

SUMMARY OF SCAN SITE 10

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SURVEY AREA

General Information

The extent of the surveyed area is approximately 30 by 40 miles, bounded by latitudes $13^{\circ} 50'N$ and $14^{\circ} 20'N$, and longitudes $140^{\circ} 00'W$ and $140^{\circ} 45'W$. The survey of this site was made from the *Argo* between April 20-23, 1969. Weather conditions at the time of survey (22 April, 0600) were: ENE winds of 14 knots, moderate seas (ENE) with swells of 5 feet, and cloudy skies. The barometric pressure was 29.94; and, sea and air temperatures were $74^{\circ}F$ and $76^{\circ}F$, respectively. An estimated drift of one knot set to west was found consistently throughout the survey.

Bathymetry

With a regional depth of 4755 meters, the survey area is characterized by a series of abyssal hills. Groups of several hills, each 37 to 55 meters high, are separated by troughs 91 to 183 meters deep. These troughs are very narrow and V-shaped, not flat-floored. The troughs and groups of hills are strongly lineated in a north-south direction.

Structure and Magnetics

A strong subbottom reflector is present, and is generally conformable with the overlying sea floor. Overlying this reflector is a relatively transparent sediment layer with thickness ranging from 0.10 to 0.15 second. An additional 0.10 second of sediment appears to be present beneath the transparent layer. The sediment is uniformly distributed over surveyed area, with no evidence of "ponding".

Amplitude of surface anomalies is 50 to 100, with a wave length of 20 to 30 miles in an east-west direction. The magnetic anomalies are strongly lineated along a direction of 350°

DESCRIPTION OF SITE 10

Site 10 is located at latitude $13^{\circ} 52.1'N$, longitude $140^{\circ} 10.3'W$ (see profile EF), in a region of relatively low abyssal hills, midway between two troughs which are 5 miles apart. The thickness of the transparent layer is about 0.10 second.

NATURE OF SITE

SCAN-10-P

Core length: 8.6 meters. This core recovered 300 centimeters of siliceous ooze overlying a white calcareous ooze.

