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CRUISE REPORT

BAJA VAMONOS 79

SEPT. 7 - SEPT. 30, 1979

by

Hans Schrader

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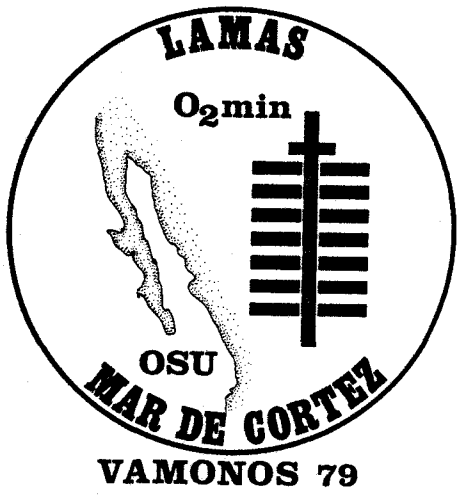

Cruise Report

BAJA VAMONOS 79

H-1 MARIANO MATAMOROS

(commanding officer Pompeyo Leon Herrera)

San Diego - Manzanillo - Sea of Cortez - San Diego

September 7, 1979 through September 30, 1979

School of Oceanography
Oregon State University
Corvallis, OR 97331

and

Instituto Oceanographico
de Manzanillo, Manzanillo,
Colima, Mexico

Acknowledgements

Without the outstanding collaboration of the Captain, the officers and the crew of the H-1-Mariano Matamoros our successful collection of laminated sediments would not have been possible. Thanks to the Mexican Navy for making the Matamoros available for our research.

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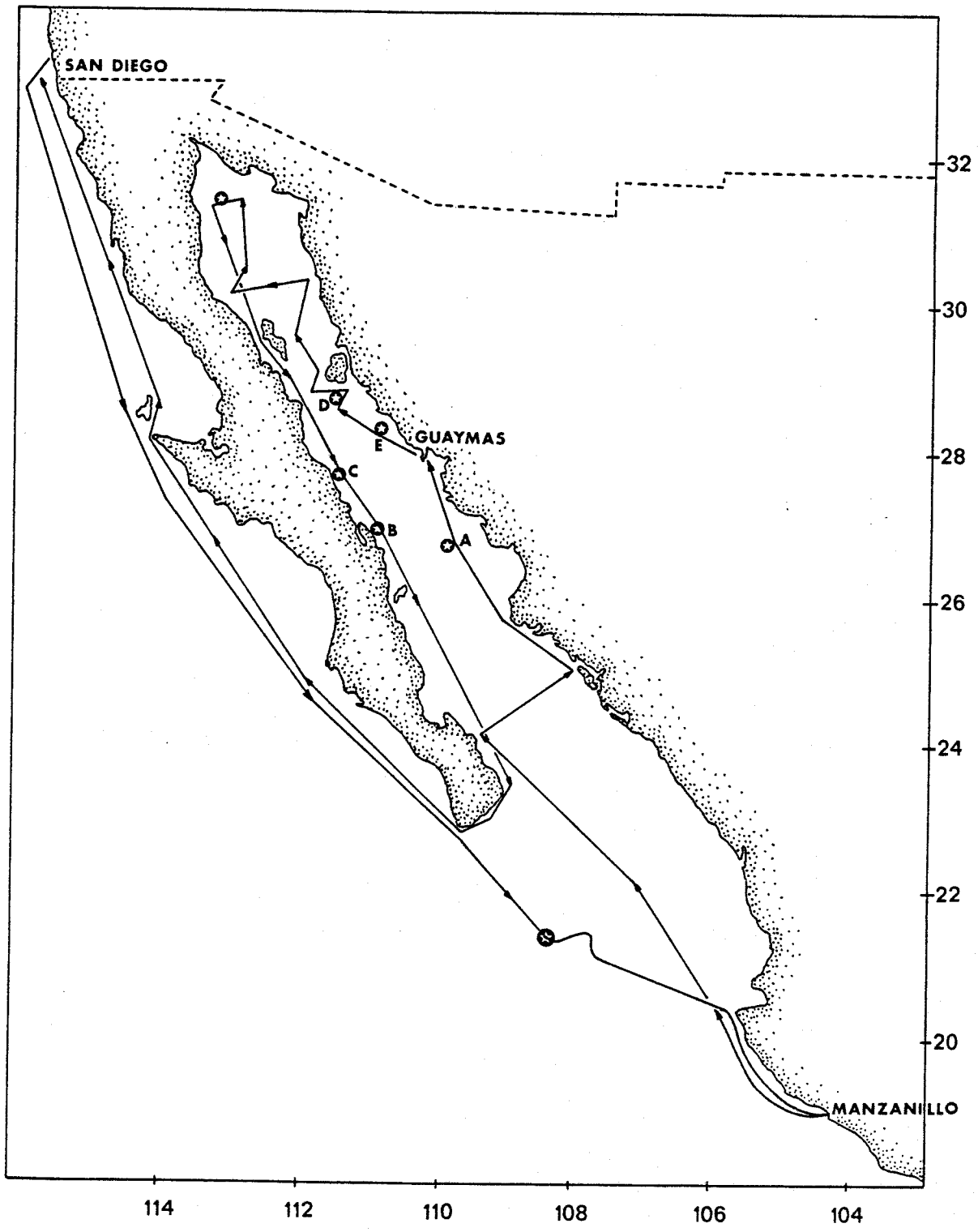
Captain of H-1 Mariano Matamoros:
Com. Off. Pompeyo Leon Herrera



Overall cruise trackline BAV-79, September 7, 1979 - September 30, 1979, San Diego - Manzanillo - Gulf of California - San Diego. Areas A, E, D, Colorado River Fan, C, B.

Objectives

The objectives were to bathymetrically survey areas in the Central Gulf of California where laminated sediments were discovered previously, core with lightweight marine geologic gravity corer, and recover well preserved surface sediment up to 2-3 meters in length. These laminated sediments will essentially be used to establish a model of varve formation in the Central Gulf and to compare differences and similarities on the mainland and Baja side. In addition, the response of biota (mostly diatoms) and abiota (terrigenous continental derived material) to climate will be studied.

Instruments

Bathymetric survey was performed at 7-9 knots ship's speed during night using the ship's EDO 12 kHz sounding system and an OSU EPC transceiver. Coring was carried out as follows:

(1) The lightweight Reineck Box Corer Mark I (Ocean Instrument, San Diego) was used without adding additional weight to the shaft and with padded frame edges to prevent the frame from sinking into the sediment and causing overpenetration.

(2) A lightweight Kasten core and 2 meter long stainless steel barrels were utilized. Barrels were pieced together using commercial weather-stripping. The core catcher door releases initially caused problems in that often one door did not close; we modified the outside release wings by adding slightly bent sheet metal extensions and after this modification had no further problems. The weight-stand normally carried only one lead ring weighing around 120 pounds. The extensions of the bolts which connect the barrels with the core catcher sometimes caused problems because they cut grooves into the recovered sediment column, thus causing outflow of surface water and surface sediments.

(3) The large diameter gravity corer was mostly used without adding any additional weight to the weight-stand. PVC barrels were around 3 meters long.

(4) Depth control and "instrument at bottom" was controlled using an Interocean Pinger. Since our meter-wheel attached to the winch was extremely accurate we ran a couple of corings without a pinger.

(5) Depths were calculated using the EPC record in fathoms and multiplying by a factor of 1.83 as conversion factor to meters.

(6) The available maximum winch speed was around 32 meters/minute. At most stations we lowered the instruments to about 20 m above bottom, waited for 2-5 minutes and proceeded at low speed with the box corer, with increasing speed (up to maximum) with the gravity- and Kasten-corer. No sign of tension release on both the big block at the "A" frame nor the deck block were recognizable when instrument hit bottom except in two instances when we used a free fall method.

(7) All navigation was based on Omega C, D, and G lines and are accurate within 2-3 nm.

Core Processing

Immediately after recovery box cores were removed from instrument, standing water carefully siphoned off, and a plastic sheeting placed over the top of the sediment, which then was topped with plenty of two component foam.

Kasten cores were siphoned, foamed and immediately opened, briefly described, and sampled into plastic boxes. The remainder of the material was cut into 5 cm thick composite samples and placed into plastic bags. Eduardo Alfaro Pardo received subsplits from most samples.

Gravity cores were siphoned, foamed and, after recovery onto deck, cut into sections then capped.

All material was stored at around 30-40° Fahrenheit during the whole cruise.

Cruise

We departed San Diego harbor on the Mexican Navy oceanographic research ship H-1 Mariano Matamoros on September 7 at 0800 en route to Manzanillo, Mexico. Departure weather was slightly foggy with moderate winds. On Monday, September 10, we began to feel the effects of tropical storm "Guillermo" which was moving northward and building in intensity. We stopped to run a quick check of the pinger - it worked like a charm - and tried to straighten the wire line which when unspooled would kink and coil up. The wire, however, remained uncooperative but during the later coring gave us no trouble. The wind was blowing 40-60 knots and seas were as high as 20 feet. On Tuesday, September 11,

the wind had increased to 50-70 knots and seas were 20-25 feet. The crew and scientists alike found this display of nature's violence and energy awesome and exhilarating. Shortly after we parted company, the proud Guillermo was given a promotion to full-fledged hurricane with all honors and privilages which are extended to one of such high rank. We arrived in Manzanillo at 0230 on September 12 for refueling and to pick up some physical oceanographers. We departed at 2200 on September 14 en route to the Sea of Cortez. We ran several physical oceanography stations across the mouth of the Gulf and on the way to "Area A".

Area "A"

with Table 1, Figures 1 and 2

We arrived at area "A" on September 17 and began surveying at 0430 GMT. The weather was excellent and caused no problems during the survey or during the coring. The initial point at which the survey began was Lat. 26°47'N, Long. 110°06'W. The initial position was determined using Omega. A satellite fix was obtained at 0458 GMT, Lat. 26°46.2'N, Long. 110°07.6'W. A course of 240° at 8 knots was initially established. A list of Omega position fixes are as follows.

Table 1. List of Omega Fixes during Survey

0500 GMT:	26°45.2'N	110°10.8'W
	course = 236°	speed = 8 knots
0530 GMT:	26°43'N	110°15'W
	course = 234°	speed = 8 knots
0600 GMT:	26°40'N	110°19'W
	course = 239°	speed = 9 knots
0652 GMT:	26°44'N	110°26.7W
	course = 063°	speed = 9 knots
0711 GMT:	26°44.4'N	110°24.6'W
	course = 059°	speed = 9 knots
0800 GMT:	26°48.2N	110°18'W
	course = 059°	speed = 10 knots
0830 GMT:	26°51'N	110°13.4'W
	course = 059°	speed = 10 knots
0854 GMT:	26°53'N	110°10'W
	course = 146°	speed = 10 knots

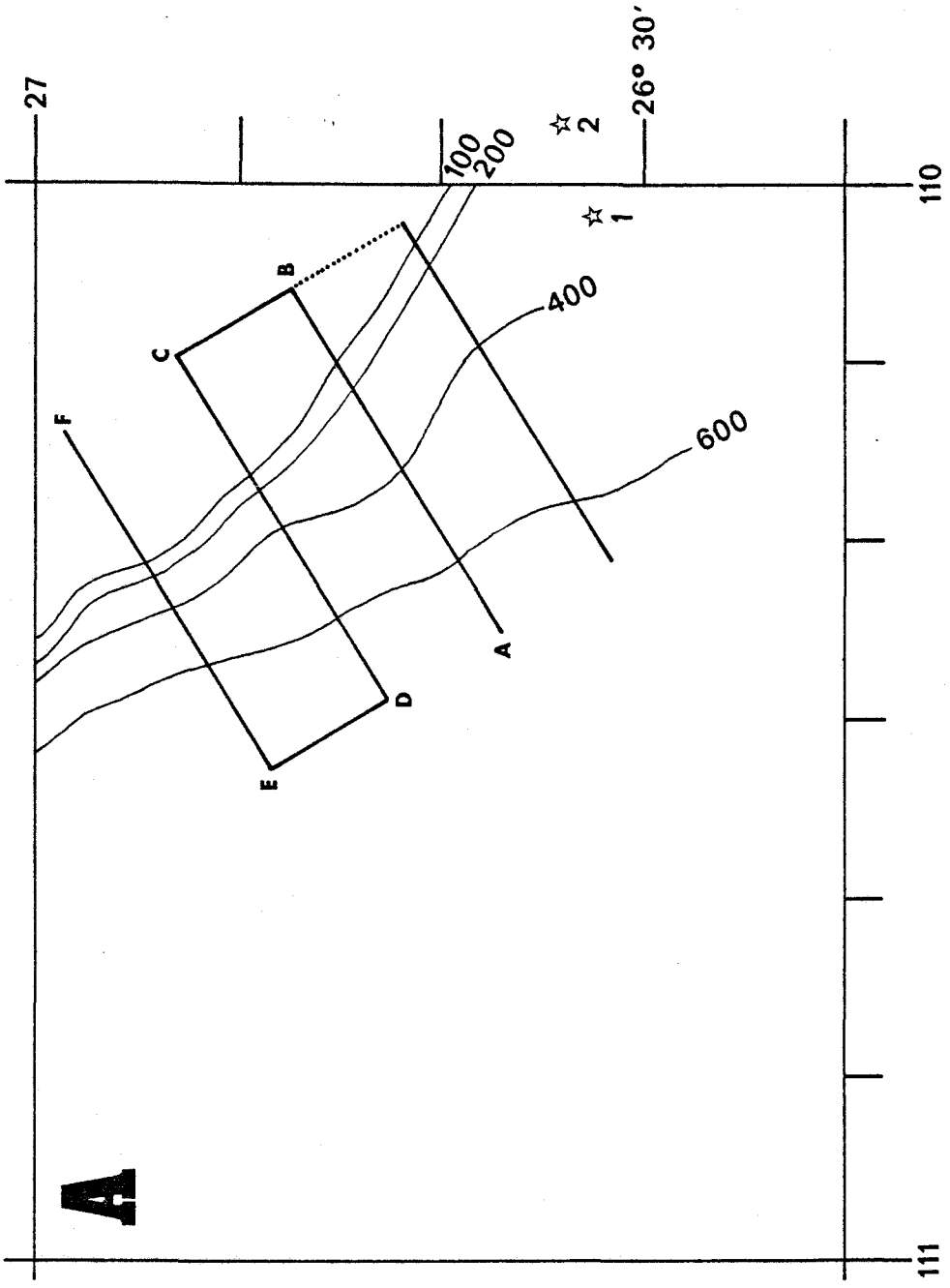


Figure 1: West off Rio Mayo. Original bathymetric survey net, Area "A". Stippled line: alternative survey trackline. A = starting point, F = end point, depth in fathoms, stars = previously cored sections. [A = 26°37'-110°25', B = 26°47'-110°06', C = 26°53'-110°10', D = 26°42.5'-110°29', E = 26°48'-110°33', F = 26°59'-110°14']

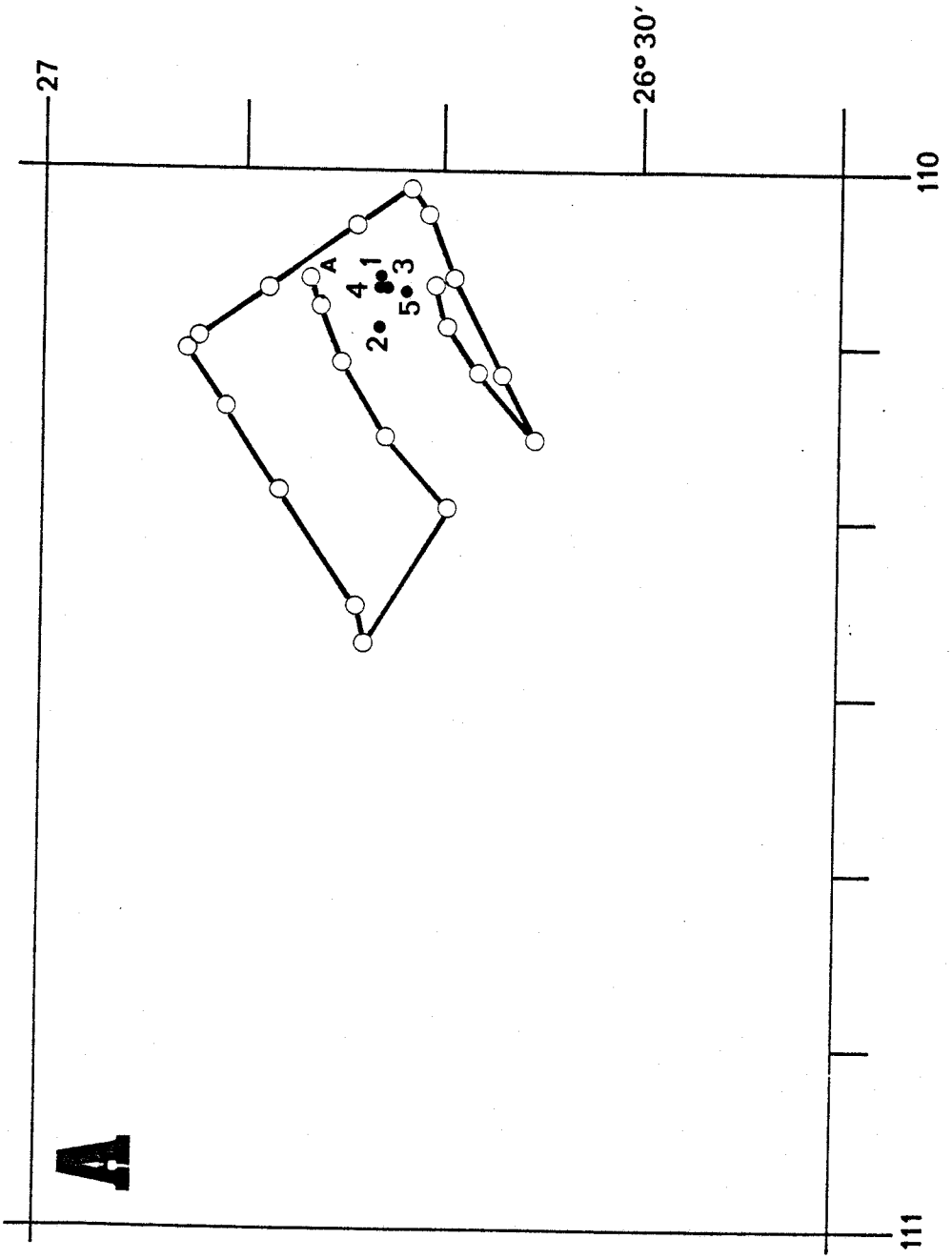


Figure 2: Actual survey trackline, Area "A". A = starting point. Numbers represent coring stations. Open circles along tracklines indicate positions obtained during bathymetric survey (for positions see Table 1).

0900 GMT: 26°52.6'N 110°09.4'W
course = 146° speed = 10 knots
0930 GMT: 26°49'N 110°06.6'W
course = 146° speed = 10 knots
1000 GMT: 26°44.6'N 110°03.0'W
course = 146° speed = 10 knots
1018 GMT: 26°41.8'N 110°01'W
course = 239° speed = 10 knots
1030 GMT: 26°41'N 110°02.3'W
course = 239° speed = 10 knots
1100 GMT: 26°39.8'N 110°06.1'W
course = 239° speed = 10 knots
1130 GMT: 26°37.2'N 110°11.5'W
course = 239° speed = 8 knots
1203 GMT: 26°35.7'N 110°15.2'W
course = 059° speed = 8 knots
1230 GMT: 26°38.4'N 110°11.4'W
course = 059° speed = 8 knots
1254 GMT: 26°40.0'N 110°08.8'W
course = 059° speed = 8 knots
1300 GMT: 26°40.5'N 110°06.5'W
course = 059° speed = 8 knots

We arrived at Station 1 at 1330 GMT. Wind was out of the NW at 7-10 knots. This was compensated for by establishing a northwesterly heading at about 40 RPM prop. speed. Box core #1 (BAV-79-A-1) was launched at 1435 GMT and was on bottom at 1547 GMT in 640 m of water. Our Omega position at 1545 GMT was 26°43.5'N,110°06.0'W. The core was recovered at 1612 GMT. It contained laminated sediments but had over-penetrated. No added weight was used. Box core #2 (BAV-79-A-2) was launched at 1717 GMT and was on bottom at 1800 GMT in 710 m of water. The Omega position at 1800 GMT was 26°43.4'N 110°08.6'W. The core was recovered at 1830 GMT and contained well preserved laminated sediments. Wooden boards were attached to the frame to reduce the penetration of the frame into the sediment. Kasten core #1 (BAV-79-A-3)

was launched at 1915 GMT and was on bottom at 1945 GMT in 689 m of water. The Omega position at 1950 GMT was 26°43.2'N,110°06.8'W. The core contained well preserved laminated sediments, but over penetrated. Two lead weights of approximately 110 lbs were used. Kasten core #2 (BAV-79-A-4) was launched at 2040 GMT and was on bottom at 2110 GMT in 637 m of water. The weight was reduced on this attempt to one lead wt. but the core catcher doors did not close and there was no recovery. Kasten core #3 (BAV-79-A-5) was launched at 2205 GMT and was on bottom at 2230 GMT in 705 m of water. The Omega position at 2230 GMT was 26°43.4'N,110°07.0'W. The area of the core catcher triggers was expanded by adding more metal. This was done to make it easier for the soft sediment to trigger the closing of the doors. Laminated sediments were recovered. Gravity core #1 (BAV-79-A-6) was launched at 0020 GMT and was "on bottom" at 0054 GMT in 646 m of water. The core was empty and presumably did not hit bottom. Due to time restrictions and successful recovery of laminated sediments, we decided to terminate coring at area "A" at this point. On our way to Area "E" we disembarked Gretchen Schuette and Luis Brizeno in Guyamas Navy Base early morning of the 19th.

Area "E"

with Table 2, Figures 3 and 4

We arrived at Area "E" on September 19 and began surveying at 17.41 GMT. Only one bathymetric survey line was selected due to time limitations and due to the fact that the bathymetry was already well established by previous cruises to this area (Baumgartner & Soutar, 1978, DSDP-IPOD Leg 64). Weather conditions again were excellent with flat seas and almost no wind.

