

1979

## The Virginia Chesapeake Bay: recent sedimentation and paleodrainage

Michael J. Carron

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**THE VIRGINIA CHESAPEAKE BAY: RECENT SEDIMENTATION AND  
PALEODRAINAGE**

*The College of William and Mary in Virginia*

PH.D. 1979

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**R/V WESTWARD**



**R/V CAPTAIN JOHN SMITH**

THE VIRGINIA CHESAPEAKE BAY:  
RECENT SEDIMENTATION AND PALEODRAINAGE

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A Dissertation

Presented to  
The Faculty of the School of Marine Science  
Virginia Institute of Marine Science  
The College of William and Mary in Virginia

In Partial Fulfillment  
Of the Requirements for the Degree of  
Doctor of Philosophy

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by  
Michael Carron  
1979

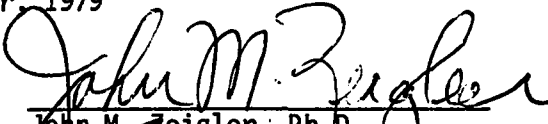
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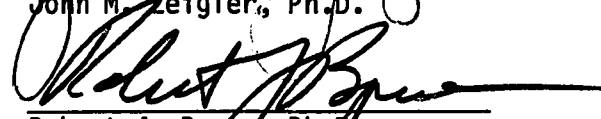
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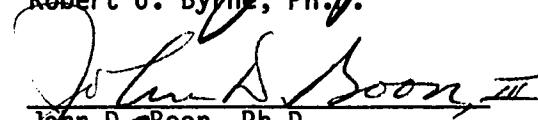
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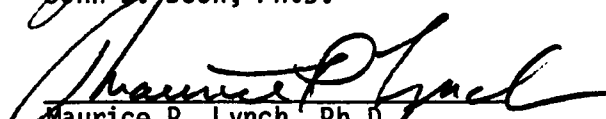
  
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TABLE OF CONTENTS

PART I

	Page
ACKNOWLEDGEMENTS . . . . .	iii
LIST OF TABLES . . . . .	vi
LIST OF FIGURES . . . . .	vii
ABSTRACT . . . . .	x
FORWARD . . . . .	2
INTRODUCTION	
Geologic and Physiographic Setting . . . . .	3
Pre-Pleistocene Geology . . . . .	6
Pleistocene To Present Geology . . . . .	10
Objectives and Scope . . . . .	16
Formulation and Approach . . . . .	17
RECENT SEDIMENTATION	
Introduction . . . . .	20
Philosophy . . . . .	23
Method . . . . .	25
Discussion of Data and Results . . . . .	28
A Conceptual Model and The Bruun Hypothesis . . . . .	37
Conclusion . . . . .	43

TABLE OF CONTENTS (Concluded)

	Page
PALEODRAINAGE	
Introduction . . . . .	46
Philosophy . . . . .	47
Method . . . . .	48
Discussion and Results . . . . .	52
SUMMARY . . . . .	76
BIBLIOGRAPHY . . . . .	78

PART II

APPENDIX A-F

A. Detailed methodology used in determining the sedimentation rates from bathymetric comparisons for the Chesapeake Bay in Virginia . . . . .	A1
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MICROFILM POCKET

B. Area, sedimentation rate and volume data from bathymetric comparisons 1850-series to 1950-series . . . . .	B1
C. Cumulative area plots for the Chesapeake Bay subsegments 38°00'N to 36°50'N . . . . .	C1
D. Cumulative volume plots for the Chesapeake Bay subsegments 38°00'N to 36°50'N . . . . .	D1
E. West to east cross-sections for each 1-minute of latitude 38°00'N to 36°56'N for the 1850-series and 1950-series bathymetric surveys . . . . .	E1

LIST OF TABLES

Table	Page
1. Mean sedimentation rates and chi-square significance levels for three subdivisions of the Virginia Bay . . .	36
2. Mean sedimentation rates and chi-square significance levels for seven 10-minute subdivisions of the Virginia Bay . . . . .	37
B1-B49 Area, sedimentation rate and volume data from bathymetric comparisons 1850-series to 1950-series	

## LIST OF FIGURES

Figure	Page
1. Map of the Chesapeake Bay region . . . . .	4
2. Physiographic provinces in the Chesapeake Bay region . . . . .	5
3. Geosynclinal couplet off the Atlantic Coast of the United States . . . . .	8
4. Section showing major structural features of the basement of the Atlantic Coastal Plain . . . . .	9
5. Ryan's (1953) trends of the Chesapeake Bay . . . . .	11
6. Rates of crustal change (mm/yr) of the Chesapeake Bay region in recent time (Holdahl and Morrison, 1974) . . . . .	15
7. Subdivisions of the Chesapeake Bay used in sedimentation rate and sediment volume change calculations . . . . .	27
8. Location of geographic names used in the discussion discussion . . . . .	29
9. Variation in sedimentation rate with depth for Mobjack Bay, Pocomoke Sound and the Chesapeake Bay Mainstem . . . . .	33
10. Variation in sedimentation rate with depth for Virginia Chesapeake Bay, upper (38°00'N to 37°38'N), middle (37°38'N to 37°16'N), and lower (37°16'N to 36°50'N) segments . . . . .	34
11. Depth vs. Sedimentation Rate for each ten-minute subsegment from 38°00'N to 36°50'N . . . . .	36
12. Depositional pattern found in the Virginia Chesapeake Bay . . . . .	38

LIST OF FIGURES (Continued)

Figure	Page
13. The Bruun (1962) Model relating sea level rise to shore erosion . . . . .	41
14. Proposed model of sea level rise as a cause of erosion for the Chesapeake Bay estuary . . . . .	44
15. Location of seismic reflection survey tracks . . . . .	49
16. Photographs of transducer platform used with Schooner R/V Westward and transducer mounted on R/V Captain John Smith . . . . .	51
17. Selected computer drawn sub-bottom cross-sections in the Virginia Chesapeake Bay . . . . .	53
18. Selected computer drawn sub-bottom cross-sections in the Virginia Chesapeake Bay . . . . .	55
19. Selected computer drawn sub-bottom cross-sections in the Virginia Chesapeake Bay . . . . .	57
20. Selected sub-bottom profiles in the York River area . . . . .	60
21. Cross-section at Bay Mouth from boring logs . . . . .	62
22. Selected sub-bottom profiles in the region south of Smith Point . . . . .	64
23. Selected sub-bottom profiles in the Potomac River mouth . . . . .	66
24. Selected sub-bottom profiles in the Mainstem region north of the Potomac River mouth . . . . .	69
25. Selected sub-bottom profiles in Tangier Sound . . . . .	71
26a. Inferred position of major paleochannels in the Virginia Chesapeake Bay Estuary . . . . .	74
26b. Present thalwegs of the Chesapeake Bay . . . . .	74

LIST OF FIGURES (Concluded)

PART II

- C1-C48 Cumulative area plots for the Chesapeake Bay subsegments 38°00' N to 36°56' N
- D1-D48 Cumulative volume plots for the Chesapeake Bay subsegments 38°00' N to 36°56' N
- E1-E66 West to east cross-sections for each 1-minute of latitude 38°00' N to 36°56' N for the 1850-series and 1950-series bathymetric surveys

## ABSTRACT

A comparison of the bathymetric surveys of the 1850-series and 1950-series indicated an average sedimentation rate for the Virginia Chesapeake Bay of 0.55 m (1.81 ft) for the last century. A statistically significant relationship between the depth of water and the rate of sedimentation was found where high rates of sedimentation exist in extremely shallow water (0 to 2 m) and in intermediate depths (6 to 13 m), while low rates exist between 2 m and 6 m, and in some cases in water deeper than 13 m.

The results of 900 km of continuous seismic reflection profiles taken in the Virginia and lower-Maryland Chesapeake Bay indicate that the ancestral Rappahannock, Piankatank, York, and James rivers were not tributary to the ancestral Susquehanna River during the Wisconsin Glaciation as was previously believed. The ancestral Rappahannock, Piankatank, and York rivers converge and flow out of the present bay area through a paleochannel located under Tail of the Horseshoe Shoal on the south side of the Bay entrance. These combined rivers probably converged with the ancestral James River somewhere on the present continental shelf.

A paleochannel in the Mainstem of the Bay north of the Potomac River mouth has an apparent thalweg depth of -42 m (-138 ft), whereas a much deeper channel at -61 m (-200 ft) has been reported by Ryan (1953) in the upper bay reaches. This suggests that the Susquehanna did not flow in the Mainstem region during the Wisconsin Glaciation and most probably flowed in the Tangier Sound region.

No evidence was found to support theories concerning the existence of significant Post-Tertiary crustal movement in the lower Bay region.

THE VIRGINIA CHESAPEAKE BAY:  
RECENT SEDIMENTATION AND  
PALEODRAINAGE



## FORWARD

The Chesapeake Bay region presents the researcher with the opportunity to study the natural history of an area that has, in addition to its natural environmental uniqueness, a significant social and political history. And though the Chesapeake Bay region has been a center of population and culture since the early 17th century, it is only now that the Bay's natural history is beginning to be understood clearly. The task of unraveling the natural history of the Chesapeake Bay has been greatly helped by the Environmental Protection Agency Chesapeake Bay Baseline Study which has drawn scientists of many disciplines together to define the 'state of the Bay.' This particular part of the EPA Chesapeake Bay Study addresses itself to the paleodrainage (ancient drainage patterns) and recent sedimentation in the Virginia portion of the Chesapeake Bay. These results will be used as a major source for the overall sediment budget model to be produced over the next two years. The sediment budget model will be integrated with ongoing biological and chemical studies, the final product being a clearer understanding of the operation of the Chesapeake Bay Estuarine System. With this better understanding, guidelines can be established that will enhance the Bay's usage while at the same time protecting its delicate ecological balance.

## INTRODUCTION

Geologic and Physiographic Setting. The Chesapeake Bay, the largest estuary on the Atlantic coast and one of the world's largest estuaries, was formed by the post-glacial drowning of the valleys of the ancestral Susquehanna and Virginia river systems and their tributaries. The resulting embayment (Figure 1) is approximately 290 km (160 nm) long with an average width of 25 km (14 nm) and a mean depth of 8.8 m (28.9 ft).

Physiographically, the Chesapeake Region can be divided into three provinces; Coastal Plain, Piedmont, and the Appalachian Mountains (Figure 2). The Coastal Plain is composed of a wedge, which thickens to seaward, of unindurated sands, clays and gravels of Cretaceous to Holocene age (Rona, 1970; Minard et al., 1974). These deposits generally have a northeast strike, a southeast dip and rest upon metamorphosed Paleozoic and Precambrian(?) rocks. The Coastal Plain is noted for its 'stair step' topography which is presumed to be emergent marine and riverine terraces of Plio-Pleistocene age (Stephenson, Cooke and Mansfield, 1932; Ryan, 1960; Oaks and Coch, 1973; Johnson, 1972, 1976). The western boundary of the Coastal Plain is a narrow fall zone where the softer Cretaceous and younger rocks contact the harder crystalline rocks of the Piedmont province. This

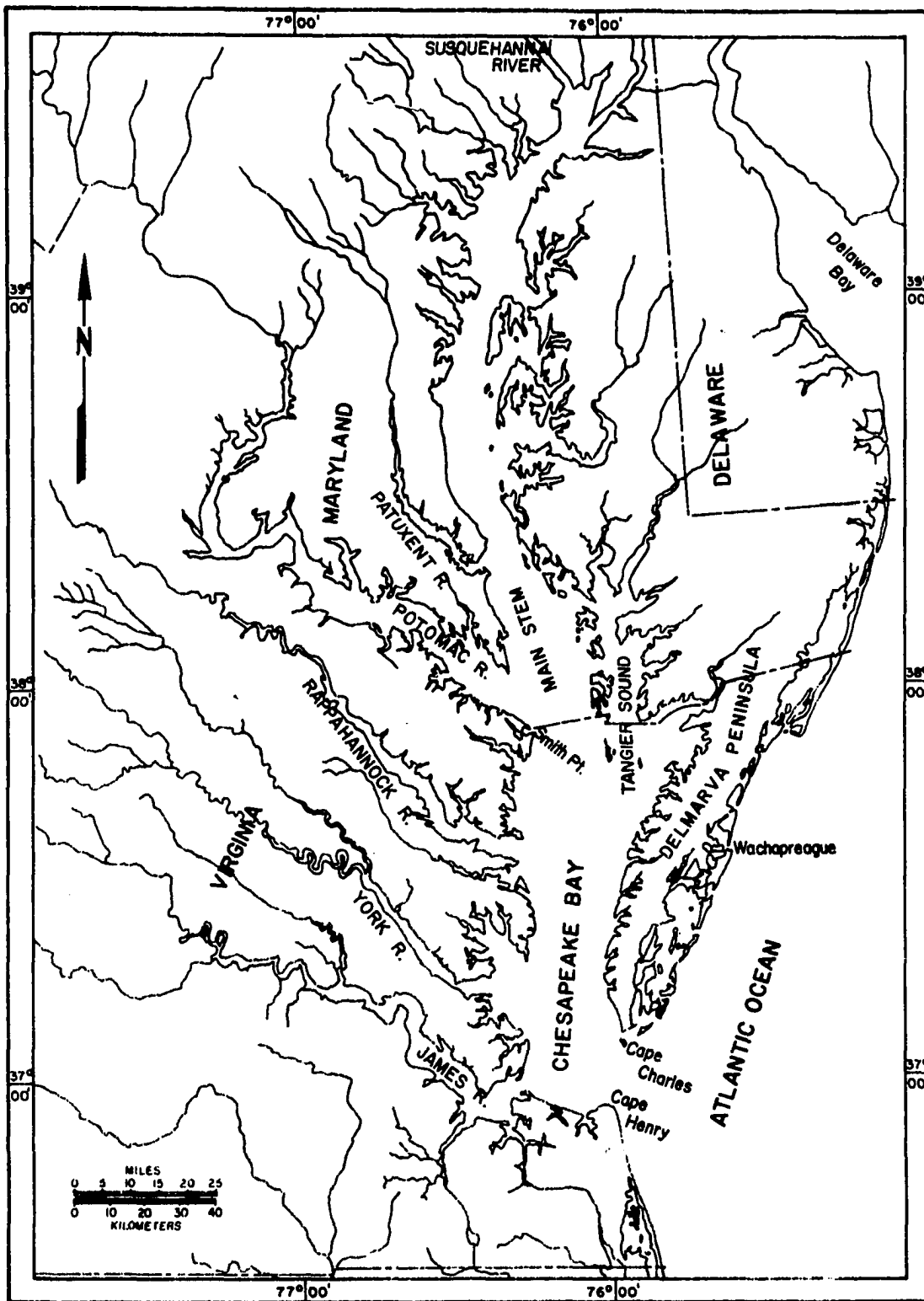


Figure 1. Map of the Chesapeake Bay region.

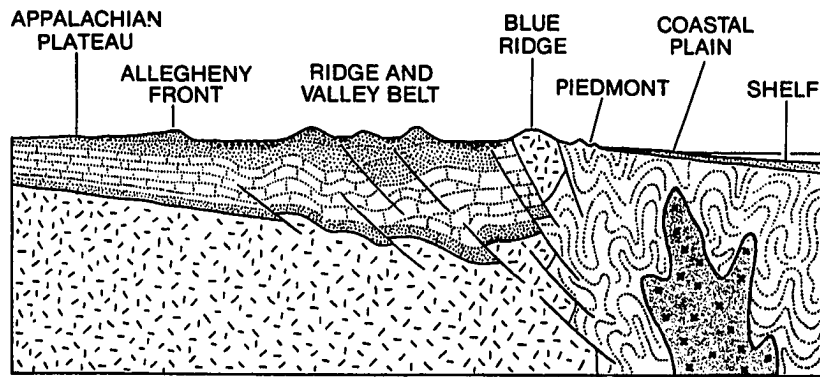


Figure 2. Physiographic provinces in the Chesapeake Bay region.

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zone is generally marked by rapids and is the head of navigation. The Fall Zone also marks the first fordable points landward from the river mouths crossing the coastal plain. For this reason the Fall Zone quickly became the locus of colonial roads between cities at the head of navigation; Baltimore, Washington, Richmond, and other cities. The Piedmont is composed primarily of metamorphic and igneous sediments, whereas the Appalachian Mountains, with the exception of the crystalline Blue Ridge Mountains, are folded miogeoclinal sedimentary rocks (Dietz, 1972).

The Chesapeake Bay System is made up of ten significant tributary rivers flowing into the Chesapeake Bay. Of these, the Susquehanna River supplies nearly half of the total fresh water inflow of  $2,000 \text{ m}^3\text{-sec}^{-1}$  ( $2,600 \text{ yd}^3\text{-sec}^{-1}$ ) (Folger, 1972). Of the total drainage area of 1.9 million hectares ( $4.7 \times 10^6$  acres) approximately 20 percent is underlain by unconsolidated coastal plain sediments, whereas the remaining 80 percent lies within the Appalachian Mountains and the Piedmont. Sediments presently being deposited in the Bay are derived from tributary flow, shore erosion (Schubel, 1971; Byrne and Anderson 1973; Rosen, 1976), organic deposition (Haven, 1972) and sediment influx from the continental shelf (Meade, 1969).

Pre-Pleistocene Geology. According to the plate tectonic theory (Dietz, 1971), the Atlantic Ocean has, since late Precambrian time, opened, closed and reopened. As the African and North American plates separated during late Precambrian time a geosynclinal cuplet was formed by the deposition of a miogeocline on the continental crust and

a eugeocline on the oceanic crust. During the Paleozoic a new plate boundary was formed and a trench was produced as the lithospheric plate descended into the earth's mantle below the North American plate. This caused a collapse of the eugeocline creating the ancient Appalachian and Blue Ridge mountains while folding of the miogeocline created the ancestors of the present Appalachians. During the late Paleozoic the North American and African continental plates came together, further folding and uplifting the collapsed eugeocline. About 180 million years ago, near the beginning of the Jurassic, a new rift opened and the two new plates separated and formed the present Atlantic Ocean. Beginning with the continental separation, erosion began to wear down the crystalline rocks of the ancestral Appalachians, leaving today only the Blue Ridge Mountains and the Piedmont above the surface. West of the Blue Ridge Mountains, the folded miogeocline formed the present Appalachian Mountains. To the east of the Piedmont and extending out to the continental rise is a series of unindurated and partially indurated wedges of Mesozoic and Cenozoic sediments that thicken to the east (Figure 3). Although the top of these wedges appears to be regular and gently sloping, the thickness of the layers is controlled by the basement structure underlying the coastal plain and continental shelf (Tiefke, 1973). Spangler and Peterson (1950) found that the centers of greatest deposition are mobile with time, which suggests that the basement changes configuration due to tectonic movement. Four major structural features; the Salisbury Embayment, the Fort Monroe High, the Hatteras Embayment and the Cape May Slope occur in the Chesapeake Bay region (Figure 4). The Mesozoic and

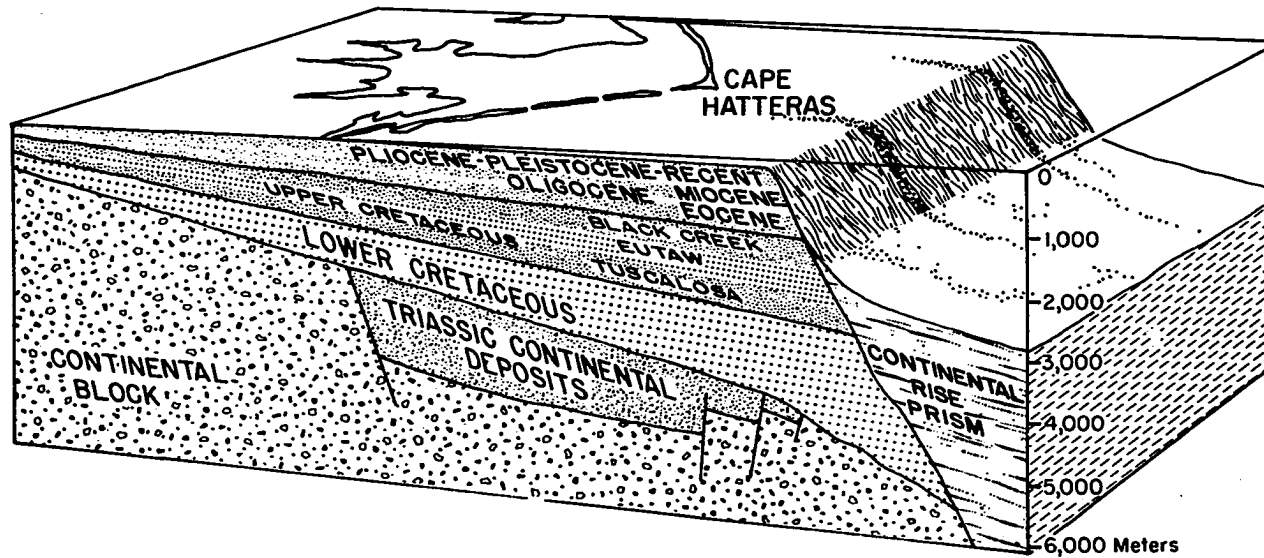


Figure 3. Geosynclinal couplet off the Atlantic Coast of the United States.

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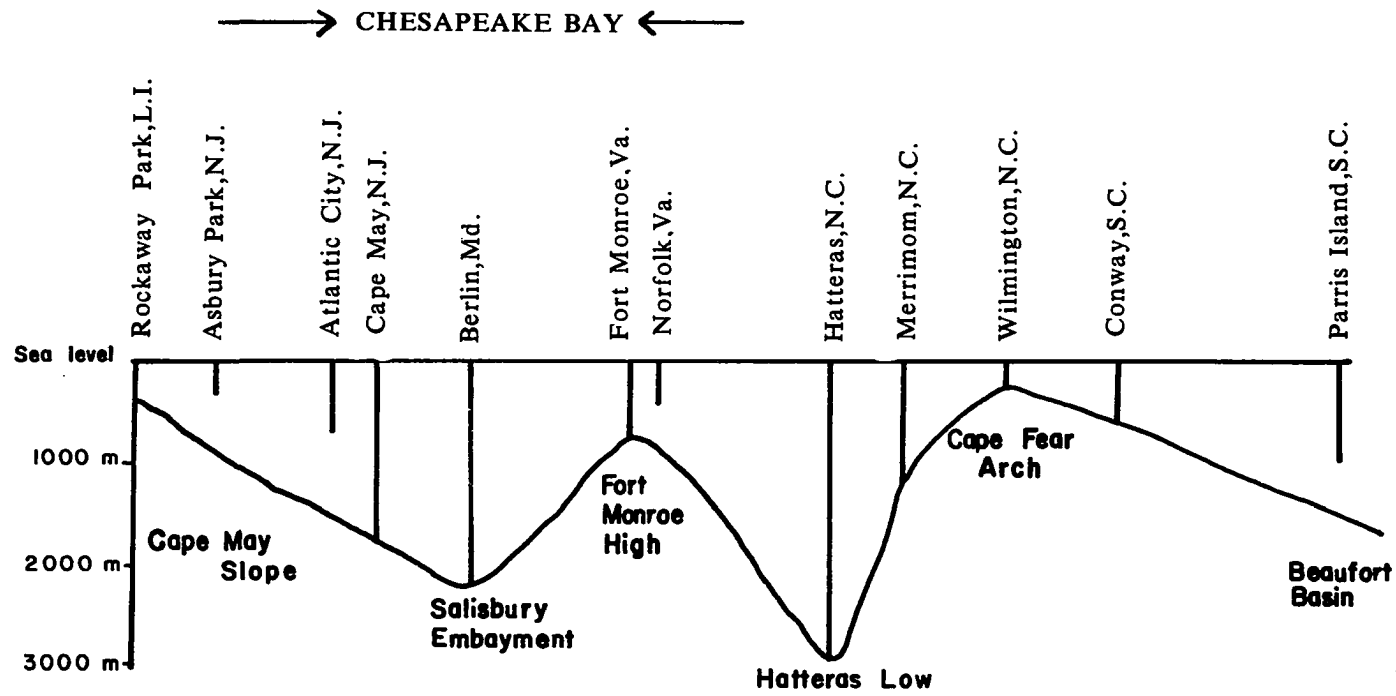


Figure 4. Section showing major structural features of the basement of the Atlantic Coastal Plain.  
(after Richards, 1967)



Cenozoic sediments of the Chesapeake Bay region range in thickness from approximately 2,500 m at Ocean City, Maryland to 700 m at Mathews, Virginia, increasing again to approximately 1,300 m at the Virginia-North Carolina border (Richards, 1974; Tiefke, 1973).

Pleistocene and Holocene Geology. It is generally believed that the present morphology of the Chesapeake Bay system is primarily a function of the drowning of the late Pleistocene valleys of the Susquehanna, Potomac, Rappahannock, York, James, and many smaller rivers (Stephenson et al., 1932; Ryan, 1952). The present channels are believed to overlie the ancestral fluvial channels (Ryan, 1953).

The only serious attempt to describe a mechanism for the position and direction of the ancestral channels was by Ryan (1953). He described a short series of Pleistocene subsequent and consequent stream valleys that connected to form the ancestor of the present general drainage (Figure 5). He made no attempt to describe the specific morphology of the ancestral streams, such as meanders and delta formations.