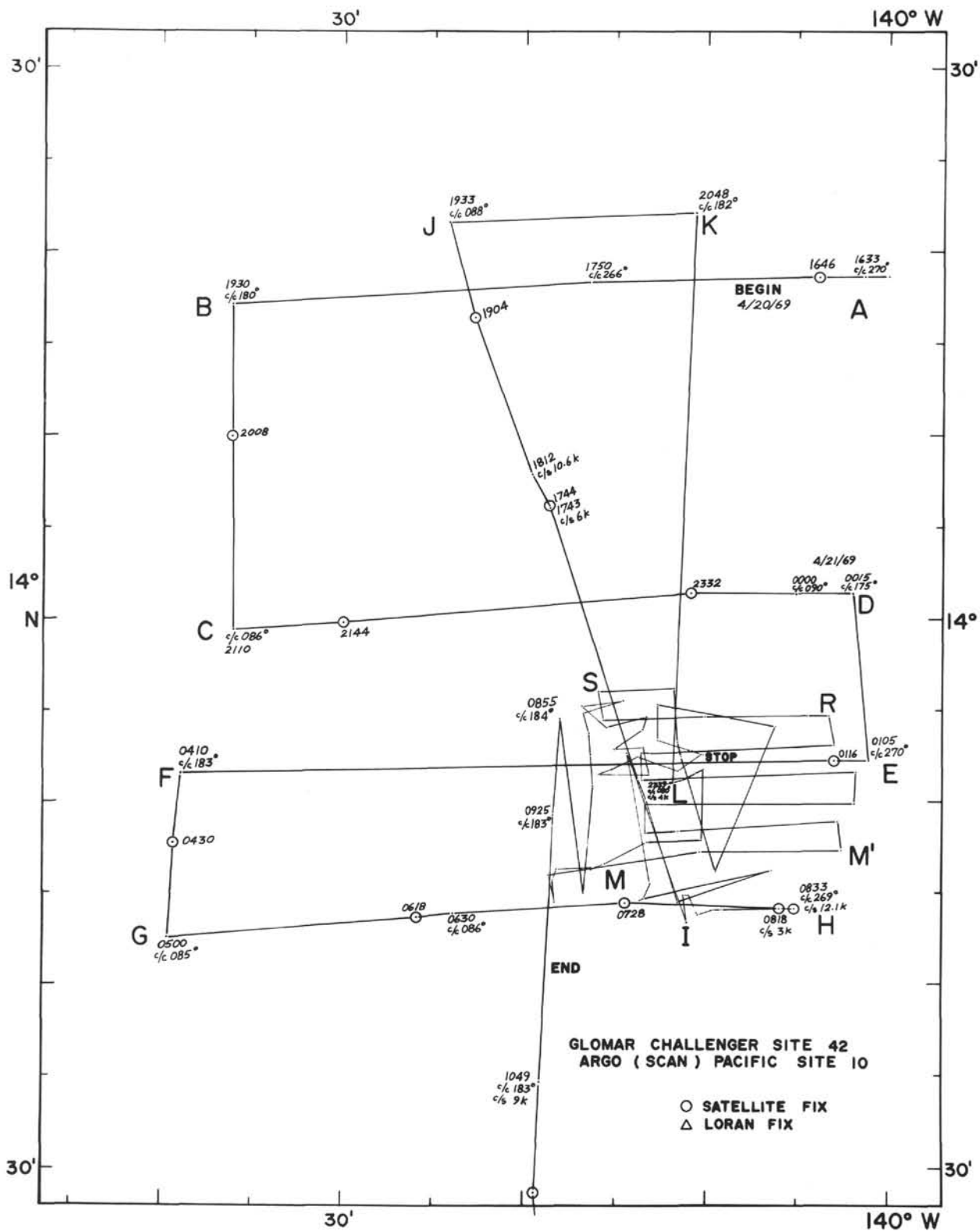
SCAN-11-P

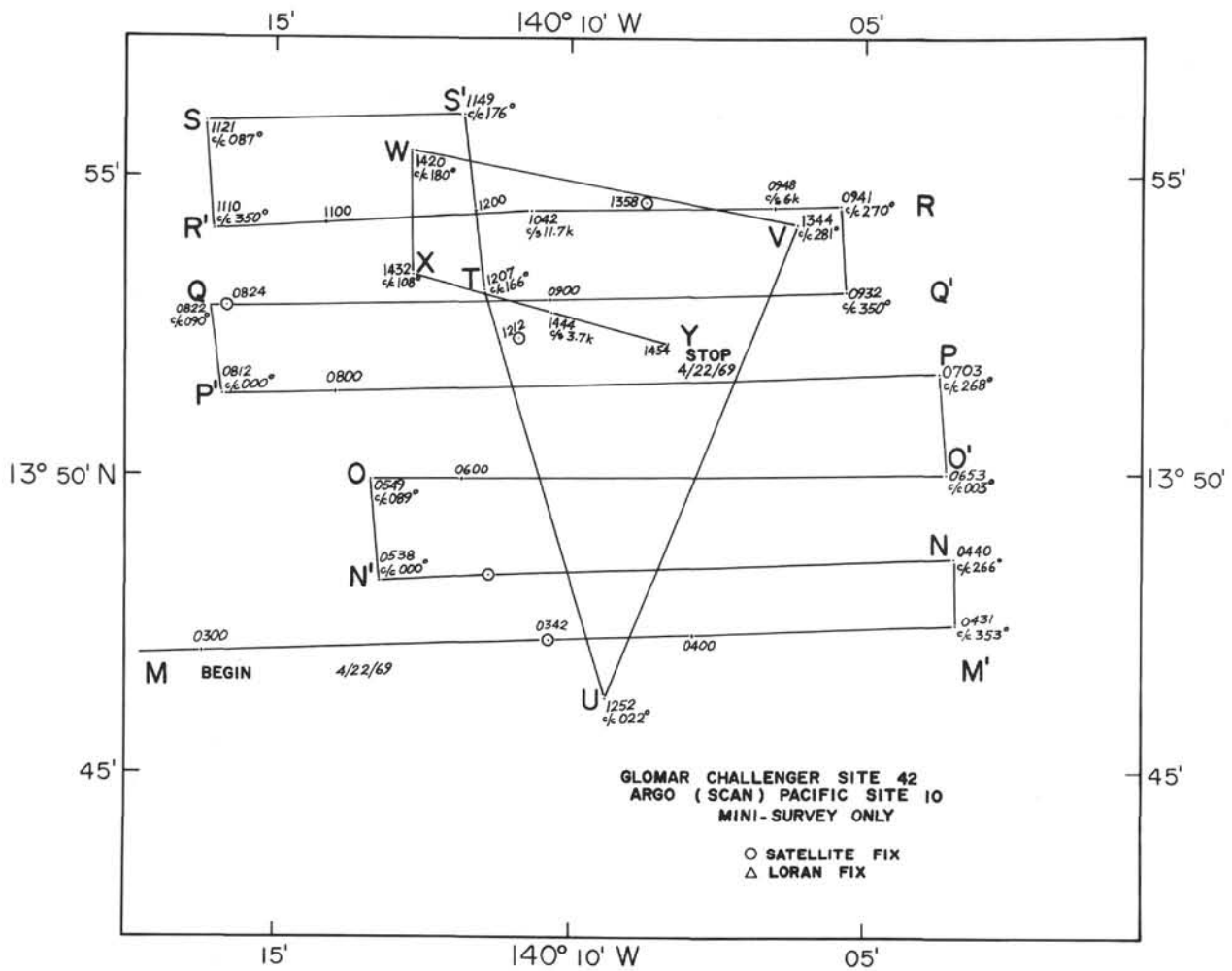
Core length: 10.83 meters. Located west of Site 9, this core sampled a dark brown siliceous ooze, overlying a lighter brown calcareous-siliceous ooze.

