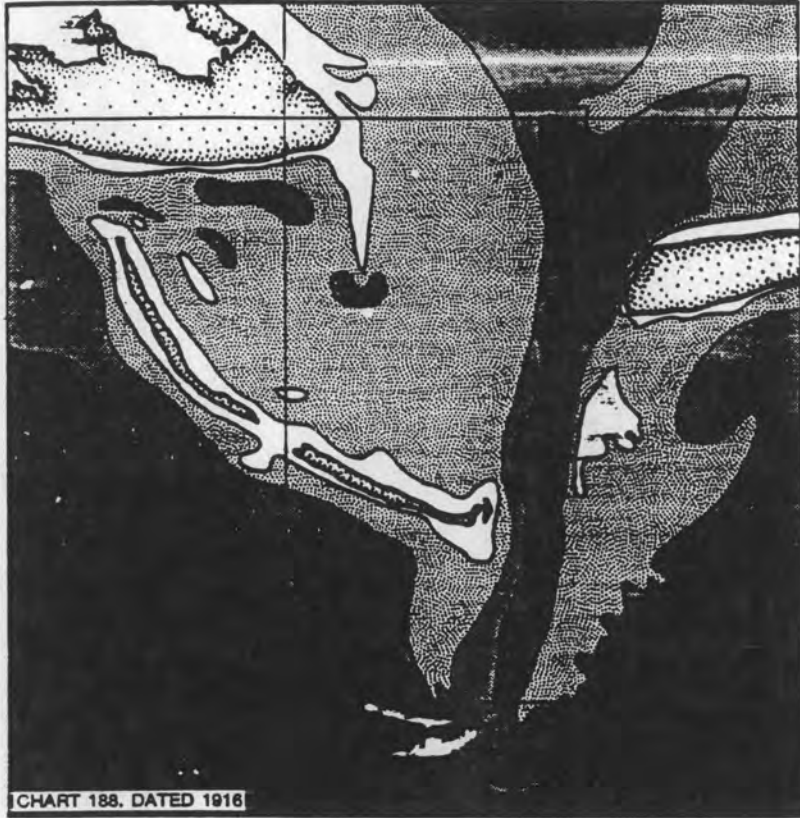
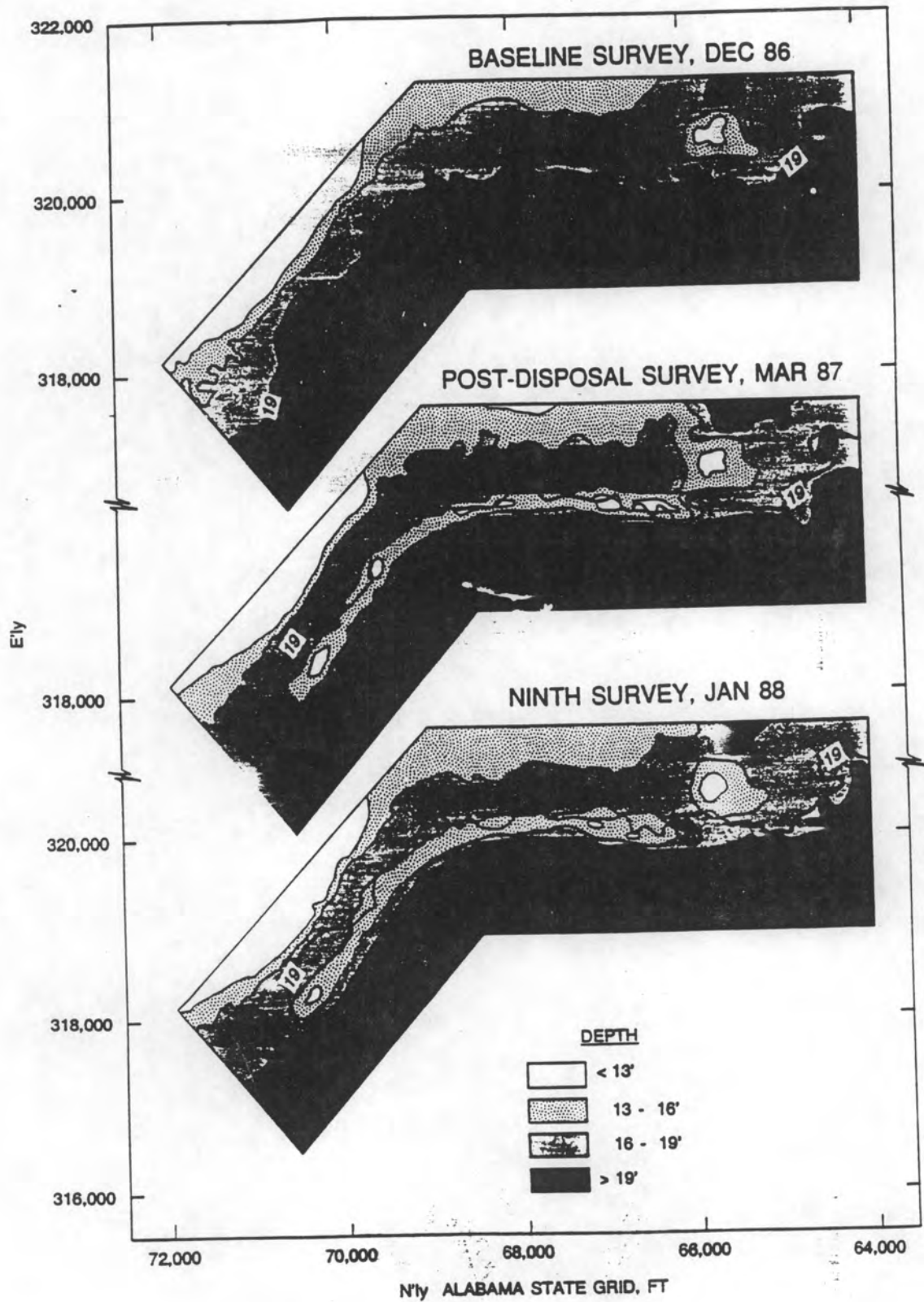
