



THE UNIVERSITY OF TEXAS

MARINE SCIENCE INSTITUTE
GEOPHYSICS LABORATORY
GALVESTON, TEXAS 77550

700 The Strand
713 765-2173

16 September 1977

RESEARCH CRUISE REPORT

SHIP NAME:

Ida Green

OPERATING INSTITUTION:

University of Texas
Marine Science Institute

CLEARANCE COUNTRY: Mexico

DATES: June and July 1977

PROJECT TITLE:

Geophysical Survey of the Middle
America Trench

PORT CALLS:

Acapulco, Mexico

FOREIGN PARTICIPANTS:

Alberto Horacio Comínguez and
J. Hector Sandoval:
Centro de Ciencias del Mar y Limnología
Ciudad Universitaria
México 20, D.F., México
José Bustamante
c/o Instituto Geografic Nacional
San Salvador, El Salvador, C.A.

CHIEF SCIENTISTS:

Thomas H. Shipley
Mark H. Houston
J. Lamar Worzel

DESCRIPTION OF SCIENTIFIC PROGRAM:

The purpose of this cruise was to comprehensively study an area of the Mexican continental margin off the State of Oaxaca and compare this margin with an area off Guatemala. The narrow shelf and trench inner wall off Oaxaca has been cited as evidence of tectonic erosion while the area of Guatemala with a wide shelf and inner trench wall has been considered an accreting margin.

The continent and ocean appear to be converging at about 7 cm/yr in the Oaxaca area. We undertook detailed multifold seismic reflection surveys to determine the tectonic fabric and continental margin structure in this zone of convergence. The geophysical survey combined with some sediment samples are being used in proposing sites for scientific drillings in the JOIDES International Phase of Ocean Drilling to test the hypothesis related to the convergence processes.

OBSERVATIONS AND SAMPLES:

Figures 1-5 show ship track offshore of Mexico. In addition to CDP data, magnetic and bathymetric data was collected along all track in Figures 1-5 except for the area indicated as "no data" in Figure 2.

In the Oaxaca grid area (Figs. 1 and 2) 13 piston core samples were taken. Their position, water depth, and length of core are given below. The samples are stored in Galveston at the UT/MSI Geophysics Laboratory, above address.

NAME AND ADDRESS OF CONTACT TO WHOM INQUIRIES REGARDING CRUISE SHOULD BE MADE:

Thomas H. Shipley
(Letterhead address)

MIDDLE AMERICA TRENCH CORES

IG - 24

Leg 05

OAXACA CORES

<u>CORE NO.</u>	(approx.) <u>LATITUDE</u>	(approx.) <u>LONGITUDE</u>	(uncorr. fm.) <u>WATER DEPTH</u>	(cm.) <u>CORE LENGTH</u>
25	15° 40.8' N	-98° 52.7' W	2254	934
26	15° 48.8' N	-98° 51.8' W	2546	210
27	15° 51.2' N	-98° 53.8' W	2514	244
28	15° 50.5' N	-98° 47.0' W	2263	560
29	15° 54.1' N	-98° 48.6' W	2005	410
30	15° 56.3' N	-98° 47.5' W	1738	411
31	15° 35.0' N	-98° 12.0' W	2832	461
32	15° 49.8' N	-98° 06.0' W	1045	294
33	15° 47.6' N	-98° 22.0' W	1920	485
34	15° 51.2' N	-98° 26.1' W	1384	377
35	16° 05.2' N	-98° 42.5' W	530	337
36	16° 18.4' N	-98° 48.8' W	45	198
37	16° 16.9' N	-98° 45.4' W	36	197