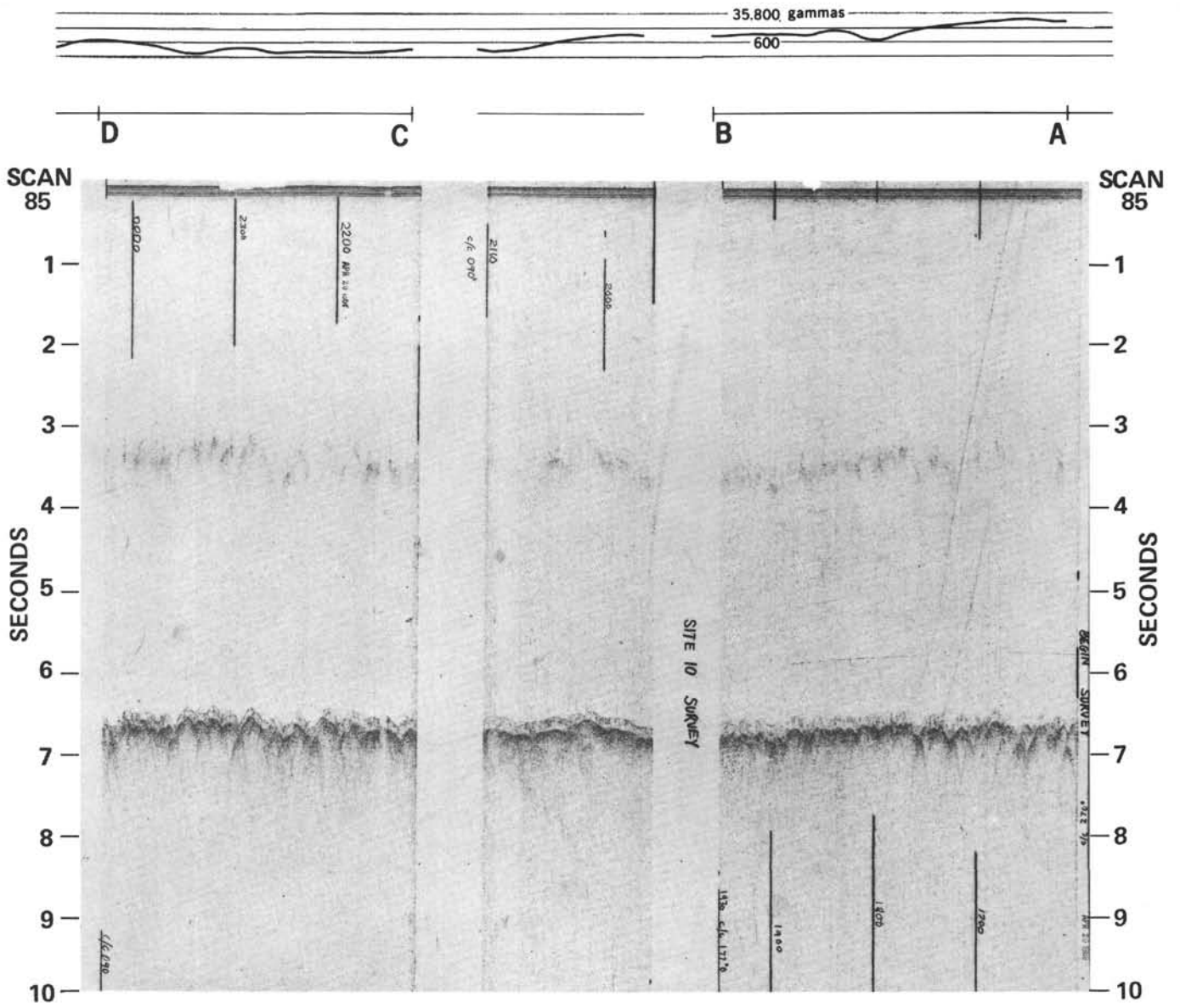
SCAN-12-P

Core length: 7.6 meters. This core, recovered from the west flank of the trough cored at SCAN-11-P, detected strong reflectors occurring several meters beneath the sea floor. Sediment sampled here is a siliceous ooze overlying a calcareous ooze.