Table 2: List of Omega Fixes during Survey

1741 GMT:	27°57.5'N	111°32'W	
	course = 180°	speed = 8 knots	wind = 015°, 11 knots
1800 GMT:	27°53.2'N	111°34.0'W	
	course = 180°	speed = 8 knots	
1820 GMT:	27°51.1'N	111°33.0'W	
	course = 157°	speed = 8 knots	wind = 310°, 6 knots
1836 GMT:	27°52.7'N	111°34.5'W	
	wind = 310°, 6 knots		

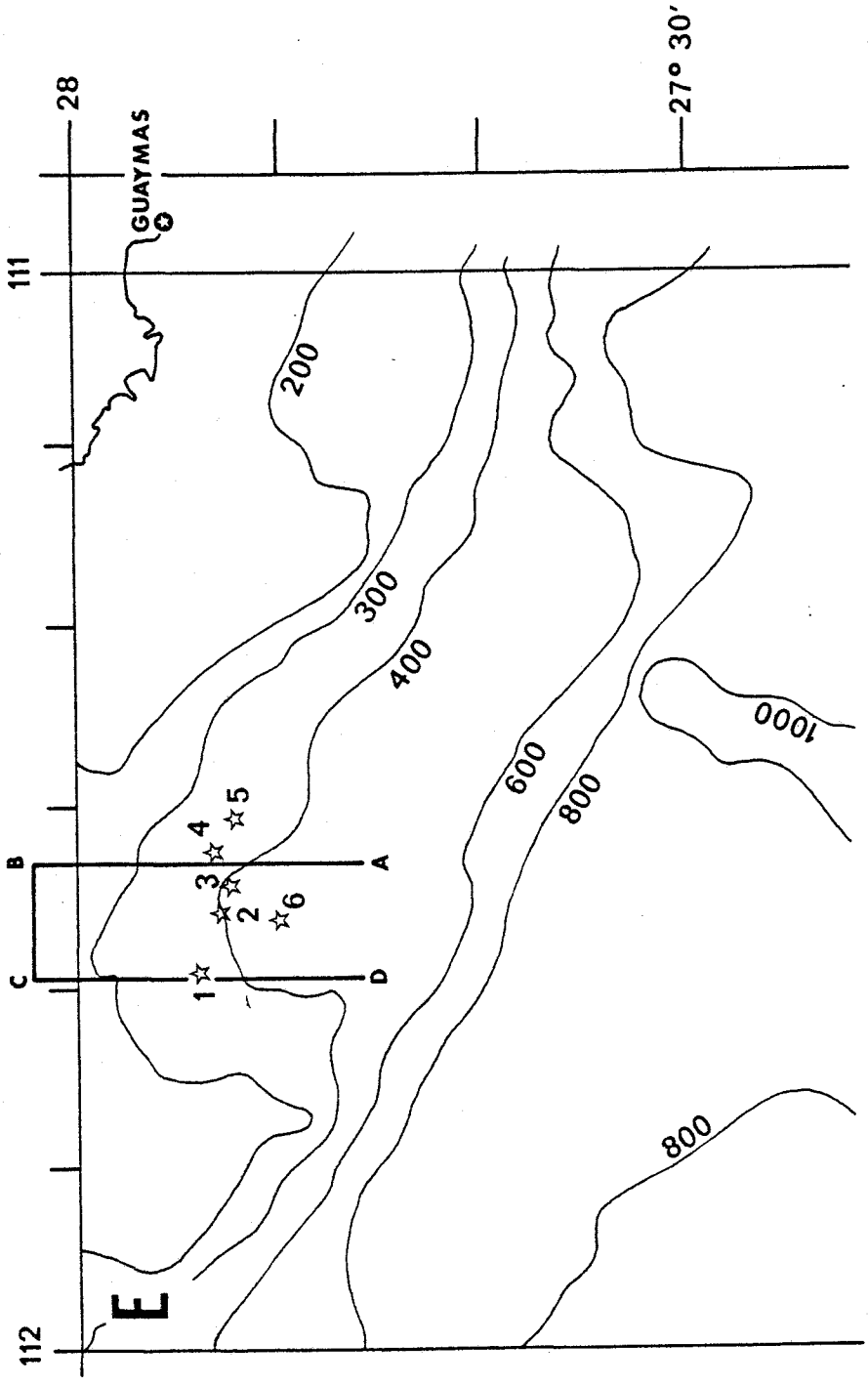


Figure 3: West off Guaymas. Original bathymetric survey net, Area "E". A = starting point, D = end point, depth in fathoms, stars = previously cored sections [A = 27°46'-111°32', B = 28°02'-111°32', C = 28°02'-111°39', D = 27°46'-111°39'].

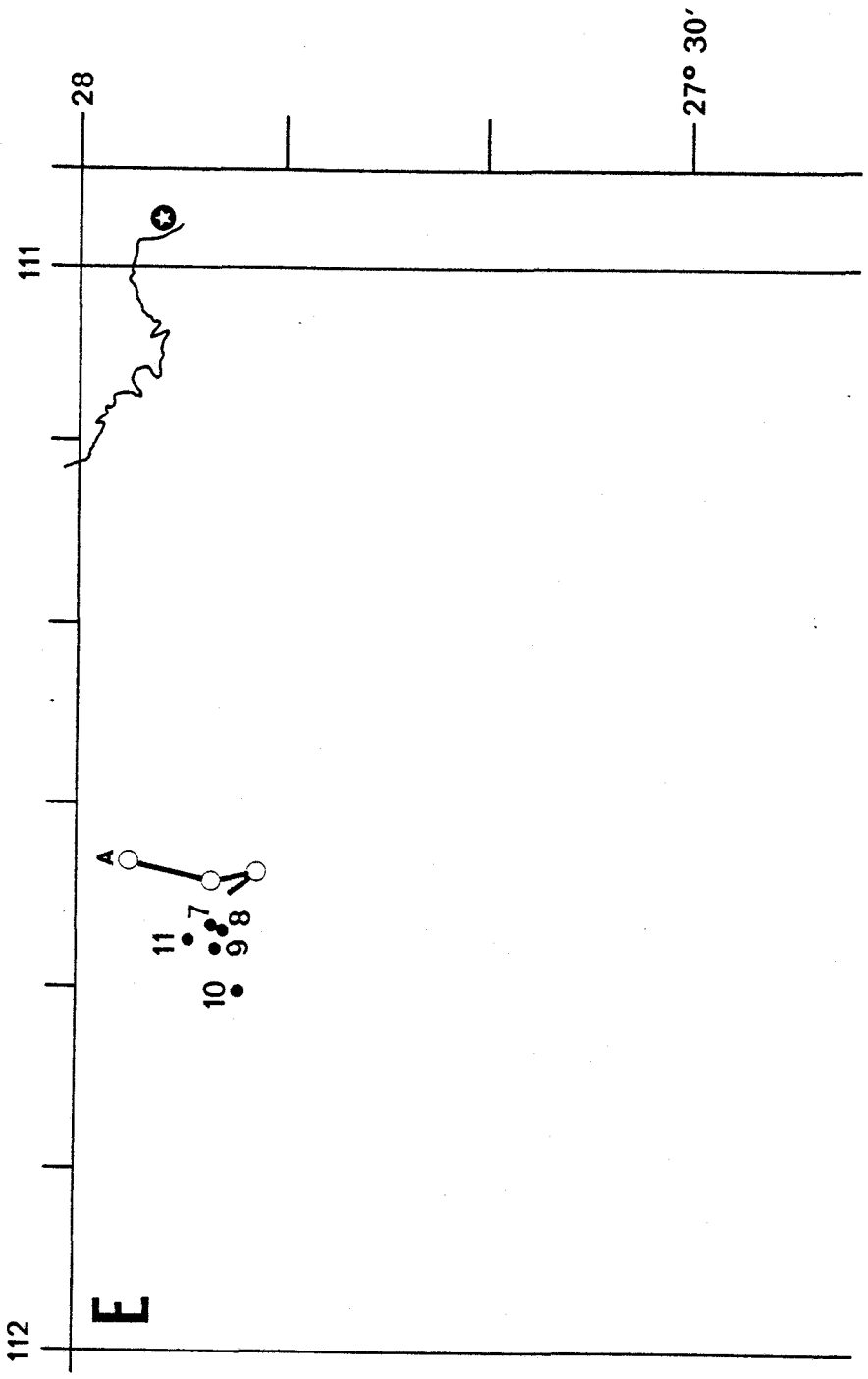


Figure 4: Actual survey trackline Area "E". A = starting point. Numbers represent coring stations. Open circles along tracklines indicate positions obtained during bathymetric survey (Table 2).

Survey was terminated at this point and we arrived at first station at 27°52.7'N,111°35.0'W with a water depth of 677 m. During coring the ship was slightly drifting west but following the 650-680 m depth contours. Some of the drifting was compensated for by running one propellor at 40 RPM.

Box core (BAV-79-E-7) was launched at 18.45 GMT and was on bottom at 19.21 GMT at 675 m depth. The Omega position was 27°53.5'N-111°36.0'W. The core was recovered at 19.45 GMT and contained well laminated sediments with a strong H_2S smell. The surface had many small worm tubes. Kasten core (BAV-79-E-8) was launched at 20.25 GMT and was on bottom at 20.50 GMT at 660 m water depth. The Omega position was 27°52.8'N,111°36.9'W. The core was recovered at 21.15 GMT and due to the failure of one door closing, the sediment column was lost. Kasten core (BAV-79-E-9) was launched at 21.25 GMT and was on bottom at 21.50 GMT at 660 m water depth. The Omega position was 27°53.2'N,111°37.2'W. The core was recovered at 22.16 GMT and contained 193 cm of well laminated sediments with a laminae density of around 8.75/cm and a strong H_2S smell. Kasten core (BAV-79-E-10) was launched at 22.53 GMT and was on bottom at 23.15 GMT at 644 m water depth. The Omega position was 27°52.2'N,111°39.7'W. The core was recovered at 23.50 GMT and contained 199 cm of well laminated sediment with a strong H_2S smell. Lamination density ranged between 8-10 laminae/cm. Large diameter gravity core (BAV-79-E-11) was launched at 00.00 GMT and was on bottom at 00.32 GMT at 635 m water depth. The Omega position was 27°54.7'N,111°37.0'W. A total of 297 cm were recovered, the core slightly overpenetrated.

Penetration and recovery was optimal in using flat 15 cm wide boards across the edges of the Box Core frame; no extra weight was added. The extended trigger arms on the Kasten core core-catcher worked fine and only 1 lead ring of 110 pounds was used. Work was terminated at 00.55 GMT in Area "E" and we were travelling towards Area "D".

Area "D"

San Pedro de Martir Basin

with Table 3, Figures 5 and 6

We arrived on station at 0850 GMT and began to survey transects of area "D", the San Pedro de Martir Basin. Seas were calm, skies clear. Transect lines in this area were oriented so as to run approximately

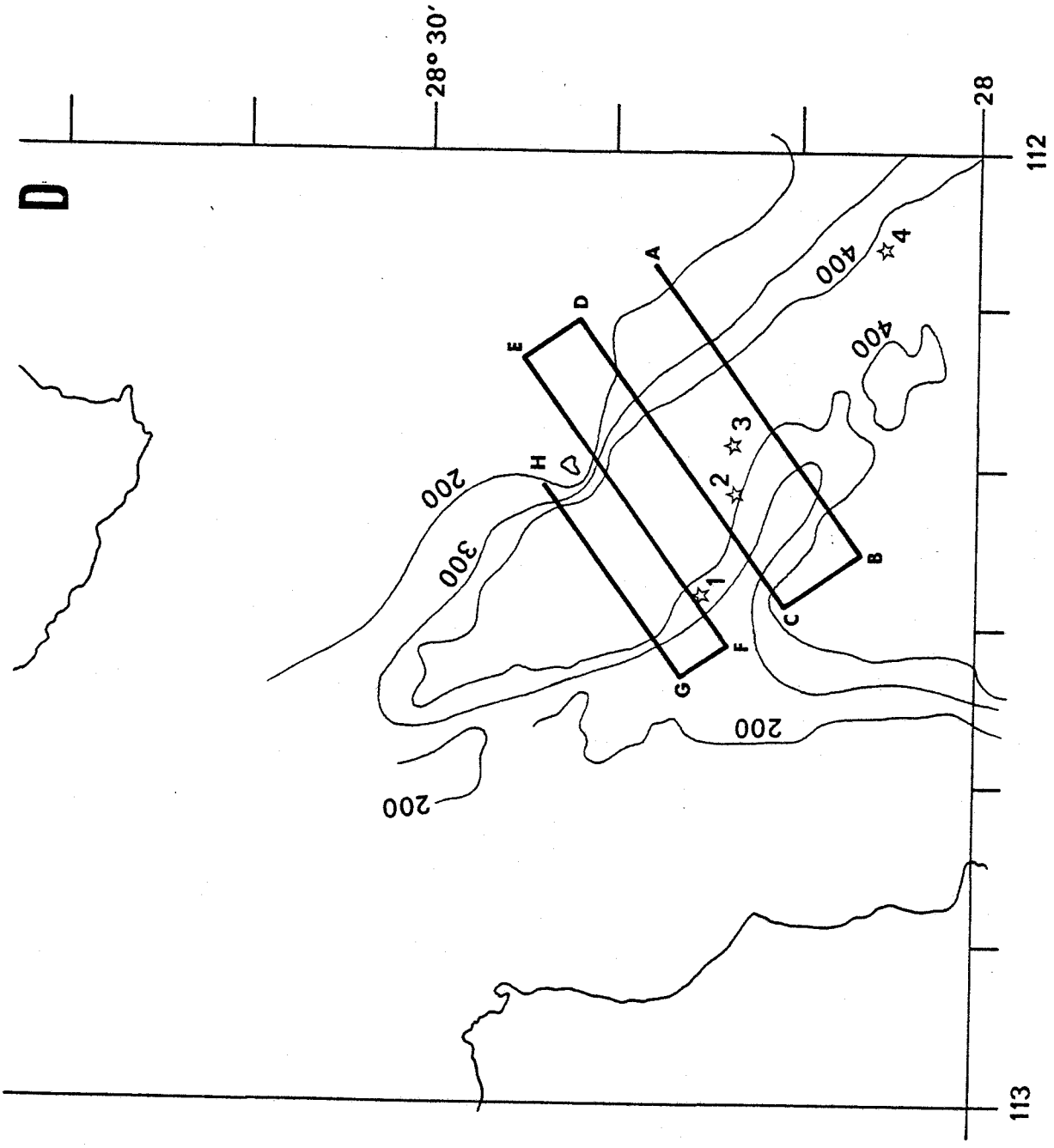


Figure 5: San Pedro Martir Basin. Original bathymetric survey net, Area "D". A = starting point, H = end point, depth in fathoms, stars = previously cored sections. [A = 28°20'-112°7.2', B = 28°7.5'-112°25.3', C = 28°10.6'-112°28.5', D = 28°22'-112°10.4', E = 28°25'-112°13', F = 28°13.7'-112°31.2', G = 28°16'-112°33.3', H = 28°23.5'-112°20.8'] 1 = L173 (Calvert), 2 = 83 (Fok), 3 = L178 (Calvert), 4 = L181 (Calvert).

parallel to the Omega navigation lines, to aid in accurately locating our position. This system is accurate to within 2-3 nautical miles. No satellite fixes were received during the survey and sampling for this area.

Wind direction was approximately 180°, wind velocity 10 knots. A southeasterly flowing current present in the eastern part of area D caused drift in a southeasterly direction away from the proposed track lines in this area (Fig. 5).

Laminated cores were previously recovered in this area. Survey lines and core locations were chosen to cover the approximate locations of these laminated cores. In addition, we wished to obtain a more accurate picture of the basin configuration, which does not appear to have been extensively surveyed.

The survey followed the track lines as shown in Fig. 5. A position table (Table 3) is given below. The correction factor used in computing depths from the PDR was 1.83 m/fathom. Survey speed was 8 knots.

Table 3: Survey Transects - Area D - San Pedro de Martir Basin

Begin Record	Time (GMT)	Position	Heading	Depth (m)	Observations
c/c	0850	28°22.4'N,112°10.9'W	244°	310	
c/c	0905	28°21.6'N,112°12.0'W	301°		
c/c	0916	28°23.5'N,112°14.4'W	244°	280	
	0930	28°21.2'N,112°15.2'W	244°		
	1000	28°19.5'N,112°20.2'W	253°	888	
	1030	28°18.5'N,112°23.4'W	247°	1034	
	1100	28°16.2'N,112°29.3'W	245°	558	
c/c	1115	28°15.4'N,112°31.4'W	151°	512	
	1130	28°13.5'N,112°30.5'W	151°	430	wind direction 180°
c/c	1151	28°10.6'N,112°28.5'W	062°	695	wind speed 10 knots
	1200	28°11.0'N,112°27.4'W	062°	659	
	1230	28°12.8'N,112°23.4'W	062°	494	
	1300	28°14.6'N,112°18.7'W	062°	833	
c/c	1330	28°15.5'N,112°14.3'W	050°		
c/c	1341	28°15.2'N,112°11.1'W	150°	805	
c/c	1351	28°14.1'N,112°10.4'W	250°	632	
c/c	1430	28°12.3'N,112°15.7'W	243°	827	

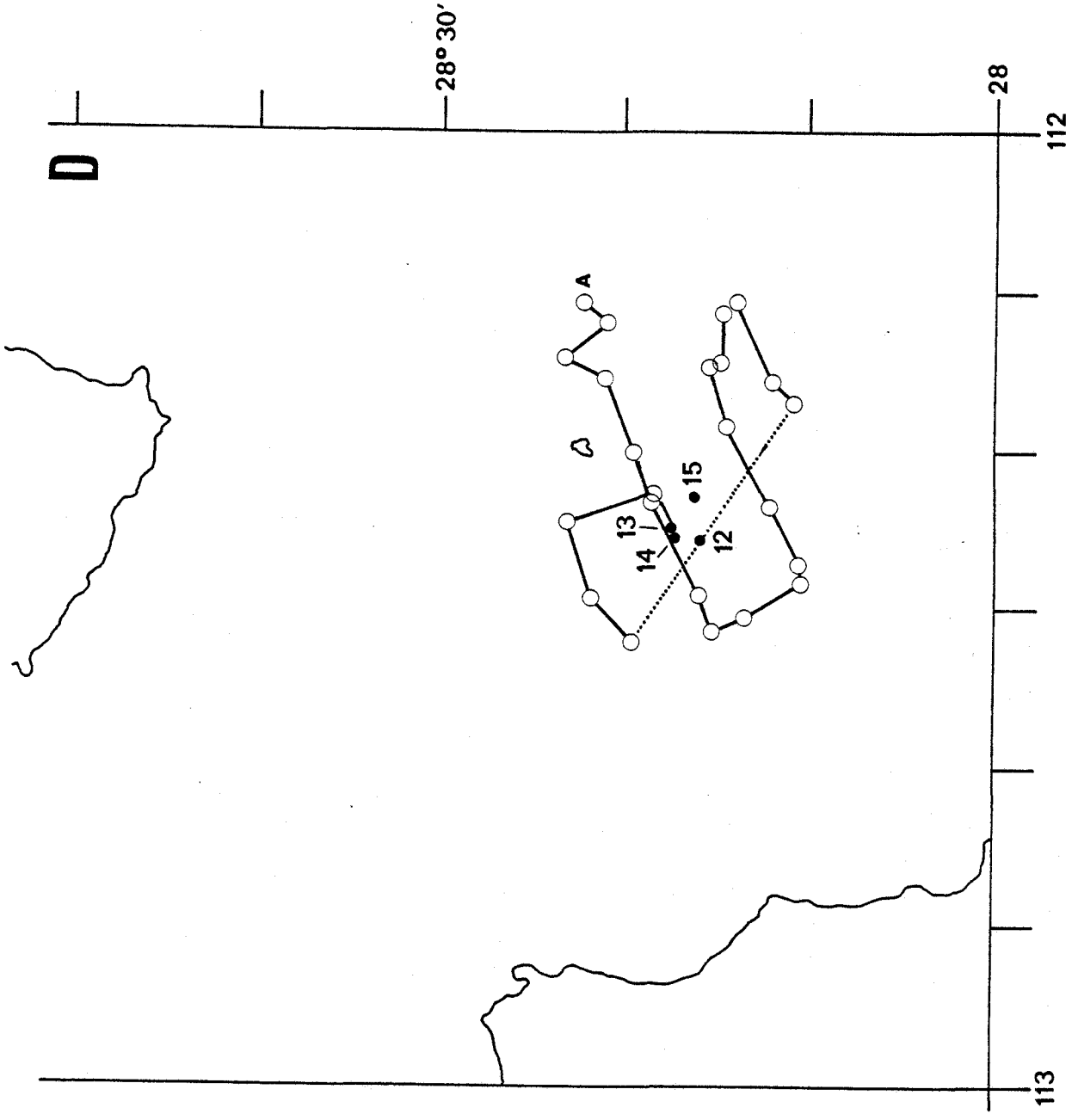


Figure 6: Actual survey trackline Area "D". A = starting point. Numbers represent coring stations. Open circles along tracklines indicate positions obtained during bathymetric survey (Table 3).

Begin Record	Time (GMT)	Position	Heading	Depth (m)	Observations
c/c	1443	28°11.5N,112°17.3'W	301°		full speed - 9 knots
c/c	1611	28°20'N,112°32'W	062°		full speed - 9 knots
	1630	28°22'N,112°29.1'W	062°		
c/c	1700	28°23.4'N,112°24.5'W	138°		
c/c	1744	28°19.9'N,112°20.5'W	244°	906	wind direction 310°
	1800	28°18.5'N,112°22.5'W	244°	878	wind velocity 6 knots
	1825	28°17.2'N,112°25.5'W	stop	933	on station - box core
	1905	28°16.0'N,112°25.6'W	on bottom	924	box core - BAV-79-D-12
	2000	28°16.1'N,112°25.0'W	core in	924	Kasten core
	2040	28°17.5'N,112°25.0'W	on bottom	924	BAV-79-D-13
	2142	28°16.9'N,112°26.5'W	core in	975	Kasten core
	2220	28°17.3'N,112°26.8'W	on bottom	997	BAV-79-D-14
	2328	28°17.1'N,112°26.0'W	core in	993	gravity core
	0006	28°16.4'N,112°24.5'W	on bottom	975	BAV-79-D-15
	0102	28°16.6'N,112°23.4'W	core in	885	gravity core
	0135	28°16.2'N,112°23.5'W	on bottom	860	BAV-79-D-16

Core positions and depths are given in Table 3. Modifications in coring procedures and additional comments for individual cores follow.

BAV-79-D-12 - Box core:

Frame padded with boards as in previous areas to prevent sinking into soft sediments. No weight added. Pinger 50 m above core. Stopped 20 m above bottom. Sediment laminated, laminae thicker than Areas A & E. Surface recovered. Large forams and polychaetes observed on surface.

BAV-79-D-13 - Kasten core:

Extensions added to trip mechanism of core catcher. Pinger 50 m above core. Stopped 20 m above bottom. Released with maximum winch speed (32 m/min.). Core recovered 1/2 full, strong H_2S odor. Sampling - Total length 110 cm, 4 plastic tray samples taken, composite core catcher sample, and 5 cm interval composite samples.

BAV-79-D-14 - Kasten core:

Pinger 50 m above core. Two lead weights added, largest extensions used on trip mechanism. Stopped 20 m above bottom, released with maximum winch speed. Core recovered 1/3 full. Sampling - Total length 55.5 cm, 2 plastic trays, composite core catcher sample, and 5 cm interval composite samples.

BAV-79-D-15 - large Ø gravity core
Pinger 50 m above bottom
One lead weight added. Stop at 40 m above bottom for 5 minutes, free fall from 40 m. Unable to stop winch. Overpenetrated, pinger on bottom. Valve failed to close. Sediment lost.
BAV-79-D-16 - Large Ø gravity core
Pinger 50 m above bottom
One lead weight added. Stop at 60 m above bottom for 5 minutes, core released at maximum speed of wench. Recovered about 34 cm of sediment, plus 1 composite core catcher sample.

Coring terminated at Area "D" at 0200 GMT and we headed north for a number of physical oceanographic stations in the northern Gulf. Due to a defect of the multi-conducting cable this program was shortened.

Colorado River Fan Station

with Figure 7

A coring station at 31°01'N,114°24'W was chosen to try to sample modern Colorado River sediments in the hope to see a difference in sedimentation rate of the Colorado River since 1935 (building of Hoover Dam). This station was chosen close to the Pleistocene shoreline (van Andel, 1964, Fig. 43) to minimize the coarse shoreline sands. Earlier studies have shown 2.25 Ø (.20 mm) to be the dominant grain size in this area (van Andel, 1964).

We arrived at Station 17 from the east at 1740 PDT on September 22, 1979 (0040 GMT, 9/23/79). The sea was fairly calm with slight winds from the northeast. The position of the station was 31°01'N,114°24.0'W with a water depth of 28 m. This position was just west of a distributary channel in the Colorado River Fan. The channel can be seen in the depth profile on the EPC depth recorder.

