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CRUISE REPORT

RV ALOHA

NOVEMBER 1-3, 1987

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Woods Hole, MA 02543

Cruise Report

VESSEL: RV ALOHA

DATES: 0001 November 1, 1987 to 0600 November 3, 1987

PORTS: Ventura, CA to Port San Luis, CA

SCIENTIFIC PERSONNEL:

Scientific

Brad Butman, USGS, Chief Scientist
Bill Strahle, USGS, Electrical Engineer
Mike Boyle, USGS, Side-scan technician
Dane Hardin, Kinetics
Mark Mertz, Kinetics
Bob Dellaert, Land and Sea Surveys, Inc.
James Cooley, Land and Sea Surveys, Inc.

OBJECTIVE: The objective of this short cruise was to attempt to locate and recover a current mooring deployed at 34° 53.7'N, 120° 59.5' W (Station C, see figure 1) in about 400 m of water off Pt. Sal, CA. The mooring, containing 3 EG&G vector averaging current meters, was deployed as part of the California Monitoring Program (CAMP) in May 1987 and was to be recovered in July 1987. No attempt could be made to recover or interrogate the mooring on the July cruise because of heavy weather and ship failures. Recovery was re-scheduled for September. On this cruise, the mooring did not respond to any acoustic commands; it was assumed that either the release had failed or that the mooring was dragged away by fishing activity. Because of the equipment and importance of the data, an additional acoustic search using the release gear, a side-scan sonar search with an EG&G 50 [REDACTED] system, and a search utilizing a remotely operated vehicle (ROV) were planned to attempt to locate the lost mooring.

NARRATIVE

Nov. 1	0001	Depart Ventura. Steam toward mooring location. Extremely slow progress due to head winds and seas.
	1600	Attempt to interrogate release
	1800	Attempt to interrogate release
	1940	Arrive mooring location. Too rough for ROV
	2100	Begin side-scan search.
	2255	Terminate side-scan search - seas too rough to enable ALOHA to maintain steerage. Head for Port San Luis.
Nov. 2	0400	Arrive Port San Luis
	0850	Depart Port San Luis
	1150	Arrive Station C. Still too rough for ROV.
	1214	Start side-scan search. Lines NW-SE
	2400	Terminate side-scan search.
Nov. 3	0100	Dive ROV on mooring location.
	0245	Terminate ROV search.
	0530	Arrive Port San Luis and offload.

SUMMARY

The mooring was not located using any of the search techniques. The acoustic search for the release was conducted over an area approximately 5 nautical miles north, south, east, and west of the site where the mooring was originally deployed (including sites surveyed on the September ALOHA cruise). The side-scan search was conducted along lines about 4 miles long (2 miles either side of the mooring site) running approximately NW-SE and spaced 100 m apart. The length of the lines was dictated by the distance necessary for the side-scan fish to straighten out following turns. It was originally planned to run the lines along-isobath (north-south) to provide maximum coverage in the preferred direction for dragging, but the weather and swell required the lines to be run NW-SE in order to maintain maneuverability. The side-scan was set on a 100 m range so the line coverage overlapped about 50%. In the time allotted for this search, 7 side-scan lines were run (3 to each side of the mooring site and one through it). Coverage extended about 560 m in the along-isobath and cross-isobath direction in the immediate vicinity of the mooring. All navigation during the side-scan survey was conducted using the Land and Sea system; the ship position on the desired track was excellent throughout the survey. No obvious side-scan target was located. However, extensive trawl marks were observed throughout the region, especially at the depth range of the mooring. Most trawl marks were along-isobath, but many also were oblique to the isobaths; if moved by trawlers, the mooring could be in any direction from the original site.

At the very end of the cruise, the seas had calmed sufficiently to enable a brief search with the ROV. A sonar search (100 m radius) at about 375 m depth (the depth of the near-bottom mooring flotation) at the mooring site and 100 m to the north of the mooring site indicated no target. No more time was available for further search or for investigation of the seafloor.

50 KM
810 ESCAN

Based on this search, it is concluded that the mooring is lost, and that the most probable cause of loss is an accidental (or otherwise) encounter with fishing activity. Additional searches could be conducted, but since the mooring was not located near the mooring site, the chances of locating it elsewhere are vanishingly small and not economical. Experience with 'lost' moorings on the east coast is that if the mooring isn't where you left it (or close), it's gone.