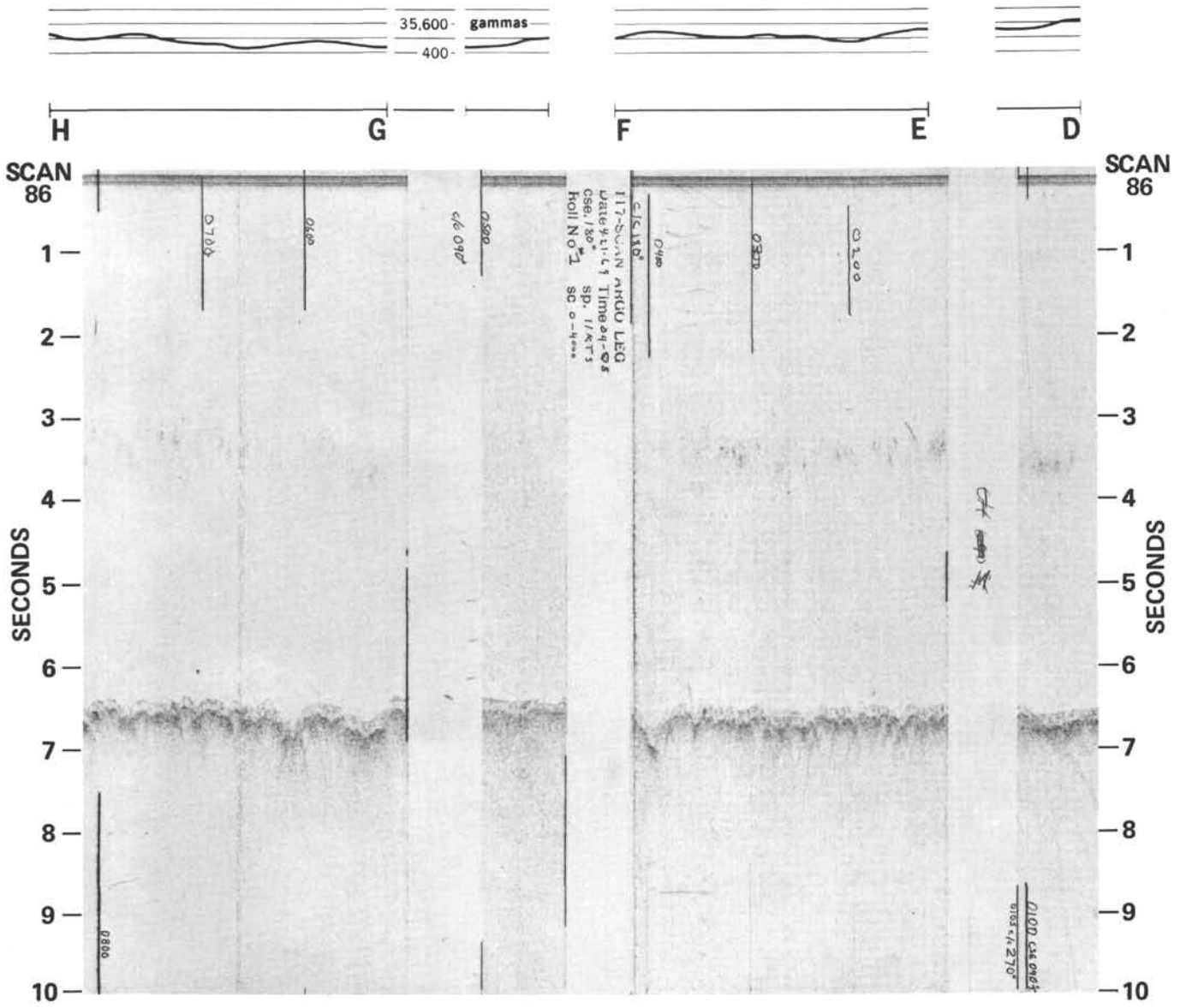
The camera lowering at Site 10 identified scattered manganese nodules (to 10 centimeters in diameter), a few small mounds of sediment, and current ripples. The heat flow measured was $2.20 \mu\text{cal}/\text{cm}^2 \text{ sec}$.