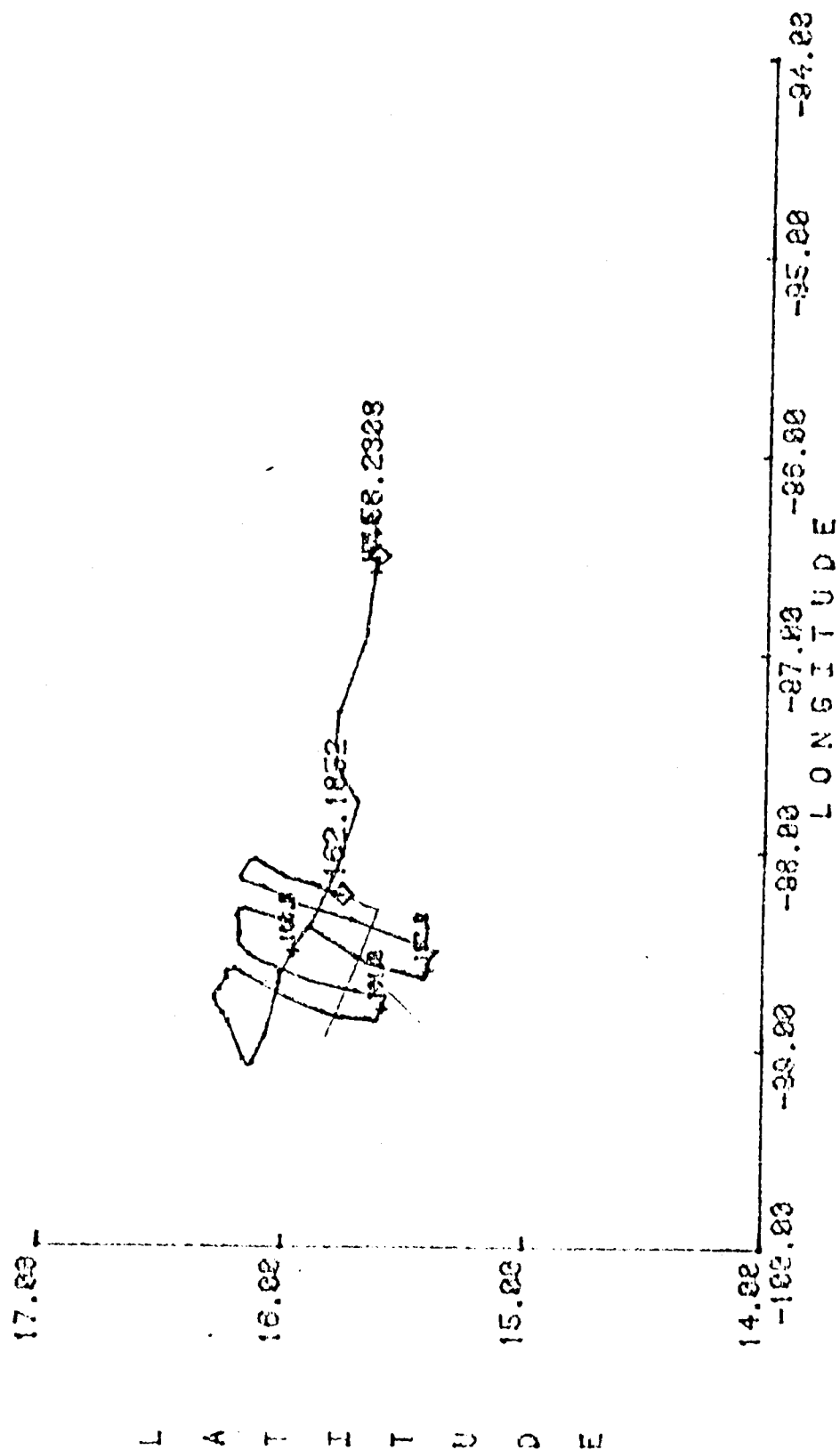


FIG. 1