The Chesapeake Bay Basin probably was cut during the Pleistocene (Hack, 1957; Harrison et al., 1965; Schubel and Zabawa, 1972). Nevertheless, the Susquehanna may have followed a different course than the present thalweg near the mouth of the present estuary. Hansen (1968), Schubel (1971) and Mixon (1978) present evidence that the Susquehanna River flowed southeasterly through the present Delmarva Peninsula during the Wisconsin Glaciation. It also has been suggested

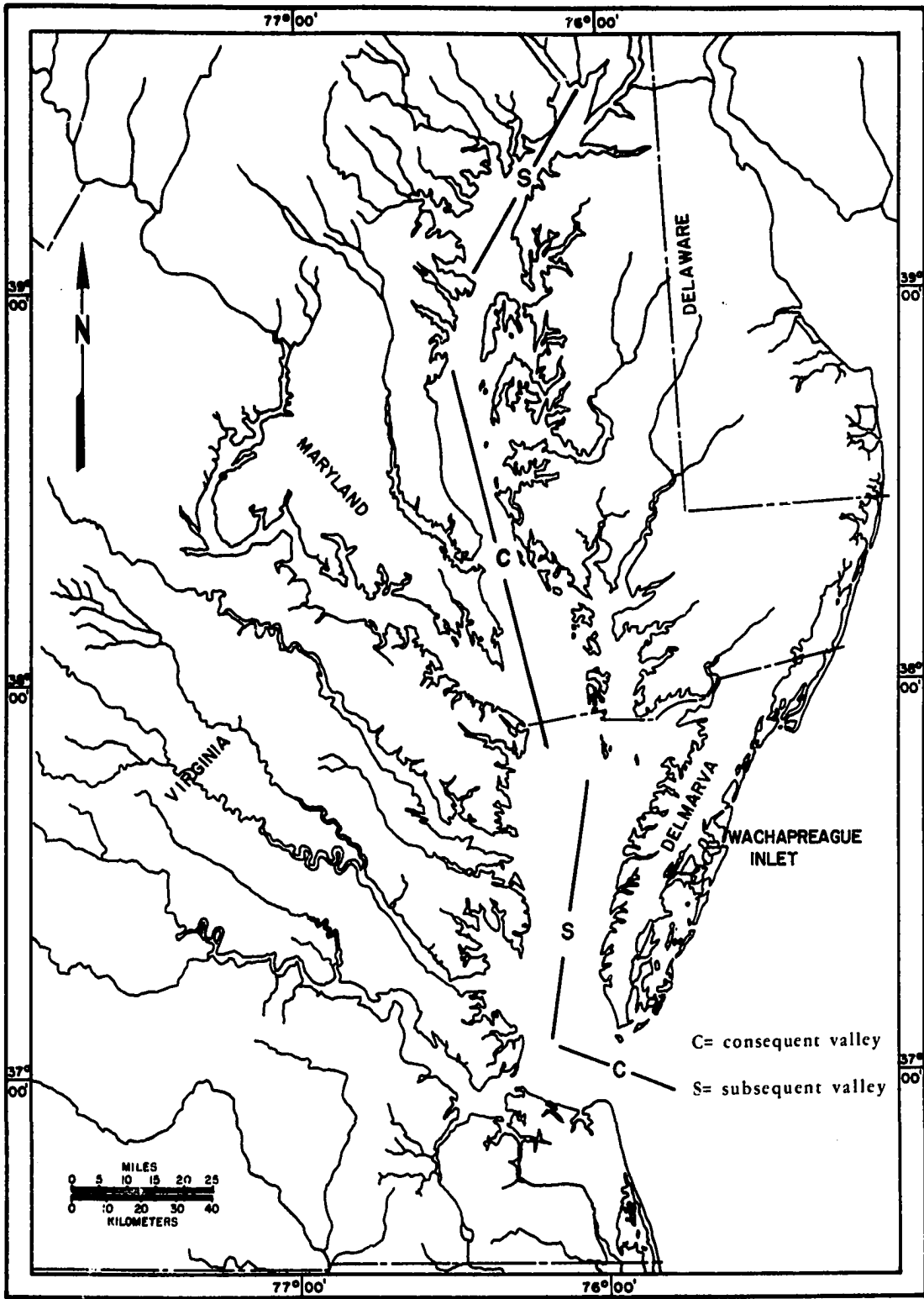


Figure 5. Ryan's (1953) trends of the Chesapeake Bay.

(Schubel, 1971) that the Potomac River may have cut across the Delmarva Peninsula near Wachapreague Inlet, Virginia during the Illinoian Glaciation. By default, this means that the Susquehanna would have entered the Atlantic Ocean north of Wachapreague.

Continuous seismic reflection profile records of Schubel and Zabawa (1972) clearly indicate the presence of an ancient channel buried beneath the modern estuarine sediments in the region of the present Chester, Miles, and Choptank rivers of Maryland.

Seismic reflection profile records and sediment cores taken in the Chesapeake Bay Bridge-Tunnel region at the Bay mouth (Beckmann et al., 1961; Meisburger, 1972) indicate the existence of multiple paleochannels and diverse depositional environments. Unfortunately the Beckmann study was limited to a very small section of the Chesapeake Bay and as it stands alone can be used only as an indicator of the complexity of the stratigraphic sequences of the entire Bay. Seismic reflection profile records taken as part of my research indicate that the stratigraphy of the Chesapeake Bay is much more complex than previously indicated.

While there is a dearth of knowledge of the stratigraphic sequences below the bottom of the Chesapeake Bay, students of Coastal Plain geology have as early as the sixteenth century been concerned with the Tertiary and Quaternary deposits of the land mass (Bartram, 1791). Most early geological studies of the Virginia Coastal Plain were predominantly morphologic in nature (Rogers, 1835-1840; Shaler,

1890; Woolman, 1899; Clark and Miller, 1906, 1912; Wentworth, 1930; Roberts, 1932; Monroe, 1938; and others), while most of the geological studies since 1950 have been predominantly stratigraphic (Moore, 1955, 1956; Sanders and Flint, 1960; Sanders et al., 1961, 1962a, b, c, d, 1963; Sanders and Oaks, 1962; Oaks and Coch, 1963, 1966, 1973; Coch, 1965, 1968; Coch and Oaks, 1966; Coch and Krinsley, 1971; Oaks et al., 1974; Onuschak, 1973; Johnson, 1969, 1972, 1976; Teifke, 1973; and others).

The Coastal Plain of Virginia, is dominated by a stair-step topography formed by a series of scarps and terraces. The thrust of most of the coastal plain geological research has been the description and interpretation of these scarps and their associated sediments.

In general, the Chesapeake region of the coastal plain has been considered tectonically stable (Johnson, 1969). Until Harrison and others (1965) suggested a possible late-Pleistocene uplift of the Chesapeake Bay mouth, the stable coastal plain hypothesis was not challenged to any significant degree. The validity of the Harrison hypothesis has never been seriously entertained, although the evidence he presented was internally consistent. Harrison based his hypothesis on the work of Hack (1957) who predicted that the ancestral Susquehanna thalweg at the mouth of the Bay would be found at -113 m (-370 ft) when in actuality the deepest buried channel depths at the Chesapeake Bay entrance had been found to be -50 m (-165 ft) (Beckmann et al., 1961). Harrison concluded that the lower Chesapeake Bay had undergone upwarping on its coastal side since the Wisconsinan

Glaciation. Byrne and others (1977) report that two pelecypod shells dated 18,750 and 19,600 years B.P. were taken from deposits 15 m (46 ft) and 19 m (62 ft) below the present sea level near Wachapreague Inlet, Virginia. If the dates are dependable and eustatic sea level was approximately 93 m (305 ft) below the present sea level (Dillon and Oldale, 1978) at the time the shells grew, then crustal uplift must have been on the order of 74 m (243 ft). Recently, Robert Mixon (1978) reported the existence of a paleochannel located in the Cape Charles, Virginia, area at a depth deeper than that reported by Meisburger (1972).

Recent investigations of vertical crustal movements in the Chesapeake Bay region by Holdahl and Morrison (1974) using precise relevelings of bench marks and marograph data show that the coastal plain around the Bay subsided differentially during the last 100 years (Figure 6). Likewise, a recent discovery by Mixon and Newell (1977) of a fault zone parallel and superimposed on the fall zone south of Washington, D. C., suggests tectonic control of the upper courses of the Potomac and Susquehanna rivers and of the fall zone itself.

Calculations by Walcott (1972) of the size of vertical displacement in the vicinity of Virginia show a possible downward relaxation movement during the late-glacial time of 60-140 m. Since the vertical displacement of the surface of the earth is a function of the load in the region of the point in question there is good reason to believe that the abnormal sea level fluctuations of the Quaternary may have introduced loading forces on the sedimentary material and on the

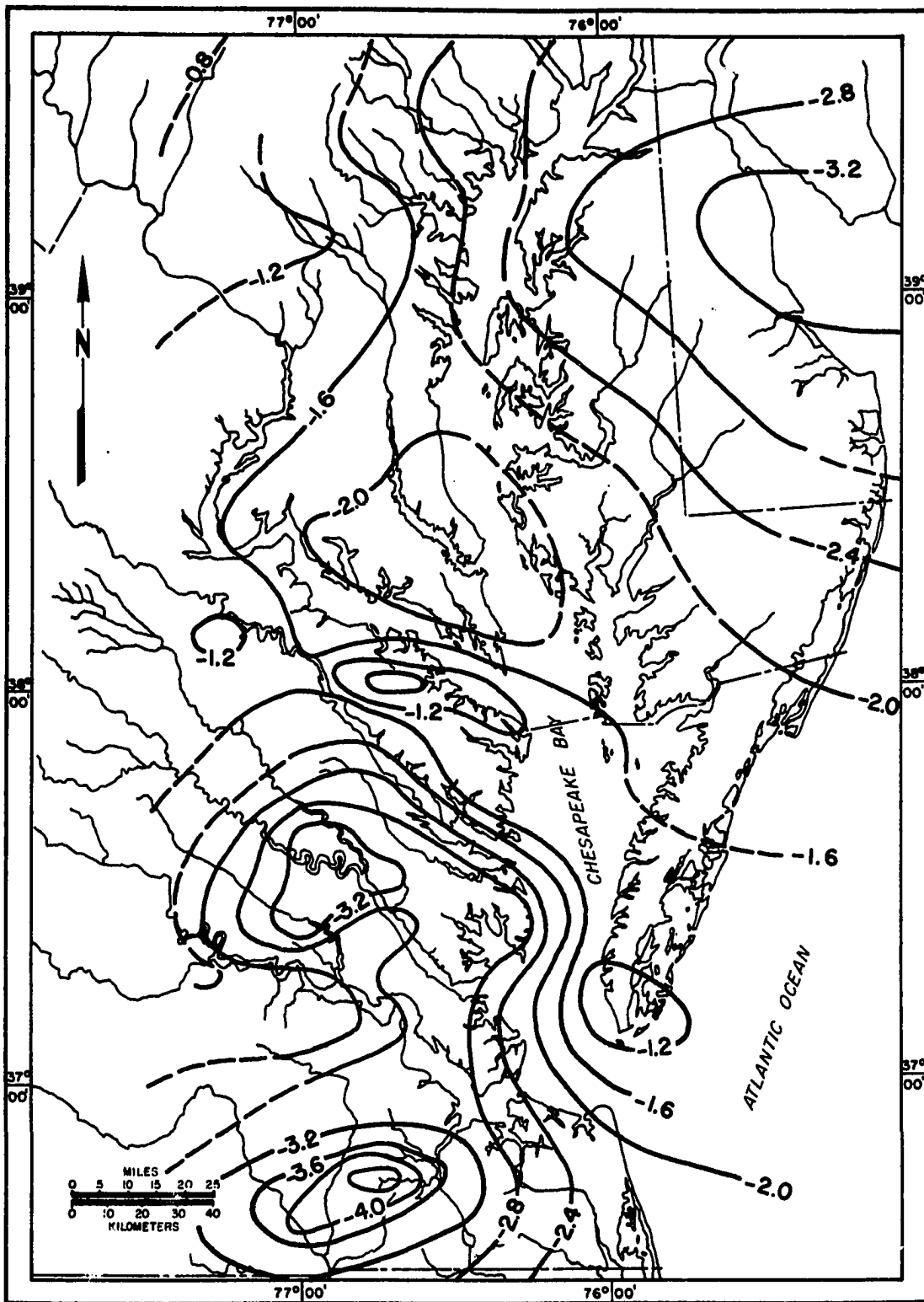


Figure 6. Rates of crustal change (mm/yr) of the Chesapeake Bay region in recent time. (from Holdahl and Morrison, 1974)

basement rocks of enough magnitude to cause significant tectonic movement during that period. Walcott's calculations indicate just the opposite effect expected by Harrison.

Objectives and Scope. The objectives of this study were:

1. To determine recent sedimentation rates for the Virginia Chesapeake Bay in both a bathymetric and volumetric sense.
2. To test the hypothesis that sometime during the last six thousand years the estuarine system has reached a quasi-equilibrium state where the rate of deposition is equal to the rate of relative sea level change.
3. To investigate the paleodrainage (ancient drainage patterns) of the Virginia Chesapeake Bay.
4. To determine whether the present thalwegs coincide with the ancient thalwegs.
5. To test the hypothesis that crustal movements influenced the formation of the Chesapeake Bay by apparently directing the Susquehanna River across the present slope rather than down it and that since that time significant crustal movements have taken place in the region.

This study focuses on the morphology of the present and ancient drainage systems of the Virginia part of the Chesapeake Bay, and with related processes such as sea level changes, crustal movements, and

sedimentation rates. Data were obtained primarily from acoustical impedance (sub-bottom) surveys of the bottom sediments in the Bay and from bathymetric surveys of the 1850-series and 1950-series.

Formulation and Approach. The rationale behind the approach used in this study is based on the fact that there has been no large-scale study of the sediments below the bottom of the Chesapeake Bay. Likewise, there has been no significant study aimed at whether late-Quaternary crustal changes may have possibly had an effect on the morphology of the Bay. In all but a few cases, the assumption of tectonic stability has been a principal premise in the study of the geology of the Chesapeake Bay region.

A point essential to any study of the coastal plain is that, although there was no glaciation in the region, it was strongly influenced during the Pleistocene and early Holocene by sea level changes, sediment influx, and possibly by crustal changes. Holdahl and Morrison (1974) indicate that local crustal movement may be of a magnitude to cause difficulty in determining past sea levels through paleontological or morphological studies.

By determining the paleodrainage of the Chesapeake Bay as it now lies hidden beneath the estuarine sediments, and by comparing its thalweg with that predicted by classical fluvial hydraulics, one may be able to deduce the crustal changes in the region. This is the essence of the logic used by Harrison and others (1965) in the formulation of their hypothesis concerning a possible late-Pleistocene uplift of the



Chesapeake Bay mouth. Using similar reasoning, it was thought that clues to past crustal movements may be found in sub-bottom features, thus my hypothesis that the course of the ancestral Susquehanna River was affected by crustal movements in the lower Chesapeake Bay region.

To test the hypothesis that the Chesapeake Bay is now in a quasi-equilibrium state where changes in relative sea level are matched by an equal change in deposition, comparison of precise depth surveys by the National Ocean Survey (Coast and Geodetic Survey) of the 1850-series and the 1950-series was made. In order to have sufficiently dense coverage of the Virginia Chesapeake Bay a comparison grid spacing of 6 seconds of latitude and longitude was used, which consisted of approximately 180,000 depth comparisons. A crustal warping correction was made to each of the depth comparisons along with a eustatic sea level change correction in order to produce the rate of sedimentation for that data point. Sedimentation rates based on a 100 year comparison were made for various depth zones and geographic areas and compared with sedimentation rates obtained from seismic sub-bottom profiling.

Rosen (1976), while testing the Bruun (1962) Rule which relates shoreline erosion and sea level rise, claims to have found a reasonable fit in the Virginia Chesapeake Bay between the horizontal relationships that the rule predicts. Bruun's hypothesis suggests that the areas with high bluffs will have narrow submerged-terraces, while areas with low bluffs will have wide submerged-terraces. Rosen did not test Bruun's assumption that deposition on the nearshore

bottom will raise the bottom an amount equal to the rise in sea level during the time the erosion of the shore took place. By comparing water depths over a 100 year period and considering relative sea level changes over the same 100 year period, both my hypothesis that the Bay is in a quasi-equilibrium state and Bruun's hypothesis (at least in the vertical sense) can be tested.

To test the hypothesis that the present thalweg does not necessarily coincide with the ancestral thalweg, a direct comparison of the thalwegs was made. The present thalweg was obtained from the National Ocean Survey boat sheets and the ancient thalwegs from the seismic sub-bottom surveys and from previous studies.

## RECENT SEDIMENTATION

Introduction. The modern Chesapeake Bay system was formed by the flooding of the ancestral Susquehanna and Virginia River System (the Rappahannock, York, James and associated smaller rivers) valleys which began some 10,000 to 15,000 years ago. Prior to this flooding, sea level was far below the present Bay bottom and sedimentation was sporadic. Sediments were removed from the region and deposited on the present continental slope and in deeper areas. As the Pleistocene ice began to retreat and sea level reached the position where it allowed salt water to penetrate into the present Bay area, the river flow pattern changed from a fluvial regime to something similar to the estuarine flow described by Pritchard (1955) where there is a net inward flow in the lower layer and a net seaward flow near the surface. This bimodal flow apparently caused the estuary to become a sediment trap. Since the time of salt water intrusion it has trapped approximately 45 billion cubic meters ( $6.0 \times 10^{10}$  yd<sup>3</sup>) of sediment (Ryan, 1953).

There are four primary sources of sediment in the Bay (Schubel and Carter, 1972):

1. sediments from tributary rivers
2. from shore erosion

3. from primary production
4. from the sea.

Rusnak (1961) approached the problem of estuarine sedimentation from the standpoint of energy gradients, where sediment flux proceeds from an area of higher energy to an area of lower energy. He deduced that the rate of sedimentation should fall between two extremes: first, being the zero sedimentation rate in estuaries of no sediment sources; and the second, being the estuary that fills at a rate equal to the rate of relative sea level rise. Since we know that the Chesapeake Bay is not devoid of available sediments and if one assumes that sediment accumulation is equal to the relative sea level rise, Rusnak reasoned that maximum sediment accumulation of 30 cm (1 ft) per hundred years may be assumed for the period 6,000 to 2,600 years B.P. whereas a lower rate of 15 cm (0.5 ft) per hundred years should be required after about 1,600 years B.P. Using data on bays and estuaries in humid areas (Shepard, 1953; Shepard and Moore, 1960) Rusnak estimated the rate of accumulation with a 'probable error of no greater than a factor of two' of 20 cm per hundred years (0.66 ft/cent). Using the overall time-average, glacial eustatic sea level rise over the last 15,000 years Rusnak estimated the upper limit of sedimentation at 60 cm per hundred years (1.97 ft/cent).

Schubel (1968a) while studying shoreline erosion and suspended sediment flux from the Susquehanna River estimated that the average sedimentation rate for the northern most section of the Chesapeake (Harve de Grace to Baltimore) should be on the order of 60 to 68 cm

(2.00 to 2.25 ft) per century. Of this, 20 percent is from shoreline erosion and 80 percent is from the Susquehanna River.

Later, Schubel and Carter (1972) while developing a suspended sediment budget for the Chesapeake Bay found a general decrease in the suspended sediment load in the Virginia part of the Bay. They stated that shore erosion and primary productivity are the major sources of suspended sediment except near the bottom and the bay mouth where resuspended material dominates. They presented a single segment model (box type) modelling water, salt and inorganic sediment transport between the bay and its tributaries, the bay and the ocean, and with inputs from the Susquehanna River and shore erosion, and a loss through deposition. A summary of their results indicates that the Bay:

1. Is a net sediment sink for suspended sediment from the ocean.
2. Is a source of suspended sediment for each of the major tributaries, except for the Susquehanna River.
3. Has an average sedimentation rate of fine-grained inorganic sediment of about 8 cm (3.14 in) per century.

Earlier, Schubel (1968b, c, 1972) estimated the average sedimentation rate for the extreme northern portion of the Bay at about 30-40 cm (12 to 16 in) per century while Biggs (1970) estimated the rate of sedimentation in the section from Baltimore to the Potomac River mouth at 11 cm (4.3 in) per century. If the 8 cm per century rate for the whole Bay presented by Schubel and Carter (1972) is correct then the

Virginia Chesapeake Bay should have a sedimentation rate much less than 8 cm per century.

Schubel and Carter's model ignores two major sources of sediment. Both sources involve boundary layer flow (flow very near the bottom) of which very little is understood, especially under non-laboratory conditions. The first is the movement of sand-sized particles from the continental shelf into the Bay through its mouth. This should be considered important, because according to Shidler (1975), the lower section of the Bay (from the mouth to approximately 37°20'N) is highly dominated by sandy sediments. The only major sources of sand in the region is the Bay mouth and eroding bluffs. The second boundary layer flow of material is the fluid-mud zone which is presently being investigated by Nichols (1979) and of which even less is known.

My intention here is not to criticize the use of numerical or analytical models. Because it appears that there are still too many unknown parameters at present to successfully apply these models to the sediment accumulation problem, I do not intend to present a numerical or analytical model (at this time) but to present a more basic and in a sense simpler test to the question, 'What is the sedimentation rate in the Virginia Chesapeake Bay '

Philosophy. Recent research involving sedimentation rates in the Chesapeake Bay has generally approached the problem through the use of suspended sediment models. These models fail to take into account boundary layer transport of sand and fluid muds.

The only major studies to attempt to determine sedimentation rates directly from comparison of bathymetric data have been by Hunter (1914) of the United States Geological Survey and by Jordan (1961) of the Coast and Geodetic Survey. Both studies were done in and around the Choptank River on the Maryland Eastern Shore. Neither study attempted to apply any vertical datum corrections although both researchers considered horizontal control important. Both of these studies impressed on me the importance of bathymetric chart analysis when studying sedimentation.

Until now no region-wide comparison of bathymetric data in the Chesapeake Bay has been undertaken. There appears to be two reasons for this. The first being that many scientists may have considered the method too 'simplistic' or lacking in precision. The second, and more probable, has been the result of the lack of computational facilities to handle the extremely large data base that exists in the awkward form of numbers on paper charts. With the aid of digital computers the task of making bathymetric comparisons over a large region has been made much easier.

The following is a discussion of my attempt to make a region-wide comparison of bathymetric surveys, in order to:

1. Test the hypothesis that sometime during the last six thousand years the estuarine system reached a quasi-equilibrium state where the rate of deposition is equal to the rate of relative sea level change.

2. To determine sedimentation rates for the Virginia Chesapeake Bay in both a bathymetric and volumetric sense.
3. To test the Bruun Hypothesis concerning the effect of sea level rise on sedimentation rates.
4. To develop a conceptual model for sedimentation and erosion in the Virginia portion of the Chesapeake Bay.

Method. During the summer and fall of 1978 the bathymetric survey boat sheets of the 1950-and-later-series and the 1850-series were digitized<sup>1</sup> and stored on magnetic tape. These data were grided at six-second intervals for the Chesapeake Bay region in Virginia and Maryland from 38°00'N to 36°50'N. The 1850-series data were corrected for horizontal displacement from the 1927 North American datum and corrections were made for vertical crustal changes between surveys, eustatic sea level changes and annual and semi-annual astronomic tides in the region that may have affected the determination of mean low water (MLW) used as the vertical datum for the surveys. (For complete discussion of methods see Appendix A).

The data in each six-second (approximately 150 x 200 m) rectangle were averaged and compared. The results for each rectangle were normalized to produce an average sedimentation rate. These rates were used to produce Charts 1 and 2, 'Sedimentation Rates in the Chesapeake

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<sup>1</sup> Most of the more recent surveys were received in magnetic tape form from the Environmental Data Service of the National Oceanic and Atmospheric Administration.



Bay' (located in the map pocket of Volume I). The study area was then divided into 66 one-minute north-south intervals. These one-minute intervals were then divided into four sub-intervals: western shore, eastern shore, western side of Smith-Tangier Islands and, eastern side of Smith-Tangier Islands (Figure 7). Two additional sub-segments were used for Pocomoke Sound and Mobjack Bay. Each sub-segment was further sub-divided into eight zones [0-6 ft (0-1.8 m), 6-12 ft (1.8-3.7 m), .....>42ft (>12.8 m)]. The units used here are English because the depth data available is only in English units and it would be awkward to use their metric equivalents. The area of each zone was determined and all data points falling within the zone were averaged. The product of the sedimentation rate and the area for each zone gives the volume per unit time for that zone. At this point the following data existed:

1. Surface area for each depth zone of one-minute latitude [ex. the area between 0-6 ft (0-1.8 m) between 38°00'N and 37°59'N].
2. The average rate of sedimentation in each zone.
3. The volume change in each zone for the last 100 years.

These data are given in Appendix B. Plots of the cumulative surface area in any depth zone versus latitude are given in Appendix C. Plots of the cumulative volume change per century of each zone versus latitude are given in Appendix D. These data were used to attempt to reach the stated objectives of this section.