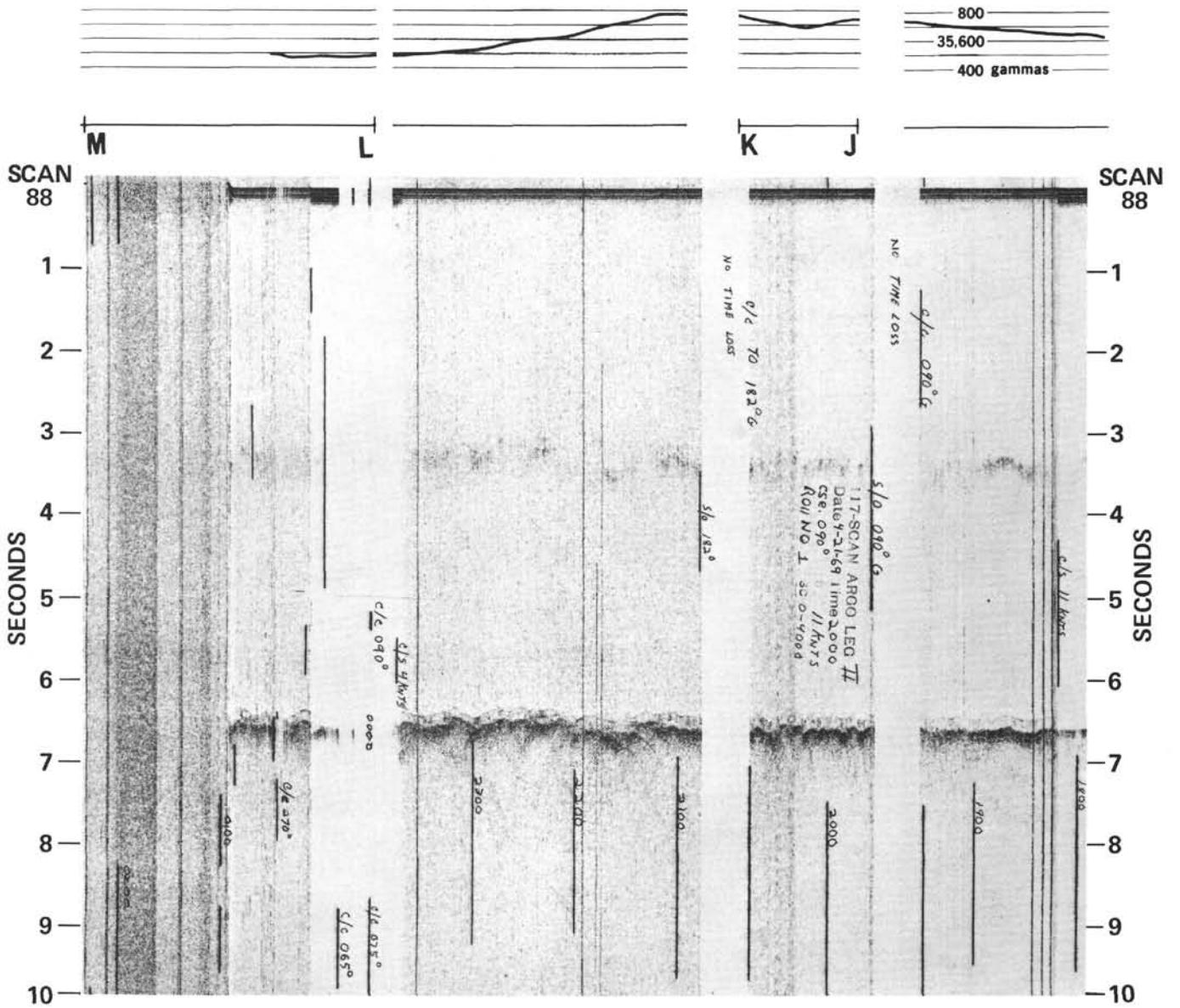




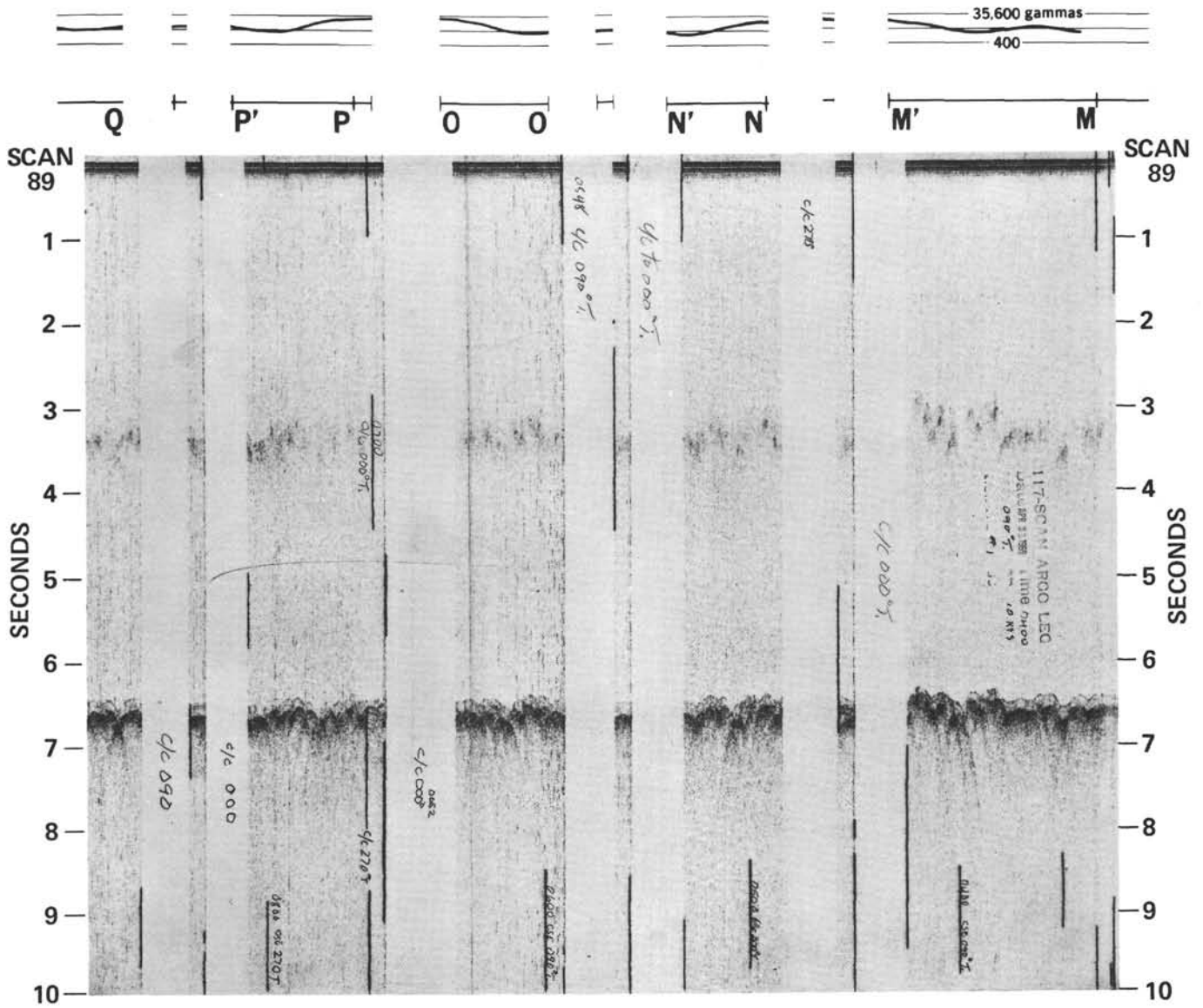
SCAN Survey, Site 10, Tracks A, B, C and D.