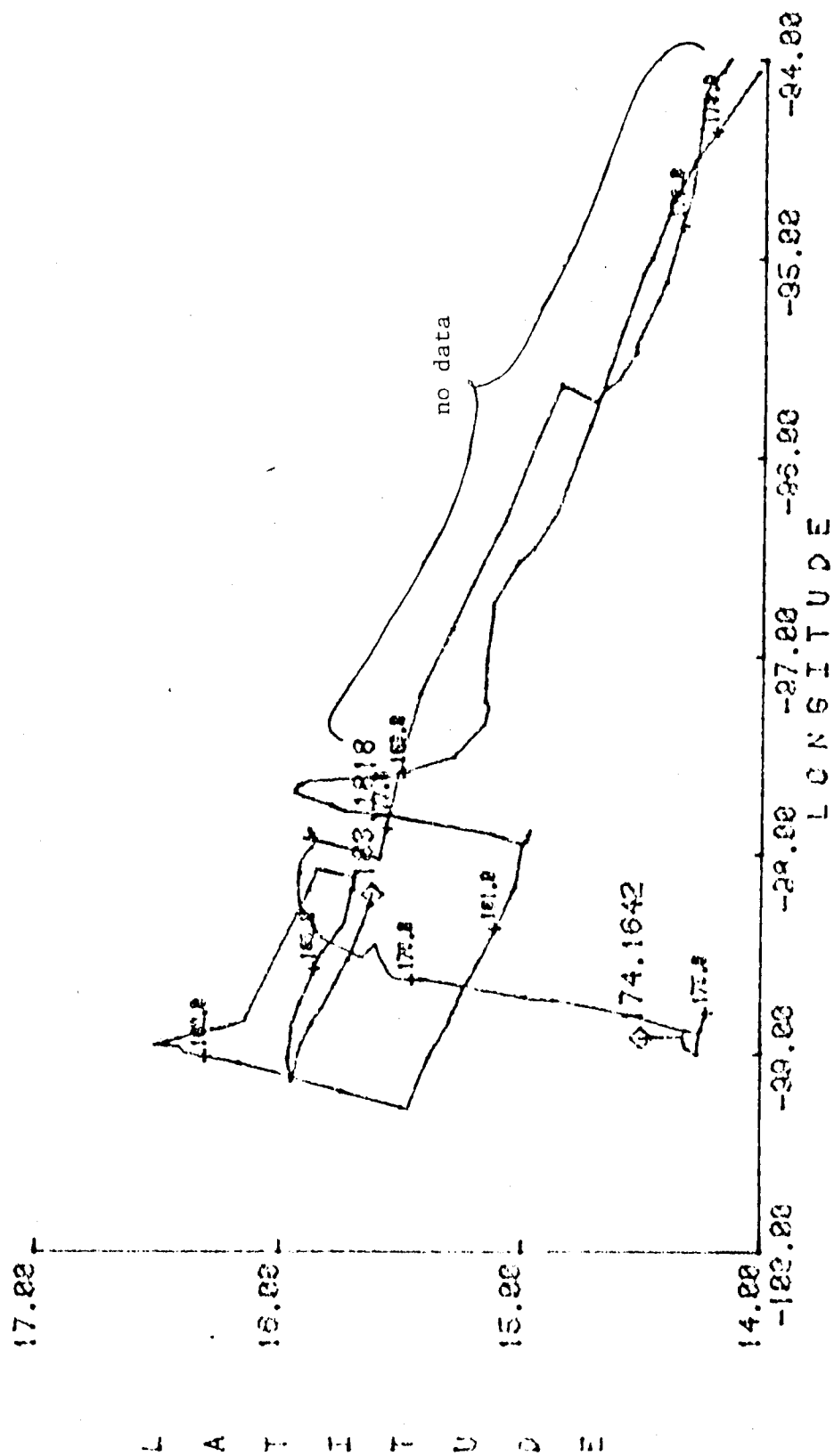


FIG. 2