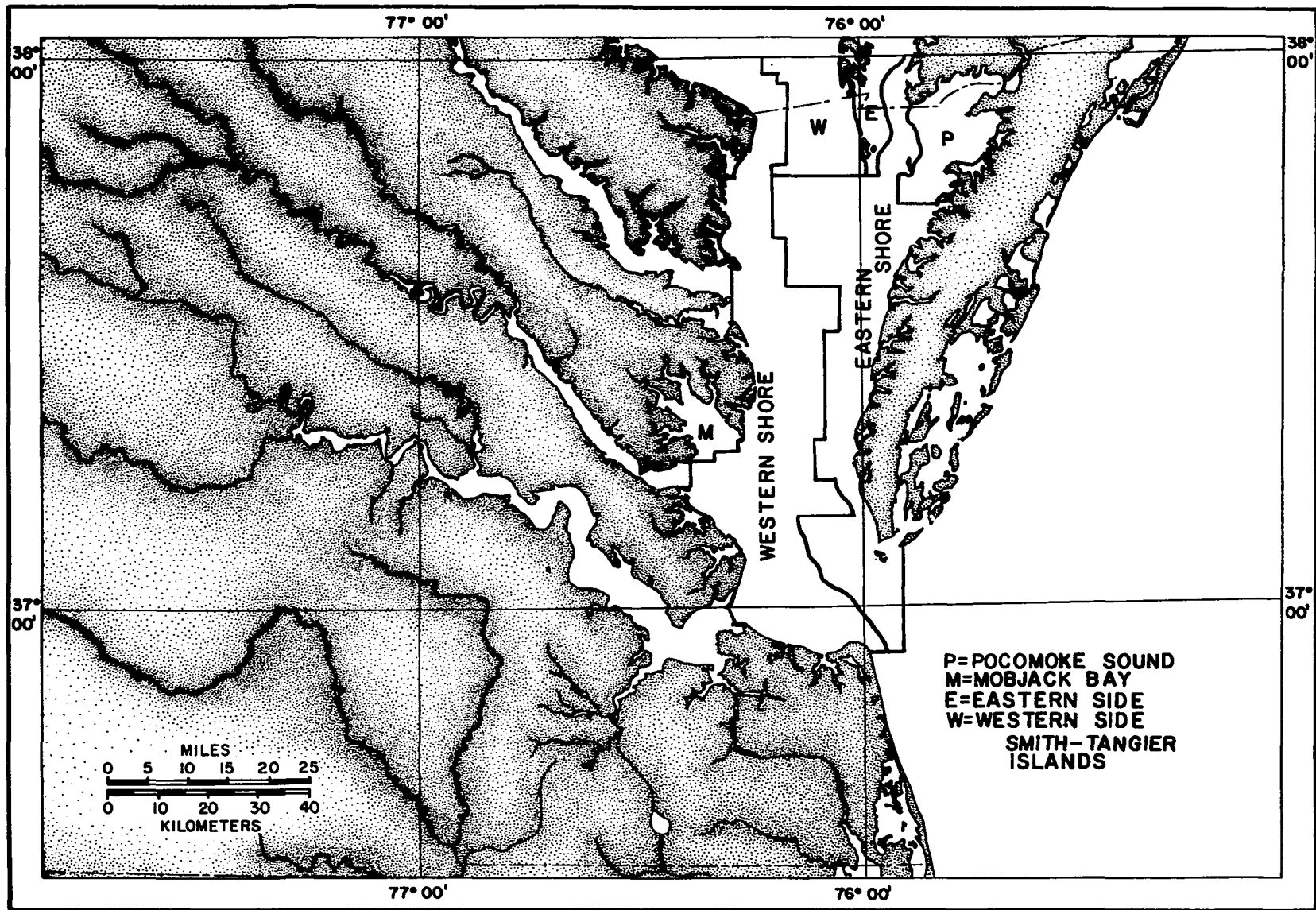


Figure 7. Subdivisions of the Chesapeake Bay used in sedimentation rate and sediment volume change calculations.

Discussion of Data and Results. The analysis of the bathymetric-changes data can be approached in two ways; qualitatively and quantitatively.

The best way to integrate the results of this analysis in a broad sense is to use Charts 1 and 2 (located in the map jacket). Charts 1 and 2, 'Sedimentation Rates in the Chesapeake Bay', are 1:80,000 scale mercator charts with seven groupings of sedimentation rates indicated by different colors. The central grouping (white), -0.3 to 0.3 meters per century, represents rates which fall within the area of uncertainty due to measurement error for the surveys. The three groupings representing positive sedimentation (shades of blue) range from light blue to dark blue and are: 0.3 to 1.3 meters per century, 1.3 to 2.3 meters per century, and greater than 2.3 meters per century. The three groupings representing negative sedimentation (or 'erosion') range from light to dark red and are: -0.3 to -1.3 meters per century, -1.3 to -2.3 meters per century, and less than -2.3 meters per century.

The only general pattern that persists from the northern to the southern areas of the study area is a sedimentation rate between 0.3 and 1.3 meters per century (light blue). The major deviations from this pattern are as follows<sup>2</sup>:

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<sup>2</sup> Figure 8 shows the locations of the geographic names used in this discussion.

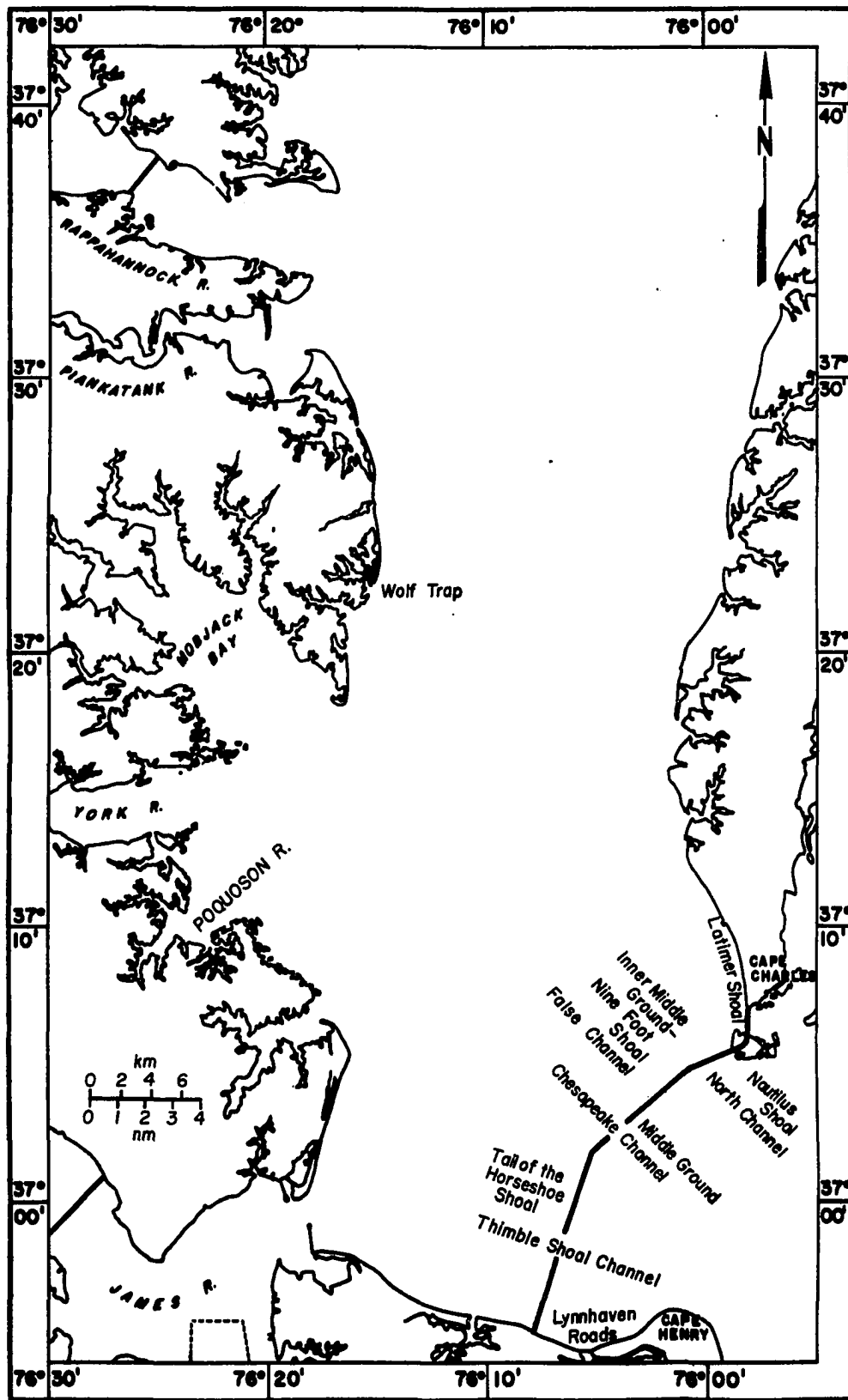


Figure 8. Location of geographic names used in this discussion.

1. Chart 1, Cape Henry to Wolf Trap. There are three major regions of sedimentary activity shown on this chart. The region from Cape Henry to Cape Charles (Bay mouth region) shows large migrations of sand bodies over the last century. Middle Ground Shoal, which flanks the eastern side of Chesapeake Channel, appears to have gained large amounts of sediment, presumably from the continental shelf. False Channel and North Channel both have deepened. Inner Middle Ground-Nine Foot Shoal has grown from two distinct shoals into one large shoal. This supports the excellent work done by Granat (1976) on the dynamics and sedimentology of the shoal. Nautilus Shoal and Latimer Shoal to the north are also growing. Middle Ground, Inner Middle Ground - Nine Foot and Latimer shoals appear to be combining to form a large shoal to the north of the present shoals.

North of the Chesapeake Bay mouth shoal region is a deep channel off of the city of Cape Charles. Although this deep channel has been used as a dredge spoil disposal site it appears to have areas of erosion. This indicates that the material placed there has been moved presumably to the area of high sedimentation rate just north of the spoil zone.

The third region of significant accretional activity is in the area around and especially to the south of Wolf Trap Light. A large area of high sedimentation south of the Light is flanked by narrow zones of negative sedimentation. The material being deposited is mostly sandy-mud. No sediment source other than long shore drift is readily apparent.

A fourth area of interest is the Thimble Shoal Channel. The dredged channel shows up as an area of high erosion although very little natural erosion appears to exist around it. This is the most prominent man-made feature in the Virginia Chesapeake Bay. The areas of high deposition around the channel may contain spoil from overboard dredge disposal.

2. Chart 2, Wolf Trap to Smith Point. Two major areas of activity are indicated by this chart, the most apparent being the deepening of the main stem channel off of Smith Point, while the general situation around the channel is depositional. No dredging has taken place in this region so one may assume that the channel is being scoured by currents. A similar situation, but not as pronounced, exists in Tangier Sound.

A general pattern of accretion exists at the mouths of the Rappahannock, Piankatank, and York rivers and at the mouth of the Bay. Sediments tend to accumulate on the right side (looking upriver) with erosion on the left side.

The results of the simple statistical analysis discussed earlier were even more revealing than the information presented in Charts 1 and 2. By plotting the depth of water versus the average sedimentation rate for that depth in the Virginia Chesapeake Bay Main Stem, Mobjack Bay, and Pocomoke Sound an interesting pattern emerges

(Figure 9). Both the Main Stem and Mobjack Bay show a bimodal distribution with a high rate for the 0-6 ft (0-1.8 m) depths, a low rate for the 6-12 ft (1.8-3.7 m) depths, followed by a high rate in the deeper water. Pocomoke Sound lacked the high rate for the 0-6 ft (0-1.8 m) depths.

The immediate question that arises is whether or not the pattern seen in the Main Stem is an artifact resulting from averaging over such a large area or, in fact, is representative of smaller sub-sets of the complete set of data. Similar calculations were made for the upper third, middle third and lower third of the study area. The resulting plot (Figure 10) indicates that each section has a statistically significant similarity to the mean. In fact only two points, 0-6 ft (0-1.8 m) in the middle section and 36-42 ft (11.0-12.8 m) in the lower section fall outside one standard deviation of the mean. The middle section 0-6 ft rate falls within two standard deviations of the mean and the lower section 36-42 ft rate is about two standard deviations lower than the mean. Neither of these data can be considered statistically insignificant. A goodness of fit test, comparing the three with the mean gives the results shown in Table 1.

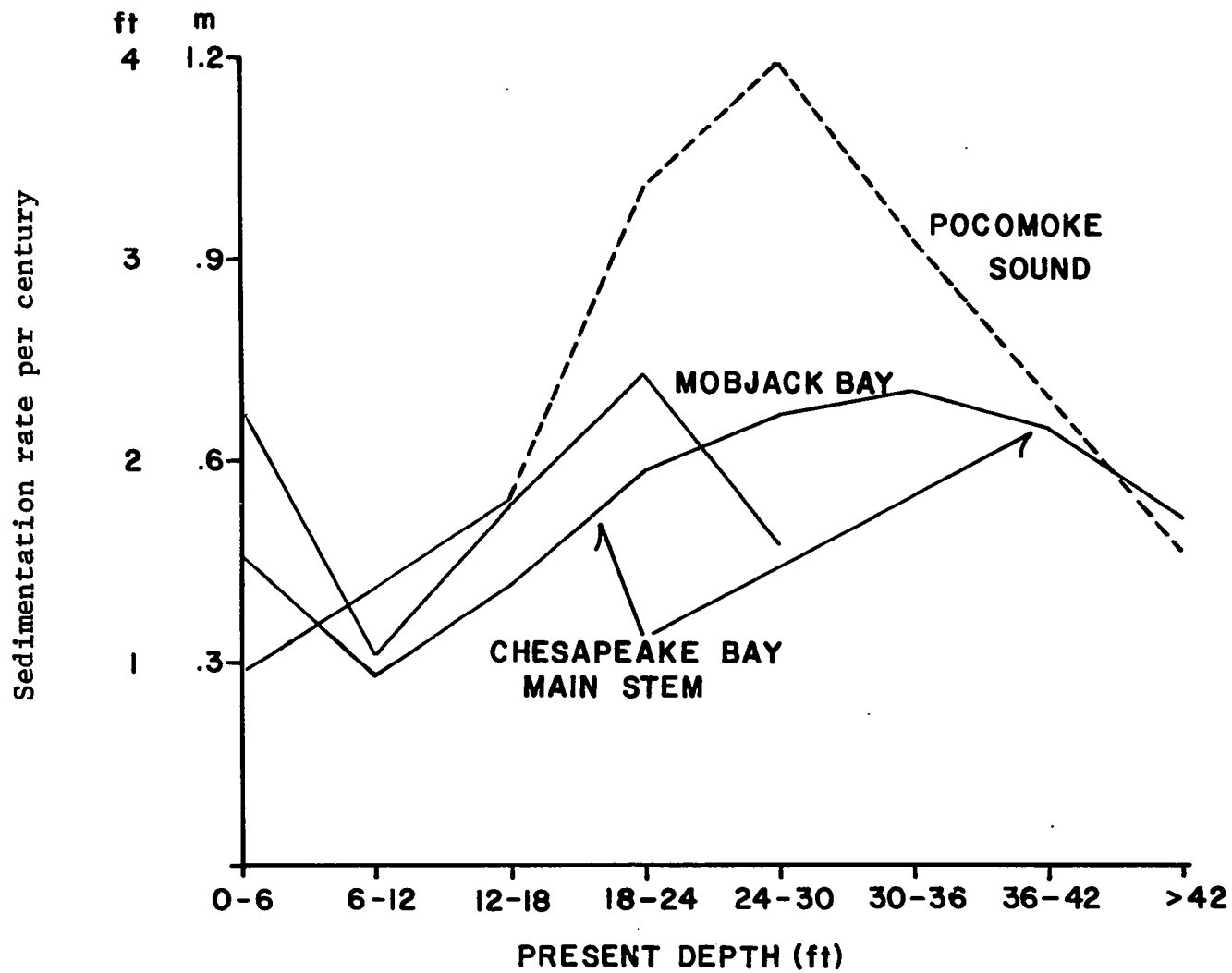


Figure 9. Variation in sedimentation rate with depth for Mobjack Bay, Pocomoke Sound and the Chesapeake Bay Mainstem.



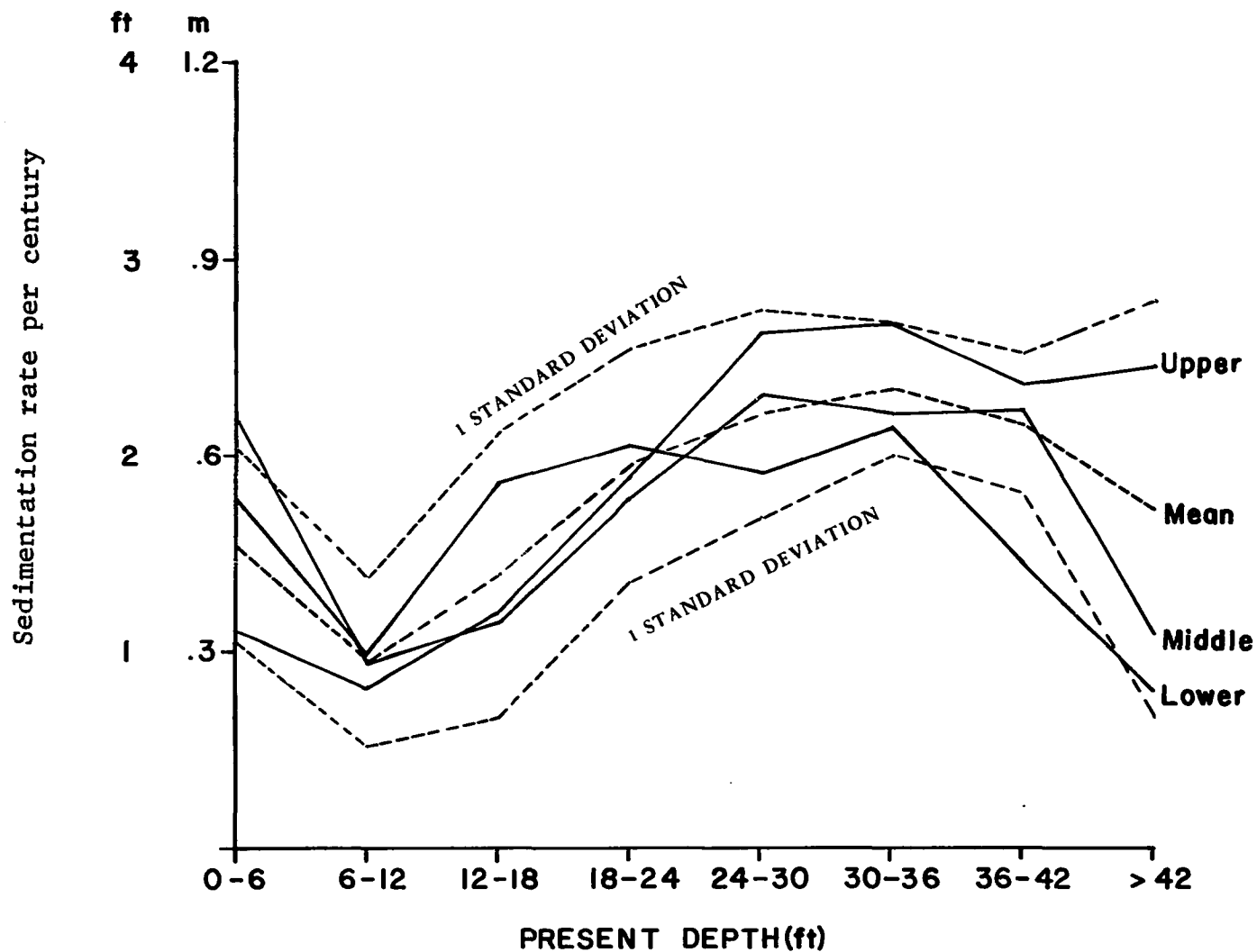


Figure 10. Variation in sedimentation rate with depth for Virginia Chesapeake Bay, upper ( $38^{\circ}00'N$  to  $37^{\circ}38'N$ ), middle ( $37^{\circ}38'N$  to  $37^{\circ}16'N$ ), and lower ( $37^{\circ}16'N$  to  $36^{\circ}50'N$ ) segments.

TABLE 1  
 MEAN SEDIMENTATION RATES AND  
 CHI SQUARE SIGNIFICANCE LEVELS FOR  
 THREE SUBDIVISIONS OF THE VIRGINIA BAY

AREA	LATITUDE	MEAN SEDIMENTATION RATE PER CENTURY	SIG. LEVEL (%)
Upper Third	38°00'N to 37°38'N	0.60m(1.97 ft)	99.5
Middle third	37°38'N to 37°16'N	0.55m(1.81 ft)	97.5
Lower third	37°16'N to 36°50'N	0.54m(1.77 ft)	97.5

The three sections conform to the mean curve at a high level of confidence (Table 1). The 'mean' rate for the main stem (weighted by area) is 0.55 m (1.81 ft) per century with only minor deviation in the three sub-sections. The only pattern is that the mean rates decrease slightly from north to south. To test the reliability of this 'fit', the study area was divided into into seven ten-minute sub-sections. In this way the areas of significant deviation from the mean values could be found. The variation in the rate of sedimentation with depth for each ten-minute sub-section from 38°00'N to 36°50'N (Figure 11) indicates that all sub-sections except sub-section 6 (37°10'N to 37°00'N) conform to the mean curve (Table 2).

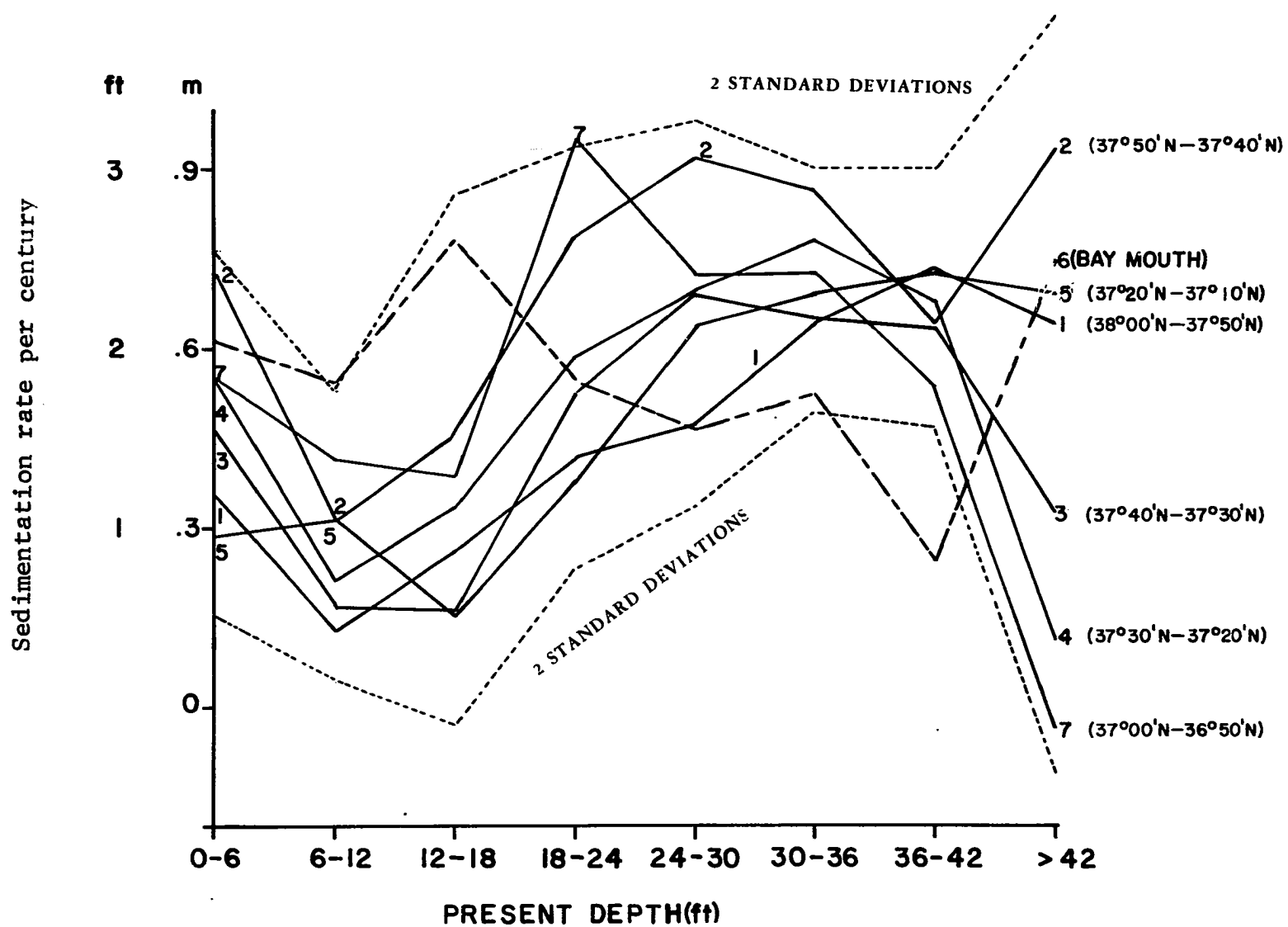


Figure 11. Depth vs. Sedimentation Rate for each ten-minute subsegment from 38°00'N to 36°50'N.

TABLE 2

MEAN SEDIMENTATION RATES AND  
CHI SQUARE SIGNIFICANCE LEVELS FOR SEVEN  
10-MINUTE SUBDIVISIONS OF THE VIRGINIA BAY

AREA	LATITUDE	MEAN SEDIMENTATION RATE PER CENTURY	SIG. LEVEL(%)
1	38°00' N to 37°50' N	0.48m(1.58 ft)	90
2	37°50' N to 37°40' N	0.69m(2.24 ft)	95
3	37°40' N to 37°30' N	0.52m(1.71 ft)	99
4	37°30' N to 37°20' N	0.53m(1.73 ft)	90
5	37°20' N to 37°10' N	0.59m(1.92 ft)	97
6	37°10' N to 37°00' N	0.56m(1.85 ft)	50
7	37,00' N to 36,50' N	0.58m(1.90 ft)	90

In summary, with the exception of sub-section 6 (bay mouth) all 10-minute sub-sections in the Virginia Chesapeake Bay conform to the expected mean curve with a high degree of significance. The following is a qualitative analysis of the apparent sedimentation pattern.