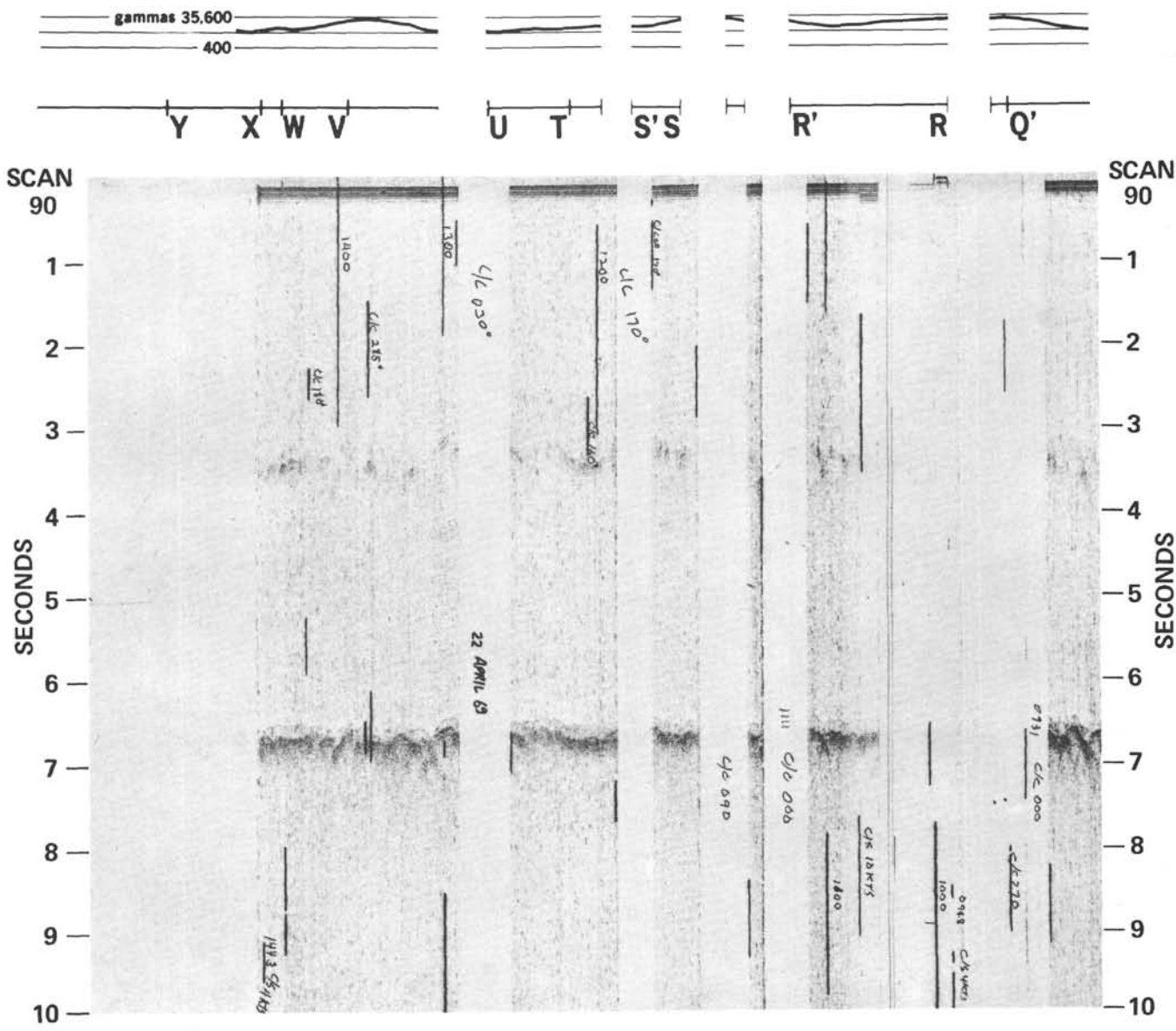
SCAN Survey, Site 10, Tracks D, E, F, G and H.