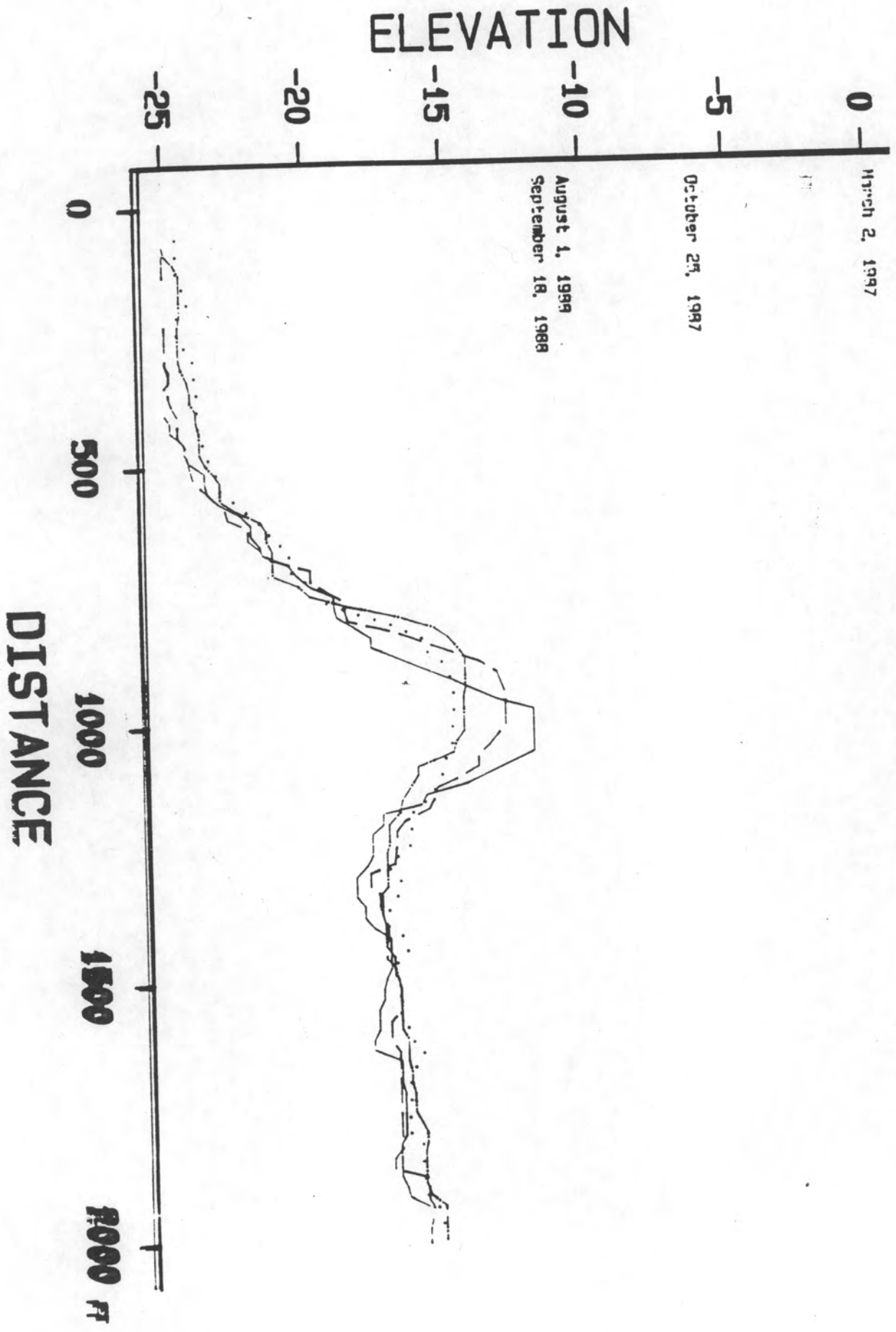