A Conceptual Model and the Bruun Hypothesis. The general sedimentation rate curve exhibits a bimodal distribution with high rates very near shore and in intermediate depths, low rates between 6 and 12 feet (1.8-3.7 m), and relatively low rates in the extreme depths (Figure 12). A complicated system of sediment sources and

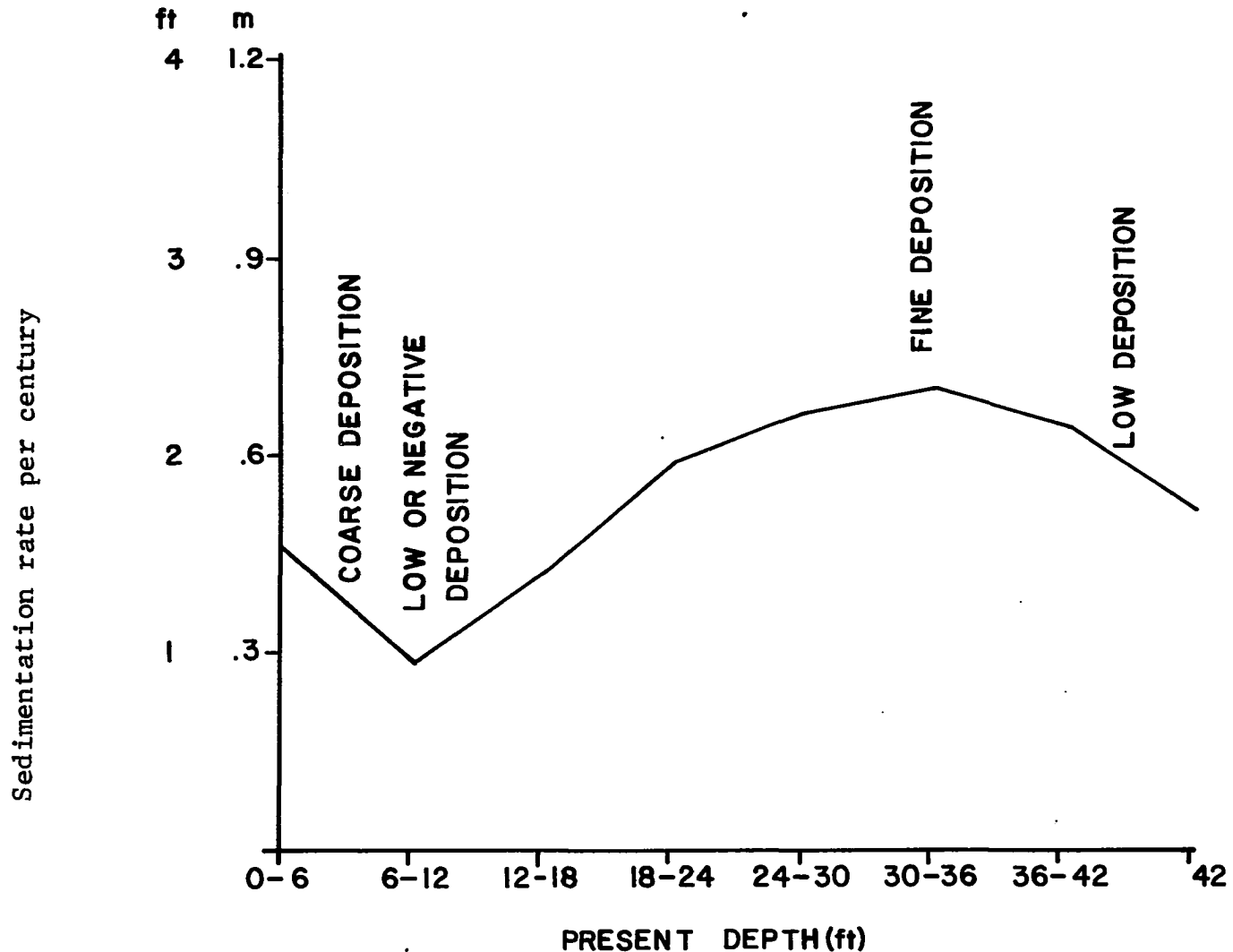


Figure 12. Depositional pattern found in the Virginia Chesapeake Bay.

types and varying turbulent energy regimes appears to control this distribution. The following processes appear to be responsible for the bimodal distribution. The two major sediment sources in all sub-sections except the Bay mouth are tributary rivers and shoreline erosion. Material eroded from the shore is sorted immediately by the turbulent wave energy. Coarse sands, gravels and shell fragments remain in the nearshore zone (0-6 ft). This coarse material quickly returns to the bottom after being subjected to turbulent wave energy. Schube1 (1968) found that little of the eroded sand and gravel in the northern part of the Chesapeake Bay escaped the nearshore zone when studying the disposition of eroded material. The only major movement that can be expected of the coarser material is along shore. The silt and clay sized particles remain in suspension and are carried to deeper depths where wave turbulence decreases to a point where these finer sediments can settle out. This depth of water is generally called 'wave base' and is a function of the period of the waves present.

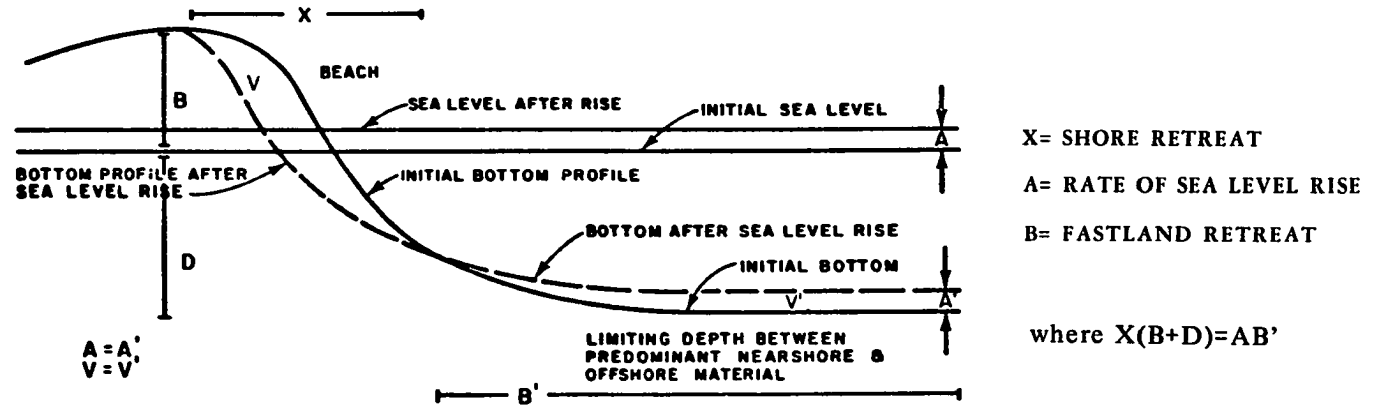
In the Chesapeake Bay wave base varies from extremely shallow depths to approximately 5 meters (16 ft) depending on the wave conditions at any given time. Since shallow depths would be subject to wave energy for a greater percentage of the time than intermediate depths, one would expect deposition to occur at a higher rate in the deeper depths. Approximately 59 percent of the bay bottom in Virginia is between 18 and 42 ft (5.49 and 12.80 m). This is the zone of highest deposition of fine grained material. In the extreme deeps and

channel areas [greater than 42 feet (12.80 m)] a marked lowering of the deposition rate occurs. This is probably caused by the higher currents that can be expected to exist in the channels.

In summary, a tendency for high deposition of coarse material eroded from the fastland and sometimes supplied by longshore drift in the very shallow areas (0-6 ft) exists. Likewise, there is a tendency for high deposition in intermediate depths, 18-42 ft (5.5 m - 12.8 m), of fine grained material supplied from shoreline erosion and tributary rivers. In the 6 to 12 ft (1.8 m - 3.7 m) zone the sedimentation rate is low because there is too little energy to transport coarse material into the zone and too much turbulence to allow settling out of fine material.

Bruun (1962) presented a model relating shore erosion and sea level rise (Figure 13). He assumed that the net longshore drift was zero. His model as summarized by Rosen (1976) is as follows:

1. The beach profile will be displaced toward shore as the fastland is eroded.
2. The material eroded ( $V$ ) will be equal in volume to the material being deposited ( $V'$ ) in the nearshore zone.
3. The rise of the nearshore bottom will be equal to the rise in sea level. This will result in the maintenance of a constant depth in the nearshore area.



(from Rosen,1976)

Figure 13. The Bruun (1962) Model which relates sea level rise to shore erosion.



Rosen (1976) tested this hypothesis in the Virginia bay by computing the width of the submerged terrace as a function of the relative sea level change and the fastland elevation. He deduced that if the fastland is high it would be able to supply more material and, therefore, less of the fast land would have had to have been eroded. Thus, the nearshore terrace would be narrower. He concluded that Bruun's model can be used successfully in the Virginia Chesapeake Bay.

An obvious problem with Bruun's model is his assumption that all the material eroded from the fastland will stay in the nearshore region (This is implicit in his assumption that the volumes would be equal). Schubel (1968) demonstrated that one can expect only a fraction of the material found in the cliffs to be sand and gravel (60 percent in his northern Chesapeake Bay studies). If this situation exists in all of the Chesapeake Bay and if Bruun's predicted relationship between the volume deposited and the volume eroded is correct, Rosen should have found the nearshore terraces to be 40 percent wider than would be predicted by Bruun's basic model.

An immediate test of Bruun's model can be made by looking at actual bottom morphologic changes with respect to depth. He predicts that very near the beach erosion will exist as the initial profile is eroded down to wave base. Seaward of this zone Bruun predicts that accretion will be regular and equal to the relative sea level rise. He assumes no net sedimentation seaward of wave base of materials from the shoreline. My data demonstrate that there is sedimentation nearshore and that the sedimentation is not regular out to wave base.

It indicates that sedimentation nearshore and in areas deeper than 12 feet (3.7 m) may be slightly higher than relative sea level rise, while sedimentation between 6 and 12 feet (1.8 m and 3.7 m) may be slightly lower than sea level rise. My data also indicate that seaward of wave base the rate of deposition is higher than relative sea level rise and is a result of both a net sediment influx from shoreline erosion and other sources. Using a similar logic as that used by Bruun, but not limiting myself to an all sand fastland and not limiting deposition to the nearshore (landward of wave base) region another model is presented (Figure 14).

In this model the relationship

$$V = V' + V'' + V''' - I$$

must be met where

$V$  = total volume eroded from fastland

$V'$  = amount coarse material deposited in nearshore beach areas

$V''$  = amount deposited (+) or eroded (-) from nearshore to wave base

$V'''$  = total amount of material (mostly fines) deposited at depths deeper than wave base.

$I$  = net loss (+) or gain (-) of sediments from without the model area.

Conclusion. The Virginia Bay appears to be filling with sediments at a rate slightly higher than the relative sea level rise rate. This may be an attempt by the system to 'catch up' with the high sea level rise rate that existed until the last few thousand years. This conclusion in effect supports Rusnak's upper limit of

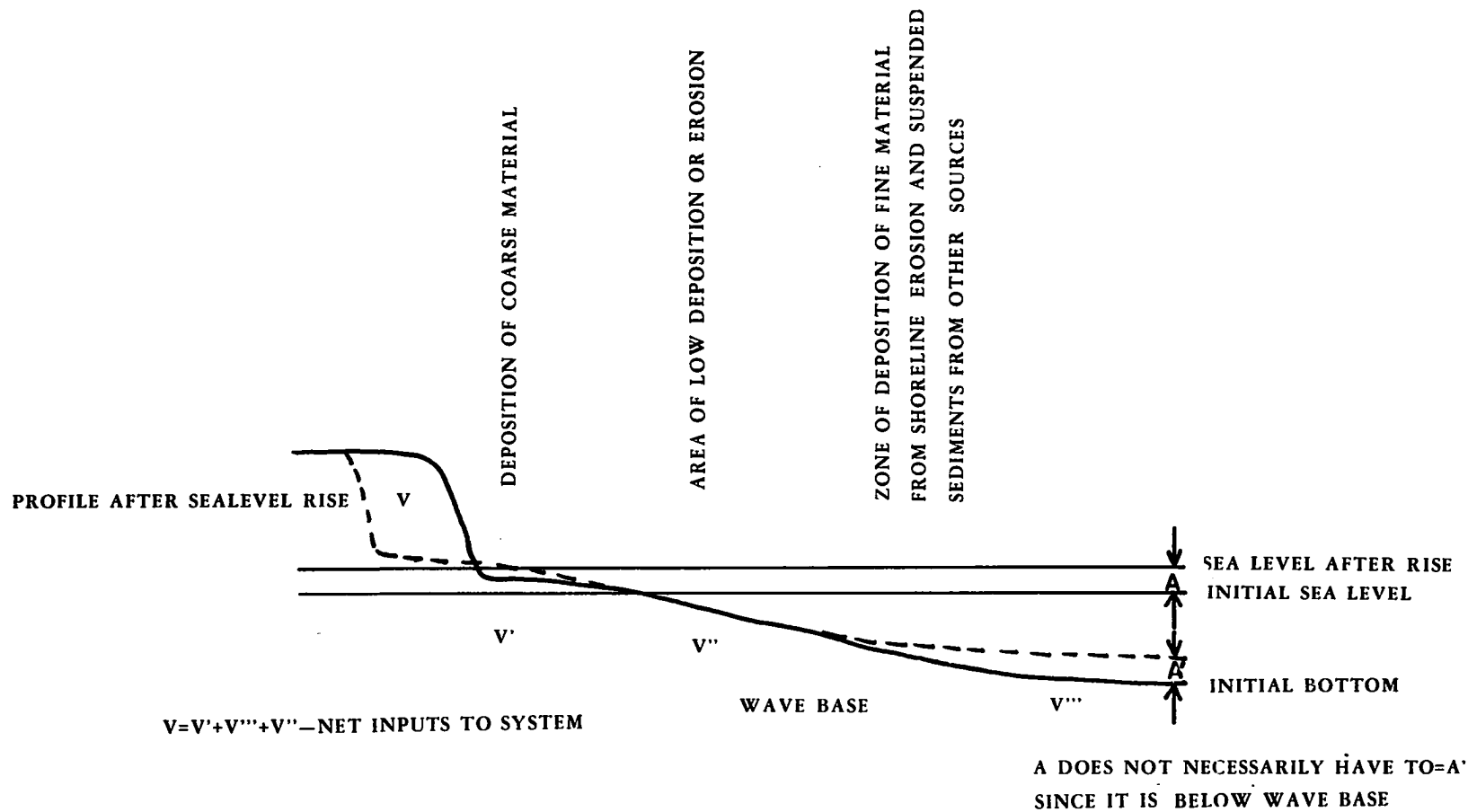


Figure 14. Proposed model of sea level rise as a cause of erosion for the Chesapeake Bay estuary.

sedimentation model where he predicted a maximum rate of sedimentation of 60 cm per hundred years (1.97 ft per century). The measured rate of accretion found during this study averaged 55 cm (1.82 ft) per century. If the Bay is in a 'catch up' mode then my hypothesis that the Bay is in a quasi-equilibrium state where deposition is equal to the relative sea level rise is not supported by the evidence presented in this thesis. An alternative hypothesis may be that the Bay is in an accelerated deposition phase and that at some time in the future the rate of deposition will equal the rate of relative sea level rise, and as long as sediments are available and sea level does not begin to fall, this new equilibrium state will continue to exist.

## PALEODRAINAGE

Introduction. Prior to the most recent transgression of the sea into the present Chesapeake Bay region, and during the Wisconsin glaciation at least two classical fresh water river systems existed. The highest order stream in these systems was the Susquehanna River which drained a region far to the north of the Chesapeake as well as the Chesapeake region itself. Tributary to the Susquehanna were the ancestors of the present Severn, Patuxent, and Potomac rivers. The Rappahannock, Piankatank, York, and James rivers appear to have been independent of the ancestral Susquehanna River within the present bay. Tributary to the major rivers of the Susquehanna and Virginia river systems were a multitude of lower order streams. All of these streams, from the Susquehanna to the smallest tributary, have had most of their valleys flooded by the Holocene oceanic transgression which began approximately 15,000 years ago. From the time of the salt water penetration into the present Chesapeake Bay area the circulation pattern began to change from a unidirectional fluvial flow to the bidirectional and complex estuarine flow observed in the present estuaries. The Susquehanna and Virginia river systems began trapping sediments sometime after the transgression began.

The topography of these stream valleys was slowly buried beneath material from the uplands, from shoreline erosion, from biogenic activity, and from the continental shelf. The present bathymetry ('topography' of the bottom) of the bay is extremely regular with slopes greater than 1 degree existing only near channels. Ryan (1953) estimated that 45 billion cubic meters ( $6.0 \times 10^{10}$  yd<sup>3</sup>) of material have been deposited on the estuary bottom since the last transgression. While 'silting' of the Bay bottom has hidden the ancient topography from our eyes and simple instruments, it has at the same time protected it from the destructive forces of the elements. Hidden beneath the sediment of the present Chesapeake Bay is another system different in many ways from what we now see. It was my desire to help 'uncover' these ancient riverine systems and while doing so hopefully gain knowledge that may help future researchers better understand the processes that are now affecting the present system.

Philosophy. The primary objectives of this research were to:

1. Determine the paleodrainage of the Virginia Chesapeake Bay.
2. Test the hypothesis that crustal movements influenced the configuration of the present Chesapeake Bay.
3. Determine whether the present thalweg is a function of the position of the paleothalweg.

Objective 1, determination of the paleodrainage, is obviously the most important of these three objectives, for without its successful conclusion, objectives 2 and 3 would be very difficult.

Because the paleotopography of the ancestral stream valleys cannot be directly observed, other methods of penetration must be used. Extraction of cores and continuous seismic reflection profiling are two realistic possibilities. A core yields excellent data for one point, but is usually limited to a few feet below the bottom. (The recent introduction of the 'vibro-core' to estuarine research allows the researcher to extract cores with a maximum length of 12 meters. This equipment was not available for this research). Core information is available for small sections of the bay (primarily in the bay mouth region) and was used as an aid in interpreting the data from the second method, and primary one used in this research, continuous seismic reflection profiling (CSRP). CSRP is a widely used geophysical technique for the determination of the bedding surfaces and structures of submerged areas.

To test the hypothesis that there has been significant differential crustal warping certain features of the sub-bottom record can be analyzed for indications of differential movement. The position of the paleo-thalweg and the present thalweg can be directly compared.

Method. From 1977 to 1979 approximately 900 km (500 nm) of sub-bottom profile tracks (Figure 15) were made in the Virginia and

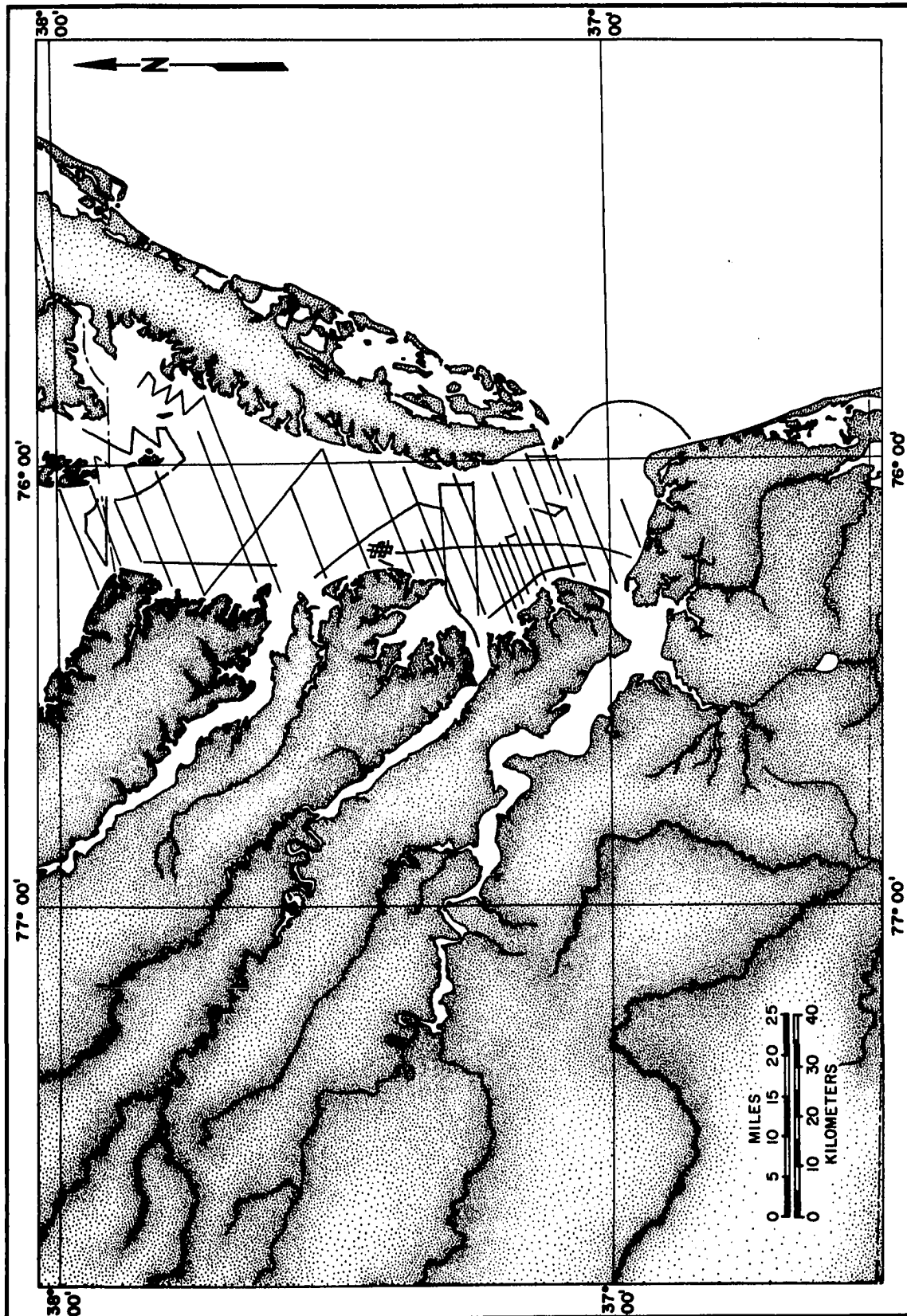
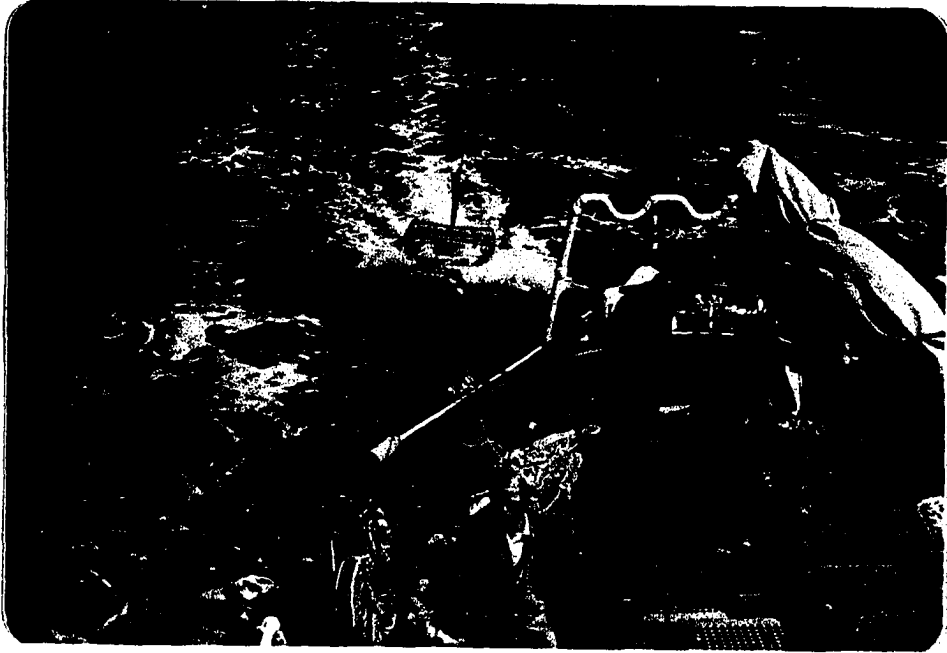


Figure 15. Location of seismic reflection survey tracks.



southern Maryland portions of the Chesapeake Bay aboard the Research Vessel Captain John Smith (Virginia Institute of Marine Science) and the schooner Research Vessel Westward (Sea Education Association) (see frontispiece). The energy source was the Raytheon RTT-1000 sub-bottom survey system which uses a 2000 watt, 7 KHz pulse, and a time varying gain receiver tied directly to a strip chart recorder. The transducer was mounted directly to the hull of R/V Captain John Smith and towed behind R/V Westward on a specially designed monohull platform (Figure 16).

