SUMMARY OF SCAN SITES 2 AND 3

G. W. Moore, U. S. Geological Survey, La Jolla, California
and

G. F. Sharman, Scripps Institution of Oceanography, La Jolla, California

OBJECTIVES OF DRILL HOLES

Sites 2 and 3, located 22 kilometers apart, are discussed together here. Site 2 is at latitude 39° 30'N, longitude 127° 30'W; and, Site 3 is at latitude 39° 30'N, longitude 127° 15'W. The water depth at Site 2 is 4260 meters, and at Site 3 it is 4300 meters; the sediment thickness at both sites is approximately 400 meters. The sites are located between the Pioneer and Mendocino Transform Faults, near the toe of Delgada Fan. Site 2 lies on a characteristic positive magnetic anomaly, and Site 3 on an adjacent negative anomaly. The positive anomaly at Site 2 has been correlated by Vacquier and others (1961) with an anomaly at Site 6, which is offset to the west, north of the Mendocino Transform Fault. The objectives at these holes were to investigate differences in the basement between adjacent positive and negative magnetic anomalies, to check the correlation between Sites 2 and 6, and to sample oceanic sediment that is relatively close to the North American continent.

SURVEY METHODS

The survey of these sites was made from the *Argo* between March 10-12, 1969. Navigation was by Loran A, with a fix precision of approximately 2 kilometers. Magnetic-intensity traverses and acoustic-reflection profiles at 12, 3.5 and 0.1 kHz were run on a grid 75 kilometers square, with tracks about 20 kilometers apart. Near Site 2, a piston core was taken and the heat flow was determined. On the acoustic-reflection profiles reproduced here, a 10-second sweep was used, and the distance between hour marks was approximately 20 kilometers.

NATURE OF SITES

The bottom topography is smooth and partially masks on the basement former hills of presumed volcanic origin. Because of the basement irregularities, sediment thickness ranges from about 350 to 450 meters. The

sea-floor sediment at Site 2 grades from soft grayish-brown clay at the top to brittle olive-gray clay at a depth of 10 meters. Stratification as revealed by the acoustic-reflection profiles is more apparent at Site 3 to the east nearer the continent than at Site 2. The entire top 10 meters at Site 2 contain Pleistocene microfossils. The heat flow is about average at 1.3 $\mu\text{cal}/\text{cm}^2$ sec.

MICROPALEONTOLOGY

David Bukry
U. S. Geological Survey, La Jolla

General Comments

Samples taken at 1.5-meter intervals from the piston cores, recovered during the preliminary surveys of the proposed Deep Sea Drilling Project sites in the northeast Pacific, were examined for calcareous nannofossils. The identified assemblages of nannofossils indicate that Pliocene sediment containing abundant discoasters is present in the upper 10 meters at only one place, Site 6. Elsewhere, only Pleistocene assemblages are present in the upper 10 meters. The abundant, widely distributed, Holocene nannofossil, *Emiliania huxleyi* (Lohmann) is not represented in any of the samples examined.

Diatoms are common only in surface samples (0 to 1 centimeter) at Sites 1, 2 and 4. Foraminifera are sparsely present in several samples from Sites 1, 2, 4, 5 and 6.

SCAN-2-P

Core length: 9.9 meters. Pleistocene calcareous nannofossil assemblages are present throughout this core. Characteristic species include: *Coccolithus pelagicus* (Wallich), *Cyclococcolithus leptoporus* Murray and Blackman var. C of McIntyre, Bé and Preikstas, and *Gephyrocapsa oceanica* Kamptner.

SCAN-3-P

No core was taken.

SCAN Survey, Sites 2 and 3, Tracks A and B.

SCAN Survey, Sites 2 and 3, Tracks B and C.

SCAN Survey, Sites 2 and 3, Tracks C and D.

SCAN Survey, Sites 2 and 3, Tracks D, E and F.

SCAN Survey, Sites 2 and 3, Tracks E, F and G.

SCAN Survey, Sites 2 and 3, Tracks F and G.

SCAN Survey, Sites 2 and 3, Tracks G, H and I.

SCAN Survey, Sites 2 and 3, Tracks H, I and J.

DEPTH (m)	LITHOLOGY	COLOR	SAMPLE INTERVAL	SAMPLE DESCRIPTION
1	Very soft clay	5YR 3/2		0-1 cm. Very soft clay, grayish-brown. 58-59 cm. Plastic clay, dark greenish-gray.
2				208-209 cm. Same.
3				
4	Plastic clay	5GY 4/1		358-359 cm. Same.
5				
6				518-519 cm. Same.
7				672-673 cm. Same.
8		N3		822-823 cm. Plastic clay, dark gray streaked or layered.
9	Slightly brittle clay	5GY 4/1		973-974 cm. Slightly brittle clay, dark greenish-gray.
10		5Y 4/1		987-988 cm. Plastic clay dark greenish-gray, with 2 cm. fragment brittle clay, olive-gray.
11				

Summary of Piston Core 2.