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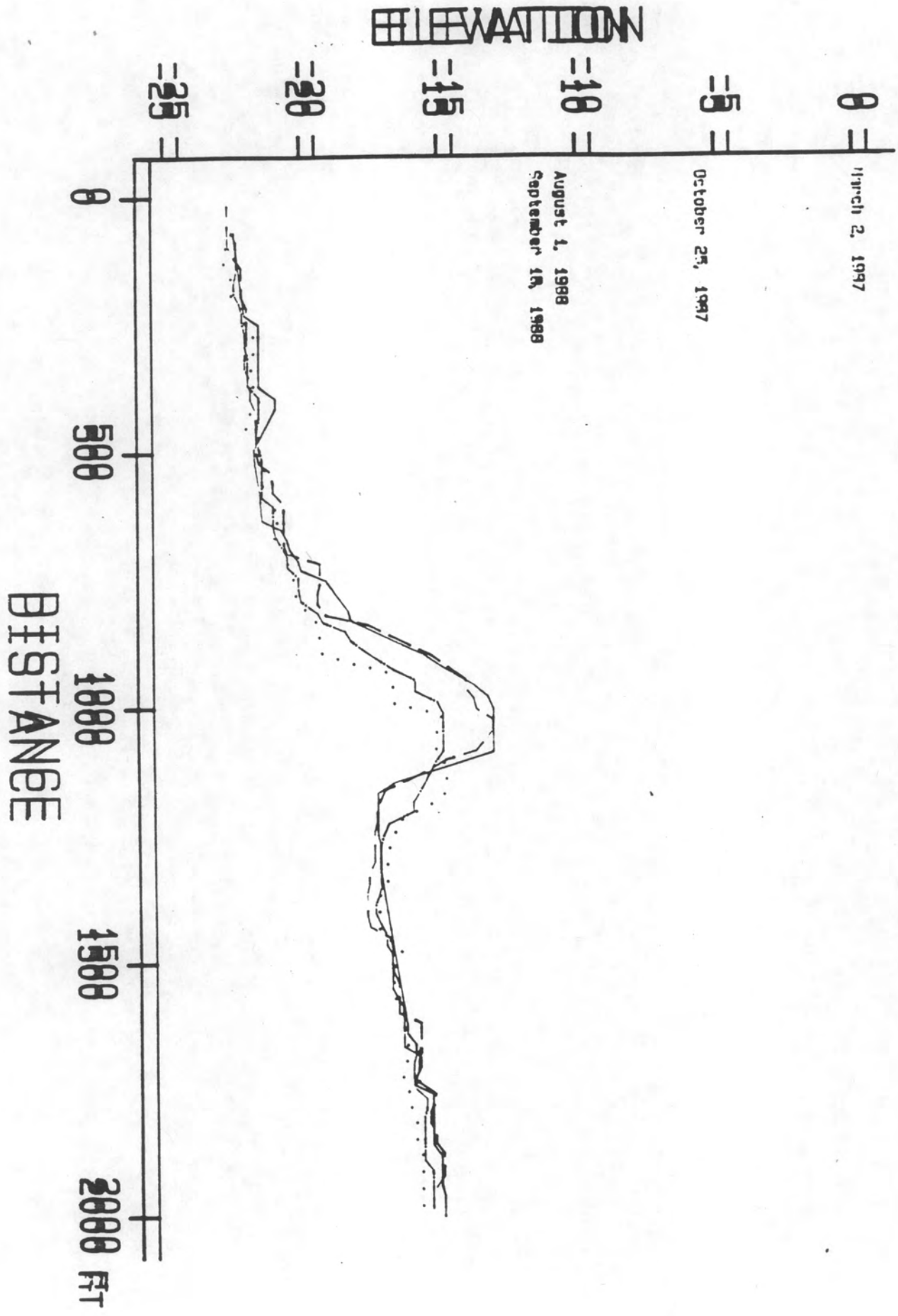