The CSRSP technique uses equipment similar to that used to make precision bathymetric surveys, except the sound frequency is much lower than the 200 KHz source used for bathymetric surveys. Sound is transmitted from the surface and a portion of the sound energy reflects off of the water-sediment interface. The remainder of the energy penetrates the bottom sediments and portions of it are reflected each time a sediment with a different acoustic impedance from that above it is encountered. Acoustic impedance is a function of the physical properties of the sediment (i.e. density, porosity, water content, gas content, etc). The reflected sound waves are recorded on a stripchart recorder with a resulting record that looks like a 'cross-section' of the sub-bottom. By analyzing these, important information concerning the buried features of the sediment can be obtained. Navigation fixes along the seismic survey lines were taken every five minutes using a self-tracking Loran-C receiver.



R/V WESTWARD  
Sea Education Association



R/V CAPTAIN JOHN SMITH  
Virginia Institute of Marine Science

Figure 16. Photographs of transducer platform used with schooner R/V WESTWARD and transducer mounted on R/V CAPTAIN JOHN SMITH.

Interpretation of the records was based on the slope and intensity of the reflected sound, and was done in accordance with the methods described by Ballard (1977). These records were supplemented by bore hole records in the Chesapeake Bay Bridge-Tunnel region (Beckmann, 1961; Meisburger, 1972). The sub-bottom profile records were digitized every minute of track time and corrected for speed of sound variations, tide and draft, and ship speed. The speed of sound was assumed to be 1463 m (4,800 ft) per second in water and 1659 m (5,440 ft) per second in sediment. A cross-section was constructed showing the major horizons along each survey line.

The quality of the records varied with the bottom sediment type, gas content, and the temperature of the water. Although no accurate records of water temperature were kept, the best results were obtained when the water temperature was close to the freezing point of water. This may be attributed to the lack of biologic activity and the ability of cold interstitial water in the sediments to dissolve gas. Bubbles in the surface water caused by rough sea conditions also reduced the quality of the sub-bottom records on some transects.

Discussion and Results. Throughout most of the area surveyed, the acoustic basement (presumed to be of Tertiary age) is buried under a highly stratified gently sloping sequence of estuarine sediments. Computer drawn profiles (Figures 17, 18, and 19) for the lower part of the study area indicate the existence of numerous buried channels which have been filled presumably with estuarine muds. In some cases a thin layer of sediment with different acoustic properties than the

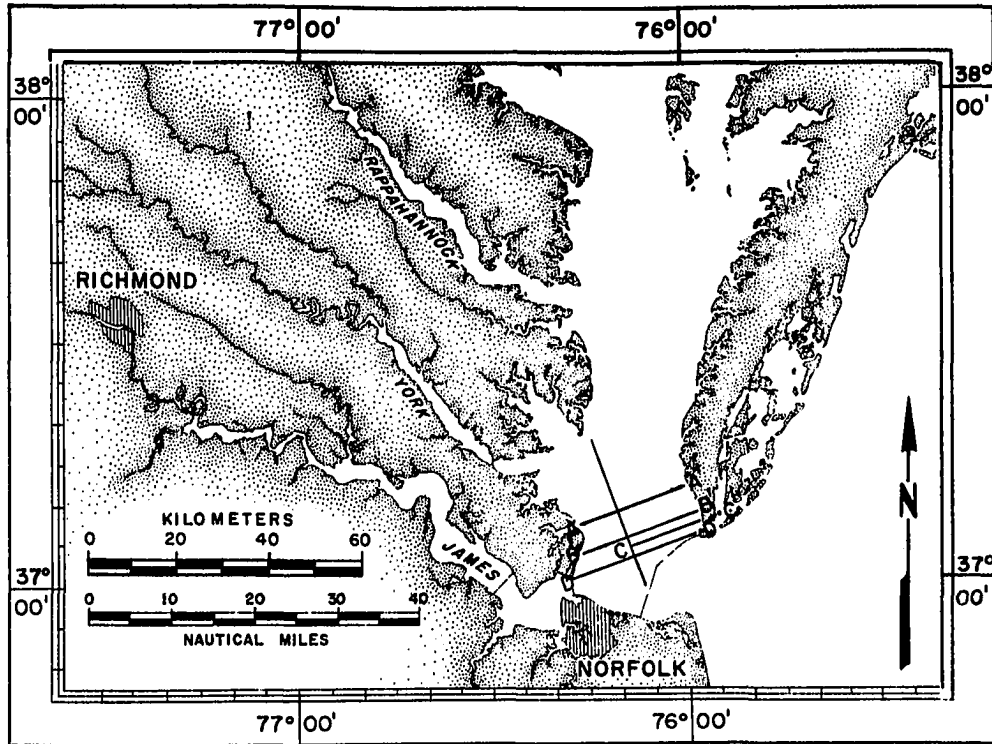
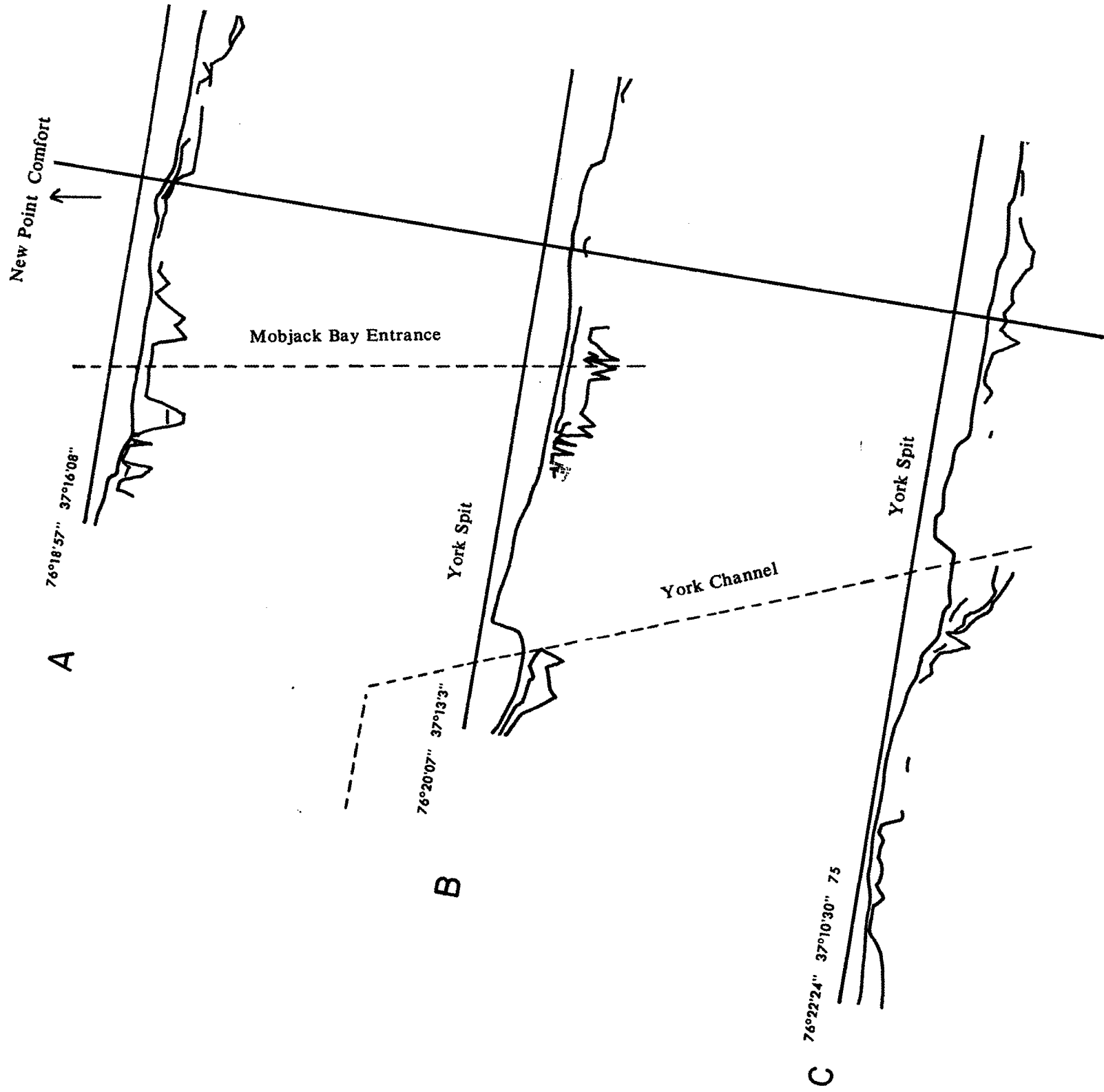
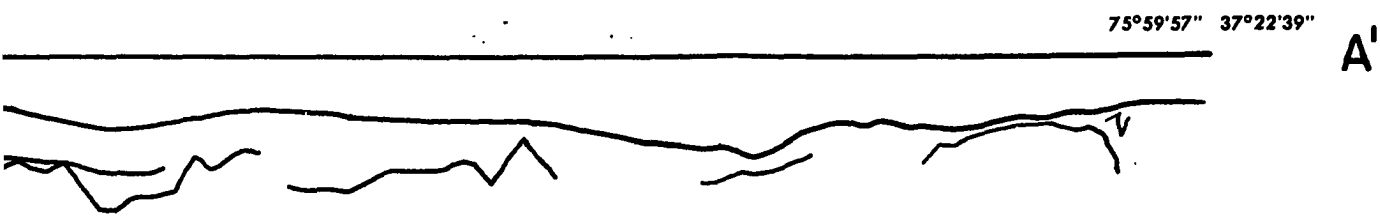


Figure 17. Selected computer drawn sub-bottom cross-sections in the Virginia Chesapeake Bay.



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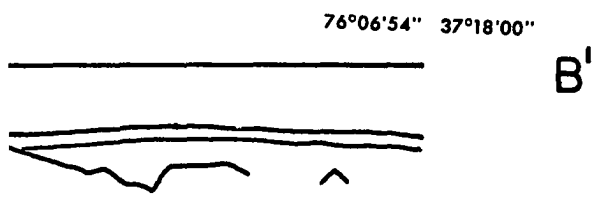


VERTICAL EXAGGERATION 80:1

1km



1nm



VERTICAL SCALE (m)

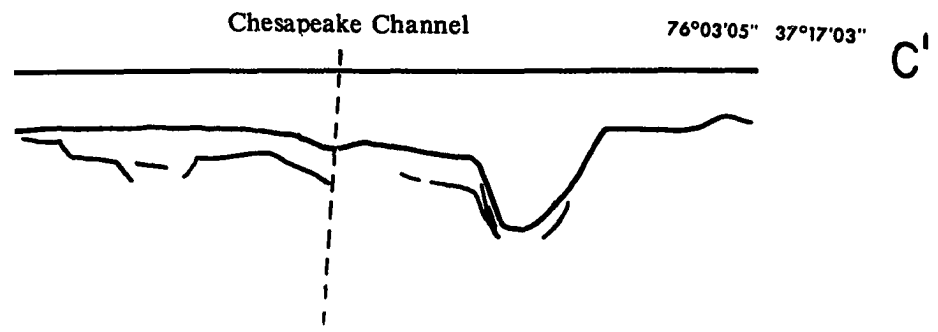
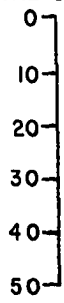


FIGURE 17





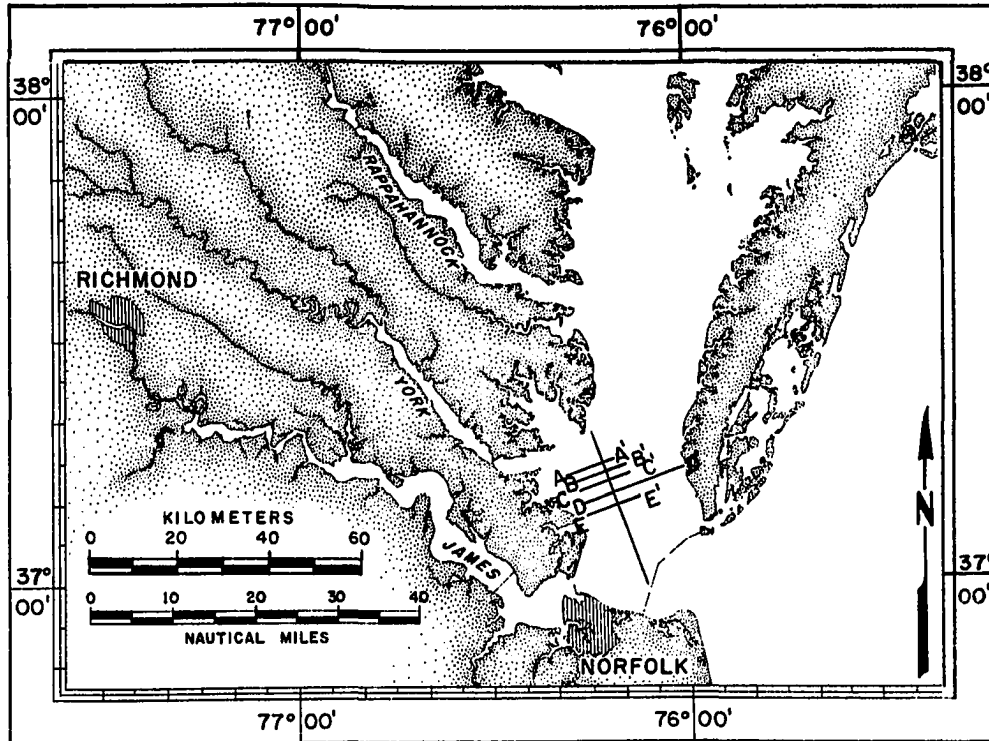
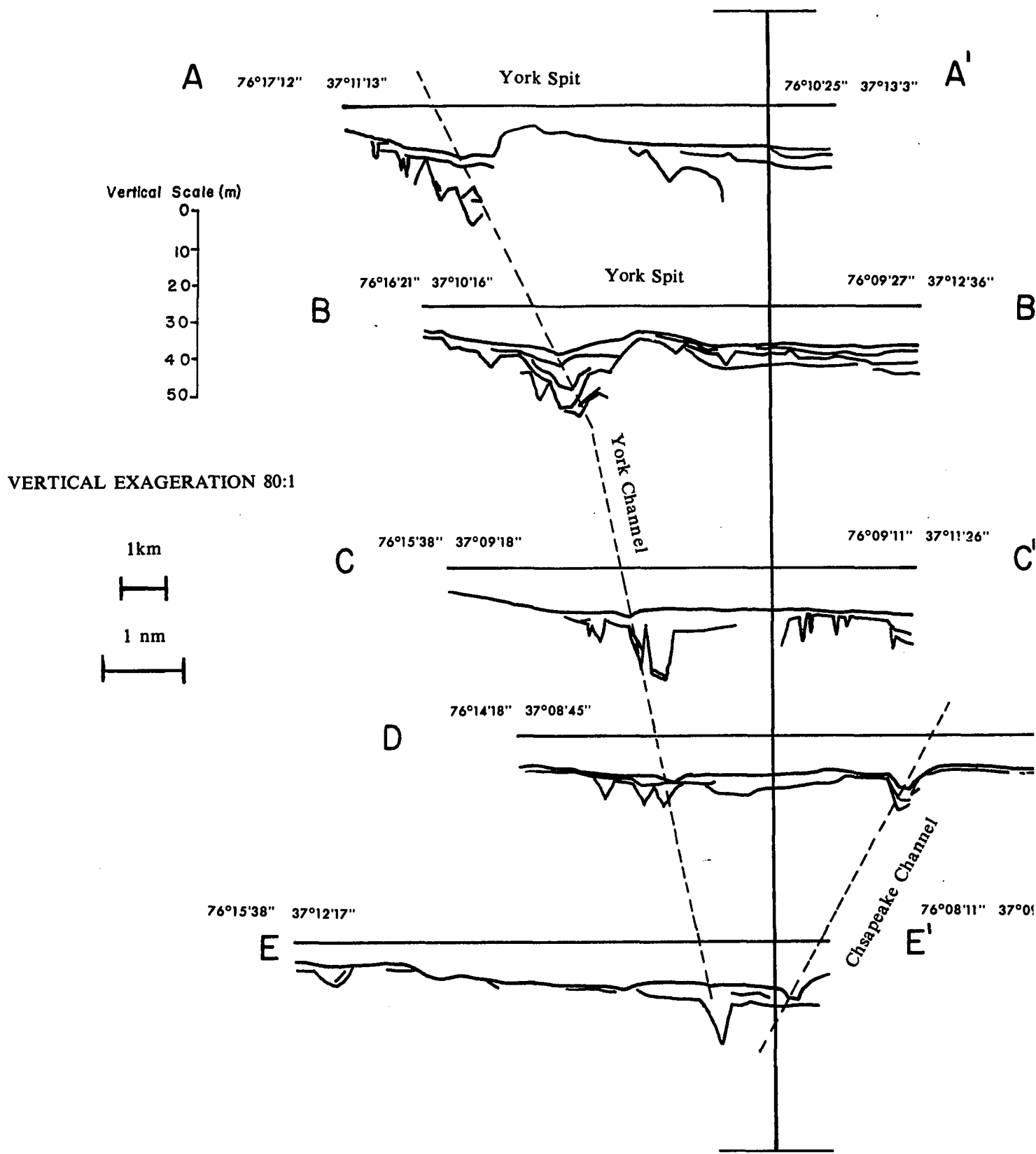


FIGURE 18. Selected computer drawn sub-bottom cross-sections in the Virginia Chesapeake Bay.





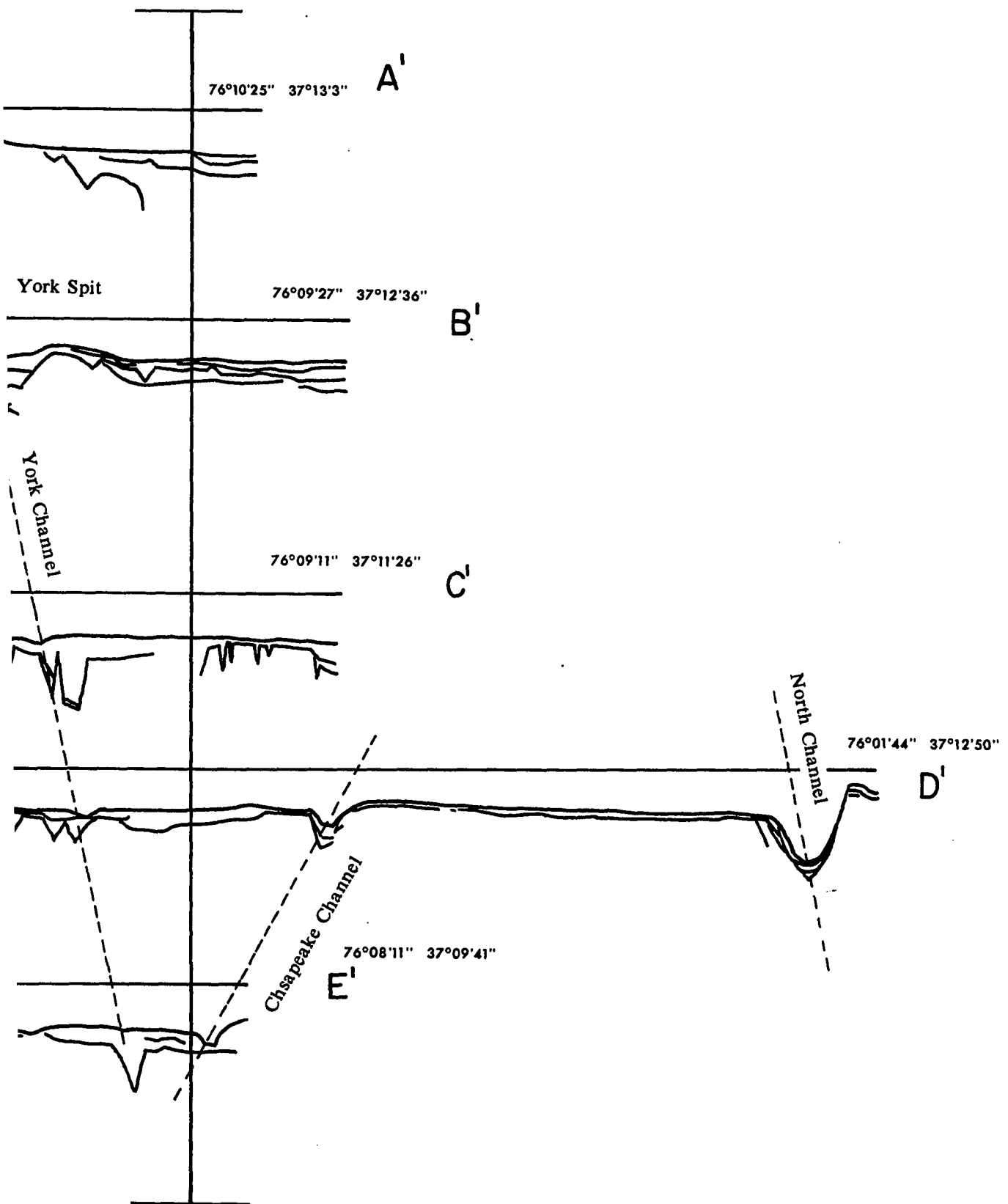


FIGURE 18



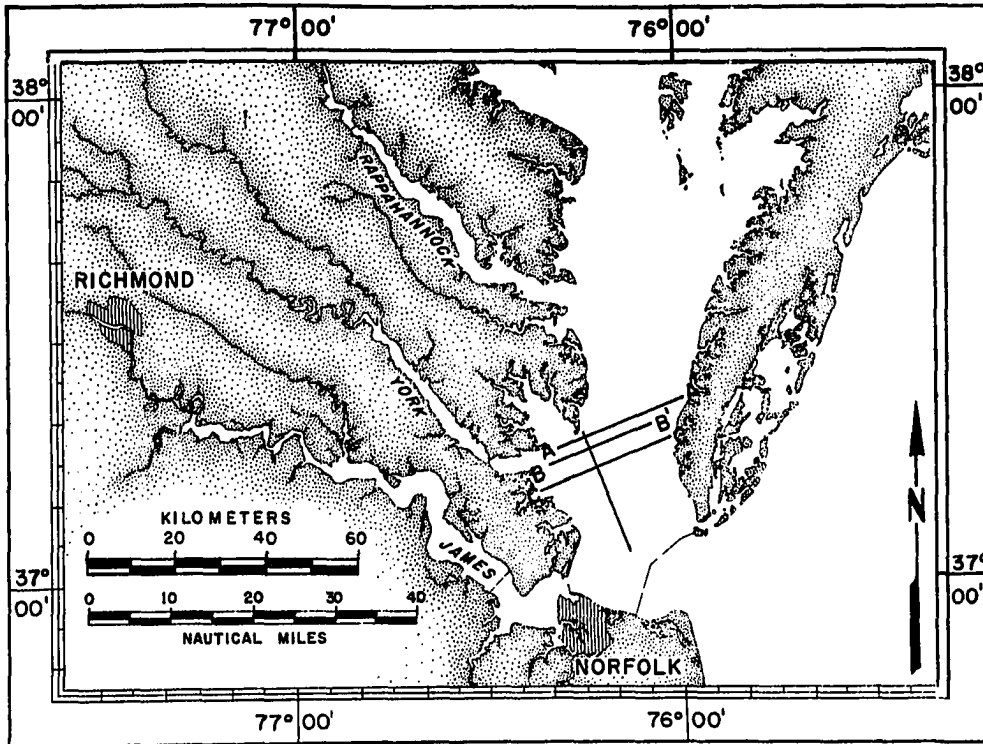


FIGURE 19. Selected computer drawn sub-bottom cross-sections in the Virginia Chesapeake Bay.