A Kasten core was launched as soon as we arrived on station. The wings used on the core catcher at previous areas were removed here because the sand is of large grain size. The holes where these wings were attached were covered by black electrical tape. Five lead weights were used on the Kasten core which amounted to approximately 570 lbs. The core was lowered 10 m and then let free fall to the bottom. The core was on the

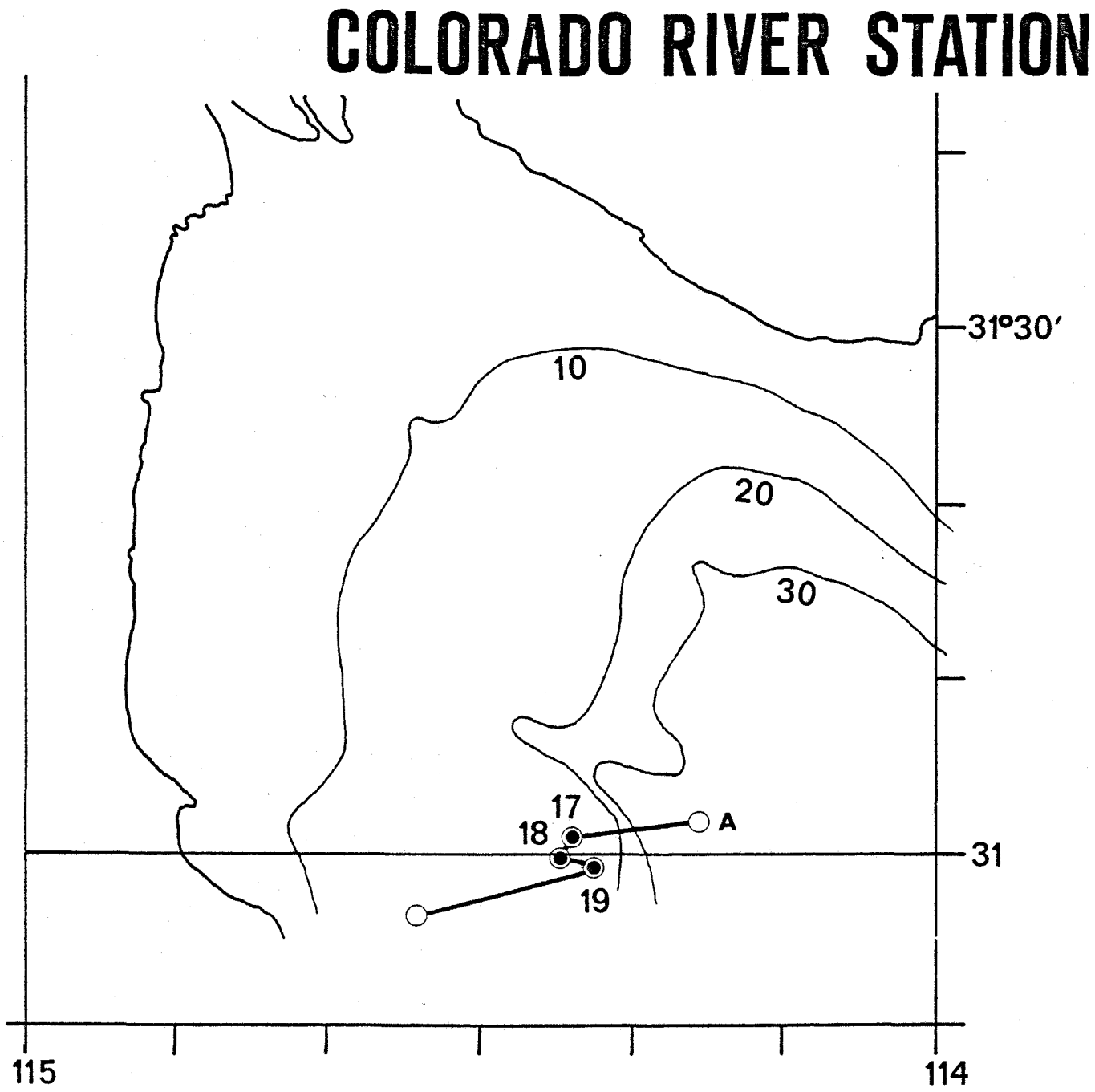


Figure 7: Colorado River Fan Station. Actual survey trackline. A = starting point, open circles represent positions obtained during survey, numbers represent coring stations. Depth in fathoms.

bottom at 0042 GMT at the same location as when it was launched. When the core hit the bottom, the block chained to the deck that was holding the wire down dropped to the deck and a total of 41 m was let out. The ship drifted slightly while the core was on the bottom because of the NE winds. The wire was at an angle as the core was lifted off the bottom. One of the doors did not shut and no sediment was recovered from this core. It was speculated that the core tipped over after it hit the bottom because sand was seen on the weight stand.

A wing was added to one side of the core catcher and the same barrel was sent down at 0100 GMT, 31°00.0'N,114°24.6'W in 29 m water depth. The core was again lowered to 10 m and then let free fall to the bottom. 43 total m of wire was let out. The ship again drifted slightly and the wire was at an angle when the core was pulled out of the bottom. The core did not penetrate very deeply into the sediment and approximately 1 cm of sand was recovered from the core catcher. Worm tubes and shells were present and the sample was placed in a plastic bag as a composite sample and labeled Station 18.

A large diameter gravity core, three meter barrel, was launched at 0123 GMT, located at 30°59.3'N,114°22.5'W with a water depth of 23 m. Six lead weights were used whose weight totaled 625 lbs. The core was lowered 5 m and then let free fall to the bottom and a total of 38 m of wire was let out. There was a slight drift of the ship while the core was on the bottom and the wire was angled to the starboard side and in towards the ship as the core was raised. The core barrel was bent about 1 m above the core catcher and no sediment was recovered. There were shell fragments and a worm tube recovered from the core catcher that were put in a plastic bag and labeled Station 19.

The total time spent in this area was one hour. Three cores were deployed and one small composite sample and some shell fragments were recovered.

Area "C"

with Table 4, Figures 8, 9 and 10

We arrived at Area "C" at 1210 GMT on September 24, 1979 and a bathymetric survey was begun. The survey was conducted at about 8 knots in a line approximating 246°-66° which is perpendicular to the depth

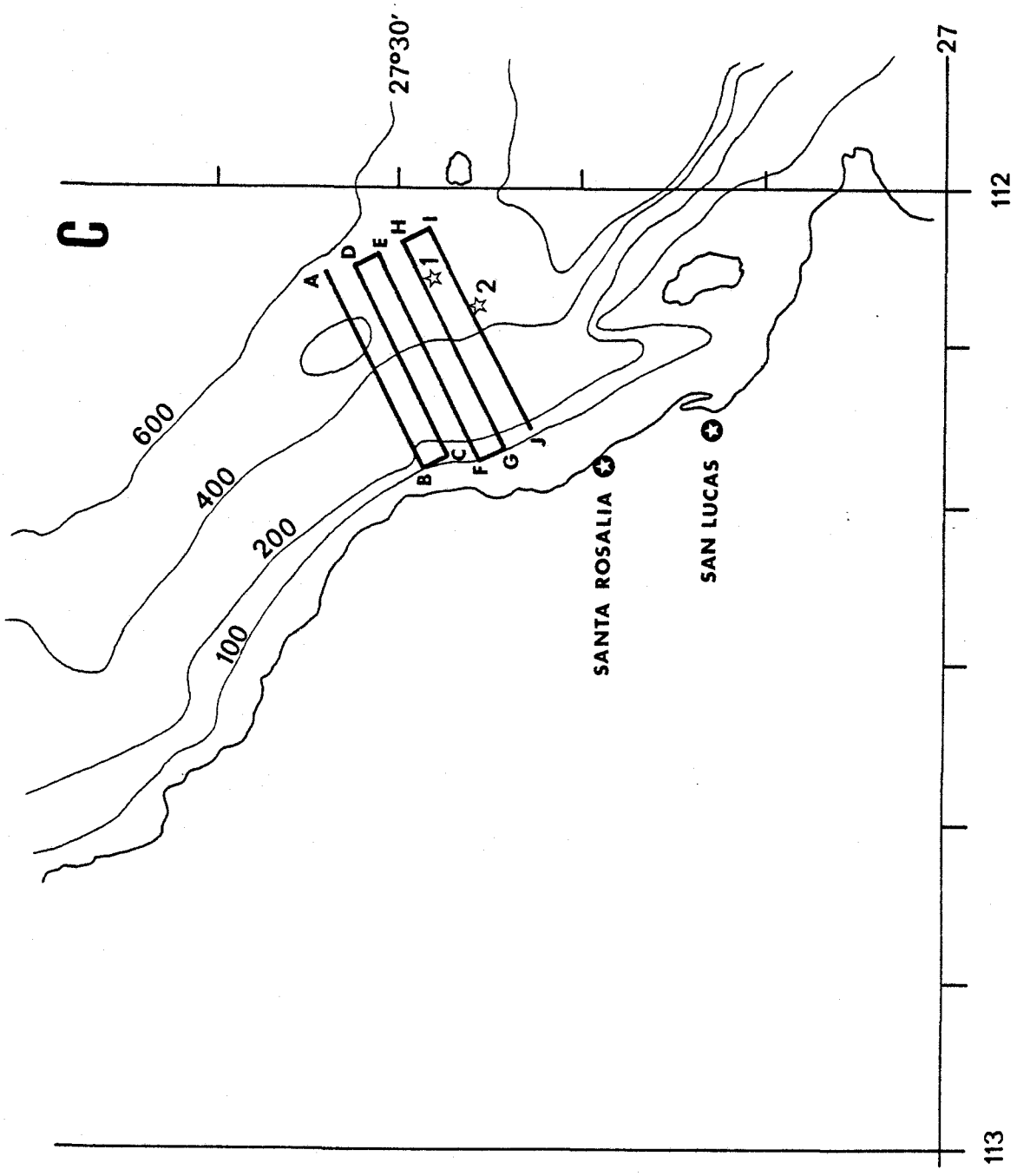


Figure 8: Off Santa Rosalia. Original bathymetric survey net, Area "C". A = starting point, J = end point, depth in fathoms, stars = previously cored sections. (A = 27°33.7'-112°05.5', B = 27°28.5'-112°17.3', C = 27°26.7'=112°16.7', D = 27°32.3'-112°05.0', E = 27°31'-112°04.2', F = 27°25.2'-112°16.7', G = 27°24.0'-112°16.1', H = 27°29.5'-112°03.7', I = 27°28.1'-112°02.9', J = 27°22.5'-112°15.0'). Tracklines parallel to Omega lines).

contours and parallel to the AB Omega lines. The area surveyed was the area between approximately 500 m and 1000 m. Three complete transects were made and a box core was taken (C-20) at 27°26.5'N,112°09.2'W in 677 m water depth. This depth is where laminated sediments were found on the eastern side of the Gulf. The sediment was expected to be firmer on this side of the Gulf due to a lower sedimentation rate so the plates on the box core controlling depth of penetration were moved to the middle position from the lower position which was used at the three previous areas. The bottom of the core was laminated but there were at least seven clams living in the top 10 cm of the sediment, and the core over-penetrated some. A 4 in. diameter tube sample was taken of the core. It was thought that we had sampled the fringe of the laminated sediment section just slightly above or below the oxygen-minimum layer.

A second box core was taken in deeper water at 750 m just SE of C-20. The penetration plates on the box core were replaced to the lowest position. This core, C-21, had no visual detectable laminated sediments or H_2S smell (which indicates a reducing environment necessary for the formation of laminated sediments); again a 4 in. tube sample was taken of the core.

The third box core, C-22, was taken in water 580 m deep east of C-20 and C-21. Again no laminated sediments were found and the H_2S smell was conspicuously absent; furthermore, there were a number of brittle starfish living in the surface of the sediment indicating an oxygen enriched environment. A 4 in. diameter tube sample was also taken of this core.

A fourth core, C-23, was taken 40 fathoms shallower with the same results. A fifth box core was taken at 655 m, the center of the oxygen minimum as found on the eastern side of the Gulf. C-24 revealed no laminated sediments or H_2S smell, and again the core was sampled with a 4 in. diameter tube.

A 2 m Kasten core, C-25, was taken in 655 m deep water to see if there were indeed laminated sediments yet they lay below what the box core sampled. A 96 cm core was recovered which was laminated below 46 cm and homogeneous above 46 cm.

The information indicates that at Area "C" the oxygen minimum layer and therefore the zone of laminated sediments has for some reason shifted below 750 m or ceased to exist in Area "C" within the last few years.

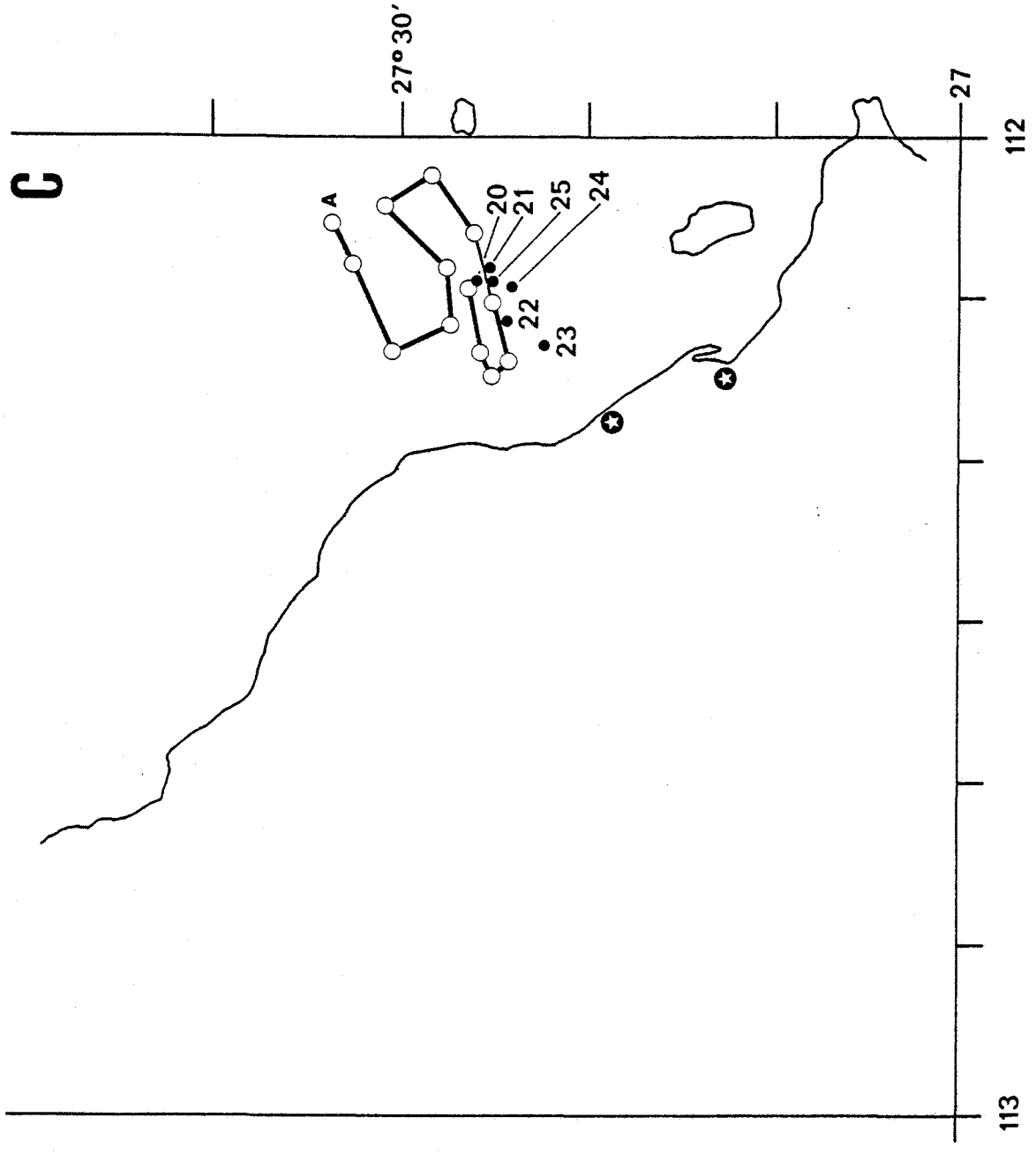


Figure 9: Actual survey trackline Area "C". A = starting point, numbers represent coring stations. Open circles along tracklines indicate positions obtained during bathymetric survey (Table 4).

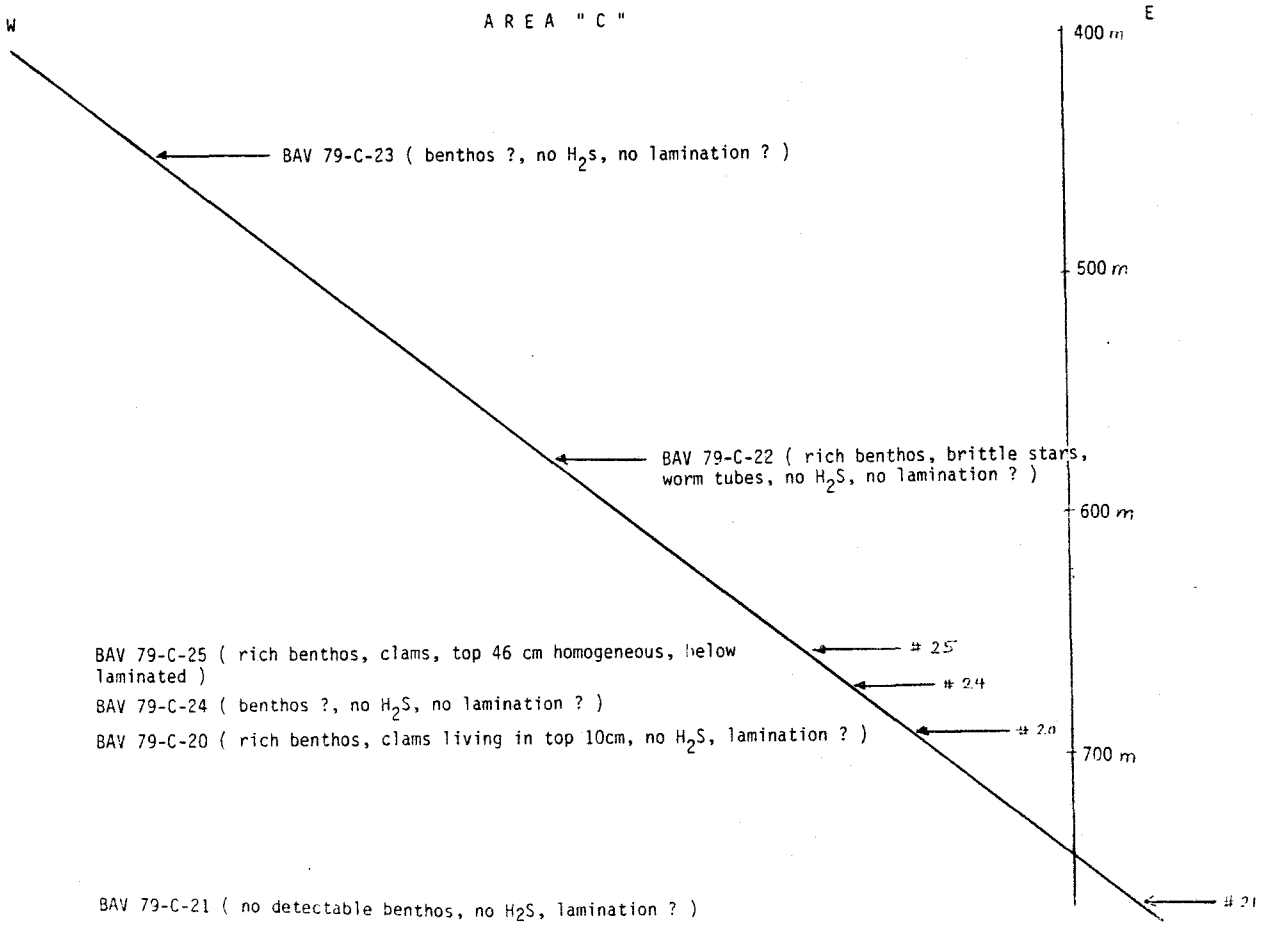


Figure 10: Off Santa Rosalia, Area "C". Cross section along slope with locations of cores and indication of benthos occurrences.

Area "C" needs to be resurveyed and cored at closer depth intervals in order to prove that indeed no strong "modern" oxygen minimum zone exists between 500-700 m.

Work in Area "C" terminated at 0200 GMT on September 25th and we started heading for Area "B".

Table 4: Survey Transects - Area C

Time (GMT)	Position	Heading	Depth (m)	Observations
1210	27°33.1'N,112°05.4'W	246°	769	starting pt. - 8 knots
1230	27°32.0'N,112°07.8'W		897	
1309	27°30.2'N,112°13.2'W	156°	503	
1334	27°27.1'N,112°11.5'W	059°	521	
1402	27°27.4'N,112°08.4'W	042°	713	c/c to compensate wind influence
1431	27°31.0'N,112°04.7'W	152°	1006	10 knots
1400	27°28.2'N,112°02.2'W	243°	897	7.5 knots
1530	27°26.5'N,112°05.6'W	254°	1006	
1600	27°25.2'N,112°10.1'W	244°		
1624	27°24.0'N,112°13.8'W	337°	420	
1634	27°25.0'N,112°14.6'W	063°		4 knots, heading for 658 m
1700	27°25.8'N,112°13.3'W	063°	522	6 knots
1730	27°26.5'N,112°09.2'W	stop	677	wind: 4 knots 030°, on station
1803	27°25.5'N,112°08.8'W	on bottom	690	BAV-79-C-20, box core, laminated
1827	27°25.4'N,112°08.8'W			core recovered
1845	27°24.6'N,112°08.6'W	063°		head for deeper water on same track
1900	27°25.2'N,112°08.2'W	stop	750	
1905	27°25.2'N,112°08.2'W	core in		wind - 7 knt. 070°, box core
1937	27°25.5'N,112°08.0'W	on bottom		BAV-79-C-21
		270°		Heading 270° at 4 knots
2050		stop	604	
2100	27°24.3'N,112°11.0'W	core in	580	Box Core - BAV-79-C-22
2124	27°24.2'N,112°11.5'W	on bottom	576	no lamination
				heading W for 40 f shallower water
2217	27°22.6'N,112°12.5'W	stop	467	
2235	27°22.2'N,112°12.1'W	on bottom		Box Core - BAV-9-C-23
				not laminated
		063°		heading for deeper waters @ 8 knt.
2320		stop		

Time (GMT)	Position	Heading	Depth (m)	Observations
2345	27°24.2'N,112°10.0'W	core in	655	Box Core - BAV-79-C-24
0013	27°23.5'N,112°09.2'W	on bottom	667	not laminated, no H_2S
		312°		4 knots
0050		stop		
0056	27°25.0'N,112°09.5'W			
0100	27°25.0'N,112°09.0'W	core in	655	Kasten Core - BAV-79-C-25
0125	27°25.0'N,112°09.2'W	on bottom	655	

Area "B"

with Table 5, Figures 11 and 12

We began the first transect in Area "B" at 0934 GMT on September 25, 1979, at position 26°52.4'N,111°20.5'W. Seas were calm with winds NE, 10 knots. The tracklines are shown on Figure 11 and positions and times are in Table 5. Survey speed was 9.5 knots. Using information from the few previous cores taken near this area (Calvert, 1964), it was decided that laminated sediments might be found at 300 (550 m) fathoms or 700 (1281 m) fathoms depth at position 26°41.7'N,111°26.0'W. Drift was very slight and our stations were held fairly well (Table 5).

BAV-79-B-26 - Box core:

Plates on the side of the shaft were in the lowest position. Pinger was used and core lowered in slowly from 20 m above the bottom. Laminated sediments were recovered although there was no H_2S smell except near the bottom of the core. 5 brittle stars and 6 polychaetes were found on surface. It was decided to go to deeper water because laminated sediments were found at 655 m on the east side of the basin.