200 FEET SOUTH OF SOUTHERN SURVEY LINE, SURVEY 12



CENTRE SAMPLE LINE; SURVEY 12

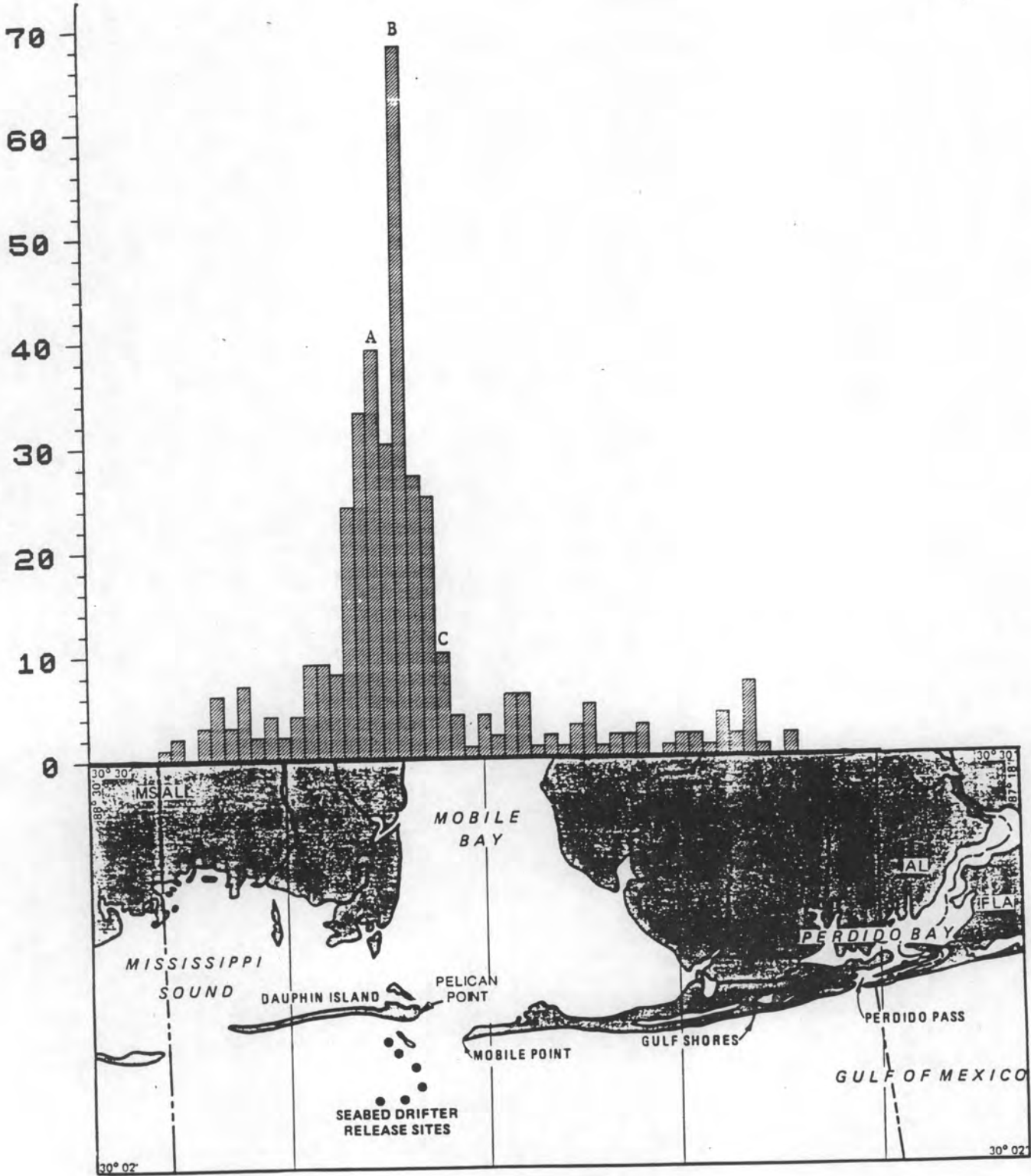


SAND ISLAND DISPOSAL BAR
DISPOSAL, STORM, AND SOUNDING SCHEDULE

	<u>EVENT</u>	<u>DATE</u>	<u>TIDE</u>
			<u>GAGE</u>
			<u>LOCA</u>
	Baseline 0 survey	2 Dec 86 to 5 Dec 86	Dauphin I.
	..Disposal Operations..	12 Jan 87 to 23 Feb 87	Dauphin I.
0	Post-disposal 1 survey	2 Mar 87 to 5 Mar 87	Dauphin I.
	Post-disposal 2 survey	16 Mar 87 to 19 Mar 87	Dauphin I.
	Post-disposal 3 survey	1 Apr 87 to 2 Apr 87	Dauphin I.
	Post-disposal 4 survey	16 Apr 87 to 17 Apr 87	Dauphin I.
	Post-disposal 5 survey	6 May 87 to 9 May 87	Dauphin I.
	Post-disposal 6 survey	19 Aug 87 to 22 Aug 87	Dauphin I.
8	Post-disposal 7 survey	25 Oct 87 to 25 Oct 87	Dauphin I.
	Post-disposal 8 survey	1 Dec 87 to 2 Dec 87	Dauphin I.
	Post-disposal 9 survey	4 Jan 88 to 8 Jan 88	Dauphin I.
	Post-disposal 10 survey	15 Apr 88 to 16 Apr 88	Dauphin I.
	Post-disposal 11 survey	16 Jun 88 to 17 Jun 88	Shell well
17	Post-disposal 12 survey	1 Aug 88 to 7 Aug 88	Exxon well
	HURRICANE BERYL	9 Aug 88	
	complete 12 survey	22 Aug 88 to 23 Aug 88	Exxon well
	HURRICANE FLORENCE	9 Sep 88	
	HURRICANE GILBERT	15 Sep 88	
19	Post-disposal 13 survey	18 Sep 88 to 21 Sep 88	Dauphin I.
20	Post-disposal 14 survey	18 Oct 88 to 23 Oct 88	Dauphin I.
	Post-disposal 15 survey	14 Dec 88 to 20 Jan 89	Dauphin I.
			and Exxon well

Surveys 0 -9 done by Browning; 10-15 done by Chance, Inc.