76°16'24" 37°03'35"

A

VERTICAL EXAGGERATION 80:1

1 km



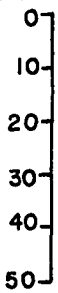
1 nm



76°17'10" 37°01'03"

B

VERTICAL SCALE (m)



76°07'37"

37°03'30"

C

76°17'41" 36°58'45"

Thimble Shoal Channel

D

Chesapeake Channel





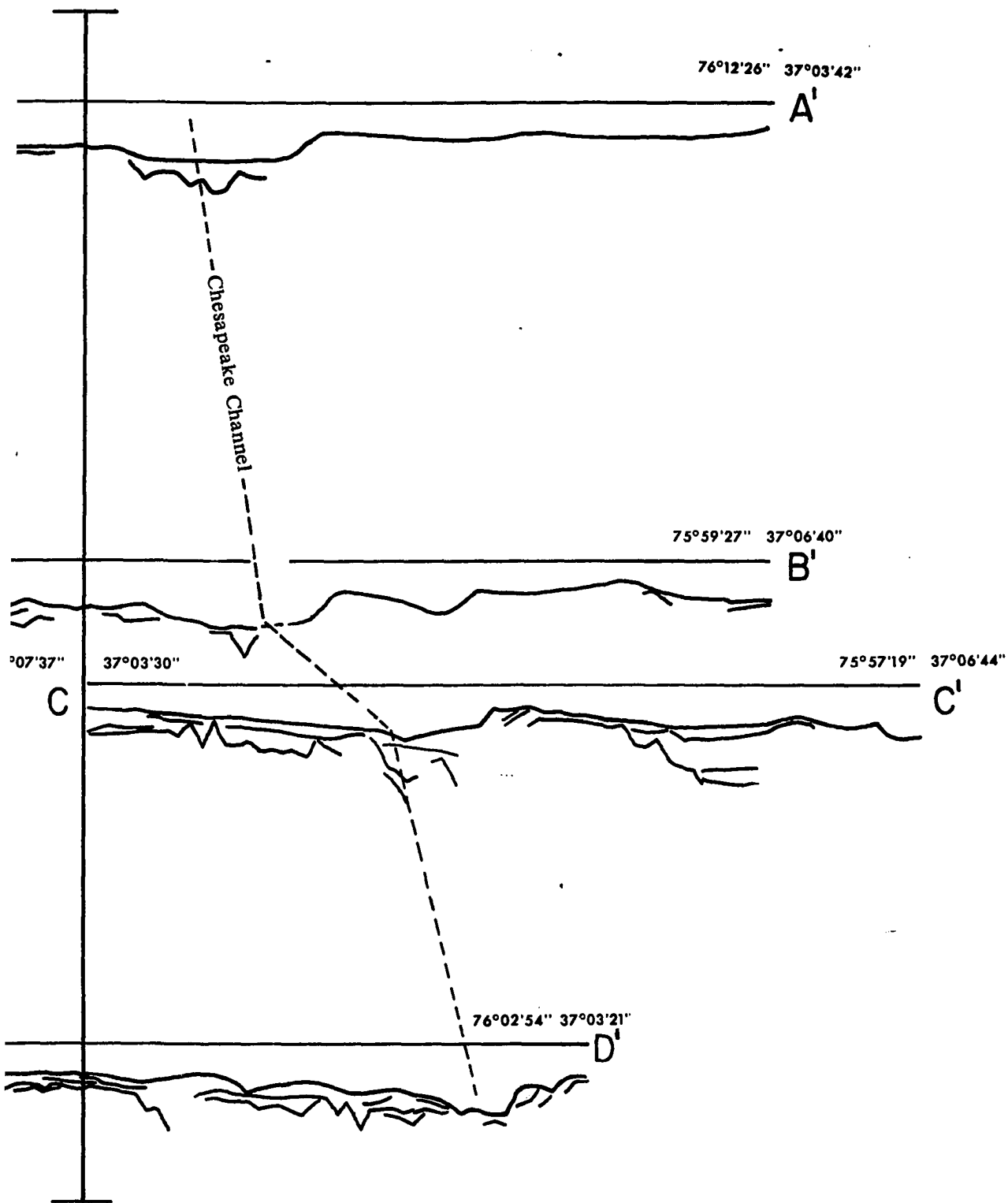


FIGURE 19



channel fill covers the deep sediments. This second layer is seen more often in the lower Bay than further to the north. The most striking sub-bottom feature in the lower Bay is the paleochannel of the ancestral York River. Figure 20a shows a sub-bottom section of the York as if one was looking up river, while figures 20b and 20c are the profiles while looking down river. The maximum paleochannel depth found is approximately 31 m (102 ft). In Figures 20a and 20c paleo-stream channels from the ancestral Poquoson River to the southwest of the York River can be seen. Likewise, there is a paleochannel from Mobjack Bay northeast of the York paleochannel. Both the Poquoson and Mobjack paleochannels converge with the York Paleochannel at about latitude 37°09'N and longitude 76°12'W.

A similar relationship is seen between the ancestral Rappahannock River and the larger western shore streams to its north, Dymer and Indian creeks, and to its south, the Piankatank River. The Dymer Creek and Indian Creek paleochannels appear to enter the Rappahannock paleochannel near the mouth of the present Rappahannock River, while the Piankatank converges with the ancestral Rappahannock near Wolf Trap. This Rappahannock-Piankatank paleochannel system appears to converge with the York paleochannel around latitude 37°04'N and longitude 76°10'W. The resulting paleochannel is headed for Tail of the Horseshoe Shoal when it is lost in the sub-bottom record. Meisburger (1972) shows a paleochannel approximately 30 m (100 ft) in depth under Tail of the Horseshoe Shoal and another paleochannel under Lynnhaven Roads at about -40 m (-130 ft) (Figure 21). The -30 m depth

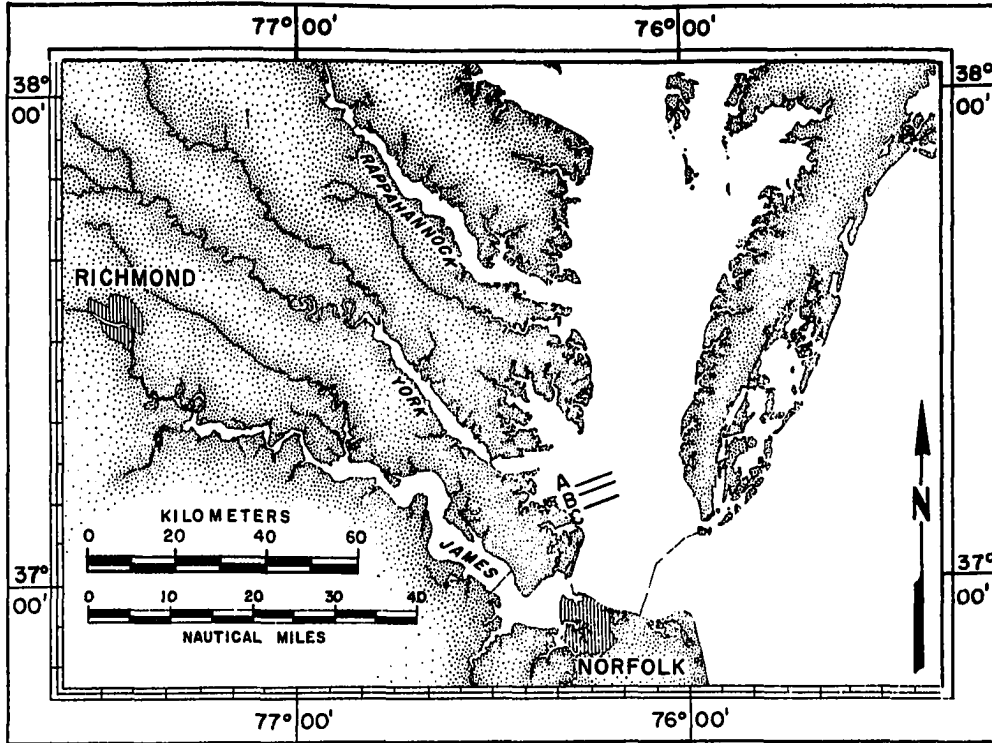
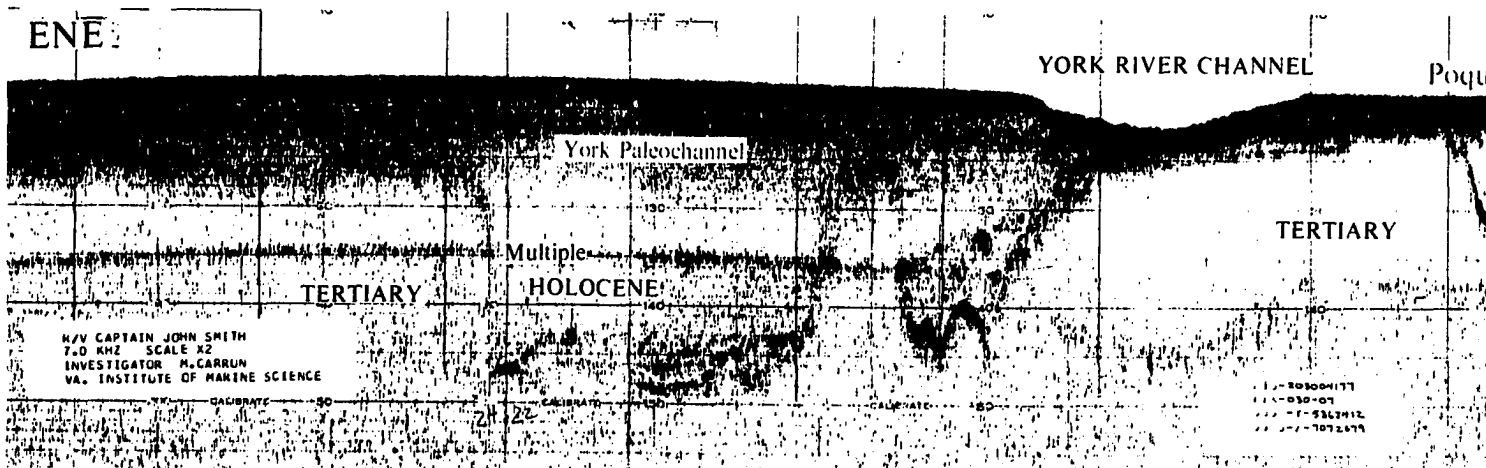
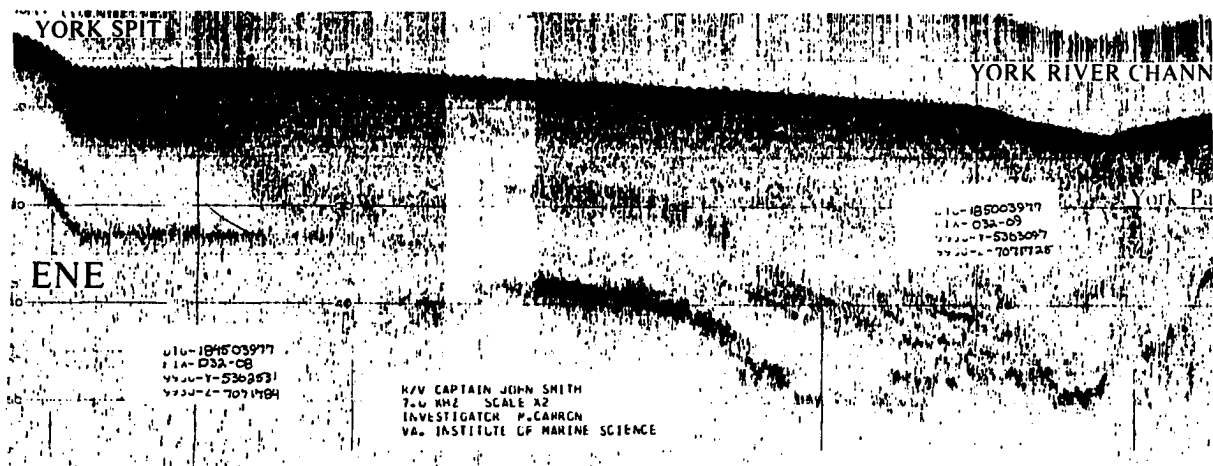
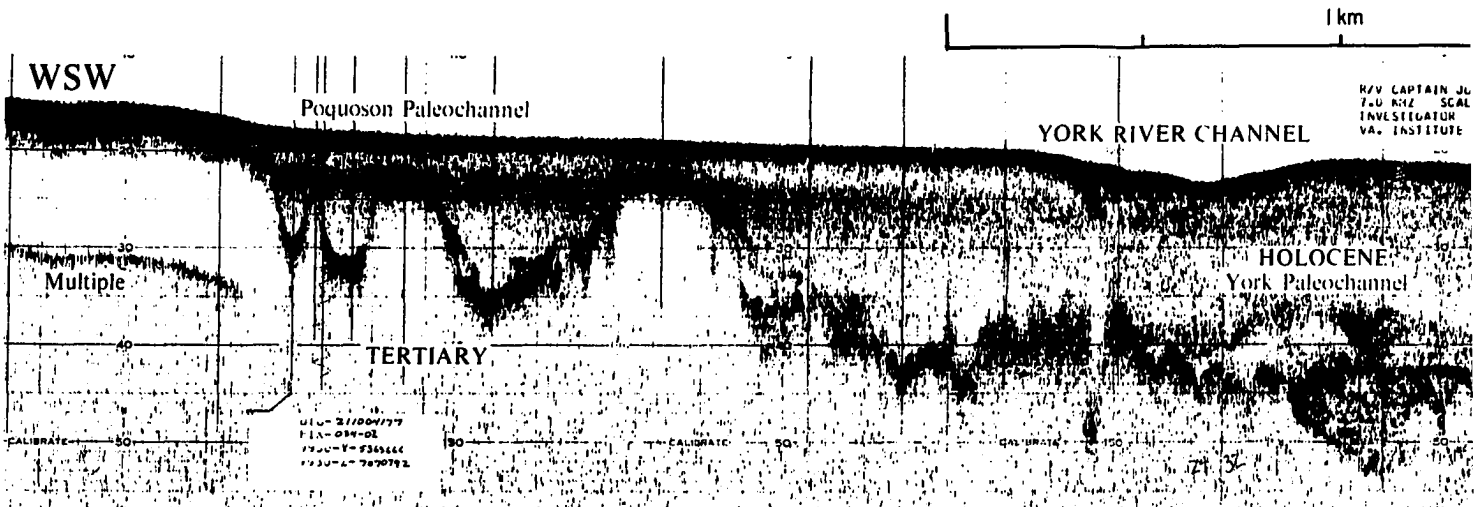


Figure 20. Selected sub-bottom profiles in the York River area.





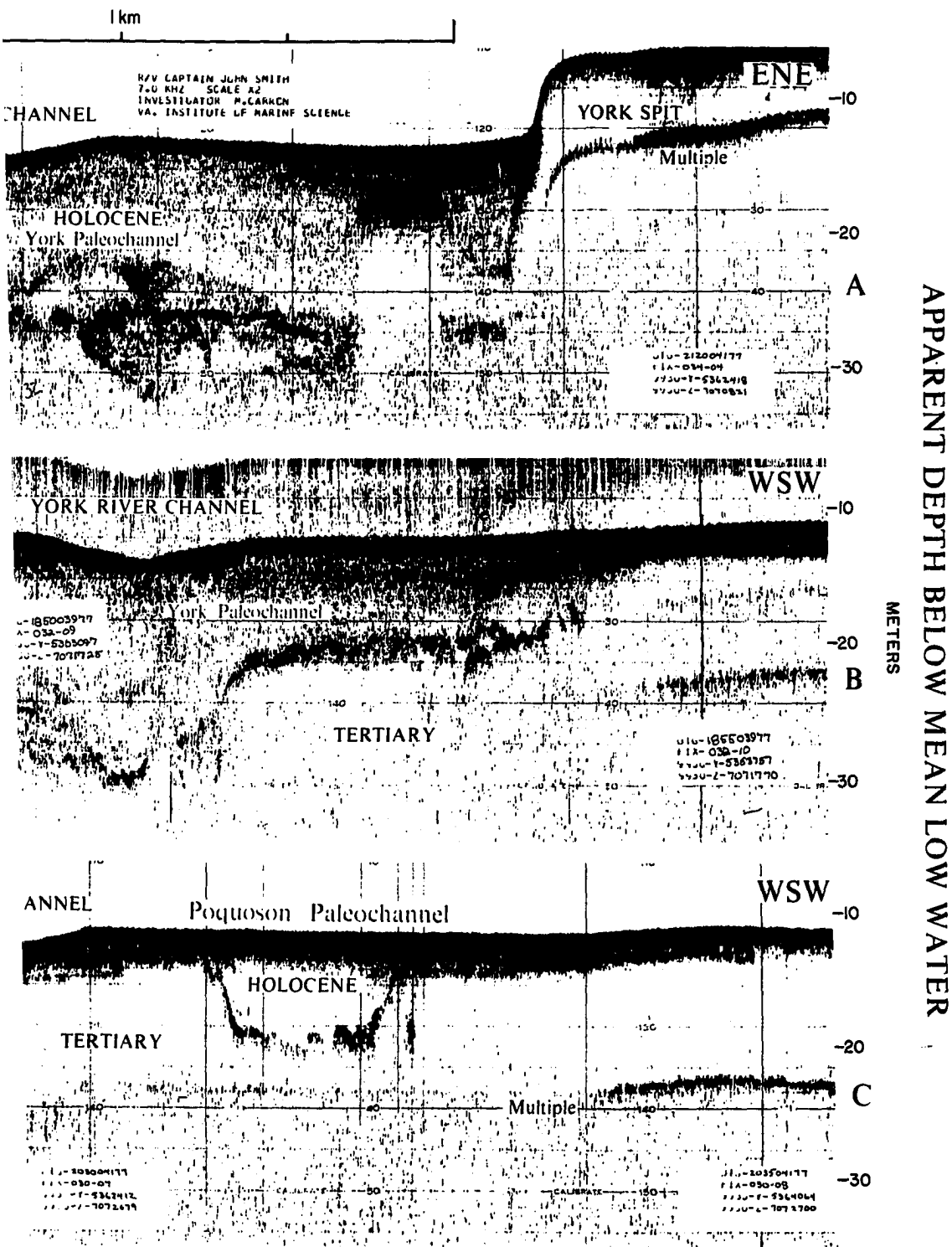


FIGURE 20

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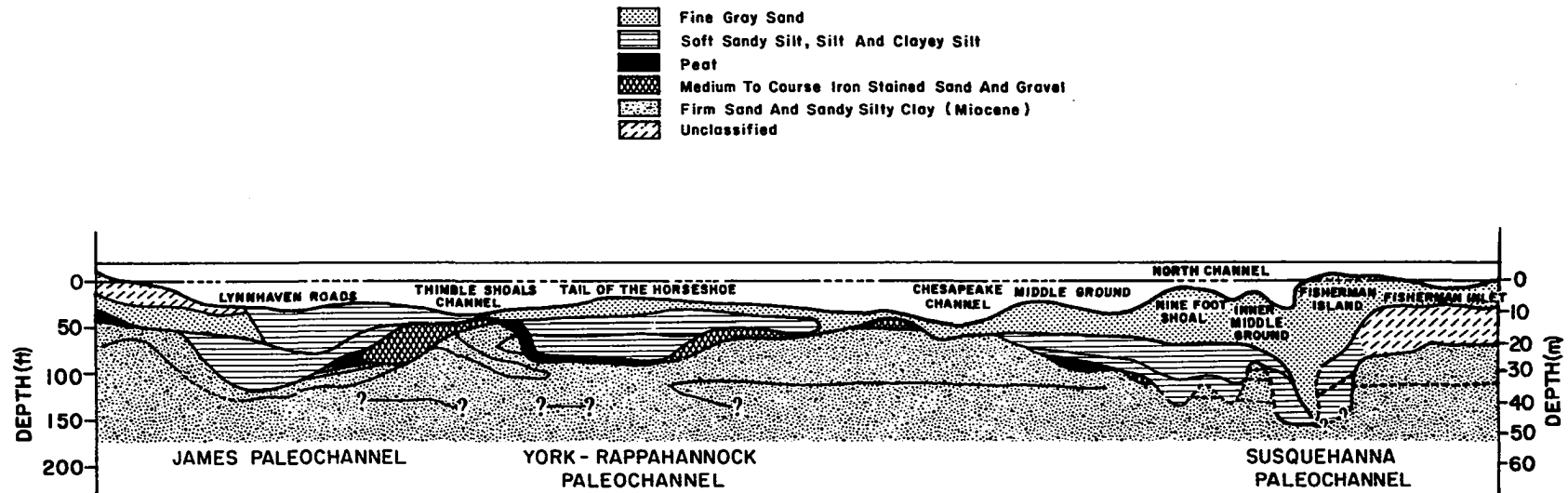


Figure 21. Cross-section at bay mouth from boring logs.

(after Meisburger, 1972)

under Tail of the Horseshoe Shoal is at approximately the same depth as the York-Rappahannock paleochannel and is inferred to be the ancestral extension of the York-Rappahannock paleochannel.

The Lynnhaven Roads paleochannel at approximately -43 m is at about the same depth (-48 m) as the paleochannel of the James River at the Hampton Roads Bridge Tunnel (Harrison, 1965). The Lynnhaven Roads paleochannel is inferred to be a possible extension of the ancestral James River. The James River paleochannel and the York-Rappahannock paleochannel appear to converge somewhere to the east of the present Bay mouth, although I did not address this question.

North of the Rappahannock River the present Potomac River enters the Chesapeake Bay. Sub-bottom profiles in the region south of Smith Point (Figure 22) show a deltaic type of sedimentation between -25 and -40 meters (-80 to -130 ft). It appears that as the sea flooded the ancestral Susquehanna-Potomac river system large volumes of material were deposited as easterly dipping and nearly horizontal beds.

At the confluence of the Bay and the Potomac River the Main Stem paleochannel and the Potomac paleochannel (Figure 23) are separated by a mass of sediment presumed to be of Plio-Pleistocene age. The Tertiary mass in Figure 23a appears to be much smaller than that shown in Figure 23b. This results from the survey ship crossing the minor axis of the mass in Figure 23a while crossing it on an oblique angle in Figure 23b. The maximum depth of the Potomac River paleochannel appears to be approximately -45 m (-148 ft) near its mouth.

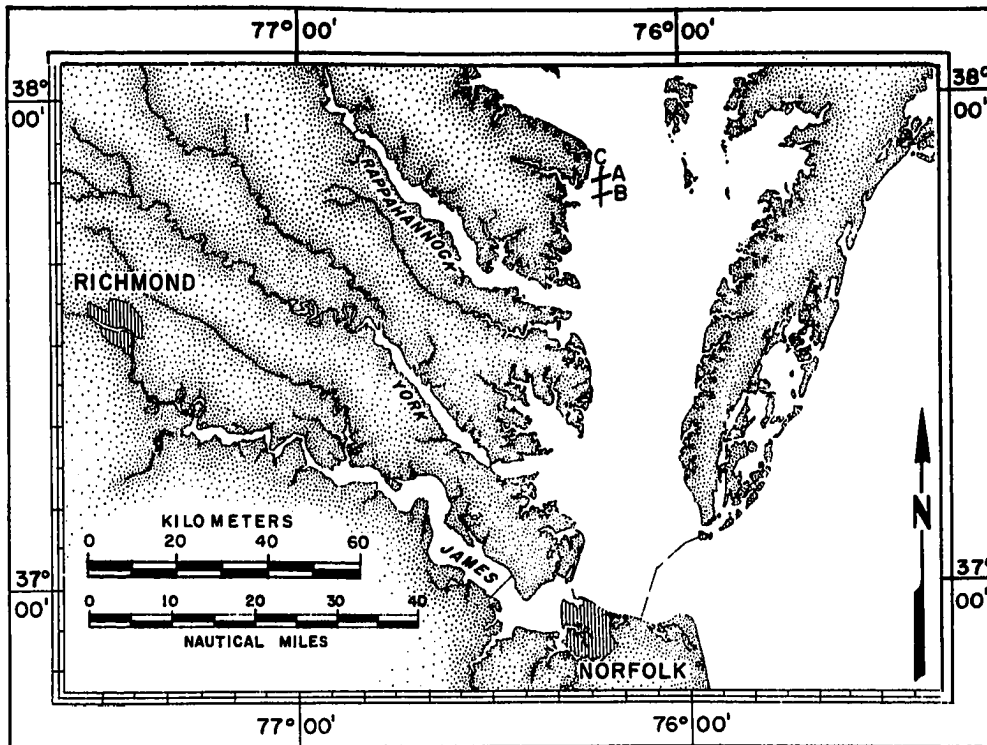
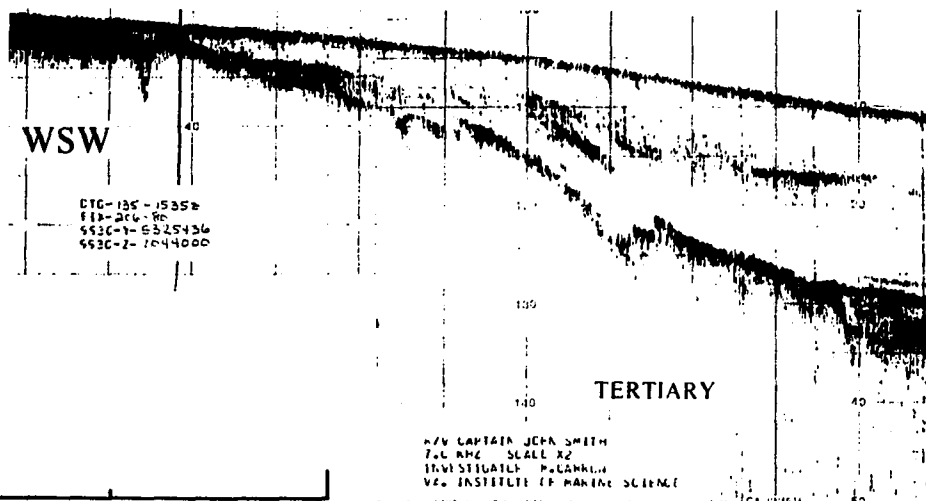
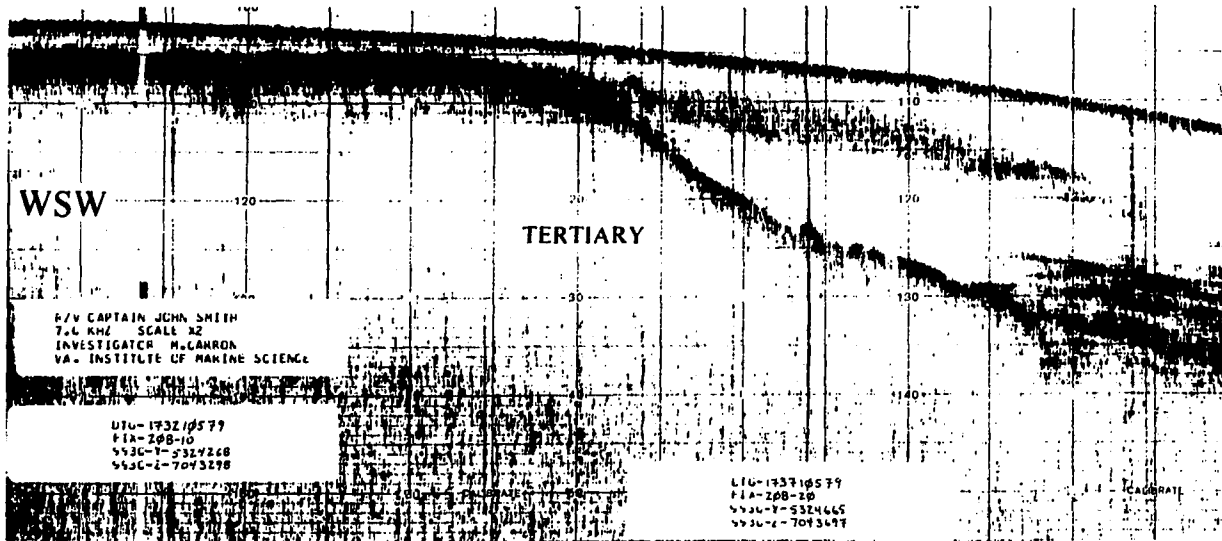
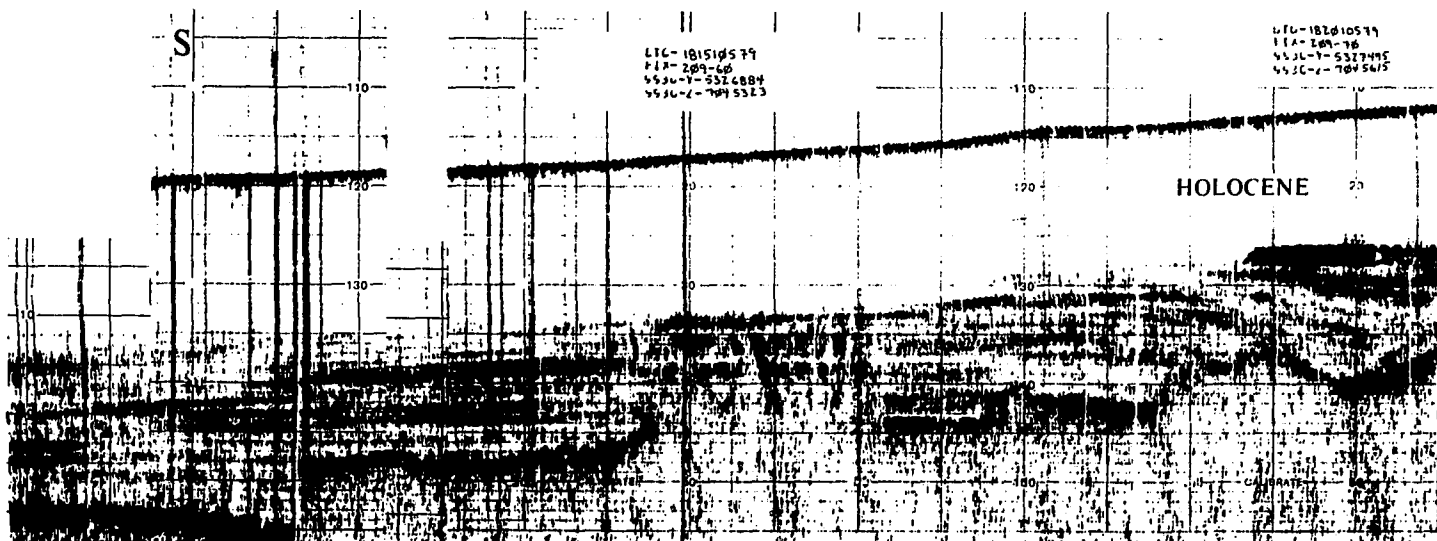