SCAN Survey, Site 10, Tracks J, K, L and M.



SCAN Survey, Site 10, Tracks M, M', N, N', O, O', P, P' and Q.



SCAN Survey, Site 10, Tracks Q', R, R', S, S', T, U, V, W, X and Y.

DEPTH (m)	LITHOLOGY	COLOR	SAMPLE INTERVAL	SAMPLE DESCRIPTION
1	Radiolarian "clay"			Lower Miocene with <i>C. estodiscus</i> cf. <i>C. pulchellus</i> - (margin zone). <i>Cyrtocapsella elongata?</i> - (small immature specimen). Scattered radiolarian (including orosphaerid) and diatom fragments and sponge spicules.
2				Mostly zeolitic clays clinoptilolite etc. with radiolarian fragments (including orosphaerids) and sponge spicules. Rare calcareous nannofossils that may be contaminants - <i>Cyclococcolithus neogammation</i> , <i>Discoaster adamanteus</i> .
3				
4				
5	Nannoplankton ooze			Upper Oligocene with (<i>C. bisectus</i> - <i>T. carinatus</i> Subzone) <i>Coccolithus bisectus</i> , <i>C. eopelagicus</i> , <i>Triquetrorhabdulus carinatus</i> (very thin form), <i>Sphenolithus moriformis</i> , <i>Cyclococcolithus neogammation</i> , <i>Discoaster woodringi</i> , <i>D. W. nephados</i> , <i>D. deflandrei</i> , <i>D. adamanteus</i> , <i>D. a. obtusus</i> , <i>D. sp. aff. tani</i> , <i>C. bisectus</i> var. Most calcareous nannofossils show signs of significant etching; centers gone on most coccoliths.
6				Upper Oligocene with <i>Coccolithus bisectus</i> , <i>Triquetrorhabdulus carinatus</i> , <i>Cyclococcolithus neogammation</i> , <i>C. bisectus</i> var., <i>Sphenolithus moriformis</i> , <i>S. sp. aff. abies</i> (heavy), <i>C. nitescens</i> , <i>C. eopelagicus</i> , <i>S. cf. S. ciperensis</i> (some traces <i>distentus?</i>), <i>D. deflandrei</i> (heavy), <i>D. adamanteus</i> , <i>D. a. obtusus</i> , <i>D. woodringi</i> , <i>D. w. nephados</i> , <i>D. sp. aff. tani</i> .
7				
8				Upper Oligocene with <i>Coccolithus bisectus</i> , <i>C. bisectus</i> var., <i>Cyclococcolithus neogammation</i> , <i>C. eopelagicus</i> , <i>Sphenolithus moriformis</i> , <i>S. sp. aff. abies</i> (heavy), <i>Discoaster adamanteus</i> , <i>Triquetrorhabdulus carinatus</i> , <i>D. deflandrei</i> , <i>D. a. obtusus</i> , <i>C. sp. aff. stavensis</i> , <i>D. sp. aff. tani</i> .
9				
10				Upper Oligocene with <i>Coccolithus bisectus</i> , <i>C. bisectus</i> var., <i>Cyclococcolithus neogammation</i> , <i>C. eopelagicus</i> , <i>Triquetrorhabdulus carinatus</i> , <i>Discoaster adamanteus</i> , <i>D. a. obtusus</i> , <i>D. w. nephados</i> , <i>D. deflandrei</i> (heavy), <i>D. sp. aff. tani</i> .
11				

Summary of Piston Core 10.