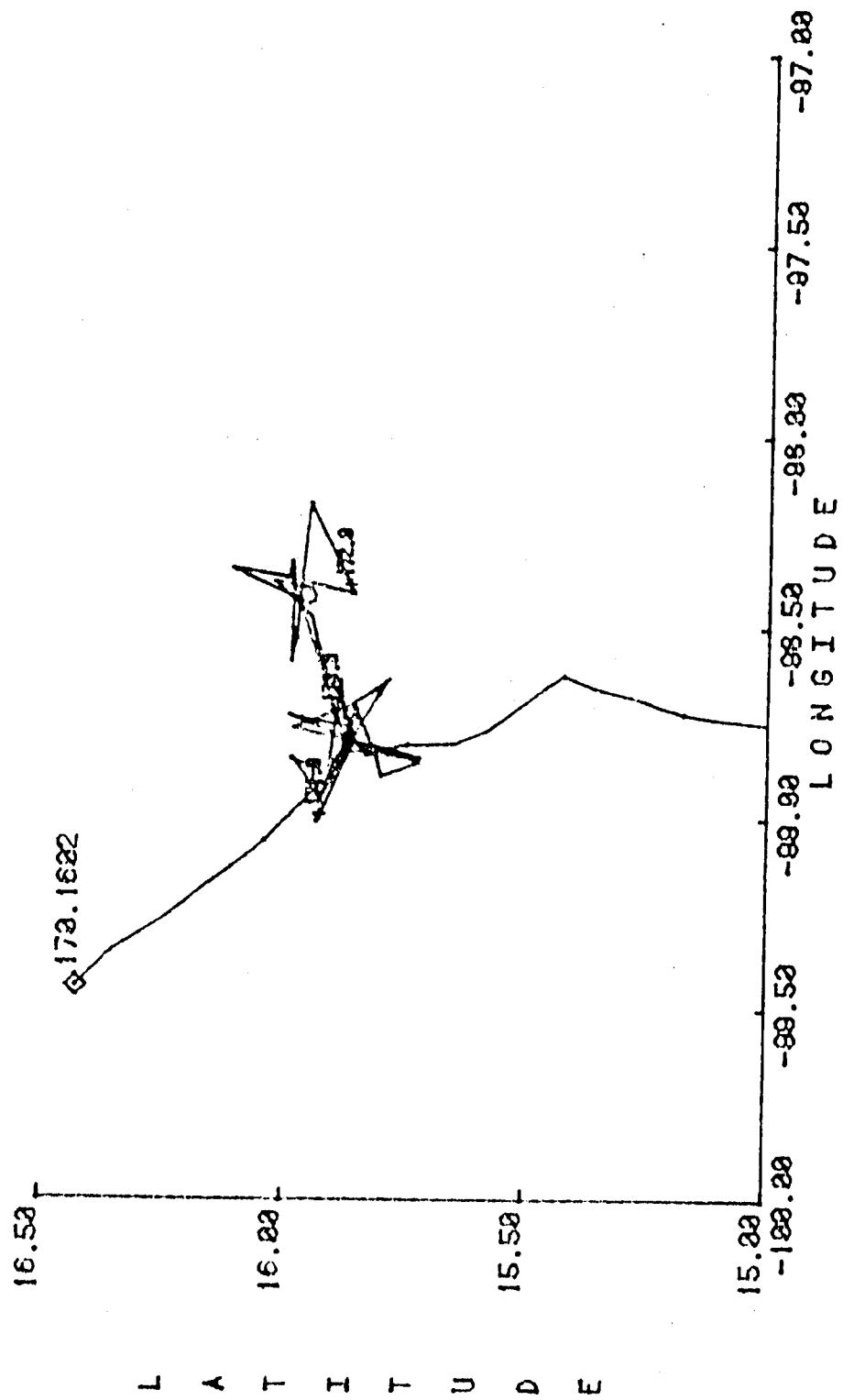


FIG. 3-A