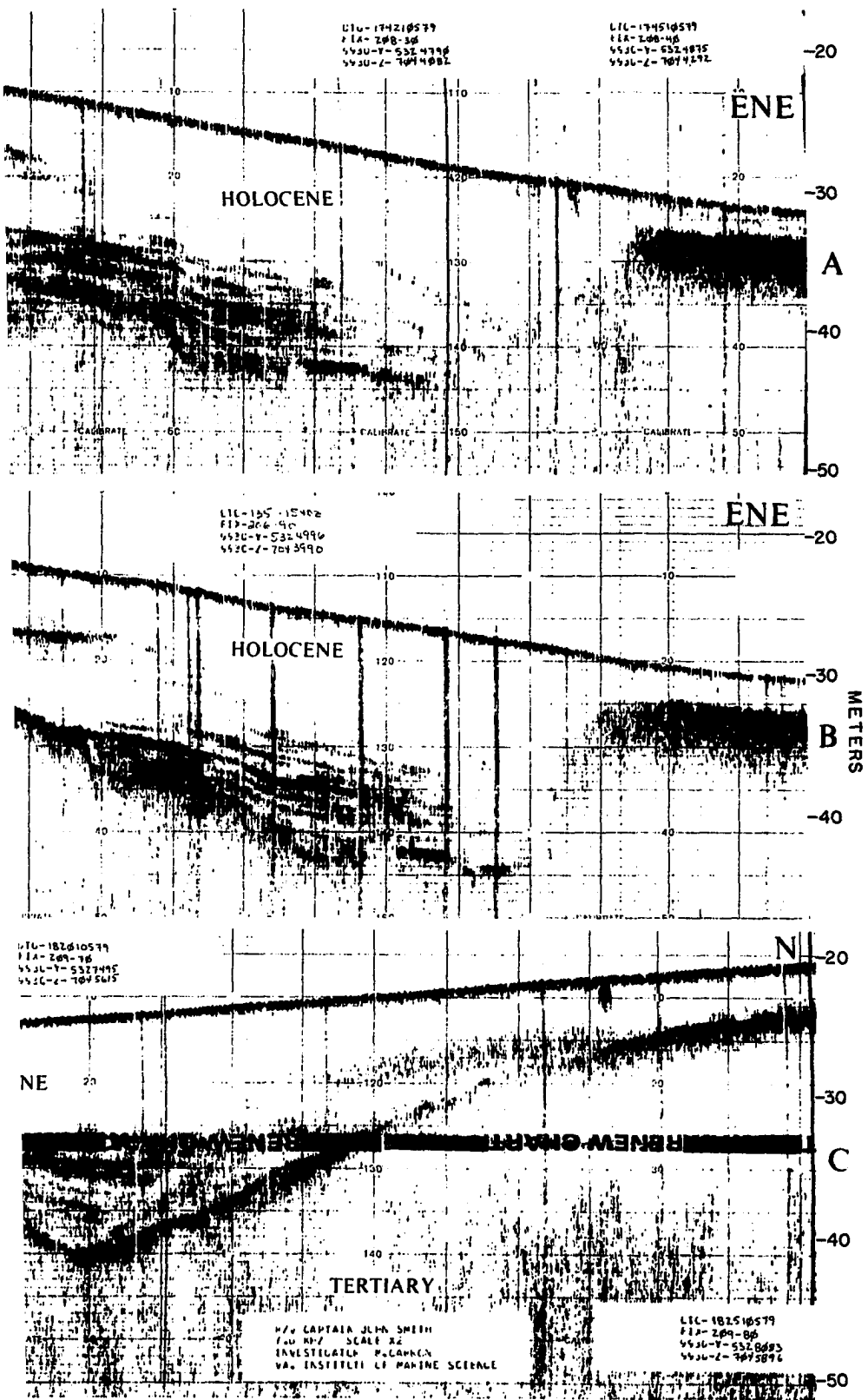
Figure 22. Selected sub-bottom profiles in the region south of Smith Point.



1 km







APPARENT DEPTH BELOW MEAN LOW WATER

FIGURE 22



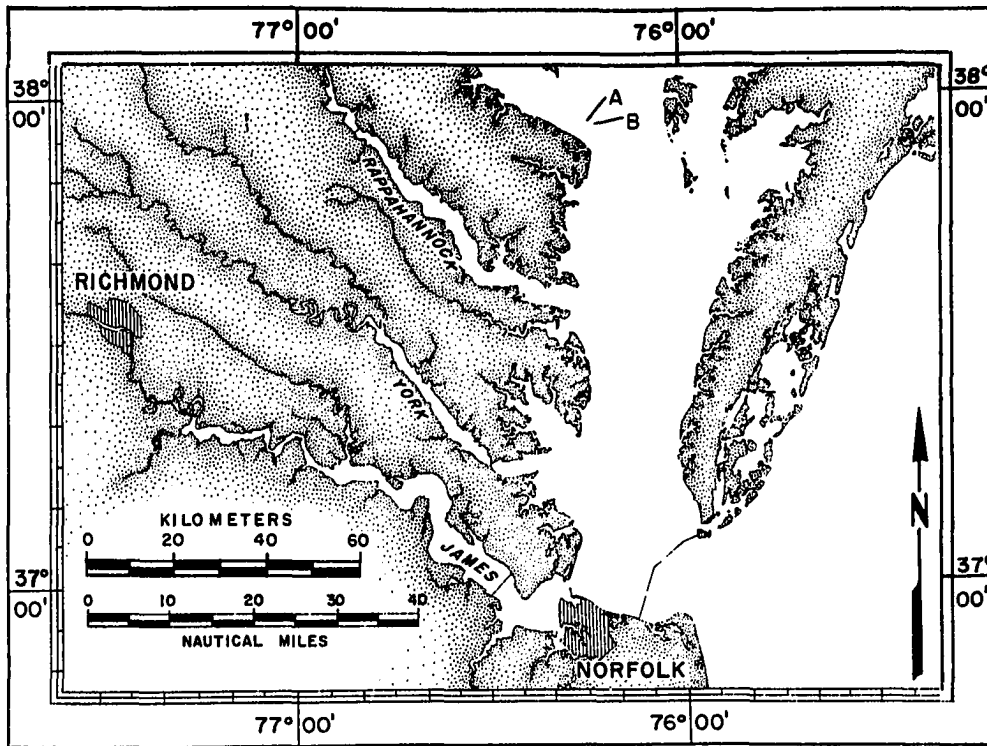
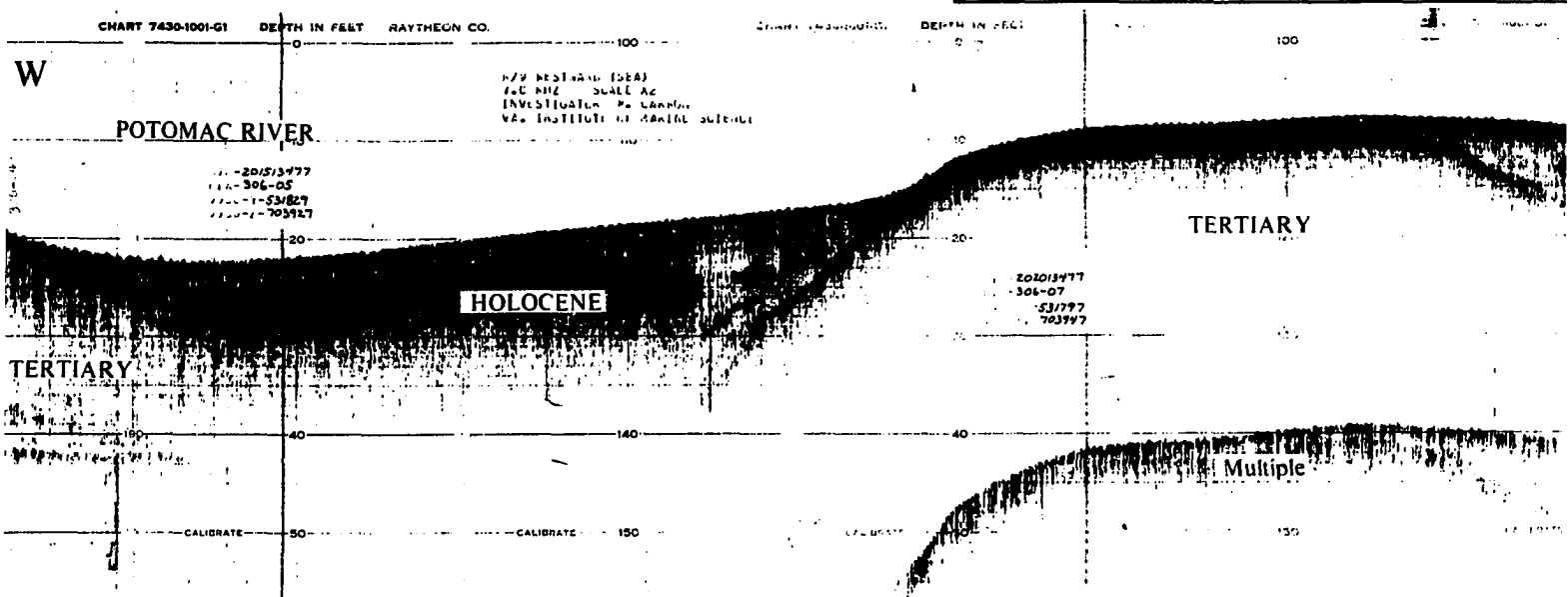
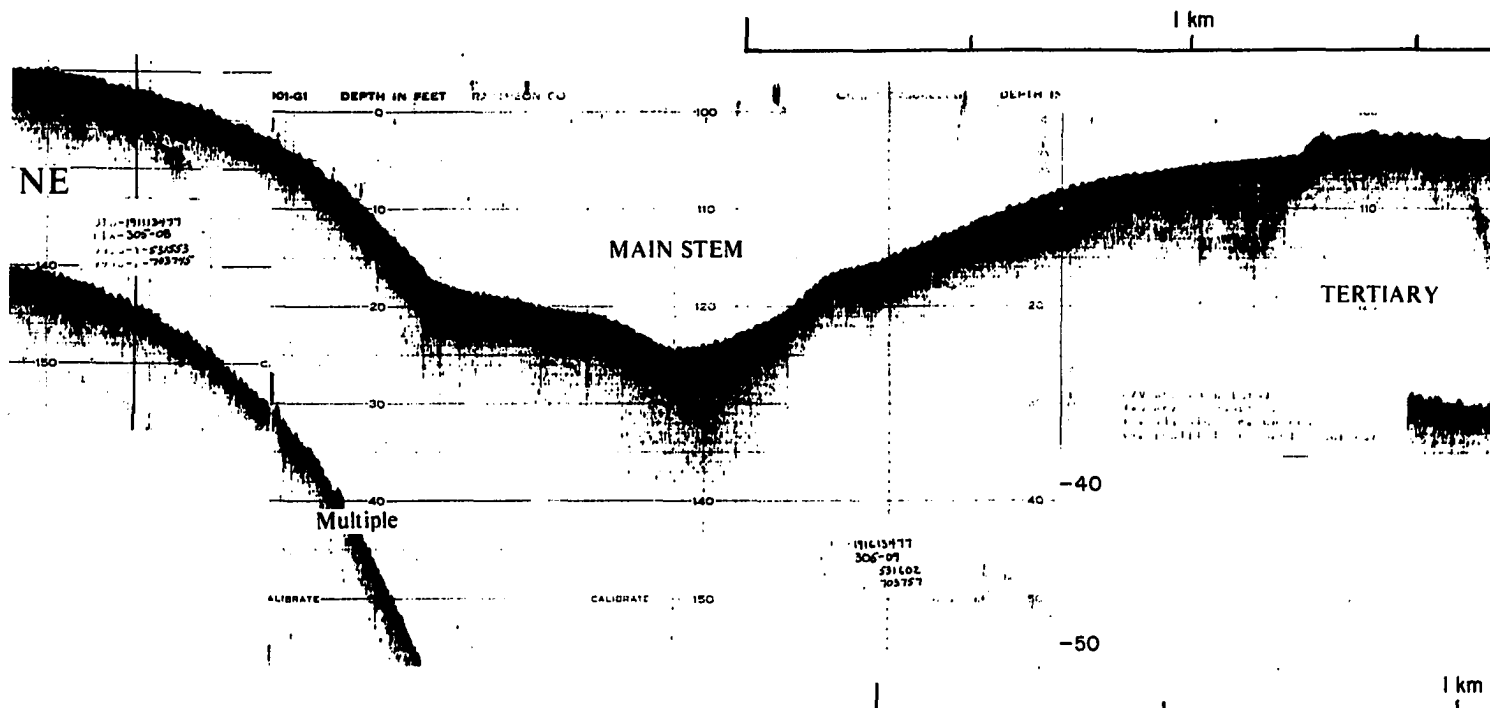


Figure 23. Selected sub-bottom profiles in the Potomac River mouth.







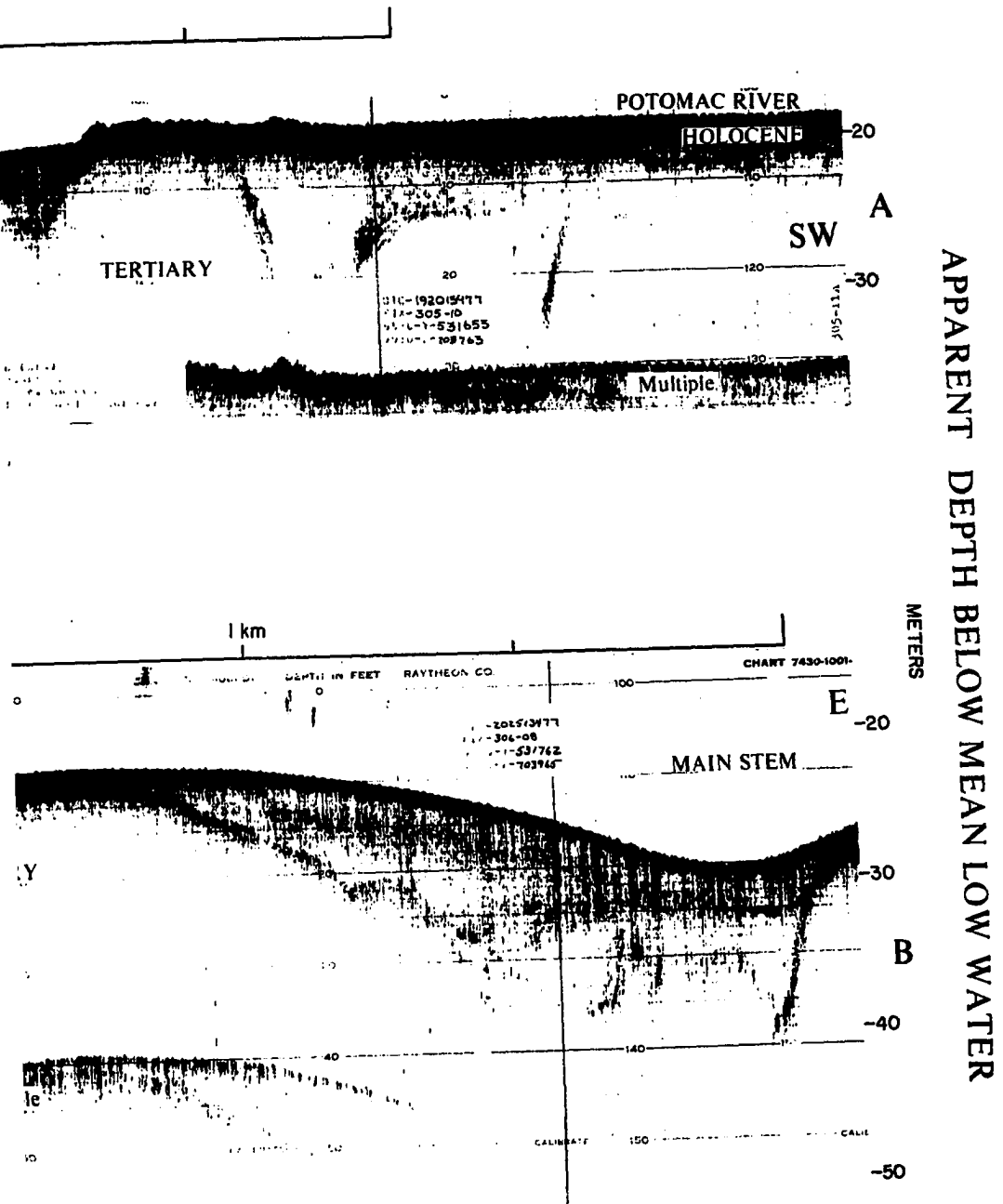


FIGURE 23



Approximately 4 km north of the Potomac River mouth sub-bottom profiles (Figure 24) indicate that the paleothalweg of the Mainstem of the Bay is around -42 m (-138 ft). The Mainstem paleochannel and the Potomac paleochannel intersect at about latitude 37°50'N and longitude 76°08'W. Ryan (1953) reported the thalweg depth of the ancestral Susquehanna River between Annapolis, Maryland and Kent Island, Maryland, in the northern part of the Bay, to be at approximately -61 m (-200 ft). If the Susquehanna flowed southward down the present Mainstem its thalweg would have had to rise approximately 16 m (53 ft) between Annapolis and the Potomac River mouth. This is extremely unlikely. The channel seen in the present Mainstem was probably formed from the merger of some of the smaller ancestral streams along Maryland's western shore or was an earlier abandoned channel of the ancestral Susquehanna.

Sub-bottom profiles in Tangier Sound (Figure 25) indicate the existence of a deep paleochannel (Figure 25a) that appears to have deltaic sedimentation along its eastern margin. The sub-bottom survey was not capable of penetrating to the thalweg depth which is greater than -30 m (-100 ft). Figure 25b shows a weak reflector at -35 m (-115 ft) but no substantial conclusions can be made from it. It is evident that a major paleostream flowed in the present Tangier Sound region. Since its thalweg was not located while the Mainstem thalweg was, it is inferred that the ancestral Susquehanna flowed at least in part, through the present Tangier Sound region.

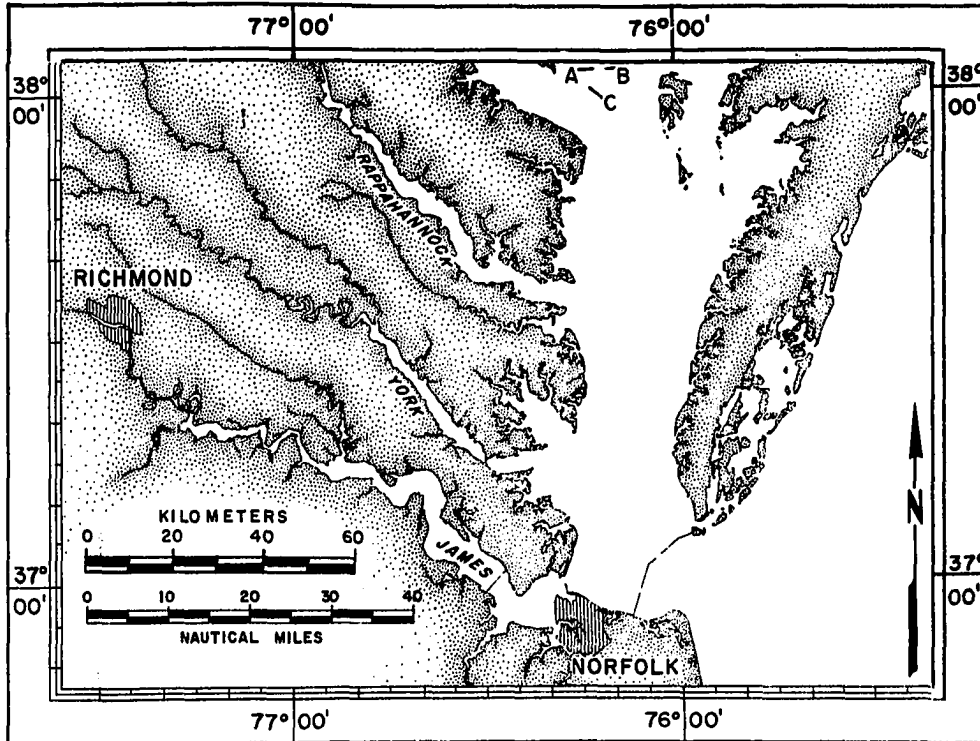
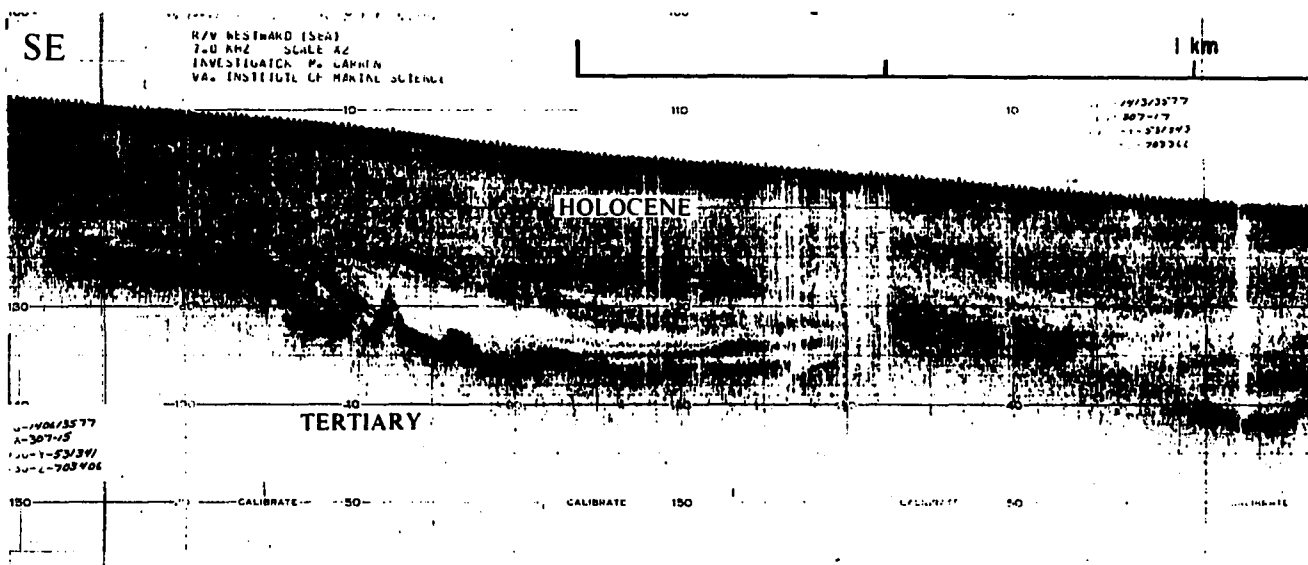
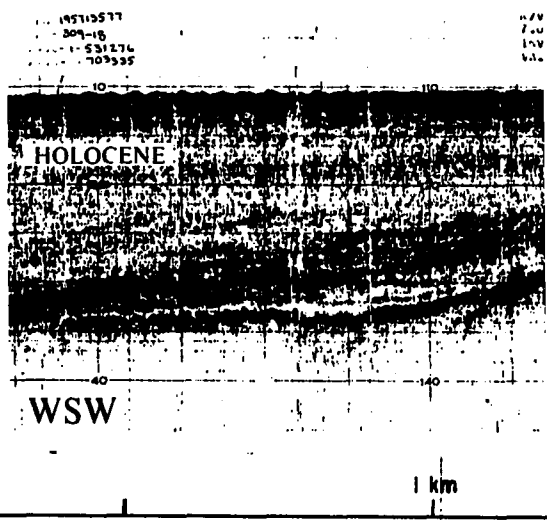
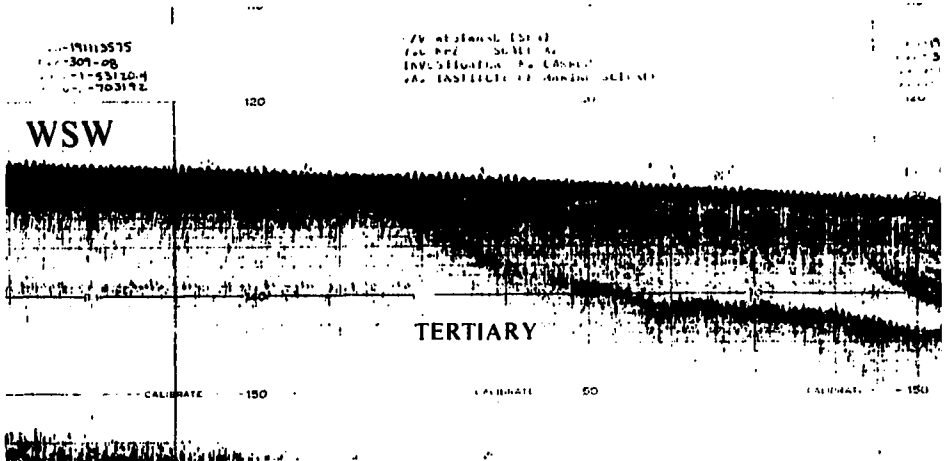


Figure 24. Selected sub-bottom profiles in the Mainstem region north of the Potomac River mouth.