BAV-79-B-27 - Box core:

Good laminated sediments were recovered from 691 m. Because box core 26 was only 35 cm the plates on the side of the shaft were moved to the middle position and 51 cm was recovered at this site. A strong H_2S smell was also present. Surface had brittle stars, clams and polychaetes. Many small forams seen on the sediment surface.

BAV-79-B-28 - Kasten core:

Because of good box core results at this station a Kasten core was also taken. 340 lbs of weight was used because of the hardness of the lower

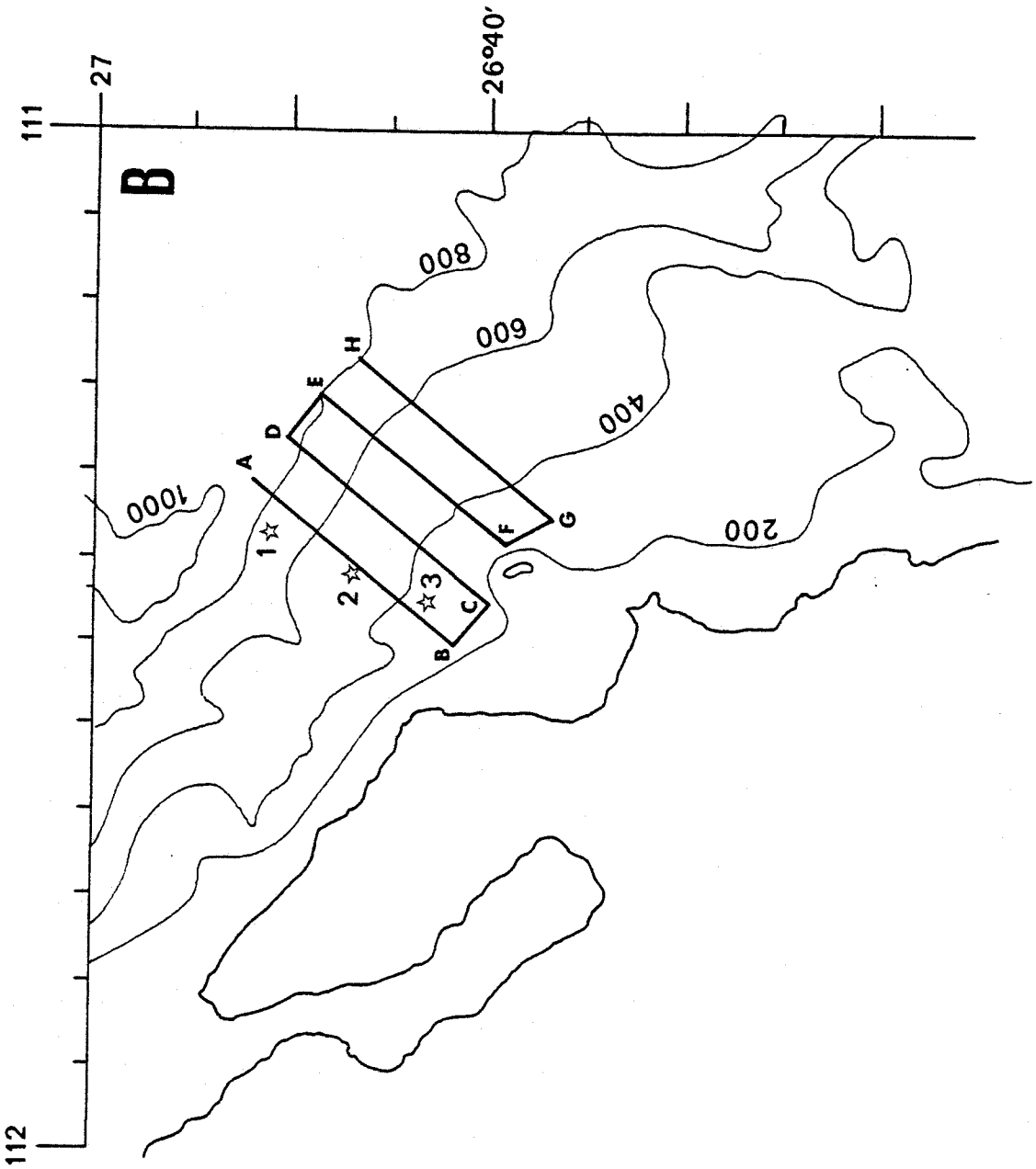


Figure 11: Off Punta Concepcion. Original bathymetric survey net, Area "B". A = starting point, H = end point, depth in fathoms, stars = previously cored sections (Calvert, 1964). (A = 26°52.9'-111°20.6', B = 26°41.5'-111°30.4', C = 26°39.6'-111°27.8', D = 26°50.2'-111°18.1', E = 26°48.5'-111°15.7', F = 26°38.8'=111°24.3', G = 26°36.5'-111°22.7', H = 26°46.6'-111°13.5').

sediments. Because of the accuracy of the meter wheel, the pinger was not used here or with the rest of the cores at this area. The rest of these cores were stopped 20 m above the bottom and then lowered into the sediment at 32 m/min. A slight over-penetration occurred here and 204 cm of sediment was recovered. 8 box samples were taken and 5 cm long samples were taken in bags as composite samples. Clam layers were found at 105 cm, 30-40 cm, and 125-130 cm. Laminae were 4-5/cm throughout the core.

BAV-79-B-29 - Kasten core

It was decided to go to shallower water and the last three cores were taken at approximately 650 m. 8 box samples were taken on this Kasten core and bagged composite samples were taken at 5 cm widths. Generally the dark laminae were thicker than the light and the laminae were 4-5/cm. A pecten layer was located at 129 cm. The total length of this core was 197 cm.

BAV-79-B-30 - Kasten core

A 205.5 cm Kasten core was recovered at this station. The large trays were used to sample the core in two layers. The leftover portion in each layer was put in bags as composite samples as stated on the coring sheet. Benthic forams were seen throughout the core and pecten layers were found at 5 and 170 cms. Laminae were 4-5/cm.

BAV-79-B-31 - Gravity core

A 289 cm large diameter gravity core was taken at this station with a slight over-penetration. The top 3 cm were scraped off and put in Bag #1, and 3-10 cm were put in Bag #2. The rest was cut in two sections to be analyzed later.

Table 5: Survey Transects - Area B

Time (GMT)	Position	Heading	Depth (m)	Observations
0934	26°52.4'N,111°20.5'W	222°		begin survey
1000	26°48.3'N,111°24.2'W			
1030	26°45.3'N,111°27.0'W			
1100	26°41.6'N,111°30.2'W	121°		end first trackline
1130	26°39.1'N,111°25.6'W			
1145	26°38.5'N,111°24.7'W	039°		begin second trackline
1200	26°40.0'N,111°22.7'W			

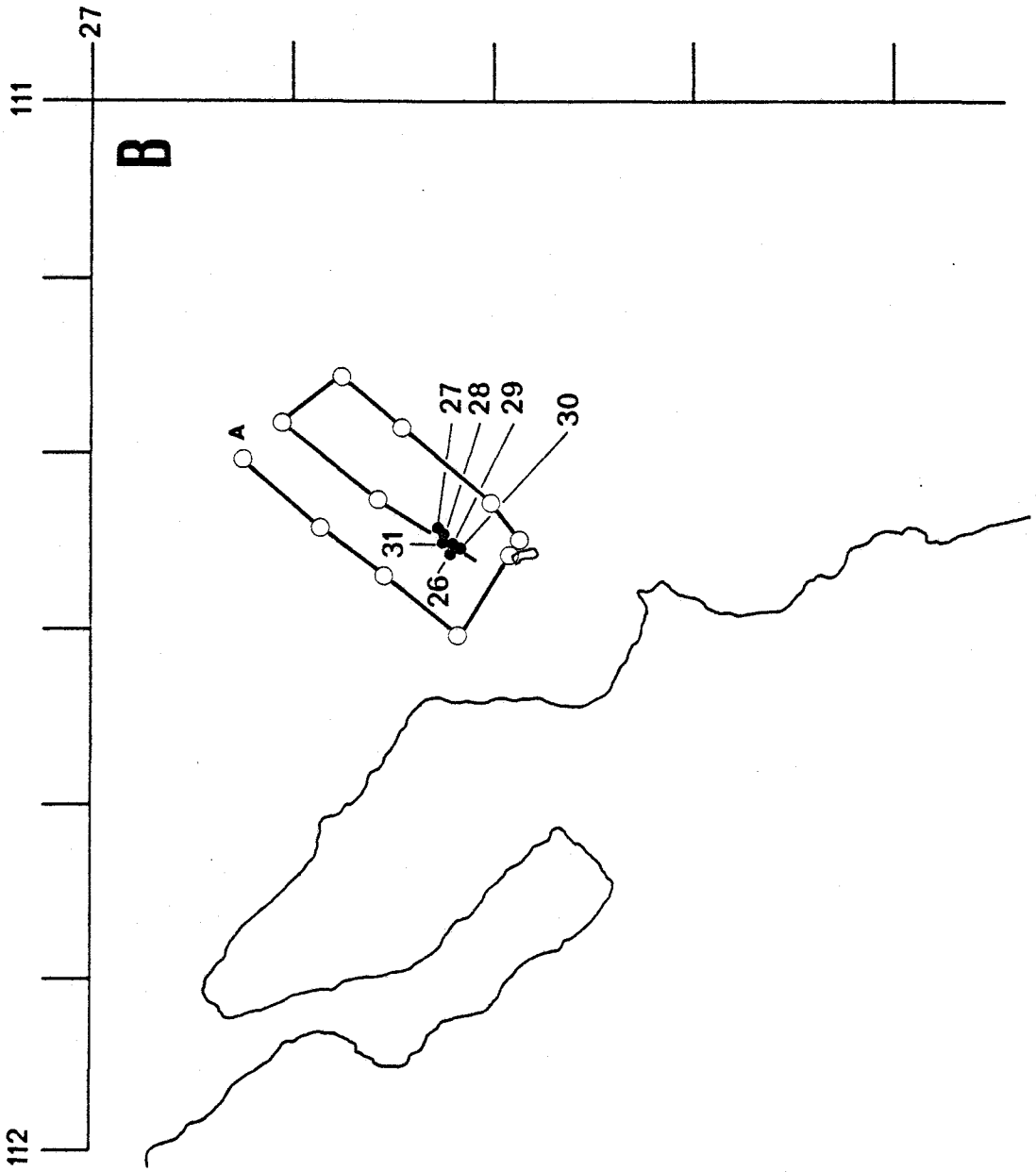


Figure 12: Actual survey trackline Area "B". A = starting point, numbers represent coring stations. Open circles along tracklines indicate positions obtained during bathymetric survey (Table 5).

Time (GMT)	Position	Heading	Depth (m)	Observations
1230	26°44.3'N,111°18.6'W			
1252	26°47.6'N,111°15.5'W	307°		end second trackline
1317	26°50.4'N,111°18.1'W	219°		begin third trackline
1400	26°45.6'N,111°22.4'W			
1430	26°41.8'N,111°26.0'W			
1440	26°41.1'N,111°27.0'W	037°		end survey, head back to 300 f
1445				wind - 10 km/hr 055°
1453	26°41.7'N,111°26.0'W	stop		on station
1500	26°41.7'N,111°26.0'W	core in		Box Core - BAV-79-B-26
1534	26°41.8'N,111°25.8'W	on bottom	552	
1556	26°41.8'N,111°25.8'W			Box Core recovered
				Head to deeper water
1620	26°42.5'N,111°25.2'W	core in		Box Core - BAV-79-B-27
1657	26°42.7'N,111°24.2'W	on bottom	691	
1805	26°42.6'N,111°25.0'W	core in		Kasten Core - BAV-79-B-28
1830	26°42.5'N,111°24.5'W	on bottom	712	
1900	26°42.5'N,111°24.5'W			Kasten Core recovered
				Move to shallower water
1932	26°41.8'N,111°24.6'W	core in		Kasten Core - BAV-79-B-29
1957	26°42.0'N,111°25.0'W	on bottom	635	
2019	26°42.0'N,111°25.0'W			Kasten Core recovered
2041	26°41.2'N,111°25.6'W	core in		Kasten Core - BAV-79-B-30
2103	26°41.6'N,111°25.1'W	on bottom	657	
2200	26°42.2'N,111°25.4'W	core in		Lg. Dia. GC - BAV-79-B-31
2221	26°42.5'N,111°25.3'W	on bottom	659	

Area "B" was finished at 1630 on September 25. The scientific crew were each sent personal invitations to attend a ceremony on the fantail of the ship after the successful completion of coring. The ceremony was much more elaborate and personal than was expected. The off-duty crew and officers were dressed in their all-white dress uniforms. The crew stood in formation along two sides of the ship. The Captain was seated at a central table with chairs on his right and left for the principal investigators of the two scientific parties. The remainder of the ship's officers

stood in formation to the rear of the table. Seats for the scientific party formed the fourth side of the rectangular ceremony area. On three sides of the area behind the crew members were hung the bright multi-colored flags used for signaling various visual messages from the ship. The colorful flags and bright whiteness of the naval dress uniforms provided a very impressive ceremonial atmosphere. The ceremony opened with a short speech by Captain Herrera which was translated into English by Oscar Gonzales. He expressed for the crew of the ship a compliment on the effort and high spirits with which the scientific investigation was carried out and he stated recognition of the philosophical importance of such studies. He then expressed the feeling that the crew was happy to collaborate with us in conducting this investigation and that it is their hope that this will not be the last cruise for us aboard the Matamoros. He expressed their feelings of friendship for us which we certainly felt in all our interaction with them throughout the cruise.

C. CAPITAN DE CORB.C.G. POMPEYO LEON HERRERA, COMANDANTE DEL BUQUE.
C. JEFE CIENTIFICO HANS SCHRADER, JEFE DEL GRUPO INVESTIGADOR DE LA UNIVERSIDAD DE OREGON, USA
C. M. EN C. REINARD DRESSLER, JEFE DE INVESTIGATORES DE LA UNIVERSIDAD DE AMBURGO.
CIUDADANOS INVESTIGADORES, COMPANEROS OFICIALES, TRIPULACION DEL BUQUE HIDROGRAFICO MARIANO MATAMOROS.

Se me ha conferido el honor de dirigirme ante uds, como portovoz del mensaje -- amistoso y sincero, que hacemos el personal de este buque al grupo de cientificos -- e investigadores que nos acompanan en esta trevesia.

Senores, en este dia que finaliza la estapa de estudios del presente crucero de investigación oceanografica, nos es altamente placentero, manifestarles, nuestro reconocimiento, por el esfuerzo desarrollado y el alto espiritu mostrado en el desem peno de muestra mision como esclarecedores de la evolución dinamica, la composición y la produccion biologica en las aguas de los mares, disponiendo para ello de gran energia y voluntad, difundiendo sus conocimientos para el bienestar social, a generaciones y jovenes deseosas de conocimiento, a estudiantes de diversas universidades que seran futuros cientificos e investigadores. Es por eso que nosotros la dotacion de este buque hidrofrafico, nos sentimos gratamente satisfechos, de haber colabora dos con ustedes en el transcurso del actual crucero, reiterandoles nuestra amistad y deseo, porque, no sea esta la ultima vez que colaboramos con ustedes, siendo asi que llegado el momento, lo haremos plenos de gusto y satisfacción. Por ultimo deseamos se encuentren pasando su estancia en este buque placenteramente.

Hans Schrader then offered an impromptu speech expressing our gratitude and friendly feelings toward the crew. The ceremony then included several songs in Spanish by members of the crew accompanied by a single guitar. Large plaques of Aztec design were awarded the two P.I.'s by the captain following which each member of the scientific party was awarded a very attractively painted paper-mache and cardboard replica of a Kasten core. Inside the core was a personalized certificate signed by the captain recognizing their attainment in "making holes" in the bottom of the Gulf of California. The ceremony was then concluded and the officers and scientific party adjourned to the galley where there was cake and coffee prepared. During this time the captain made reference to the fact that they had never conducted such a ceremony for anyone before.

During this ceremony we were "heading for the barn" steaming southward toward Cape San Lucas, which we reached the following day, September 26, at about 1700. We then rounded the Cape heading northward for San Diego harbor and the stronger winds and cooler temperatures gave evidence that we were entering the colder Pacific waters. A school of over 100 porpoises splashing and leaping out of the water gave us an exciting escort out of the Sea of Cortez.

We arrived at San Diego in good weather on September 30 at 0800, and had traveled a total of 3900 nm.

Tabulation of Observed Lamination in Samples BAV79-			mean number of laminae/ 1cm
#28	30-40 cm	4/ cm	
	80-90 cm	5/ cm	4.5/cm
	150-155 cm	4.5/ cm	
#29	80 cm	7/1.5 cm	4.67
	110 cm	8/2 cm	4 } 4.67/cm
	180 cm	8/1.5 cm	5.3
#30	20 cm	9/2 cm	4.5
	105 cm	7/2 cm	3.5 } 4.17/cm
	160 cm	9/2 cm	4.5
#25	47-79 cm	5/ cm	6 /cm
	79-76 cm	7/ cm	
# 9	25 cm	10/ cm	
	60 cm	10/ cm	8.75/cm
	156 cm	5/ cm	
	173 cm	10/ cm	
#10	15 cm	9/ cm	
	80 cm	9-10/ cm	8.83/cm
	190 cm	8/ cm	
# 5	Top	6/ cm	
	45	6/ cm	5.5 /cm
	90	4/ cm	
	110°	6/ cm	

Table 7

TABLE OF SAMPLES

*indicates good samples

*BAV 79 - A - 1	Box Core, 56 cm overpenetrated, 26°43.5' - 110°06.6' 640 m
*BAV 79 - A - 2	Box Core, not measured, 26°43.4' - 110°08.6' 710 m
BAV 79 - A - 3	Kasten-Core, 2m overpenetrated, empty 26°44.0' - 110°07.0' 689 m
BAV 79 - A - 4	Kasten Core, 2m empty 26°43.4' - 110°05.5' 637 m
*BAV 79 - A - 5	Kasten Core, 2m good lamination 185 cm 26°43.4' - 110°07.0' 705 m
BAV 79 - A - 6	Gravity Core, 3m empty 26°46.1' - 110°06.5' 646m
*BAV 79 - E - 7	Box Core, not measured 27°53.5' - 111°36.0' 675 m
BAV 79 - E - 8	Kasten Core, 2m empty 27°52.8' - 111°36.9' 660 m
*BAV 79 - E - 9	Kasten Core, 2m good lamination, 192 cm 27°53.2' - 111°37.2' 660 m
*BAV 79 - E - 10	Kasten Core, 2m good lamination, 198.5 cm 27°52.2' - 111°39.7' 644 m
*BAV 79 - E - 11	Gravity Core, 3m slightly overpenetrated, 297 cm 27°54.7' - 111°37.0' 635 m
*BAV 79 - D - 12	Box Core, approximately 20 cm 28°16.0' - 112°25.6' 924 m
*BAV 79 - D - 13	Kasten Core, 2m 110 cm recovered 28°17.5' - 112°25' 924 m
*BAV 79 - D - 14	Kasten Core, 2m, 55.5 recovered 28°17.3' - 112°26.8' 997 m
BAV 79 - D - 15	Gravity Core, 3m empty 28°16.4' - 112°24.5' 975 m

*BAV 79 - D - 16	Gravity Core, 3m 34 cm recovered
	28°16.2' - 112°23.5' 860 m
BAV 79 - 17	Kasten Core, 2m empty
	31°01.0' - 114°24.0' 28 m
BAV 79 - 18	Kasten Core, 2m only cc sample washed
	31°00.0' - 114°24.6' 29 m
BAV 79 - 19	Gravity Core, 3m only cc sample washed
	30°59.3' - 114°22.5' 23 m
*BAV 79 - C - 20	Box Core, overpenetrated 62 cm
	27°25.5' - 112°08.8' 690 m
*BAV 79 - C - 21	Box Core, 50 cm
	27°25.5' - 112°08.04' 763 m
*BAV 79 - C - 22	Box Core, 53 cm
	27°24.2' - 112°11.5' 576 m
*BAV 79 - C - 23	Box Core, not measured
	27°22.2' - 112°12.1' 447 m
*BAV 79 - C - 24	Box Core, 53 cm
	27°23.5' - 112°09.2' 667 m
*BAV 79 - C - 25	Kasten Core, 2m 96 cm recovered
	27°25.0' - 112°09.2' 655 m
*BAV 79 - B - 26	Box Core, 35 cm recovered
	26°41.8' - 111°25.8' 552 m
*BAV 79 - B - 27	Box Core, 51 cm recovered
	26°42.7' - 111°24.2' 691 m
*BAV 79 - B - 28	Kasten Core, 2m, 205 cm recovered
	26°42.5' - 111°24.5' 712 m
*BAV 79 - B - 29	Kasten Core, 2m, 197 cm recovered
	26°42.0' - 111°25.0' 635 m
*BAV 79 - B - 30	Kasten Core, 2m, 205.5 cm recovered
	26°41.6' - 111°25.1' 657 m
*BAV 79 - B - 31	Gravity Core, 3m, 289 cm recovered
	26°42.5' - 111°25.3' 659 m

Table 8

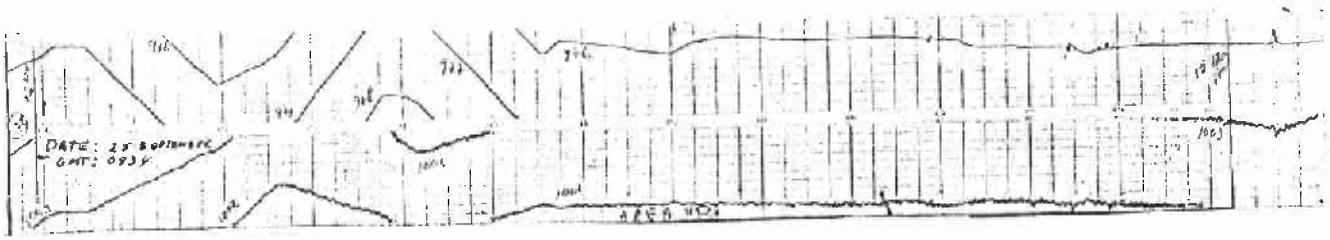
Satellite position fixes obtained during BAV-79 stations in Central Gulf

DATE	TIME	LATITUDE		LONGITUDE		FIX MERIT	
YR-MO-DA	HR-MN	DEG	MIN	DEG	MIN	DMRAD (m)	SAT.I.D.
790918	0458	26	46.2	110	07.6	06734	3020.0
790918	0104	26	42.6	110	06.1	10004	5555.5
790919	0348	26	59.6	110	21.0	- -	- -
790919	0532	27	14.3	110	--	- -	- -
790919	1128	27	55.0	110	51.4	52103	3019.0
790919	1248	27	50.1	110	53.4	05524	3013.0
790920	0202	28	00.6	111	41.9	04325	3019.0
790920	0428	28	25.9	111	57.0	- -	- -
790920	06.4	28	36.2	112	07.9	01114	3020.0
790920	1342	28	15.0	112	09.1	03525	3013.0
790920	1504	28	12.5	112	22.3	00824	3019.0
790920	1612	28	21.0	112	32.1	04214	3020.0
790920	1754	28	18.6	112	22.4	01615	3020.0
790920	2346	28	16.5	112	25.1	02316	3013.0
790921	0134	28	15.4	112	23.2	04315	3013.0
790921	1416	28	37.3	112	39.7	- -	- -
790921	2236	29	33.9	112	53.7	06425	3014.0
790922	0210	30	00.0	112	54.3	53502	3020.0
790922	0546	30	02.2	113	15.5	02054	3020.0
790922	0952	29	47.1	113	43.9	05935.	3014.0
790922	1200	29	39.4	113	55.4	10005	5555.5
790922	2354	30	57.7	114	16.1	02925	3013.0
790923	0436	30	37.3	114	23.3	- -	- -
790923	1046	29	50.1	113	57.8	- -	- -
790923	2306	28	38.0	113	04.1	20005	3012.0
790924	1024	27	43.5	112	15.5	04325	3012.0
790924	2148	27	23.4	112	12.1	05924	- -
790925	0408	27	19.2	111	59.7	01134	3020.0
790925	0550	27	10.3	111	47.2	- -	3020.0
790925	0920	26	53.7	111	27.6	- -	- -
790925	2238	26	42.9	111	25.8	50702	3013.0
790926	0100	26	28.4	111	15.1	04617	3013.0
790926	0258	26	09.6	111	03.7	01526	3020.0
790926	1158	24	42.9	110	04.4	02827	3019.0