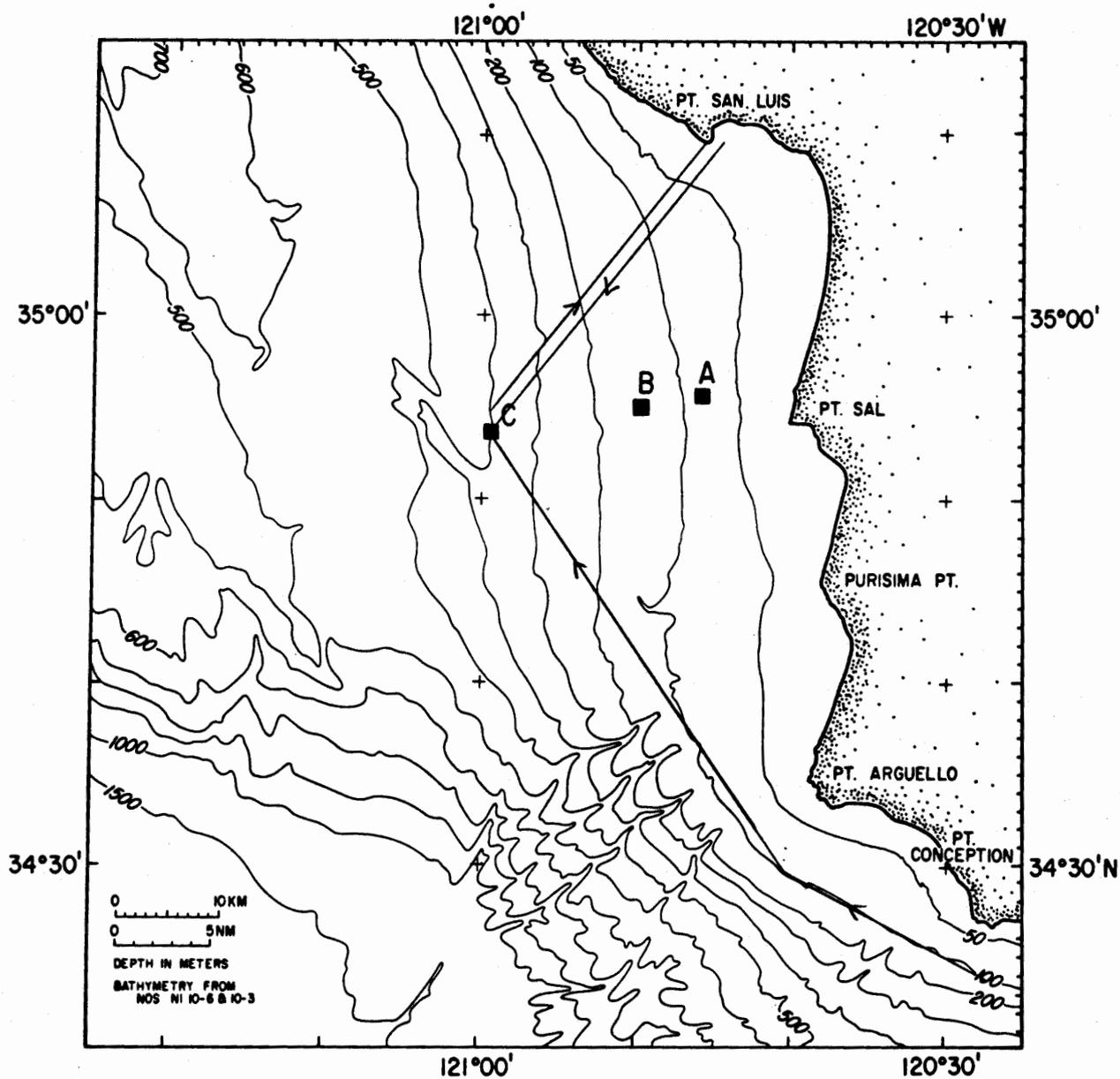


Figure 1. Cruise track for RV ALOHA, November 1-3, 1987. Detailed side-scan sonar survey trackline not shown.