172.2132

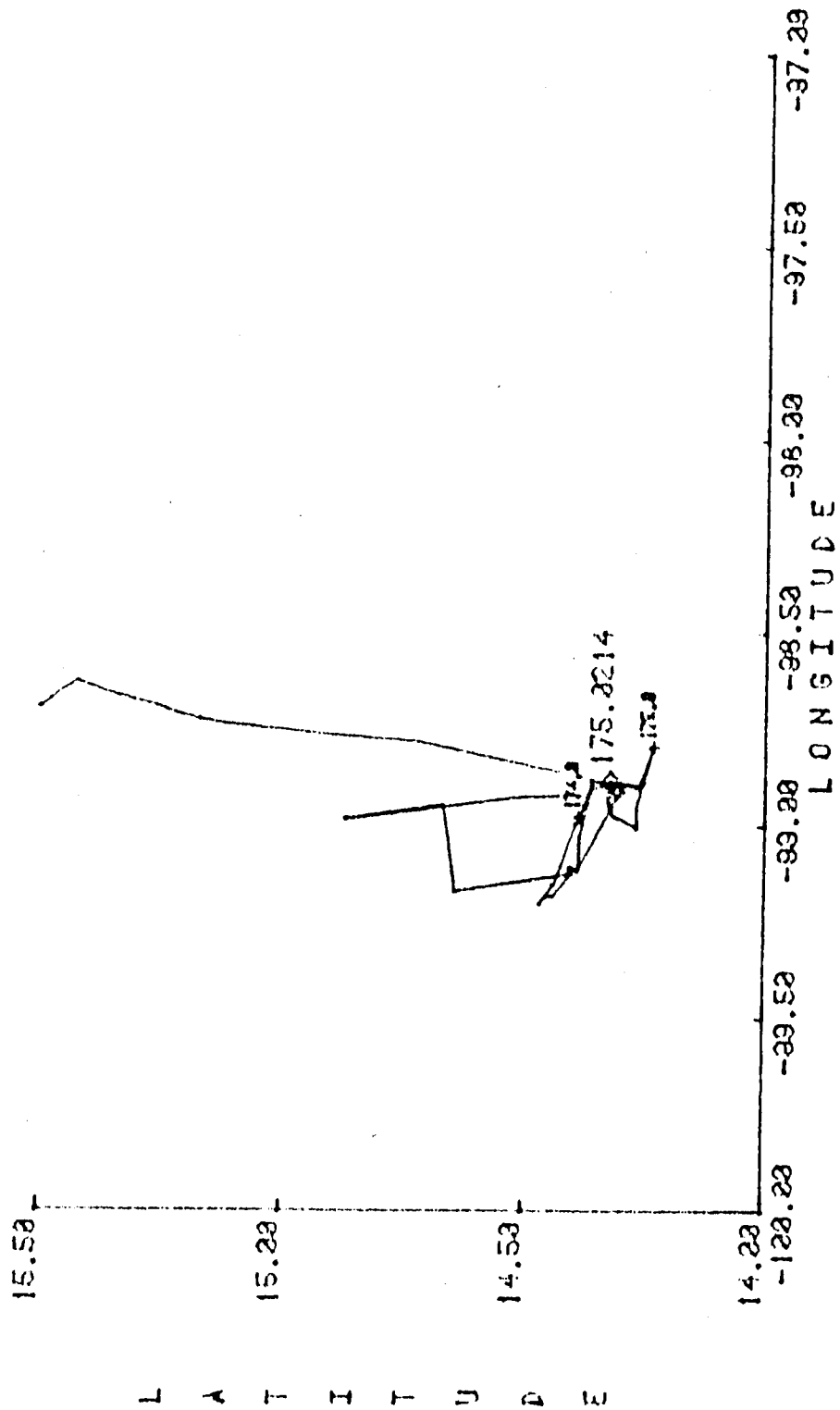