ERROR CODES:

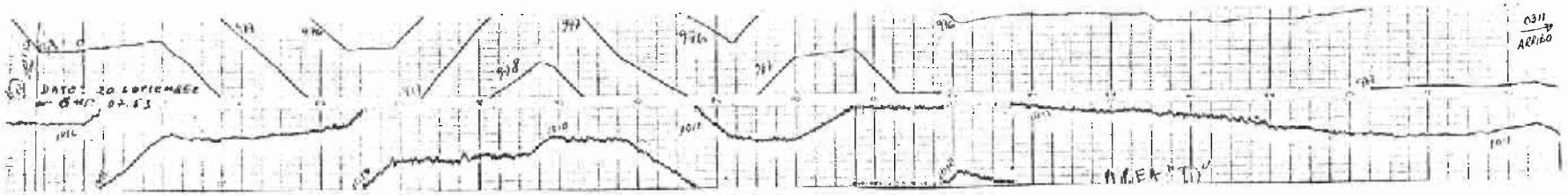
0	Good fix obtained
1 or 2	Bad message data
3	Satellite elevation above 70°
4	Computation will not converge
5	Pass to SHGRT
6	Computing discrepancy
7	Satellite elevation below 7°
8	Bad fit of Doppler data

Area "B"



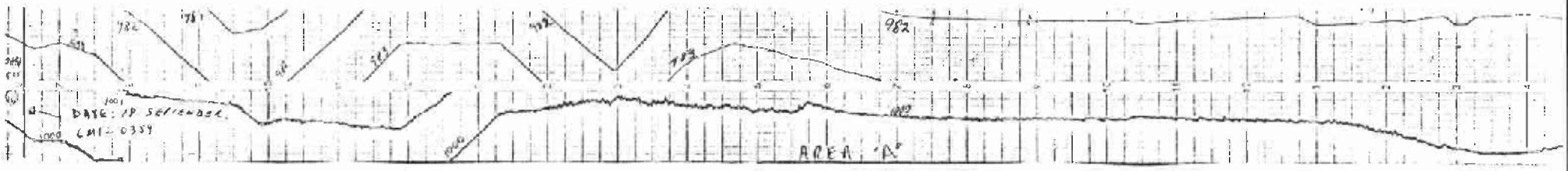
Area "C"

Area "D"



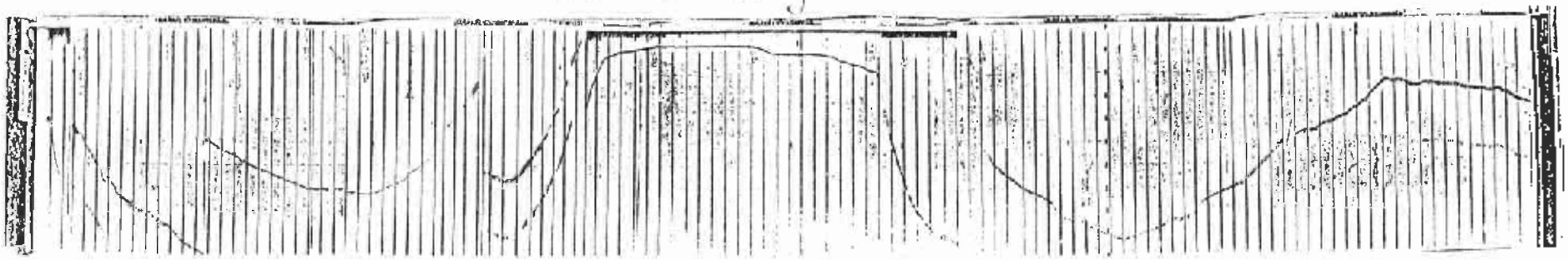
Area "E"

Area "A"

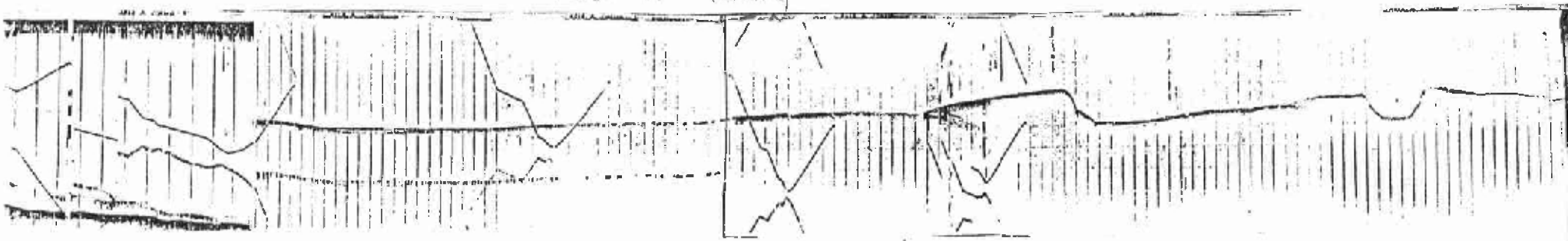


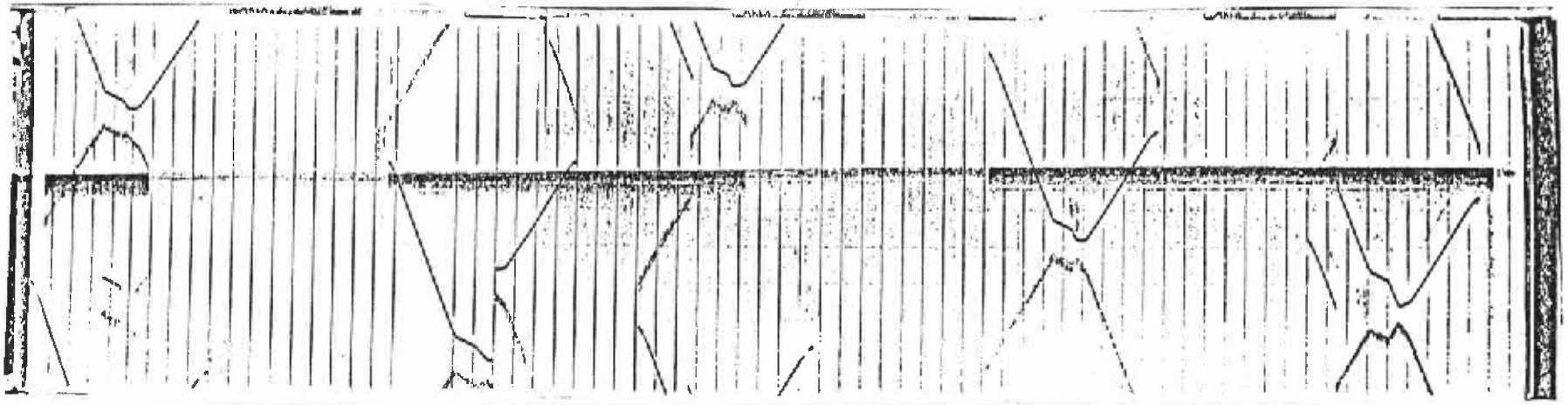
Pages 36 through 42 are reductions of EPC records during survey and coring. Originals are available at OSU.