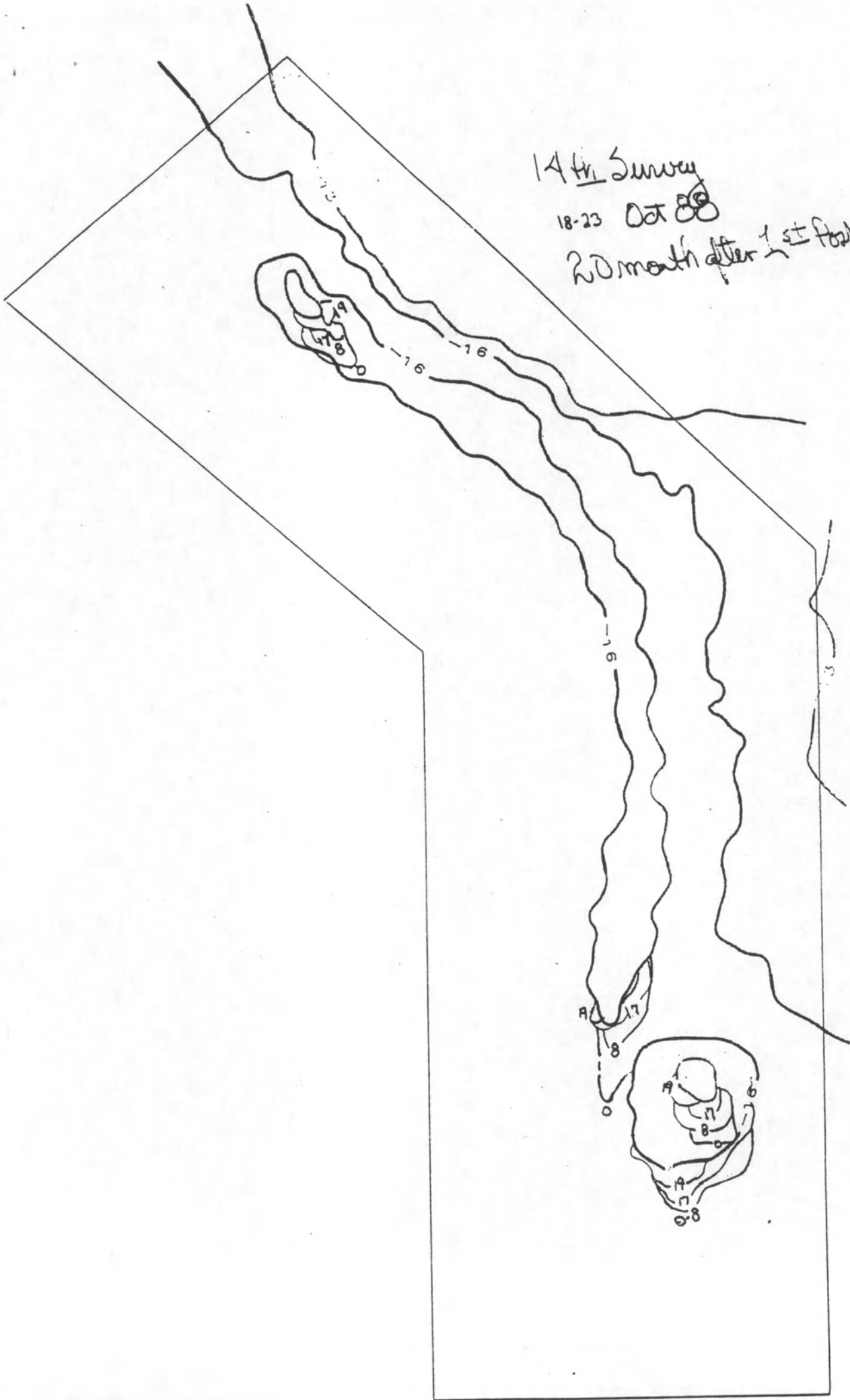
NUMBER OF RETURNS



14 hr Survey

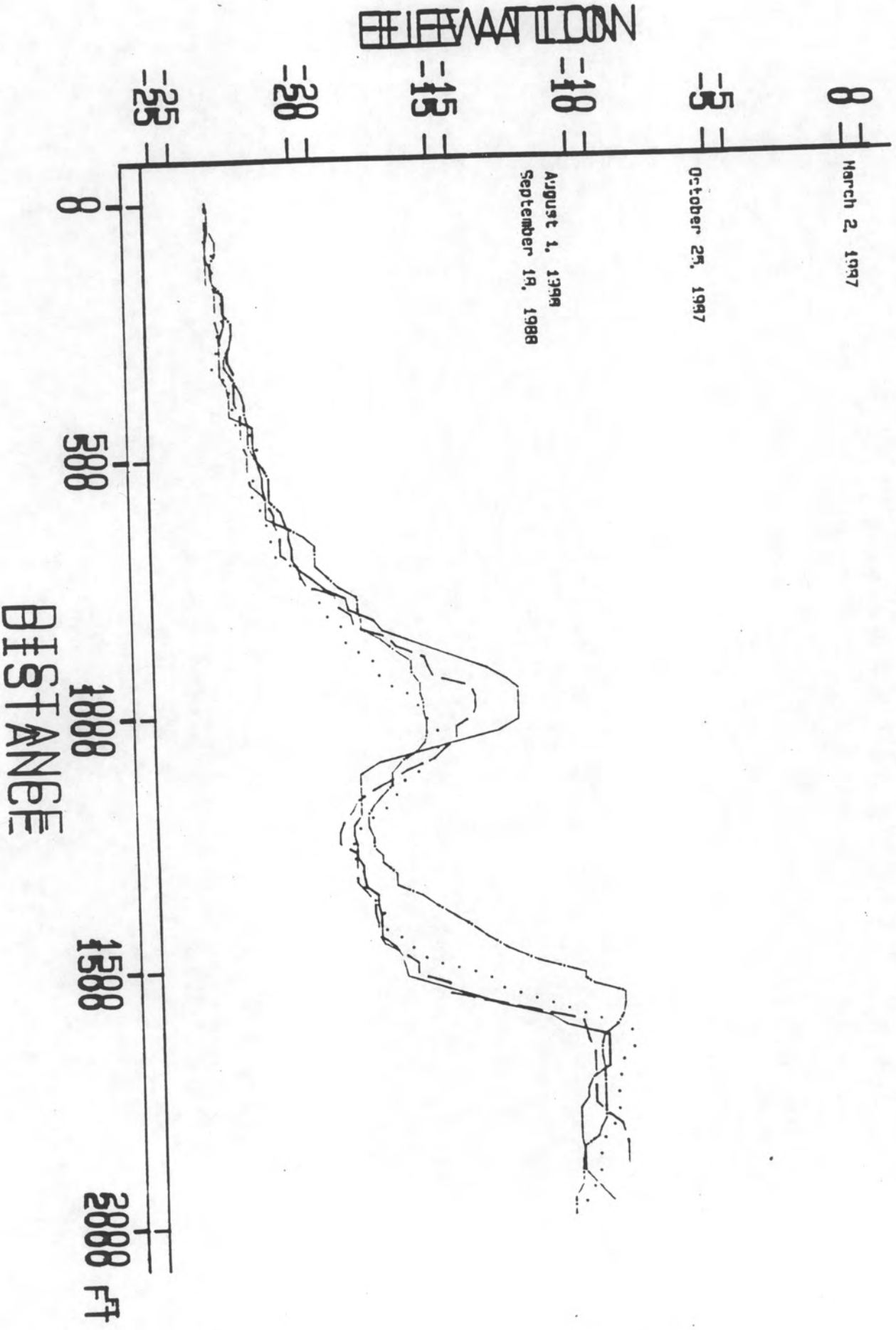
18-23 Oct 88