Fig. 3-B

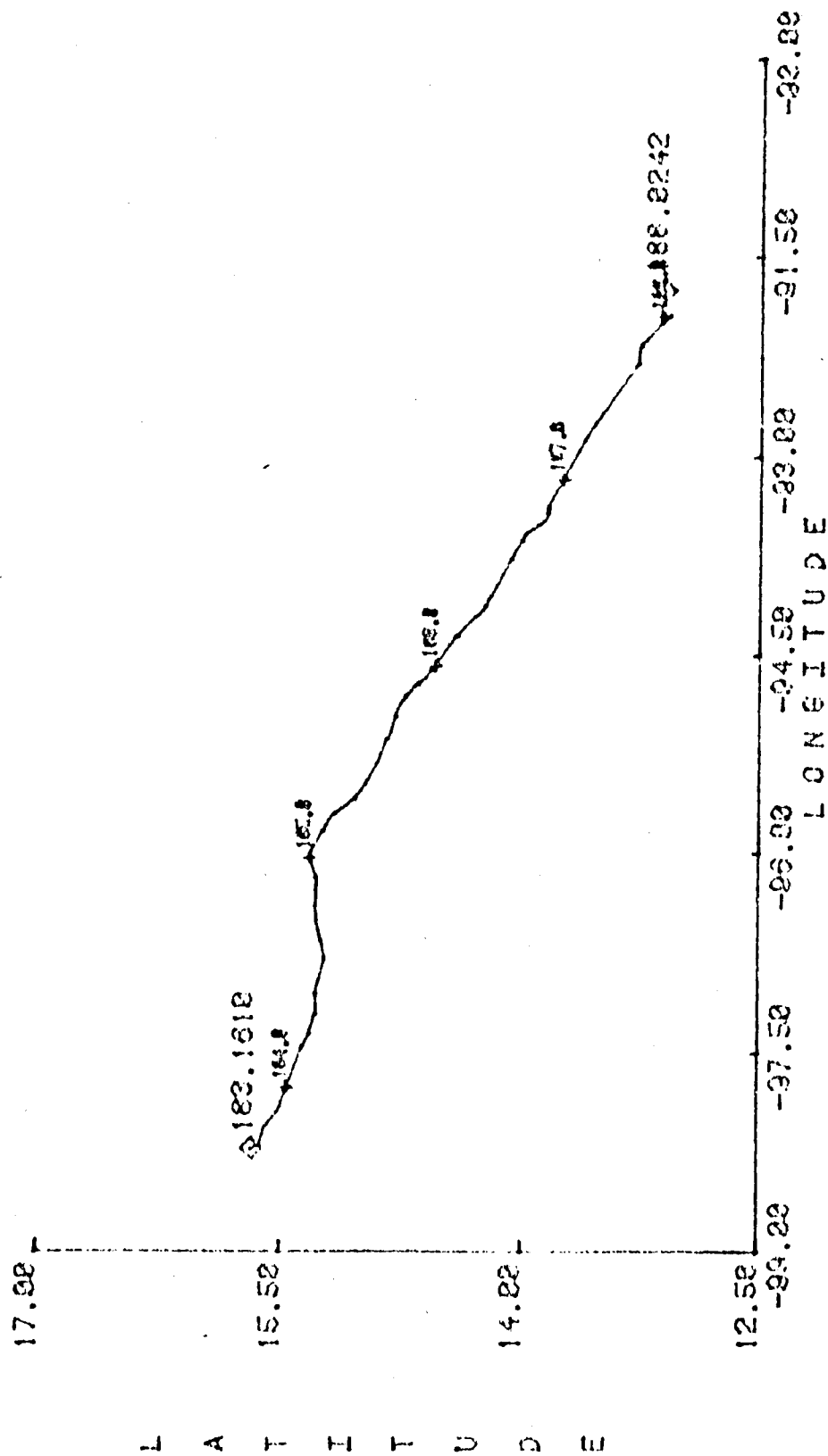