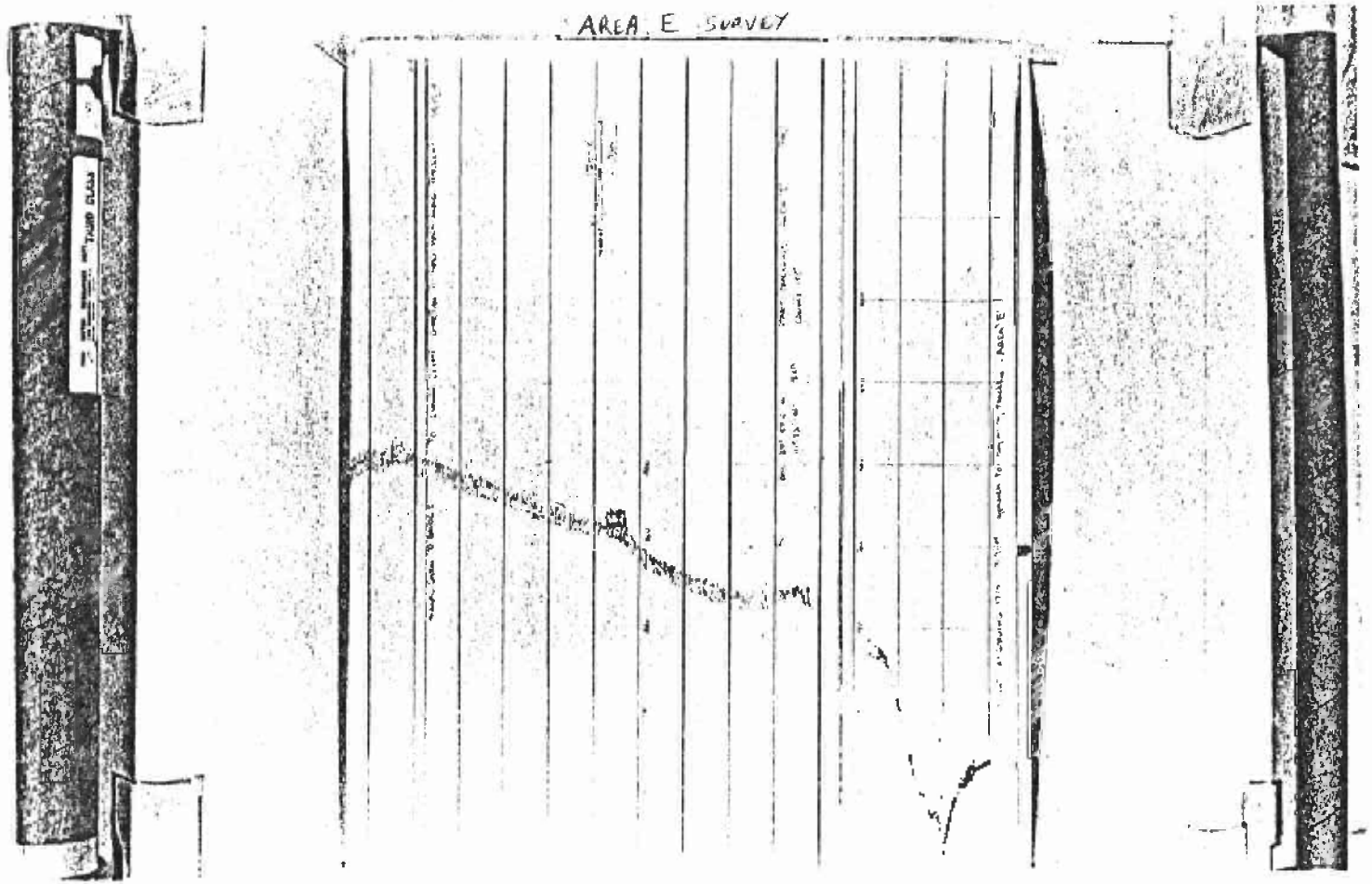
AREA 'A' survey



AREA 'A' Contour

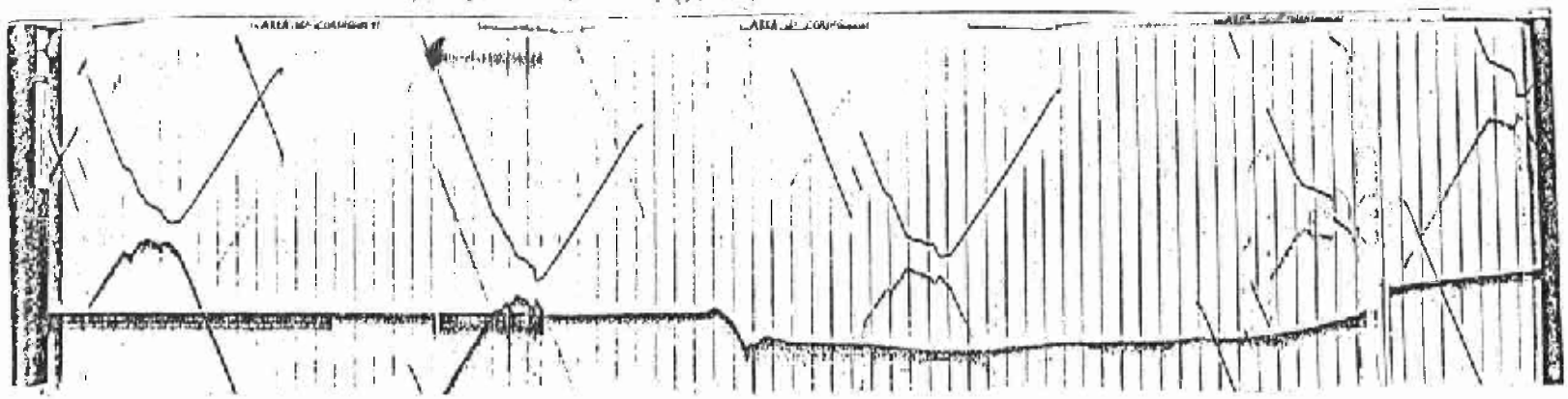


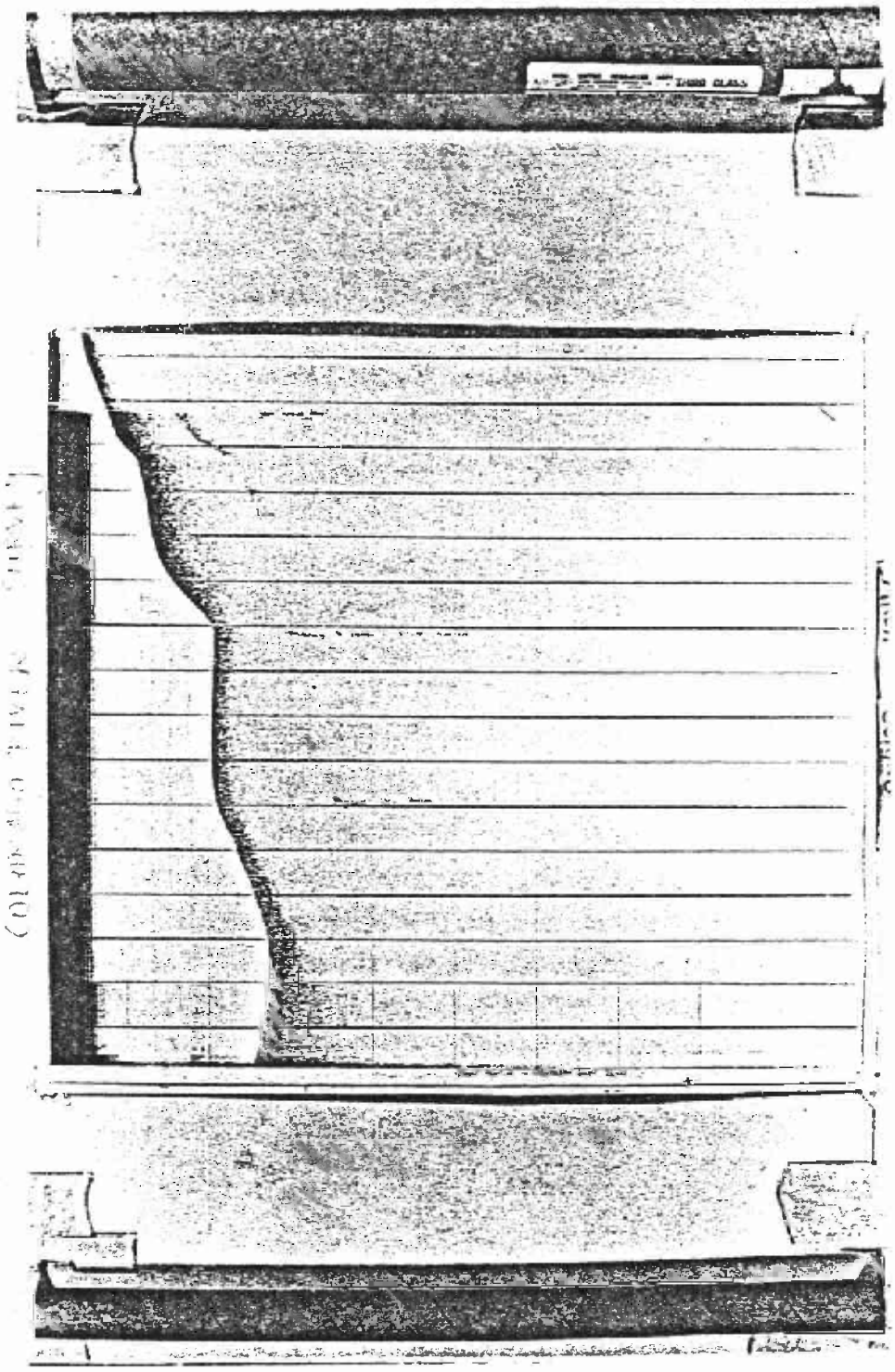


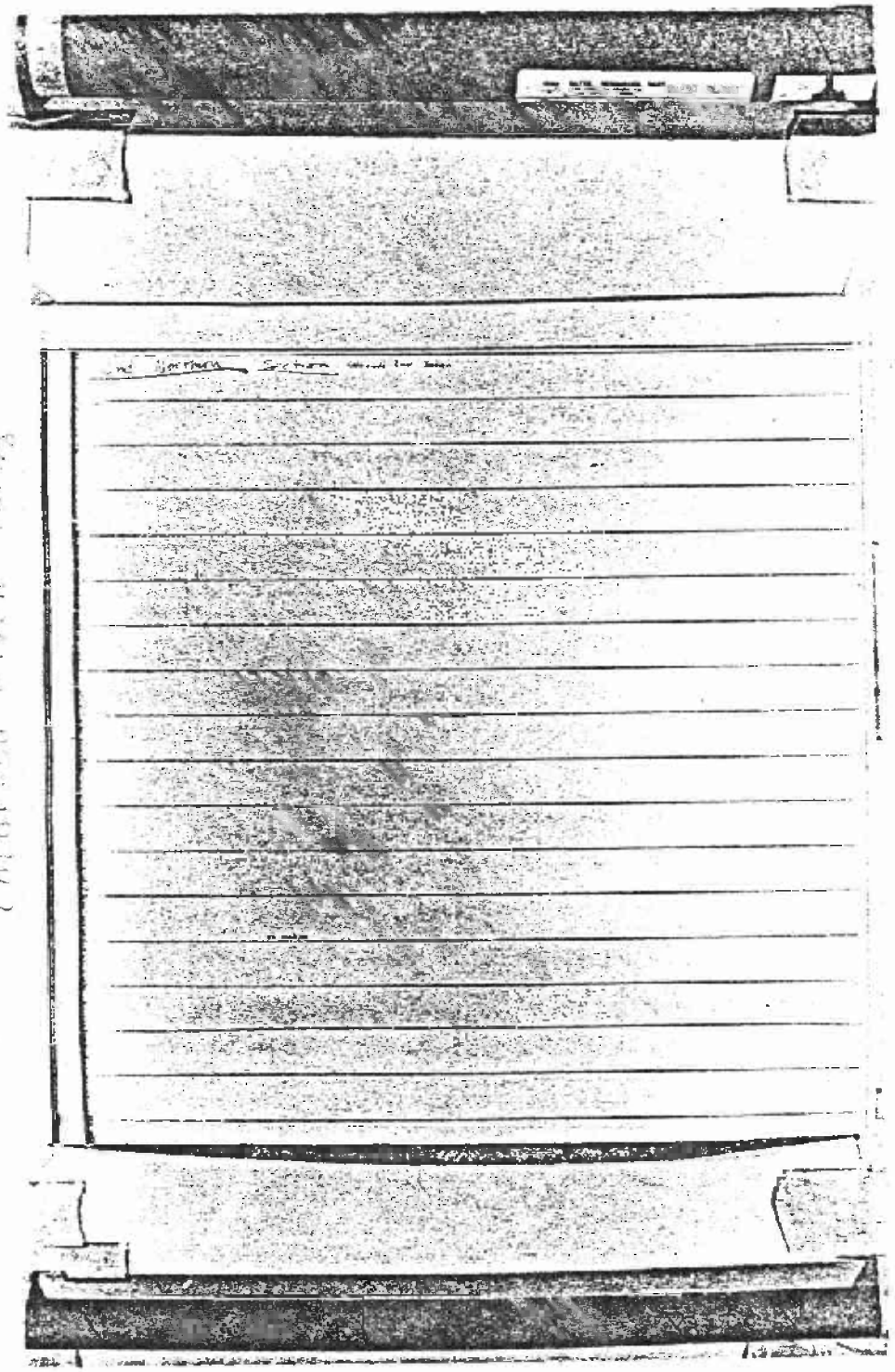

AREA E SURVEY

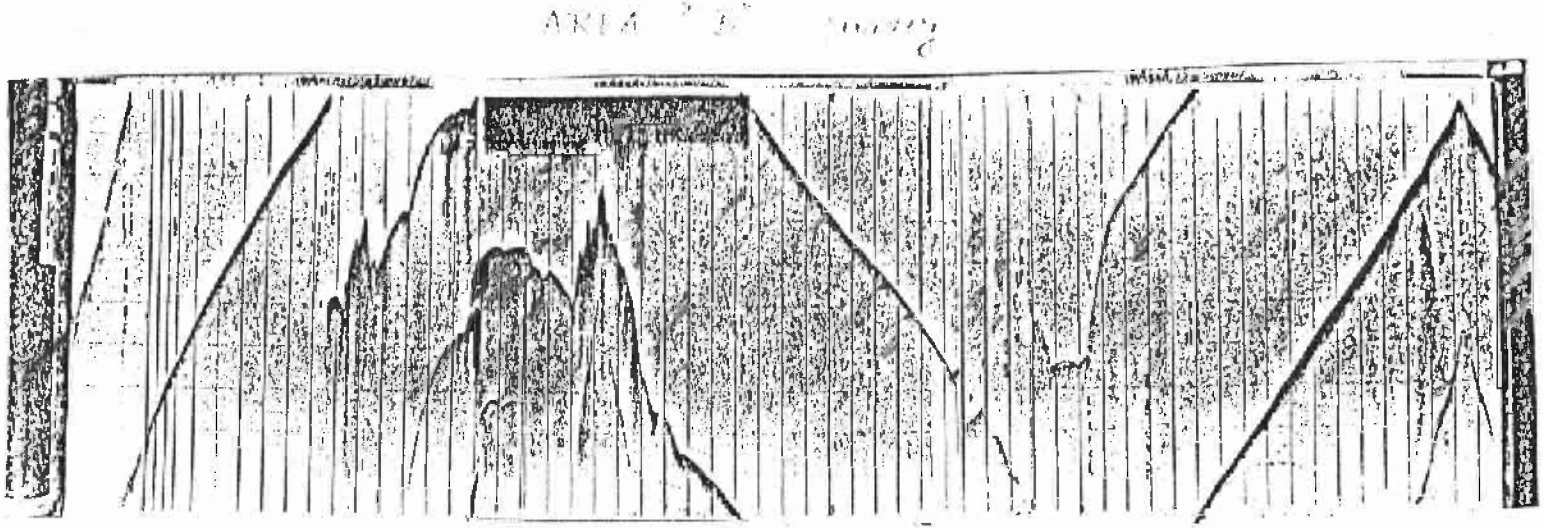
AREA "D" survey

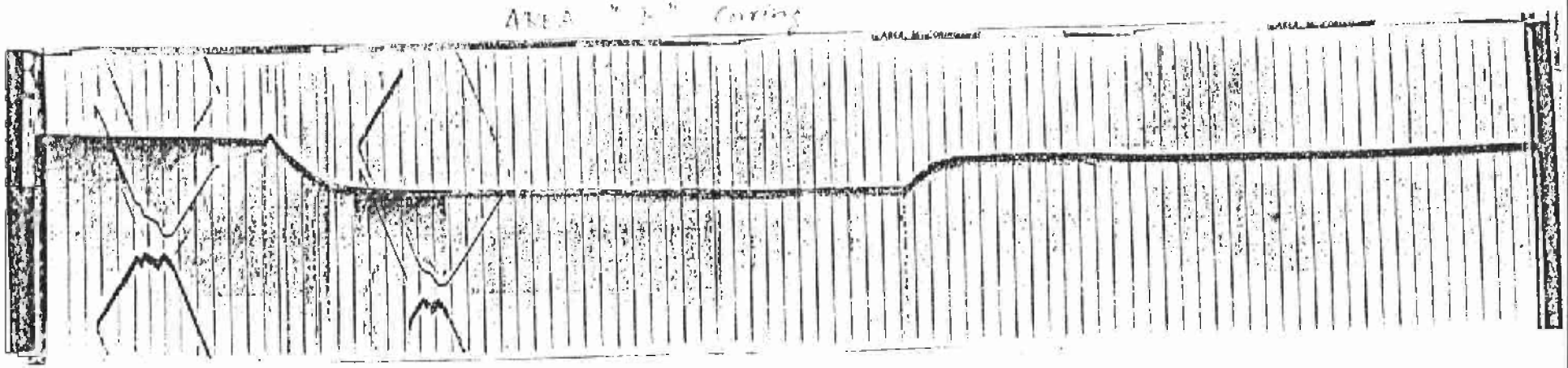
AREA "D" Contour



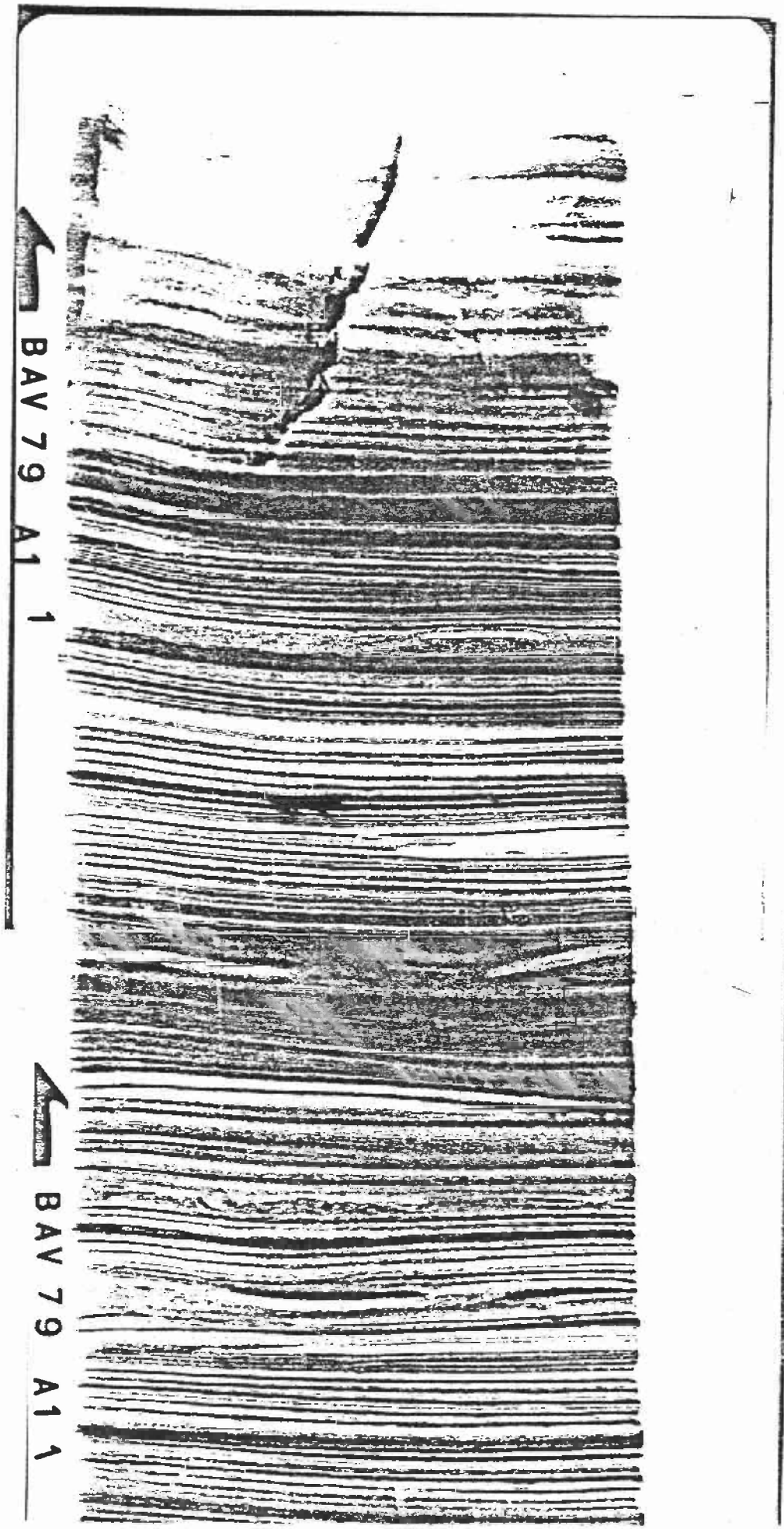






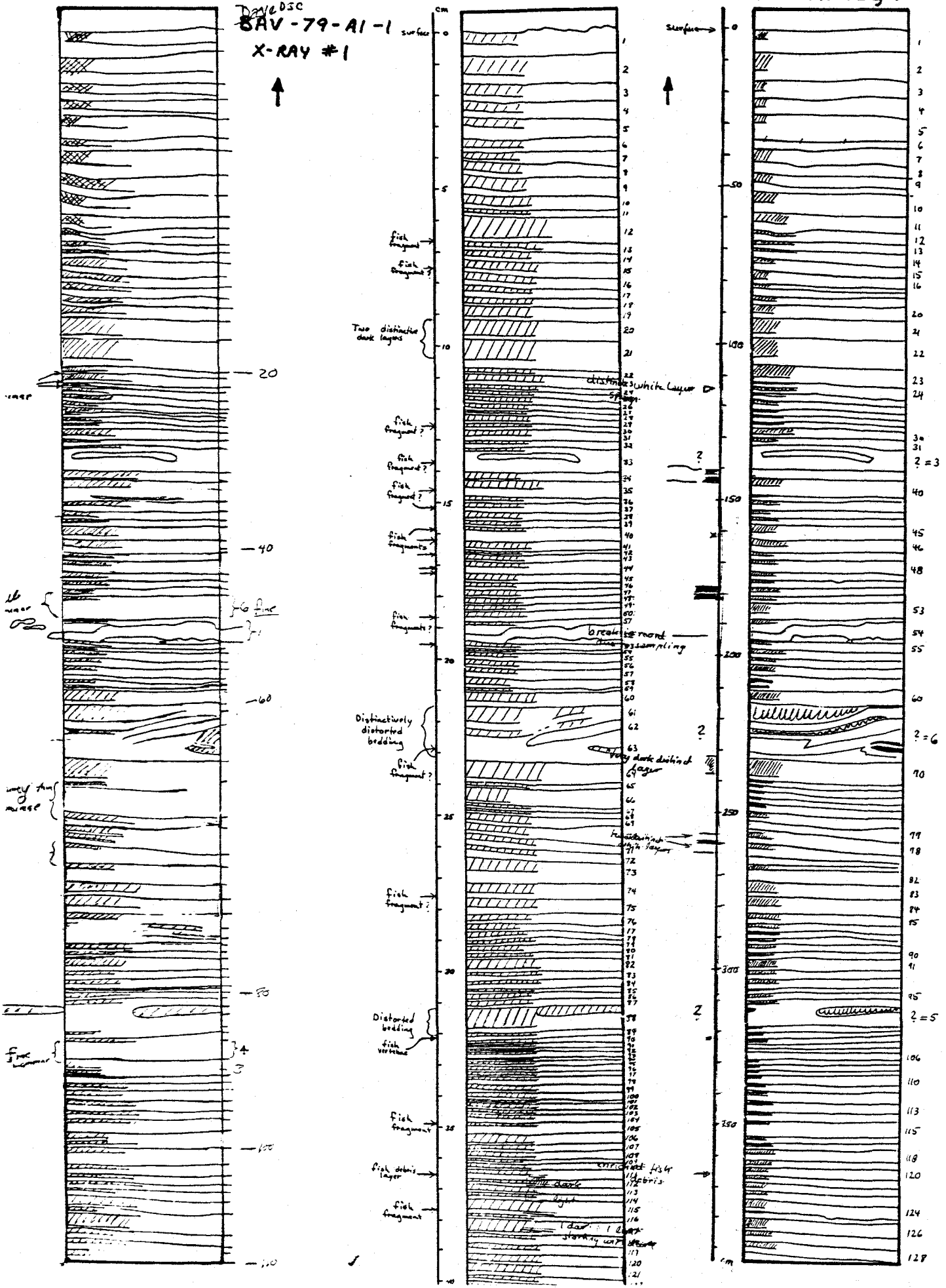


X-radiograph of Box Core BAV-79-A-1, slab 1. Arrows point to top of core.

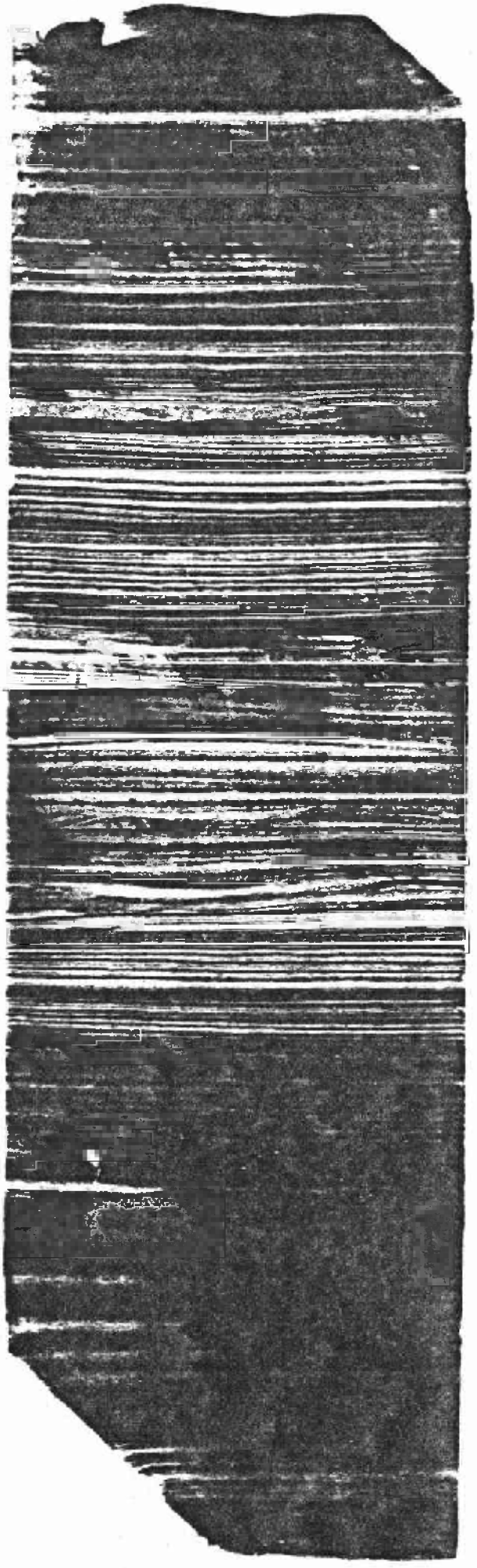


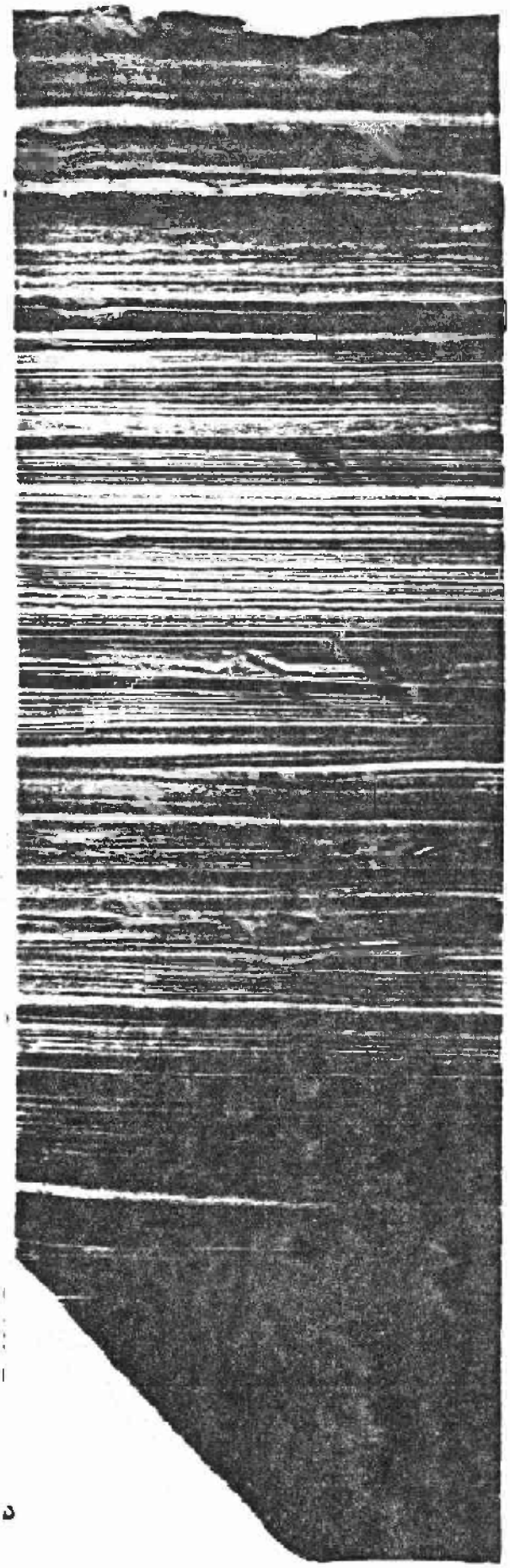
Interpretation of X-radiograph BAV-79-A-1, slab 1, by three different persons. Hatched = dark laminae, white = white laminae.

BAV 79 - A - 1 (1st. x-ray)



Pages 47 through 49 are X-radiographs of three other slabs taken from BAV-79-A-1, sublabelled 2-4. Distortion at bottom caused by sampling.





BAV 79 - A - 1, 3

Following is a listing of all samples taken during BAV-79 cruise.

OSU Oceanography
MARINE GEOLOGY CORING DATA SHEET

(1)

Vessel: R/V H-1 MATAMOROS Station: A-1

Cruise: B&V '79

Leg: _____

Mo/Day/Yr 9 / 18 / 79

Latitude: 26 °D 42.5 'M ____ (bridge) — On Bottom
____ °D ____ 'M ____ (corrected)

Longitude: 110 °D 06.4 'M ____ (bridge)
____ °D ____ 'M ____ (corrected)

Sampler Types:
Piston Core - PC
Multiple Gravity - MG
Dredge - DR
Free Fall - FF
Kasten - K
Gravity - G
Rock Core - RC
Shipek Grab - SG
Other - Box Core

Time:	launched	on bottom	recovered	(GMT)
	1435	1547	1612	

Water Depth:				
(PDR)	640 m	____	____	fathoms (uncor) / meters (~~corr~~)
Wire		733 m	____	meters

Piston Core Length: 20 40 60 80 100
Other:

Scope: _____

Trigger Line Length: _____

Shear Pin Size: _____
Actuating Depth: _____

Tension: Prior to trip: _____
On bottom: _____
Pullout (max,): _____
Ascending: _____

Other Samplers:
Type and Number — Length

PC Section Number	Section Length (cm)	Total Length (cm from top) Upper	Lower
Length - 56 cm tray slab taken			
compacted 6 cm since taken			
stopped sampling until back at OSU			

Remarks: Pinger 30 m above box core
Box Core - Core penetrated
SEL MENT LAMINATED - H_2S small presence

laminae 7-8 cm top + bottom
fish debris at 30-32 cm
4 cm x 1 cm diameter hole - maybe fish debris

CORE NO. | TYPE | LENGTH (cm) | ±LATITUDE | ±LONGITUDE
10 20 30 40

DEPTH (m) | TOPO LOCAT | COLOR abbreviation | Munsell code
50 60 70 80

OSU 3118

OSU Oceanography
MARINE GEOLOGY CORING DATA SHEET

(2)

Vessel: ~~R/V~~ MARIANO MATAMOROS Station: A-2

Cruise: B&V '79

Leg: _____

Mo/Day/Yr 9 / 17 / 79

Latitude: 26 °D 42.7 'M ____ (bridge)
26 °D 42.4 'M ____ (~~corrected~~ bottom)

Longitude: 110 °D 09.1 'M ____ (bridge)
110 °D 08.6 'M ____ (~~corrected~~ bottom)

Sampler Types:
Piston Core - PC
Multiple Gravity - MG
Dredge - DR
Free Fall - FF
Kasten - K
Gravity - G
Rock Core - RC
Shipek Grab - SG
Other - Box Core

Time:	launched	on bottom	recovered	(GMT)
	1719	1800	1830	

Water Depth:				
(PDR)	400 fathoms	(710 m?)	____	fathoms (uncor) / meters (corr)
Wire		720	____	meters

Piston Core Length: 20 40 60 80 100
Other:

Scope: _____

Trigger Line Length: _____

Shear Pin Size: _____
Actuating Depth: _____

Tension: Prior to trip: _____
On bottom: _____
Pullout (max,): _____
Ascending: _____

Other Samplers:
Type and Number — Length

PC Section Number	Section Length (cm)	Total Length (cm from top) Upper	Lower

Remarks: Pinger is 50 m above ~~50 FEET~~ Box Core
Wood beards put on each of three angle at base to slow penetration.
LAMINATED seds found again and good core taken

CORE NO. | TYPE | LENGTH (cm) | ±LATITUDE | ±LONGITUDE
10 20 30 40

DEPTH (m) | TOPO LOCAT | COLOR abbreviation | Munsell code
50 60 70 80

OSU 3118

51

OSU Oceanography
MARINE GEOLOGY CORING DATA SHEET

(3)

Vessel: R/V MARIANO MATAMOROS Station: A-3

Cruise: BAV 79

Leg: _____

Mo/Day/Yr 9 / 18 / 79

1915Z Latitude: 26 °D 49.0 'M _____ (bridge)
_____ °D _____ 'M _____ (corrected)

Longitude: 110 °D 07.0 'M _____ ,bridge)
_____ °D _____ 'M _____ (corrected)

Sampler Types:
Piston Core - PC
Multiple Gravity - MG
Dredge - DR
Free Fall - FF
(Kasten - K) 2m
Gravity - G
Rock Core - RC
Shipek Grab - SG
Other - ____

Time:	launched	on bottom	recovered	
	1915	1945	_____	(GMT)

Water Depth:				
(PDR)	377 fath	_____	_____	fathoms (uncor)
	_____	689	_____	meters (corr)
Wire	_____	675	_____	meters

Piston Core Length: 20 40 60 80 100
Other:

Scope: _____

Trigger Line Length: _____

Shear Pin Size: _____
Actuating Depth: _____

Tension: Prior to trip: _____
On bottom: _____
Pullout (max.): _____
Ascending: _____

Other Samplers:
Type and Number — Length

PC Section Number	Section Length (cm)	Total Length (cm from top) Upper	Lower
EMPTY			

Remarks: Pinger 50 m above corer
Core penetration

CORE NO. TYPE LENGTH (cm) ±LATITUDE ±LONGITUDE
10 20 30 40

DEPTH (m) TOPO LOCAT COLOR abbreviation Munsell code
50 60 70 80

OSU 3118

OSU Oceanography
MARINE GEOLOGY CORING DATA SHEET

(4)

Vessel: R/V MARIANO MATAMOROS Station: A-4

Cruise: BAV 79

Leg: _____

Mo/Day/Yr 9 / 18 / 79

2040Z Latitude: 26 °D 48.8 'M _____ (bridge)
26 °D 47.4 'M _____ (corrected)

Longitude: 110 °D 06.4 'M _____ ,bridge)
110 °D 05.5 'M _____ (corrected)

Sampler Types:
Piston Core - PC
Multiple Gravity - MG
Dredge - DR
Free Fall - FF
(Kasten - K) 2m
Gravity - G
Rock Core - RC
Shipek Grab - SG
Other - ____

Time:	launched	on bottom	recovered	
	2040	2110	_____	(GMT)

Water Depth:				
(PDR)	680 m	657 m	(uncor)	meters ~~(corr)~~
Wire	_____	638	_____	meters

Piston Core Length: 20 40 60 80 100
Other:

Scope: _____

Trigger Line Length: _____

Shear Pin Size: _____
Actuating Depth: _____

Tension: Prior to trip: _____
On bottom: _____
Pullout (max.): _____
Ascending: _____

Other Samplers:
Type and Number — Length

PC Section Number	Section Length (cm)	Total Length (cm from top) Upper	Lower
empty			

Remarks: Pinger 50 m above corer; 2nd attempt down to 4110 lb - with TRAP down (corer retrieved) did not close

CORE NO. TYPE LENGTH (cm) ±LATITUDE ±LONGITUDE
10 20 30 40

DEPTH (m) TOPO LOCAT COLOR abbreviation Munsell code
50 60 70 80

OSU 3118

OSU Oceanography
MARINE GEOLOGY CORING DATA SHEET

Vessel: R/V MARIANO MATAMOROS Station: A-5 (5)

Cruise: BAV 79

Leg: _____

Mo/Day/Yr 9 / 15 / 79

Latitude: 26 °D 42.5 'M ____ (bridge)
26 °D 43.4 'M ____ (~~corrected~~) c.w Bottom

Longitude: 110 °D 06.6 'M ____ (bridge)
110 °D 07.0 'M ____ (~~corrected~~) c.w 3.7m

Sampler Types:
Piston Core - PC
Multiple Gravity - MG
Dredge - DR
Free Fall - FF
Kasten - K 2m
Gravity - G
Rock Core - RC
Shipek Grab - SG
Other - ____

Time:	launched	on bottom	recovered	(GMT)
	2205	2230	____	

Water Depth:				
(PDR)	712 m	705 m (uncor)	____	~~fathoms~~ meters (uncor)
	____	____	____	meters (corr)
Wire		740	____	meters

Piston Core Length: 20 40 60 80 100
Other:

Scope: _____

Trigger Line Length: _____

Shear Pin Size: _____
Actuating Depth: _____

Tension: Prior to trip: _____
On bottom: _____
Pullout (max.): _____
Ascending: _____