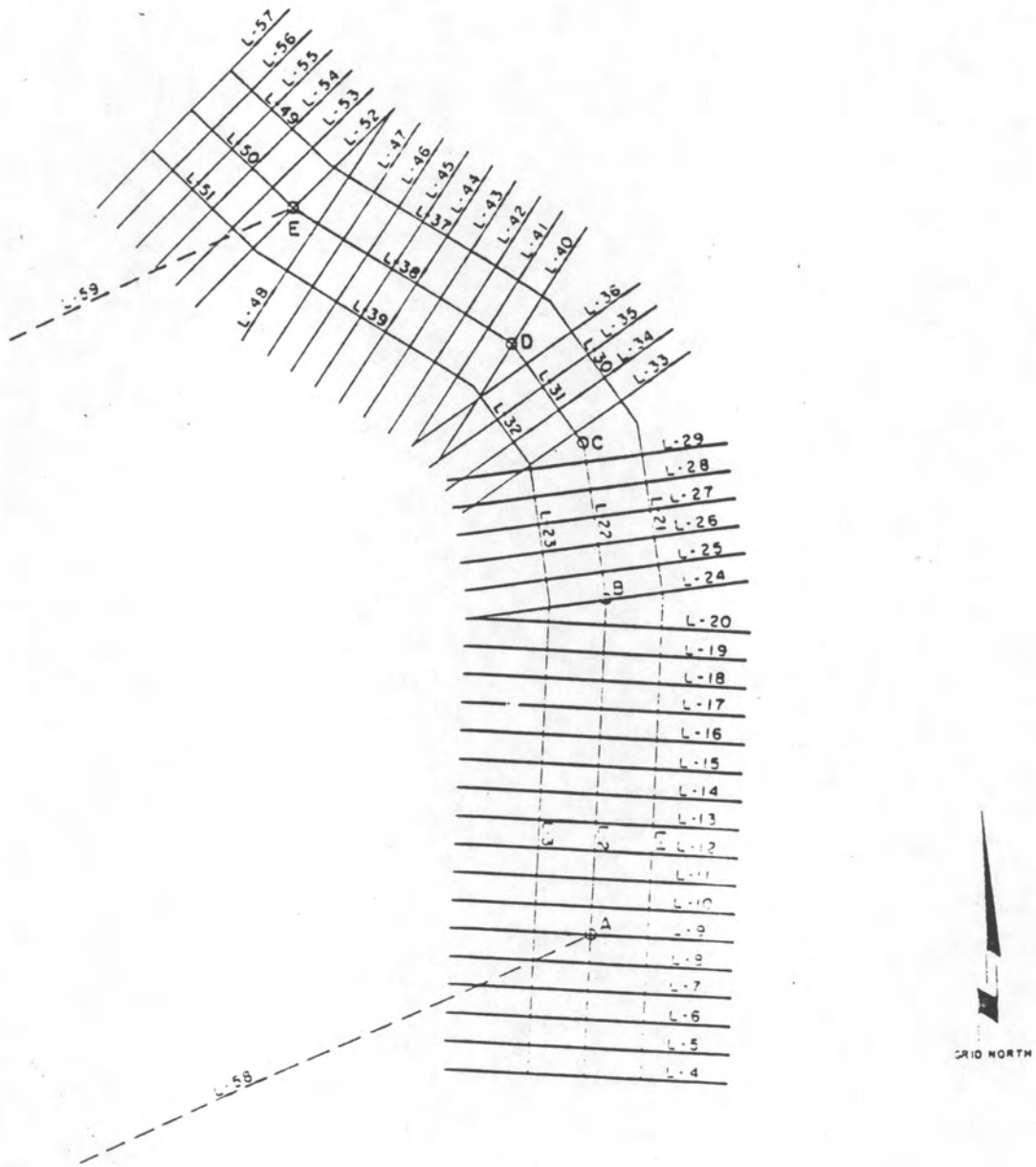
20 month after 1st Post Placement Survey



200009

NORTHERN SAMPLE LINE; SURVEY 12





SAND ISLAND NEARSHORE BERM
 HYDROGRAPHIC SURVEY
 PLAN

Figure 6. Layout of survey lines on 200-ft spacings. The lines were run between the same end points on all post-placement surveys.