FIG. 4

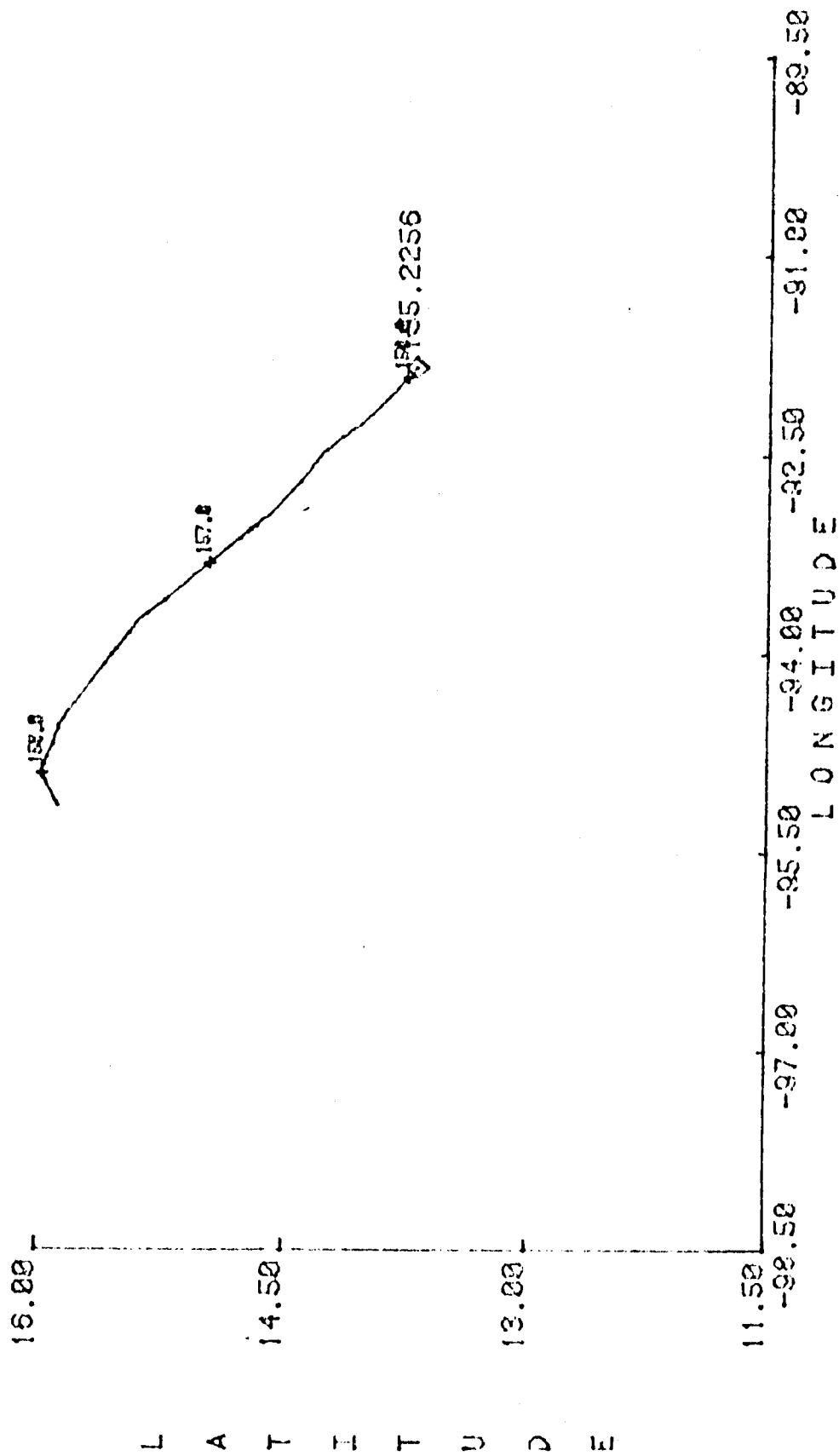


FIG. 5