Other Samplers:
Type and Number | Length

Total length 184 cm

PC Section Number	Section Length (cm)	Total Length (cm from top) Upper	Lower
Box 1	0-27.7 cm		
Box 2	27.7-55 cm		
Box 3	55-83.2 cm		
Box 4	83.2-110.4 cm		
Box 5	110.4-138.2 cm		
Box 6	138.5-166.4 cm		
Box 7	166.4-184 cm		

Composite bag samples every 5cm

Remarks: NO PINGER - 3rd attempt
"Wings" added to Trip doors on core catcher / Laminae angled - probably core didn't enter sediments straight. Top/bottom 6/cm
LAMINATED - H2S Smell 50cm - 4/cm

CORE NO. | TYPE | LENGTH (cm) | ±LATITUDE | ±LONGITUDE
10 20 30 40

DEPTH (m) | TOPO LOCAT | COLOR abbreviation | Munsell code
50 60 70 80

OSU 3118

OSU Oceanography
MARINE GEOLOGY CORING DATA SHEET

Vessel: ~~R/V~~ H-1 MATAMOROS Station: A-6 (6)

Cruise: BAV 79

Leg: _____

Mo/Day/Yr 9 / 19 / 79

Latitude: 26 °D 45.3 'M ____ (~~bridge~~)
26 °D 46.1 'M ____ (~~corrected~~)

Longitude: 110 °D 06.5 'M ____ (~~bridge~~)
110 °D 06.5 'M ____ (~~corrected~~)

Sampler Types:
Piston Core - PC
Multiple Gravity - MG
Dredge - DR
Free Fall - FF
Kasten - K
Gravity - G large diameter 3m
Rock Core - RC
Shipek Grab - SG
Other - ____

Time:	launched	on bottom	recovered	(GMT)
	0620	0654	____	

Water Depth:				
(PDR)	340	____	____	fathoms (uncor)
	619	646	____	meters (corr)
Wire		700	____	meters

Piston Core Length: 20 40 60 80 100
Other:

Scope: _____

Trigger Line Length: _____

Shear Pin Size: _____
Actuating Depth: _____

Tension: Prior to trip: _____
On bottom: _____
Pullout (max.): _____
Ascending: _____

Other Samplers:
Type and Number | Length

PC Section Number	Section Length (cm)	Total Length (cm from top) Upper	Lower

Remarks: CORE BARREL CAME UP EMPTY
Did not contact Seds - NO PINGER used

CORE NO. | TYPE | LENGTH (cm) | ±LATITUDE | ±LONGITUDE
10 20 30 40

DEPTH (m) | TOPO LOCAT | COLOR abbreviation | Munsell code
50 60 70 80

OSU 3118

OSU Oceanography
MARINE GEOLOGY CORING DATA SHEET

Vessel: R/V H-1 [illegible] Station: E-7 II

Cruise: BAJ 79

Leg: ____

Mo/Day/Yr 4 / 14 / 79

Sampler Types:
Piston Core - PC
Multiple Gravity - MG
Dredge - DR
Free Fall - FF
Kasten - K
Gravity - G
Rock Core - RC
Shipek Grab - SG
Other - [illegible]

1934 Z Latitude: 27 °D 59.7 'M ____ (bridge)
1921 Z 27 °D 52.5 'M ____ (corrected)

Longitude: 111 °D 35.0 'M ____ (bridge)
111 °D 36.6 'M ____ (corrected)

	launched	on bottom	recovered	
Time:	1840	1920	1945	(GMT)

Water Depth: 677m [illegible] ____ fathoms(uncor)
(PDR) ____ ____ ____ meters(corr)
Wire ____ 675 ____ meters

Piston Core Length: 20 40 60 80 100
Other:

PC Section Number	Section Length (cm)	Total Length (cm from top) Upper Lower
top foamed and whole		
sample stored at 30-40°F		

Scope: ____

Trigger Line Length: ____

Shear Pin Size: ____
Actuating Depth: ____

Tension: Prior to trip: ____
On bottom: ____
Pullout (max.): ____
Ascending: ____

Other Samplers:
Type and Number | Length

Remarks: [illegible]
[illegible]

CORE NO. TYPE LENGTH (cm) ±LATITUDE ±LONGITUDE
10 20 30 40

DEPTH (m) TOPO LOCAT COLOR abbreviation Munsell code
50 60 70 80

OSU 3118

OSU Oceanography
MARINE GEOLOGY CORING DATA SHEET

Vessel: R/V H-1 [illegible] Station: E-8 13

Cruise: BAT 79

Leg: ____

Mo/Day/Yr 4 / 14 / 79

Sampler Types:
Piston Core - PC
Multiple Gravity - MG
Dredge - DR
Free Fall - FF
Kasten - K ~ 2m
Gravity - G
Rock Core - RC
Shipek Grab - SG
Other - ____

Latitude: 27 °D 53.4 'M ____ (bridge)
27 °D 53.3 'M ____ (corrected)

Longitude: 111 °D 36.4 'M ____ (bridge)
111 °D 36.9 'M ____ (corrected)

	launched	on bottom	recovered	
Time:	2024	2044	2105	(GMT)

Water Depth: [illegible] 660 ____ fathoms(uncor)
(PDR) ____ ____ ____ meters(corr)
Wire ____ 675 ____ meters

Piston Core Length: 20 40 60 80 100
Other:

PC Section Number	Section Length (cm)	Total Length (cm from top) Upper Lower
empty		

Scope: ____

Trigger Line Length: ____

Shear Pin Size: ____
Actuating Depth: ____

Tension: Prior to trip: ____
On bottom: ____
Pullout (max.): ____
Ascending: ____

Other Samplers:
Type and Number | Length

Remarks: [illegible]
[illegible]
[illegible]
[illegible]

CORE NO. TYPE LENGTH (cm) ±LATITUDE ±LONGITUDE
10 20 30 40

DEPTH (m) TOPO LOCAT COLOR abbreviation Munsell code
50 60 70 80

OSU 3118

OSU Oceanography

MARINE GEOLOGY CORING DATA SHEET

Vessel: R/V [illegible]   Station: E-9   [illegible]

Cruise: [illegible] 79

Leg: ____

Mo/Day/Yr 9 / [illegible] / 79

Latitude: 27 °D [illegible] 'M ____ (bridge)
27 °D [illegible] 'M ____ (corrected)

Longitude: 111 °D [illegible] 'M ____ (bridge)
111 °D [illegible] 'M ____ (corrected)

Sampler Types:
- Piston Core - PC
- Multiple Gravity - MG
- Dredge - DR
- Free Fall - FF
- ✓ Kasten - K [illegible]
- Gravity - G
- Rock Core - RC
- Shipek Grab - SG
- Other - ____

Time:	launched	on bottom	recovered	
	[illegible]	[illegible]	[illegible]	(GMT)

Water Depth: [illegible] [illegible] ____ fathoms (uncor)
(PDR) ____ ____ ____ meters (corr)
Wire ____ [illegible] ____ meters

Piston Core Length: 20 40 60 80 100
Other:

Scope: ____

Trigger Line Length: ____

Shear Pin Size: ____
Actuating Depth: ____

Tension: Prior to trip: ____
On bottom: ____
Pullout (max.): ____
Ascending: ____

Other Samplers:
Type and Number   Length

PC Section Number	Section Length (cm)	Total Length (cm from top) Upper	Lower
[illegible]			
[illegible]			
[illegible]			
[illegible]			
[illegible]			
[illegible]			
[illegible]			
[illegible]			
[illegible]			
[illegible]			
[illegible]			
[illegible]			
[illegible] composite [illegible] 5 [illegible]			
bagged.			

Remarks: [illegible]

CORE NO. | TYPE | LENGTH (cm) | ±LATITUDE | ±LONGITUDE
10 20 30 40

DEPTH (m) | TOPO LOCAT | COLOR abbreviation | Munsell code
50 60 70 80

OSU 3118

OSU Oceanography

MARINE GEOLOGY CORING DATA SHEET

Vessel: R/V [illegible]   Station: E-10   [illegible]

Cruise: [illegible] 79

Leg: ____

Mo/Day/Yr 9 / [illegible] / 79

Latitude: 27 °D [illegible] 'M ____ (bridge)
27 °D [illegible] 'M ____ (corrected)

Longitude: 111 °D [illegible] 'M ____ (bridge)
111 °D [illegible] 'M ____ (corrected)

Sampler Types:
- Piston Core - PC
- Multiple Gravity - MG
- Dredge - DR
- Free Fall - FF
- ✓ Kasten - K [illegible]
- Gravity - G
- Rock Core - RC
- Shipek Grab - SG
- Other - ____

Time:	launched	on bottom	recovered	
	[illegible]	[illegible]	[illegible]	(GMT)

Water Depth: [illegible] [illegible] ____ fathoms (uncor)
(PDR) ____ ____ ____ meters (corr)
Wire ____ [illegible] ____ meters

Piston Core Length: 20 40 60 80 100
Other:

Scope: ____

Trigger Line Length: ____

Shear Pin Size: ____
Actuating Depth: ____

Tension: Prior to trip: ____
On bottom: ____
Pullout (max.): ____
Ascending: ____

Other Samplers:
Type and Number   Length

PC Section Number	Section Length (cm)	Total Length (cm from top) Upper	Lower
[illegible]			
[illegible]			
[illegible]			
[illegible]			
3 [illegible]			
4 [illegible]			
5 [illegible]			
6 [illegible]			
7 [illegible]			
[illegible] in plastic bag			
[illegible]			
[illegible]			
[illegible]			
[illegible]			
[illegible]			
[illegible]			

Remarks: [illegible]

CORE NO. | TYPE | LENGTH (cm) | ±LATITUDE | ±LONGITUDE
10 20 30 40

DEPTH (m) | TOPO LOCAT | COLOR abbreviation | Munsell code
50 60 70 80

OSU 3118

OSU Oceanography
MARINE GEOLOGY CORING DATA SHEET

Vessel: R/V H-1 Matamoros Station: E11

Cruise: GAV 79

Leg: _____

Mo/Day/Yr 9 / 1 / 79

Latitude: 27 °D [illegible] 'M (bridge)
[illegible] °D [illegible] 'M (corrected)

Longitude: [illegible] °D [illegible] 'M (bridge)
[illegible] °D [illegible] 'M (corrected)

Sampler Types:
Piston Core - PC
Multiple Gravity - MG
Dredge - DR
Free Fall - FF
Kasten - K
Gravity - G
Rock Core - RC
Shipek Grab - SG
Other - ____

Time: launched [illegible] on bottom [illegible] recovered _____ (GMT)

Water Depth: _____ fathoms (uncor)
(PDR) _____ meters (corr)
Wire _____ meters

Piston Core Length: 20 40 60 80 100
Other:

Scope: _____

Trigger Line Length: _____

Shear Pin Size: _____
Actuating Depth: _____

Tension: Prior to trip: _____
On bottom: _____
Pullout (max,): _____
Ascending: _____

Other Samplers:
Type and Number | Length

PC Section Number	Section Length (cm)	Total Length (cm from top) Upper	Lower
[illegible]			

Remarks: [illegible]

CORE NO. | TYPE | LENGTH (cm) | ±LATITUDE | ±LONGITUDE
10 20 30 40

DEPTH (m) | TOPO LOCAT | COLOR abbreviation | Munsell code
50 60 70 80

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OSU Oceanography
MARINE GEOLOGY CORING DATA SHEET

Vessel: R/V H-1 Matamoros Station: D

Cruise: GAV 79

Leg: _____

Mo/Day/Yr 9 / [illegible] / 79

Latitude: [illegible] °D [illegible] 'M (bridge)
[illegible] °D [illegible] 'M (corrected)

Longitude: [illegible] °D [illegible] 'M (bridge)
[illegible] °D [illegible] 'M (corrected)

Sampler Types:
Piston Core - PC
Multiple Gravity - MG
Dredge - DR
Free Fall - FF
Kasten - K
Gravity - G
Rock Core - RC
Shipek Grab - SG
Other - 22K Core

Time: [illegible] launched [illegible] on bottom [illegible] recovered [illegible] (GMT)

Water Depth: [illegible] (uncor) [illegible] [illegible] fathoms (uncor)
(PDR) _____ meters (corr)
Wire [illegible] meters

Piston Core Length: 20 40 60 80 100
Other:

Scope: _____

Trigger Line Length: _____

Shear Pin Size: _____
Actuating Depth: _____

Tension: Prior to trip: _____
On bottom: _____
Pullout (max,): _____
Ascending: _____

Other Samplers:
Type and Number | Length

PC Section Number	Section Length (cm)	Total Length (cm from top) Upper	Lower

Remarks: [illegible]
brittle stars
Polychaete
Sample foamed and stored at 30-40°

CORE NO. | TYPE | LENGTH (cm) | ±LATITUDE | ±LONGITUDE
10 20 30 40

DEPTH (m) | TOPO LOCAT | COLOR abbreviation | Munsell code
50 60 70 80

OSU 3118

OSU Oceanography
MARINE GEOLOGY CORING DATA SHEET

13

Vessel: R/V H-1 Metamores Station: D

Cruise: BAV 79

Leg: _____

Mo/Day/Yr 8 / 30 / 79

Latitude: 25 °D [illegible] 'M_____(bridge)
[illegible] °D [illegible] 'M_____(corrected)

Longitude: [illegible] °D [illegible] 'M_____(bridge)
[illegible] °D [illegible] 'M_____(corrected)

Sampler Types:
Piston Core - PC
Multiple Gravity - MG
Dredge - DR
Free Fall - FF
Kasten - K ~2m
Gravity - G
Rock Core - RC
Shipek Grab - SG
Other - ____

Time:	launched	on bottom	recovered	
	[illegible]	[illegible]	2105	(GMT)

Water Depth: [illegible] m [illegible] fathoms(uncor)
(PDR) _____ _____ meters(corr)
Wire _____ [illegible] meters

Piston Core Length: 20 40 60 80 100
Other:

Scope:_____
Trigger Line Length:_____

Shear Pin Size:_____
Actuating Depth:_____

Tension: Prior to trip:_____
On bottom:_____
Pullout (max.):_____
Ascending:_____

Other Samplers:
Type and Number / Length

PC Section Number	Section Length (cm)	Total Length (cm from top) Upper	Lower
[illegible]			

Remarks: [illegible]

CORE NO. | TYPE | LENGTH (cm) | ±LATITUDE | ±LONGITUDE
10 20 30 40

DEPTH (m) | TOPO LOCAT | COLOR abbreviation | Munsell code
50 60 70 80

OSU 3118

OSU Oceanography
MARINE GEOLOGY CORING DATA SHEET

14

Vessel: R/V Metamores (H-1) Station: D

Cruise: BAV 79

Leg: _____

Mo/Day/Yr 8 / 30 / 79

Latitude: [illegible] °D [illegible] 'M_____(bridge)
[illegible] °D [illegible] 'M_____(corrected)

Longitude: [illegible] °D [illegible] 'M_____(bridge)
[illegible] °D [illegible] 'M_____(corrected)

Sampler Types:
Piston Core - PC
Multiple Gravity - MG
Dredge - DR
Free Fall - FF
Kasten - K ~2m
Gravity - G
Rock Core - RC
Shipek Grab - SG
Other - ____

Time:	launched	on bottom	recovered	
	[illegible]	[illegible]	[illegible]	(GMT)

Water Depth: [illegible] fathoms(uncor)
(PDR) _____ _____ meters(corr)
Wire _____ [illegible] meters

Piston Core Length: 20 40 60 80 100
Other:

Scope:_____
Trigger Line Length:_____

Shear Pin Size:_____
Actuating Depth:_____

Tension: Prior to trip:_____
On bottom:_____
Pullout (max.):_____
Ascending:_____

Other Samplers:
Type and Number / Length

PC Section Number	Section Length (cm)	Total Length (cm from top) Upper	Lower
[illegible]			

Remarks: [illegible]

CORE NO. | TYPE | LENGTH (cm) | ±LATITUDE | ±LONGITUDE
10 20 30 40

32 m/min.

DEPTH (m) | TOPO LOCAT | COLOR abbreviation | Munsell code
50 60 70 80

OSU 3118

OSU Oceanography

MARINE GEOLOGY CORING DATA SHEET

Vessel: R/V H-1 Mikimeres Station: D 115

Cruise: BAV 71

Leg: ______

Mo/Day/Yr [illegible] / [illegible] / 79

Latitude: 25 °D [illegible] 'M ____ (bridge)
[illegible] °D [illegible] 'M ____ (corrected)

Longitude: [illegible] °D [illegible] 'M ____ (bridge)
[illegible] °D [illegible] 'M ____ (corrected)

Sampler Types:
- Piston Core - PC
- Multiple Gravity - MG
- Dredge - DR
- Free Fall - FF
- Kasten - K
- Gravity - G 3m
- Rock Core - RC
- Shipek Grab - SG
- Other - ____

	launched	on bottom	recovered	
Time:	2325	[illegible]		(GMT)
Water Depth:	[illegible]	[illegible]		fathoms (uncor)
(PDR)				meters (corr)
Wire				meters

Piston Core Length: 20 40 60 80 100
Other:

PC Section Number	Section Length (cm)	Total Length (cm from top) Upper	Lower

Scope: ______

Trigger Line Length: ______

Shear Pin Size: ______
Actuating Depth: ______

Tension: Prior to trip: ______
On bottom: ______
Pullout (max.): ______
Ascending: ______

Other Samplers:

Type and Number	Length

Remarks: [illegible]
[illegible]

CORE NO. TYPE LENGTH (cm) ± LATITUDE ± LONGITUDE
10 20 30 40

DEPTH (m) TOPO LOCAT COLOR abbreviation Munsell code
50 60 70 80

OSU 3118

OSU Oceanography

MARINE GEOLOGY CORING DATA SHEET

Vessel: R/V H-1 Mikimeres Station: D 116

Cruise: BAV 79

Leg: ______

Mo/Day/Yr [illegible] / [illegible] / 79

Latitude: 25 °D 16.6 'M ____ (bridge)
[illegible] °D [illegible] 'M ____ (corrected)

Longitude: 112 °D 33.4 'M ____ (bridge)
112 °D [illegible] 'M ____ (corrected)

Sampler Types:
- Piston Core - PC
- Multiple Gravity - MG
- Dredge - DR
- Free Fall - FF
- Kasten - K
- Gravity - G 3m
- Rock Core - RC
- Shipek Grab - SG
- Other - ____

	launched	on bottom	recovered	
Time:	[illegible]	[illegible]		(GMT)
Water Depth:	[illegible]	[illegible]	(uncorr)	fathoms (uncor)
(PDR)				meters (corr)
Wire				meters

Piston Core Length: 20 40 60 80 100
Other:

PC Section Number	Section Length (cm)	Total Length (cm from top) Upper	Lower
[illegible]			
[illegible]			

Scope: ______

Trigger Line Length: ______

Shear Pin Size: ______
Actuating Depth: ______

Tension: Prior to trip: ______
On bottom: ______
Pullout (max.): ______
Ascending: ______

Other Samplers:

Type and Number	Length

Remarks:

CORE NO. TYPE LENGTH (cm) ± LATITUDE ± LONGITUDE
10 20 30 40

DEPTH (m) TOPO LOCAT COLOR abbreviation Munsell code
50 60 70 80

OSU 3118

OSU Oceanography
MARINE GEOLOGY CORING DATA SHEET

Vessel: ~~R/V~~ H-1 MATAMCROS Station: COLO RIVER FAN Sta #5

Cruise: BAV 79

Leg: _____

(17)

Mo/Day/Yr 09 / 23 / 79

Latitude: 31 °D 01' M ____ (bridge)
31 °D 01' M ____ (corrected)

Longitude: 114 °D 24.0 M ____ (bridge)
114 °D 24.6 M ____ (corrected)

Sampler Types:
Piston Core - PC
Multiple Gravity - MG
Dredge - DR
Free Fall - FF
~~Kasten - K~~
~~Gravity - G~~ 2m
Rock Core - RC
Shipek Grab - SG
Other - ____

Time:	launched	on bottom	recovered	(GMT)
	0040	0042	_____	

Water Depth (PDR): 28m 28m (uncor) ~~fathoms~~(uncor)
_____ meters(corr)
Wire: 41 m _____ meters

Piston Core Length: 20 40 60 80 100
Other:

Scope: _____

Trigger Line Length: _____

Shear Pin Size: _____
Actuating Depth: _____

Tension: Prior to trip: _____
On bottom: _____
Pullout (max.): _____
Ascending: _____

Other Samplers:

Type and Number	Length

PC Section Number	Section Length (cm)	Total Length (cm from top) Upper	Lower
NO SAMPLE RECOVERED			

Remarks: ~570 LBs (weight)
(No. deck did not shear; came up with sand on it.
Core probably fell over after contact with sediments
(sand on one side of weight stand)

CORE NO. | TYPE | LENGTH (cm) | ±LATITUDE | ±LONGITUDE
10 20 30 40

DEPTH (m) | TOPO LOCAT | COLOR abbreviation | Munsell code
50 60 70 80

OSU 3118

OSU Oceanography
MARINE GEOLOGY CORING DATA SHEET

Vessel: ~~R/V~~ H-1 MATAMCROS Station: COLO RIVER FAN

Cruise: BAV 79

Leg: _____

(18)

Mo/Day/Yr 9 / 23 / 79

Latitude: 31 °D 00.0 M ____ (bridge)
____ °D ____ M ____ (corrected)

Longitude: 114 °D 24.6 M ____ (bridge)
____ °D ____ M ____ (corrected)

Sampler Types:
Piston Core - PC
Multiple Gravity - MG
Dredge - DR
Free Fall - FF
(Kasten - K) 2m
Gravity - G
Rock Core - RC
Shipek Grab - SG
Other - ____

Time:	launched	on bottom	recovered	(GMT)
	0100	0101	0104	

Water Depth (PDR): 29m 29m (uncor) ~~fathoms~~(uncor)
_____ meters(corr)
Wire: _____ 43m _____ meters

Piston Core Length: 20 40 60 80 100
Other:

Scope: _____

Trigger Line Length: _____

Shear Pin Size: _____
Actuating Depth: _____

Tension: Prior to trip: _____
On bottom: _____
Pullout (max.): _____
Ascending: _____

Other Samplers:

Type and Number	Length

PC Section Number	Section Length (cm)	Total Length (cm from top) Upper	Lower
Recovered 1 1/2 m sand in core catcher and logged as composite sample.			
warm tubes present			

Remarks: ~570 lbs weight
Grabbed core wire to tripping flap of core catcher
Lowered down @ 10 m then free fall (20m)

CORE NO. | TYPE | LENGTH (cm) | ±LATITUDE | ±LONGITUDE
10 20 30 40

DEPTH (m) | TOPO LOCAT | COLOR abbreviation | Munsell code
50 60 70 80

OSU 3118

OSU Oceanography
MARINE GEOLOGY CORING DATA SHEET

(19)

Vessel: ~~R/V~~ H-1 MATAMOROS Station: Colo. River FAN

Cruise: BAJ 79

Leg: _____

Mo/Day/Yr 9 / 23 / 79

Latitude: 30 °D 59.3 'M _____ (bridge)
_____ °D _____ 'M _____ (corrected)

Longitude: 114 °D 22.5 'M _____ (bridge)
_____ °D _____ 'M _____ (corrected)

Sampler Types:
Piston Core - PC
Multiple Gravity - MG
Dredge - DR
Free Fall - FF
Kasten - K
~~Gravity~~ - G large ϕ (3m)
Rock Core - RC
Shipek Grab - SG
Other - ____

Time:	launched	on bottom	recovered	(GMT)
	0129 / 0103	0125	_____	

Water Depth:			
(PDR)	23m	23m (uncor)	fathoms (uncor) / meters ~~(corr)~~
Wire		38m	meters

