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Location and description of sediment samples: Navarin Basin province, Bering Sea, 1980-81

by

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INTRODUCTION

Three cruises have been conducted in the Navarin Basin province (lease sale area 83) in the northern Bering Sea to obtain data on seafloor hazards pertinent to OCS oil and gas lease sale activity. This report summarizes the information that is presently available regarding sediment samples collected during those cruises. Included in this report are a station location map (plate 1) and a map of sediment types (plates 2) derived from qualitative visual descriptions of surface samples. Microfilm copies of the visual core description logs are available for viewing:

(1) U.S. Geological Survey
Pacific-Arctic Branch of Marine Geology, Room B 171
Menlo Park, CA 94025

or for purchase:

(2) National Geophysical and Solar Terrestrial Data Center
EDS/NOAA
Boulder, CO 80302

DATA COLLECTION

USCG Ice breaker POLAR STAR followed the ice in spring (May 2-29) 1980 and 22 gravity cores and 33 grab samples were collected during this cruise designated PST-80-BS; 104 gravity cores, 10 grab samples and 1 dredge sample were collected in summer (July 2 - August 17) 1980 during NOAA ship DISCOVERER cruise DC 4/5-80-BS/NB; and 88 gravity cores, 10 grab samples, 6 box cores, and 5 vibracores were collected in summer (June 8 - July 29) 1981 during DISCOVERER cruise DC2/3-81-BS/NB.

Cores collected on USCG POLAR STAR during cruise PST-80-BS cores were stored at Adak, Alaska from late May to late July and then transferred to NOAA ship DISCOVERER for study. PST-80-BS, DC4/5-80-BS/NB, and DC2/3-81-BS/NB cores were split and described and subsamples were collected for grain-size, geochemical, faunal, clay mineral, carbon, and geotechnical analyses at onshore laboratories. The split cores were placed in D-tubes and kept with subsamples in cold storage and are archived at the U.S. Geological Survey refrigerated core locker in Menlo Park.

Navigation was by Loran C and satellite; position accuracies are probably on the order of 0.5 km.

OBSERVATIONS

Sediment sampling stations are plotted in Plate 1. Plate 2 shows the distribution of sediment types derived from qualitative visual descriptions of surface samples, defined as bulk subsamples from grab samples and discrete subsamples from the upper 35 cm of gravity cores. Silts generally characterize the shelf and slope, but there are zones of coarser sediments at the shelf break, on the upper slope, and in the heads of submarine canyons. Surficial sediment on the shelf tends to be coarser in the southeastern part of the area than elsewhere.

ADDITIONAL PERTINENT REPORTS

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