Piston Core Length: 20 40 60 80 100
Other:

Scope: _____

Trigger Line Length: _____

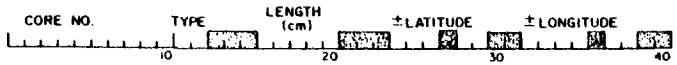
Shear Pin Size: _____
Actuating Depth: _____

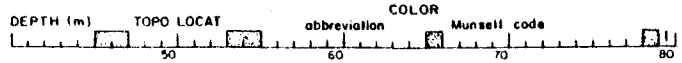
Tension: Prior to trip: _____
On bottom: _____
Pullout (max.): _____
Ascending: _____

Other Samplers:
Type and Number / Length

PC Section Number	Section Length (cm)	Total Length (cm from top) Upper	Lower
A few shells and a worm tube were recovered from the core catcher and logged			

Remarks: M-25 / 52 (6 plates)
hit something hard - ~~BENT~~ BENT + Broke BARREL ~1m above ~~the~~ core catcher





OSU 3118

OSU Oceanography
MARINE GEOLOGY CORING DATA SHEET

(20)

Vessel: ~~R/V~~ H1 MATAMOROS Station: AREA C / C-20

Cruise: BAJ 79

Leg: _____

Mo/Day/Yr 9 / 24 / 79

Latitude: 27 °D 26.5 'M _____ (bridge)
27 °D 26.5 'M _____ (corrected)

Longitude: 112 °D 09.2 'M _____ (bridge)
112 °D 08.8 'M _____ (corrected)

Sampler Types:
Piston Core - PC
Multiple Gravity - MG
Dredge - DR
Free Fall - FF
Kasten - K
Gravity - G
Rock Core - RC
Shipek Grab - SG
Other - Box Core

Time:	launched	on bottom	recovered	(GMT)
	1730	1803	1830	

Water Depth:			
(PDR)	677	690 (uncor)	fathoms (uncor) / meters (corr)
Wire		706	meters

Piston Core Length: 20 40 60 80 100
Other:

Scope: _____

Trigger Line Length: _____

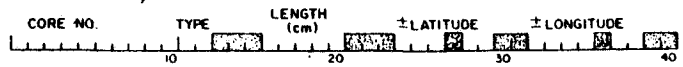
Shear Pin Size: _____
Actuating Depth: _____

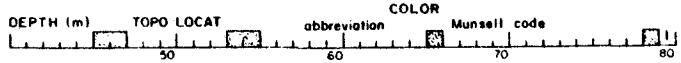
Tension: Prior to trip: _____
On bottom: _____
Pullout (max.): _____
Ascending: _____

Other Samplers:
Type and Number / Length

PC Section Number	Section Length (cm)	Total Length (cm from top) Upper	Lower
Basal top 5cm			
Put in 4" diameter tube 62cm long for sample			
Tube bottoms sfc.			
Bag contains remainder of sfc			
at least 4 mollusk shells living on top with H_2S			

Remarks: Box Core plates on shaft moved to middle position - previously at lowest position
Core penetrated, bottom sides laminated





OSU 3118

OSU Oceanography
MARINE GEOLOGY CORING DATA SHEET

(21)

Vessel: ~~R/V~~ H1 MATAMOROS Station: C-21

Cruise: BAV-'79

Leg: _____

Mo/Day/Yr 09 / 24 / 79

Sampler Types:
Piston Core - PC
Multiple Gravity - MG
Dredge - DR
Free Fall - FF
Kasten - K
Gravity - G
Rock Core - RC
Shipek Grab - SG
Other) Box Core

Latitude: 27 °D 25.2 'M ____ (~~bridge~~)
27 °D 25.5 'M ____ (corrected)

Longitude: 112 °D 03.2 'M ____ (bridge)
112 °D 03.64 'M ____ (corrected)

Time:	launched	on bottom	recovered	(GMT)
	1905	1937	2005	

Water Depth:				
(PDR)	750	763	(illegible)	fathoms(uncor) meters(corr)
Wire				meters

Piston Core Length: 20 40 60 80 100
Other:

Scope: _____

Trigger Line Length: _____

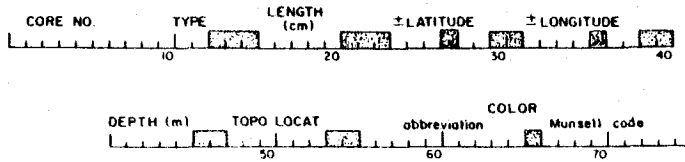
Shear Pin Size: _____
Actuating Depth: _____

Tension: Prior to trip: _____
On bottom: _____
Pullout (max.): _____
Ascending: _____

Other Samplers:
Type and Number | Length

PC Section Number	Section Length (cm)	Total Length (cm from top) Upper	Lower
not opened yet jammed and stored cat 30-40°F			

Remarks: Plates on shaft of corer put back to lowest position
No H_2S - Clayey + sandy laminated - Recovered 45(?) cm in gravity core tube - lost some of bottom



OSU 3118

OSU Oceanography
MARINE GEOLOGY CORING DATA SHEET

(22)

Vessel: ~~R/V~~ H-1 MATAMOROS Station: C-22

Cruise: BAV 79

Leg: _____

Mo/Day/Yr 9 / 24 / 79

Sampler Types:
Piston Core - PC
Multiple Gravity - MG
Dredge - DR
Free Fall - FF
Kasten - K
Gravity - G
Rock Core - RC
Shipek Grab - SG
Other) - Box Core

Latitude: 27 °D 24.3 'M ____ (bridge)
27 °D 24.2 'M ____ (~~corrected~~) bottom

Longitude: 112 °D 11.0 'M ____ (bridge)
112 °D 11.5 'M ____ (~~corrected~~) bottom

Time:	launched	on bottom	recovered	(GMT)
	2100	2124	2146	

Water Depth:				
(PDR)	580 m	576 m	(uncor)	fathoms(uncor) meters~~(corr)~~
Wire		592		meters

Piston Core Length: 20 40 60 80 100
Other:

Scope: _____

Trigger Line Length: _____

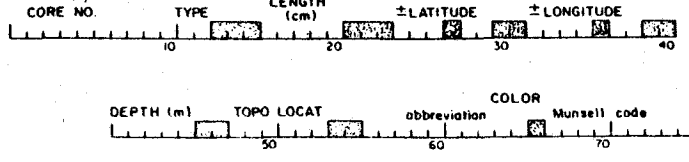
Shear Pin Size: _____
Actuating Depth: _____

Tension: Prior to trip: _____
On bottom: _____
Pullout (max.): _____
Ascending: _____

Other Samplers:
Type and Number | Length

PC Section Number	Section Length (cm)	Total Length (cm from top) Upper	Lower
surface: ~10 brittle stars ϕ ½ cm ~3 worm tubes 1-1½ cm length			

Remarks: 40 fathoms shallower than last - no lamination, no H_2S
53 cm recovered in ½ ϕ grav tube as sample.
Sfc w/10 brittle stars - body dia ½-1½ cm; 3 worm tubes ½-1 cm diam



OSU 3118

OSU Oceanography

MARINE GEOLOGY CORING DATA SHEET

Vessel: ~~R/V~~ H-1 MATAMOROS

Station: C-23

(23)

Cruise: BAV 79

Leg: ____

Mo/Day/Yr 9 / 24 / 79

Latitude: 27 °D 22.6 'M ____ (~~bridge~~)
27 °D 22.2 'M ____ (corrected)

Longitude: 112 °D 12.5 'M ____ (~~bridge~~)
112 °D 12.1 'M ____ (~~corrected~~)

Sampler Types:
- Piston Core - PC
- Multiple Gravity - MG
- Dredge - DR
- Free Fall - FF
- Kasten - K
- Gravity - G
- Rock Core - RC
- Shipek Grab - SG
- (Other) - Box Core

	launched	on bottom	recovered	
Time:	2217	2235	____	(GMT)
Water Depth:	____	____	____	fathoms (uncor)
(PDR)	467	~~4~~ 447	____	meters (corr)
Wire		467	____	meters

447
467

Piston Core Length: 20 40 60 80 100
Other:

PC Section Number	Section Length (cm)	Total Length (cm from top) Upper Lower
1 Large Ø tube pressed in, surface bagged, rest discharged		

Scope: ____

Trigger Line Length: ____

Shear Pin Size: ____
Actuating Depth: ____

Tension: Prior to trip: ____
On bottom: ____
Pullout (max.): ____
Ascending: ____

Other Samplers:
Type and Number / Length

Remarks: 40 fathoms shallower

CORE NO. | TYPE | LENGTH (cm) | ±LATITUDE | ±LONGITUDE
10 20 30 40

DEPTH (m) | TOPO LOCAT | COLOR abbreviation | Munsell code
50 60 70 80

OSU 3118

OSU Oceanography

MARINE GEOLOGY CORING DATA SHEET

Vessel: R/V H-1 Matamoros

Station: C-24 / 24

Cruise: BAV 79

Leg: ____

Mo/Day/Yr 9 / 24 / 79

Latitude: 27 °D [illegible] 'M ____ (~~bridge~~)
27 °D [illegible] 'M ____ (~~corrected~~)

Longitude: 112 °D [illegible] 'M ____ (~~bridge~~)
112 °D [illegible] 'M ____ (~~corrected~~)

Sampler Types:
- Piston Core - PC
- Multiple Gravity - MG
- Dredge - DR
- Free Fall - FF
- Kasten - K
- Gravity - G
- Rock Core - RC
- Shipek Grab - SG
- Other - [illegible]

	launched	on bottom	recovered	
Time:	2345	0023	____	(GMT)
Water Depth:	655	[illegible]	(uncor)	fathoms (uncor)
(PDR)	____	____	____	meters (corr)
Wire		[illegible] m	____	meters

Piston Core Length: 20 40 60 80 100
Other:

PC Section Number	Section Length (cm)	Total Length (cm from top) Upper Lower
[illegible]		
[spling = sampling]		

Scope: ____

Trigger Line Length: ____

Shear Pin Size: ____
Actuating Depth: ____

Tension: Prior to trip: ____
On bottom: ____
Pullout (max.): ____
Ascending: ____

Other Samplers:
Type and Number / Length

Remarks: [illegible]

CORE NO. | TYPE | LENGTH (cm) | ±LATITUDE | ±LONGITUDE
10 20 30 40

DEPTH (m) | TOPO LOCAT | COLOR abbreviation | Munsell code
50 60 70 80

OSU 3118

OSU Oceanography
MARINE GEOLOGY CORING DATA SHEET

Vessel: R/V [illegible] Station: C-25 [illegible]

Cruise: [illegible] 79

Leg: ____

Mo/Day/Yr [illegible] / 25 / 79

Latitude: 27 °D [illegible] 'M ____ (bridge)
____ °D ____ 'M ____ (corrected)
27° 25.0

Longitude: [illegible] °D ____ 'M ____ (bridge)
112° 09.0 [illegible] °D [illegible] 'M ____ (corrected)

Sampler Types:
Piston Core - PC
Multiple Gravity - MG
Dredge - DR
Free Fall - FF
Kasten - K ~2 m
Gravity - G
Rock Core - RC
Shipek Grab - SG
Other - ____

	launched	on bottom	recovered	
Time:		[illegible]		(GMT)
Water Depth:	[illegible]	[illegible]	[illegible]	fathoms (uncor)
(PDR)				meters (corr)
Wire		[illegible]		meters

Piston Core Length: 20 40 60 80 100
Other:

Scope: ____

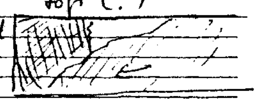
Trigger Line Length: ____

Shear Pin Size: ____
Actuating Depth: ____

Tension: Prior to trip: ____
On bottom: ____
Pullout (max.): ____
Ascending: ____

Other Samplers:
Type and Number — Length

PC Section Number	Section Length (cm)	Total Length (cm from top) Upper	Lower
[illegible]			
[illegible] (struck through)			
[illegible]			



Remarks: [illegible]

CORE NO. TYPE LENGTH (cm) ±LATITUDE ±LONGITUDE
10 20 30 40

DEPTH (m) TOPO LOCAT COLOR abbreviation Munsell code
50 60 70 80

OSU 3118

OSU Oceanography
MARINE GEOLOGY CORING DATA SHEET

Vessel: R/V [illegible] Station: 6 [26]

Cruise: [illegible] 79

Leg: ____

Mo/Day/Yr 5 / 25 / 79

1510 Latitude: 26 °D [illegible] 'M ____ (bridge)
1539 [illegible] °D [illegible] 'M ____ (corrected)

Longitude: 111 °D [illegible] 'M ____ (bridge)
111 °D [illegible] 'M ____ (corrected)

Sampler Types:
Piston Core - PC
Multiple Gravity - MG
Dredge - DR
Free Fall - FF
Kasten - K
Gravity - G
Rock Core - RC
Shipek Grab - SG
Other - [illegible]

	launched	on bottom	recovered	
Time:	1500Z	[illegible]	[illegible]	(GMT)
Water Depth:	544 m	552 m	(uncor)	~~fathoms~~ meter (uncor)
(PDR)				meters (corr)
Wire		[illegible]		meters

Piston Core Length: 20 40 60 80 100
Other:

Scope: ____

Trigger Line Length: ____

Shear Pin Size: ____
Actuating Depth: ____

Tension: Prior to trip: ____
On bottom: ____
Pullout (max.): ____
Ascending: ____

Other Samplers:
Type and Number — Length

PC Section Number	Section Length (cm)	Total Length (cm from top) Upper	Lower
35 cm recovered			
foamed and chilled 30-40°F			

Remarks: [illegible]

CORE NO. TYPE LENGTH (cm) ±LATITUDE ±LONGITUDE
10 20 30 40

DEPTH (m) TOPO LOCAT COLOR abbreviation Munsell code
50 60 70 80

OSU 3118

OSU Oceanography
MARINE GEOLOGY CORING DATA SHEET

Vessel: R/V [illegible] Station: [illegible] [illegible]

Cruise: BAV 79

Leg: ____

Mo/Day/Yr 9/15/79

Latitude: [illegible] °D [illegible] 'M (bridge)
[illegible] °D [illegible] 'M (corrected)

Longitude: [illegible] °D [illegible] 'M (bridge)
[illegible] °D [illegible] 'M (corrected)

Sampler Types:
Piston Core - PC
Multiple Gravity - MG
Dredge - DR
Free Fall - FF
Kasten - K
Gravity - G
Rock Core - RC
Shipek Grab - SG
Other - [illegible]

Time: launched [illegible] on bottom [illegible] recovered [illegible] (GMT)

Water Depth: [illegible] [illegible] ~~fathoms~~ meters (uncor)
(PDR) meters(corr)
Wire [illegible] meters

Piston Core Length: 20 40 60 80 100
Other:

Scope:

Trigger Line Length:

Shear Pin Size:
Actuating Depth:

Tension: Prior to trip:
On bottom:
Pullout (max.):
Ascending:

Other Samplers:
Type and Number Length

PC Section Number	Section Length (cm)	Total Length (cm from top) Upper Lower
51 cm recovered,		
foamed and stored 30-40°F		

Remarks: [illegible]

CORE NO. TYPE LENGTH (cm) ±LATITUDE ±LONGITUDE
10 20 30 40

DEPTH (m) TOPO LOCAT COLOR abbreviation Munsell code
50 60 70 80

OSU 3118

OSU Oceanography
MARINE GEOLOGY CORING DATA SHEET

Vessel: R/V [illegible] Station: [illegible] [illegible]

Cruise: BAV 79

Leg: ____

Mo/Day/Yr 9/15/79

Latitude: [illegible] °D [illegible] 'M ~~(bridge)~~
[illegible] °D [illegible] 'M (corrected)

Longitude: [illegible] °D [illegible] 'M ~~(bridge)~~
[illegible] °D [illegible] 'M ~~(corrected)~~

Sampler Types:
Piston Core - PC
Multiple Gravity - MG
Dredge - DR
Free Fall - FF
Kasten - K [illegible]
Gravity - G
Rock Core - RC
Shipek Grab - SG
Other -

Time: launched [illegible] on bottom [illegible] recovered [illegible] (GMT)

Water Depth: [illegible] [illegible] [illegible] ~~fathoms~~ meters (uncor)
(PDR) meters(corr)
Wire [illegible] meters

Piston Core Length: 20 40 60 80 100
Other:

Scope:

Trigger Line Length:

Shear Pin Size:
Actuating Depth:

Tension: Prior to trip:
On bottom:
Pullout (max.):
Ascending:

Other Samplers:
Type and Number Length

PC Section Number	Section Length (cm)	Total Length (cm from top) Upper Lower
[illegible]		
[illegible]		
[illegible]		
[illegible]		
[illegible]		
[illegible]		
[illegible]		
[illegible]		
[illegible]		
Eduardo got sample splits every 10 cm.		

Remarks: [illegible]

CORE NO. TYPE LENGTH (cm) ±LATITUDE ±LONGITUDE
10 20 30 40

DEPTH (m) TOPO LOCAT COLOR abbreviation Munsell code
50 60 70 80

OSU 3118

OSU Oceanography
MARINE GEOLOGY CORING DATA SHEET

Vessel: ~~R/V~~ H-1 MATAMOROS Station: B (29)

Cruise: BAV '79

Leg:

Mo/Day/Yr 9/25/79

Latitude: 26 °D 41.8 'M (bridge)
26 °D 42.0 'M (~~corrected~~) Bottom

Longitude: 111 °D 24.6 'M (bridge)
111 °D 25.0 'M (corrected) Bottom

Sampler Types:
Piston Core - PC
Multiple Gravity - MG
Dredge - DR
Free Fall - FF
~~Kasten~~ - K 2 m
Gravity - G
Rock Core - RC
Shipek Grab - SG
Other -

Time:	launched	on bottom	recovered	(GMT)
	1932	1957	2019	

Water Depth:	launched	on bottom	recovered	
(PDR)	652 m	635m (1,COR)		~~fathoms(uncor)~~ meters
				meters(corr)
Wire		625		meters

* the counter on the W22 slid ~50m wire released 700m

Piston Core Length: 20 40 60 80 100
Other:

Scope:

Trigger Line Length:

Shear Pin Size:
Actuating Depth:

Tension: Prior to trip:
On bottom:
Pullout (max,):
Ascending:

Other Samplers:
Type and Number / Length

PC Section Number	Section Length (cm)	Total Length (cm from top) Upper	Lower
	197cm		
Trays	(1)	0	24 cm
	(2)	24	52
	(3)	52	79.5
	(4)	79.5	107.5
	(5)	107.5	135
	(6)	135	163
	(7)	163	191.5
	(8)	191.5	197
BAG SAMPLES (Composite)			
5cm width			

Remarks: Nice - No finger ~340-155 lead used

laminae 50 cm - 7/1.5cm 120cm - pectin layer
110 cm - 8/2 cm
130 - 8/1.5 cm
Generally - Dark laminae Reddish thin light

CORE NO. | TYPE | LENGTH (cm) | ±LATITUDE | ±LONGITUDE
10 20 30 40

DEPTH (m) | TOPO LOCAT | COLOR abbreviation | Munsell code
50 60 70 80

OSU 3118

OSU Oceanography
MARINE GEOLOGY CORING DATA SHEET

Vessel: ~~R/V~~ H-1 MATAMOROS Station: B (30)

Cruise: BAV '79

Leg:

Mo/Day/Yr 9/25/79

Latitude: 26 °D 41.2 'M (~~bridge~~)
26 °D 41.6 'M (~~corrected~~) Bottom

Longitude: 111 °D 25.6 'M (bridge)
111 °D 25.1 'M (corrected) Bottom

Sampler Types:
Piston Core - PC
Multiple Gravity - MG
Dredge - DR
Free Fall - FF
~~Kasten~~ - K 2 m
Gravity - G
Rock Core - RC
Shipek Grab - SG
Other -

Time:	launched	on bottom	recovered	(GMT)
	2041	2103	2130	

Water Depth:	launched	on bottom	recovered	
(PDR)	650	657 (uncor)		~~fathoms(uncor)~~ meters
				meters(corr)
Wire		680		meters

Piston Core Length: 20 40 60 80 100
Other:

Scope:

Trigger Line Length:

Shear Pin Size:
Actuating Depth:

Tension: Prior to trip:
On bottom:
Pullout (max,):
Ascending:

Other Samplers:
Type and Number / Length

PC Section Number	Section Length (cm)	Total Length (cm from top) Upper	Lower
205.5cm - Slight core penetration			
Trays - Layer 1	(1)	0	62 cm
	(2)	62	123.5
	(3)	123.5	186
Composite Samp		136	190 cm
		190	195
		195	200
		200	203.5
Layer 2	(4)	21.5	83.5 cm
	(5)	83.5	145
	(6)	145	205.5
Composite Samp		0	5 cm
		5	10 cm
		10	15 cm
		16	21.5 cm

Remarks: Blood weights - No finger
Laminae - 20 cm - 9/2 cm
105 - 7/2 cm
160 - 9/2 cm

2 layers of samples taken into large plastic
pectin layer at 170 and 5 cm
Benthic foams soon throughout

CORE NO. | TYPE | LENGTH (cm) | ±LATITUDE | ±LONGITUDE
10 20 30 40

DEPTH (m) | TOPO LOCAT | COLOR abbreviation | Munsell code
50 60 70 80

OSU 3118

65

OSU Oceanography

MARINE GEOLOGY CORING DATA SHEET

Vessel: ~~R/V~~ HI MATAMOROS Station: B (31)

Cruise: BAC 79

Leg: _____

Mo/Day/Yr 9/25/79

Latitude: 26 °D 42.2 'M ____ (~~bridge~~) Bottom
26 °D 42.5 'M ____ (~~corrected~~)

Longitude: 111 °D 25.4 'M ____ (~~bridge~~) Bottom
111 °D 25.3 'M ____ (corrected)

Sampler Types:
Piston Core - PC
Multiple Gravity - MG
Dredge - DR
Free Fall - FF
Kasten - K
Gravity - G 1g ϕ 3m
~~Rock Core~~ - RC
Shipek Grab - SG
Other - ____

Time:	launched	on bottom	recovered	(GMT)
	2200	2221	2246	

Water Depth:
(PDR) 654 — 659 (uncor) fathoms (uncor)
Wire 658 — ____ meters (~~corr~~)
____ meters

Piston Core Length: 20 40 60 80 100
Other:

Scope: _____

Trigger Line Length: _____

Shear Pin Size: _____
Actuating Depth: _____

Tension: Prior to trip: _____
On bottom: _____
Pullout (max.): _____
Ascending: _____

Other Samplers:

Type and Number	Length

PC Section Number	Section Length (cm)	Total Length (cm from top) Upper	Lower
Core penetrated	3 cm		
Cut off top 10 cm + put in 2 bags			
bag 1 - very top		0	3 cm
bag 2		3	10 cm
sec II	126 cm	(10	136 cm)
sec I	153 cm	(136	289 cm)

Remarks: One lead weight; no pinger

CORE NO. | TYPE | LENGTH (cm) | ±LATITUDE | ±LONGITUDE
10 20 30 40

DEPTH (m) | TOPO LOCAT | COLOR abbreviation | Munsell code
50 60 70 80

OSU 3118

Vámonos

Que no somos iguales dice la gente
Que tu vida y mi vida se van a perder
Que yo soy un canallo y que tu eres decente
Que dos seres distintos no se pueden querer
Pero yo ya te guise y no te alvido
Y morir en tus brazos es mi ilusión
Yo no entiendo esas cosas de las clases sociales
Solo sé que me quieres y quete quiero yo
Vámanos donde nadie nos juzque, donde nadie no diga que hacemos mal
Vámonos alejados del mundo
Donde no haya justicia, ni leyes, ni nada
No mas' nuestro amor
Que no somos iguales dica la gente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