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20

RAYTHEON CO.

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ENE

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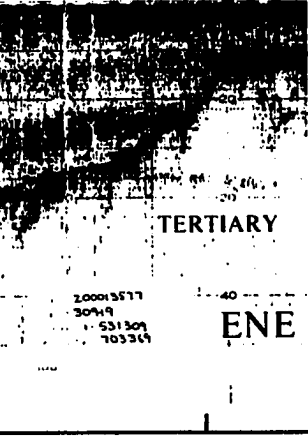
A

HOLOCENE

-30

-20

W. W. WILSON, JR., GEOL. ENGR.  
U.S. NAVY, NAVAL INSTITUTE OF NAUTICAL SCIENCE



B

TERTIARY

-40

ENE

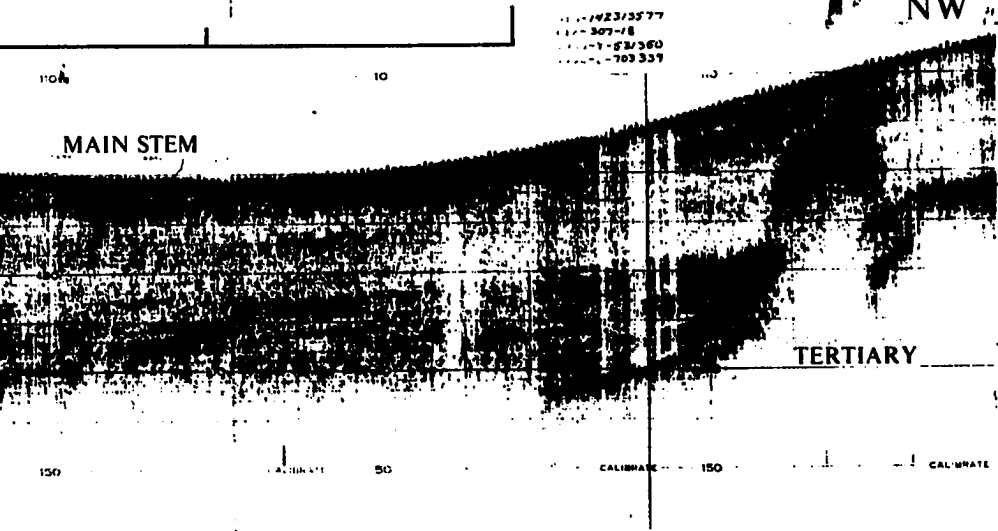
200015577  
309-08  
53191  
703196

NW

-20

METERS

APPARENT DEPTH BELOW MEAN LOW WATER



C

TERTIARY

-40

150 CALIBRATE 50 CALIBRATE 150 CALIBRATE

FIGURE 24



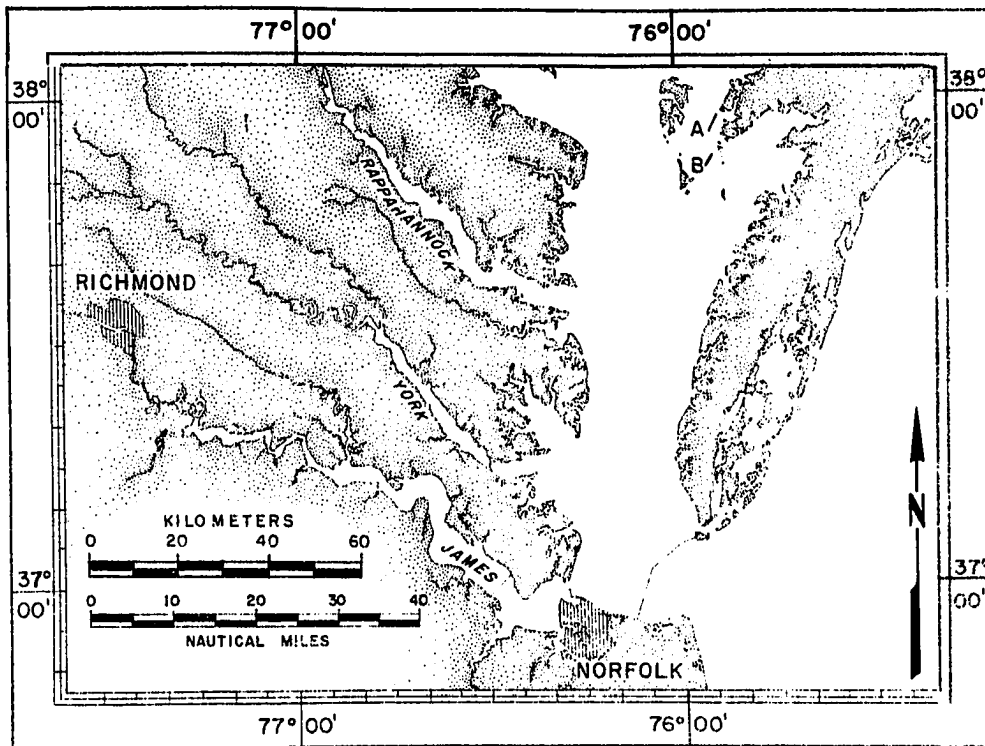
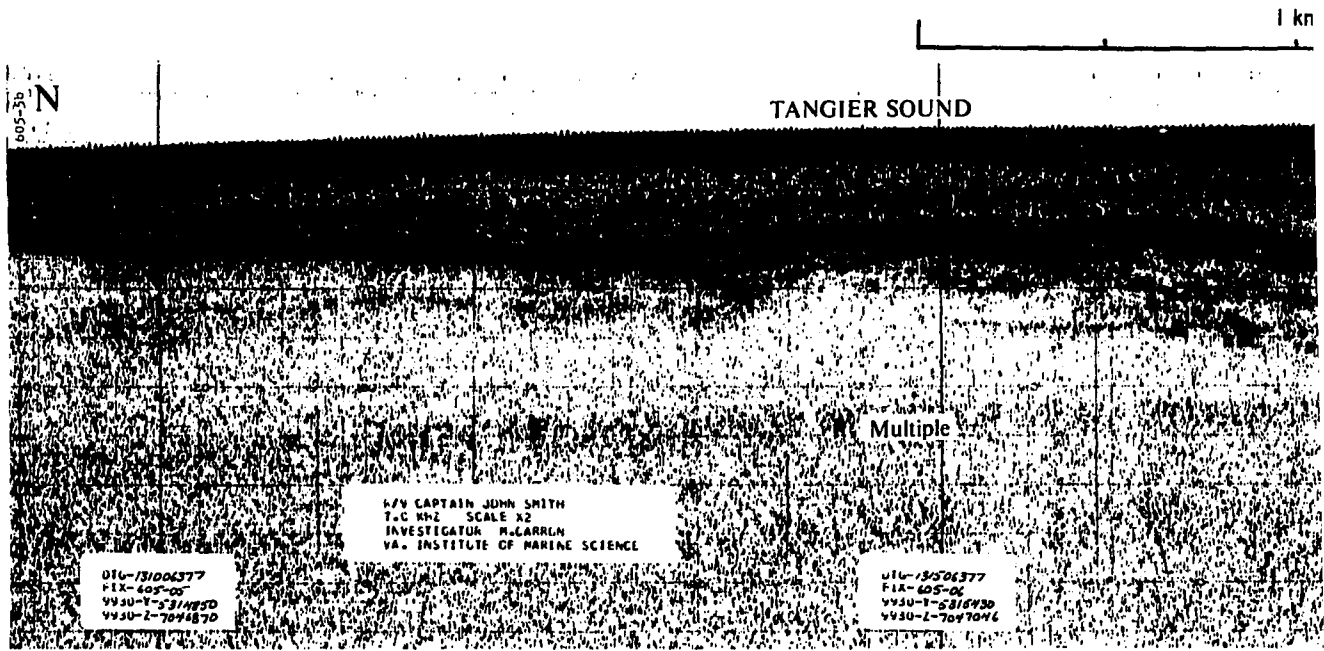
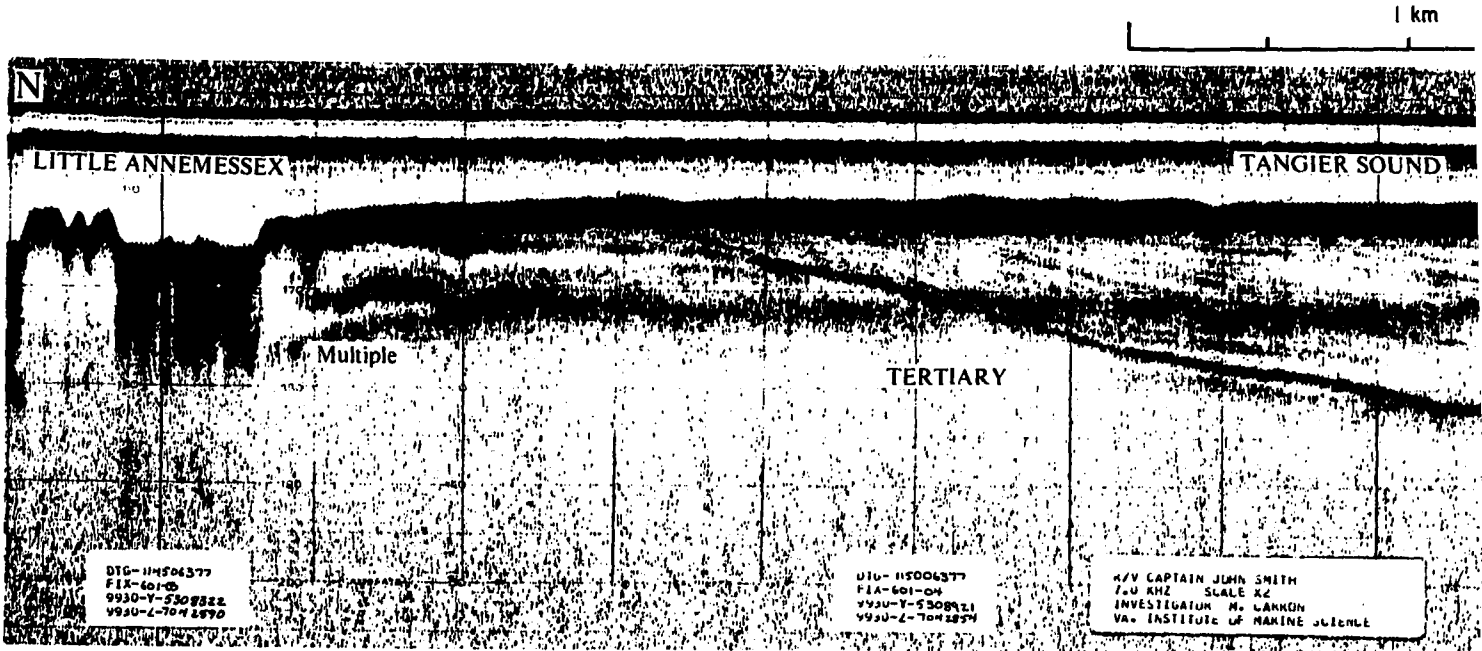
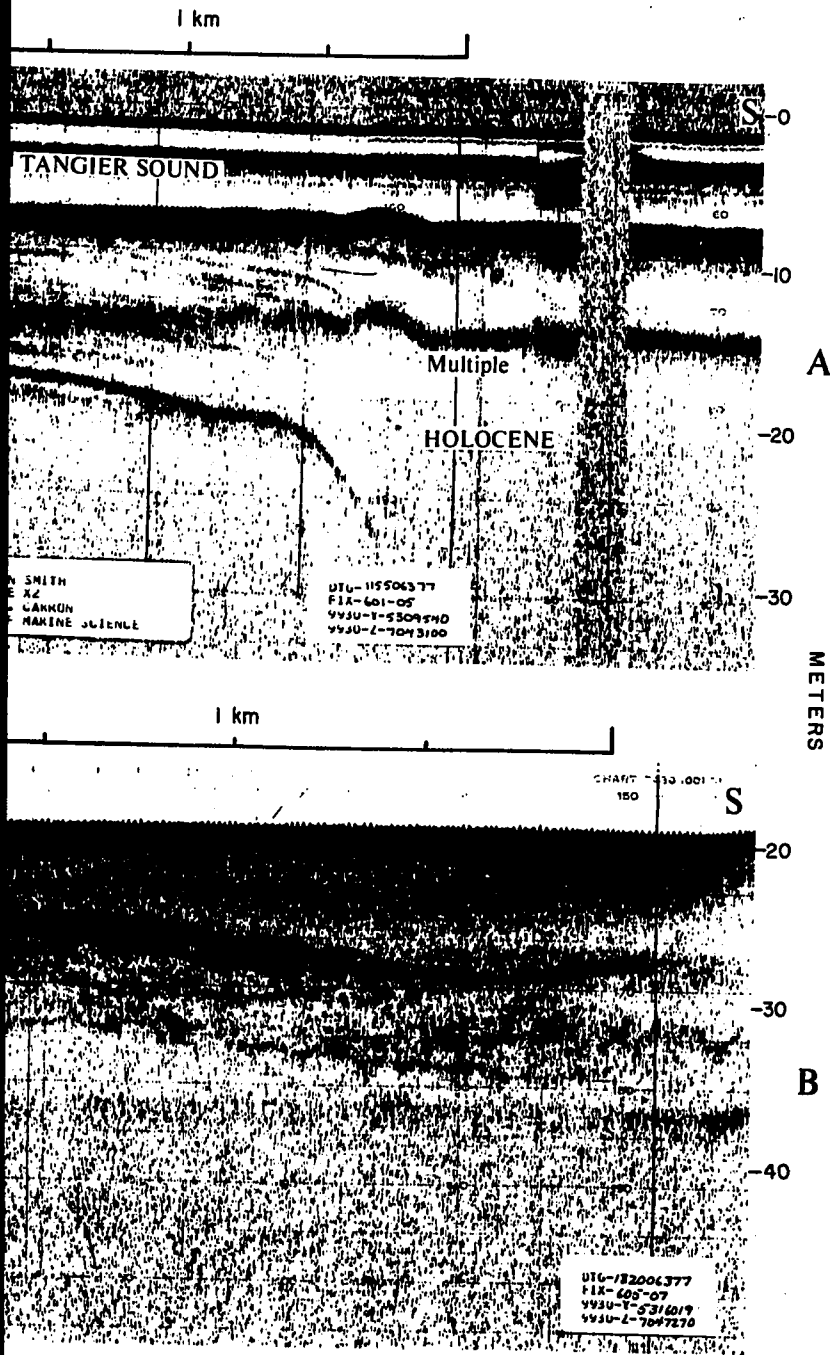


Figure 25. Selected sub-bottom profiles in Tangier Sound.







APPARENT DEPTH BELOW MEAN LOW WATER

FIGURE 25



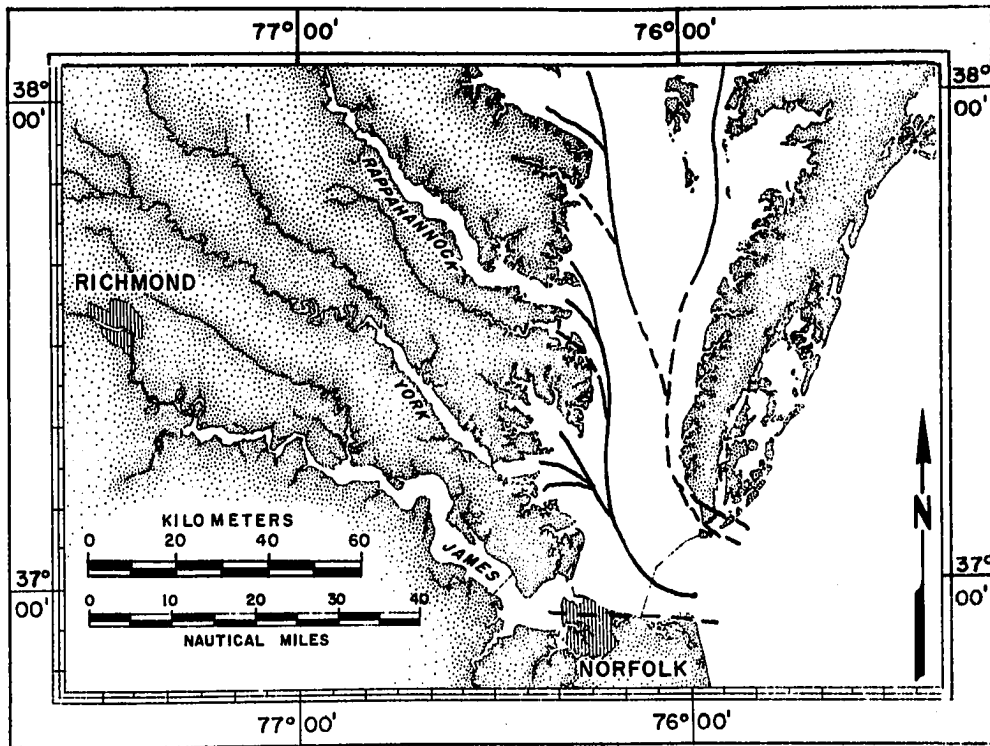
No significant sub-bottom reflectors below -35 m were encountered in Pocomoke Sound. Shallow water prevented a complete survey and reduced the effectiveness of the survey equipment. No significant sub-bottom reflectors were found along the Virginia Eastern Shore. If any exist they are below the effective penetration range of the equipment used in this study.

Mixon (1978) reports the existence of a paleochannel crossing the Delmarva Peninsula south of the City of Cape Charles at a depth greater than -60 m below mean sea level. This may very well be part of the major channel of the pre-Sangamanian or Winconsinan Susquehanna River. A comparison of the inferred positions of the major paleochannels in the lower Chesapeake Bay with the present thalweg (Figure 26) indicates that only in a few cases is the ancient channel reflected in the present bathymetry. The most reliable data is represented by a solid line whereas weaker data is represented by dashes.

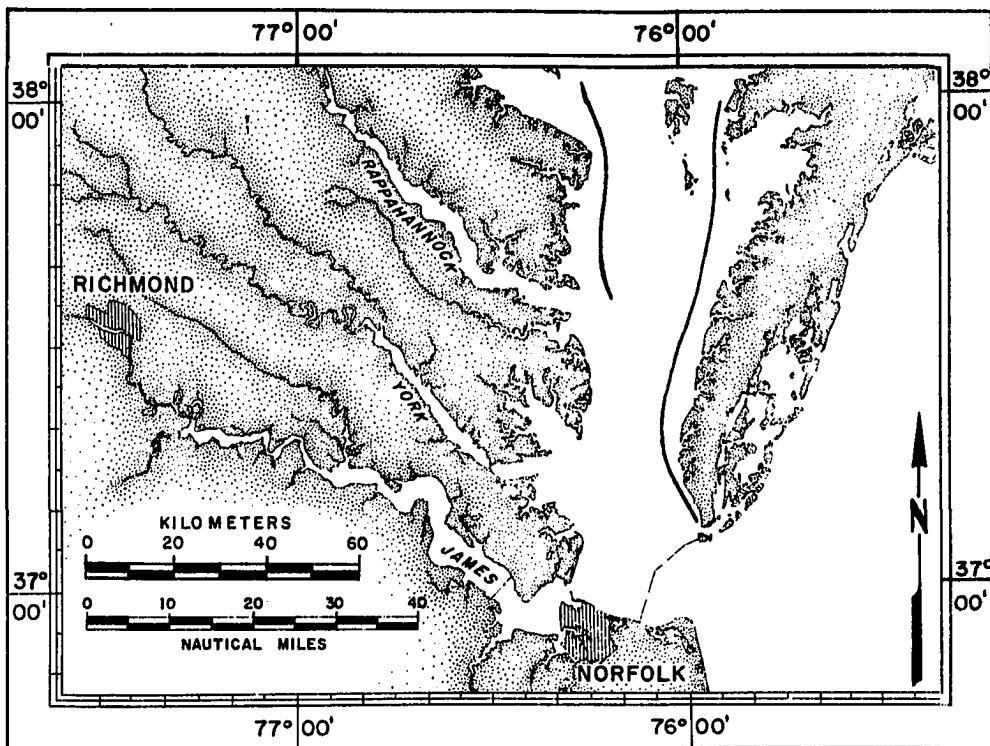
No significant evidence for differential crustal movement was seen in the sub-bottom record. The only anomalous feature is what appears to be a slight upslope flow of the ancestral James and York rivers. This small irregularity seen in the paleothalweg depths which may be the result of sample spacing for the core data or speed of sound errors for the sub-bottom profiles.

With the discovery of Mixon's deep paleochannel in the southern Delmarva and the removal of the Rappahannock and York rivers from the





**A**



**B**

Figure 26. A-Inferred position of major paleochannels, and B-Present thalwegs of the Virginia Chesapeake Bay.

ancestral Susquehanna River system, the primary supportive evidence for Harrison's postulated late-Pleistocene uplift of the Chesapeake Bay mouth is no longer viable. Likewise, the hypothesis that significant crustal warping controlled the course of the ancestral Susquehanna River in the lower parts of the Bay is not supported by the results of this research.

## SUMMARY

The Virginia Chesapeake Bay was found to be filling with sediments at a rate slightly higher than the relative sea level rise rate, but very near the maximum rise rate predicted by Rusnak (1961) of 60 cm per century. The rate of sedimentation is not constant over the Virginia Chesapeake Bay, but is strongly dependent on the depth of water. A statistically significant bimodal relationship of depth versus sedimentation rate was found where the highest rates were in the very shallow (0-6 ft) (0-1.8 m) depths and mid-depths (18-42 ft) (5.5-12.8 m) while the lowest rate was found in between 6 (1.8 m) and 12 feet (3.7 m) of water. Likewise, a relatively low rate was found in water greater than 42 feet (12.8 m).

The results of the seismic sub-bottom survey demonstrated that the major Virginia Rivers (Rappahannock, Piankatank, York, and James) were not tributary to the Susquehanna in the present Chesapeake Bay region during the Wisconsin glacialiation as was previously believed, but were members of an independent system in which the York and Piankatank were tributary to the Rappahannock and flowed from the Chesapeake Bay region below the Tail of the Horseshoe Shoal on the south side of the bay mouth. The James appears to have flowed from the bay region below Lynnhaven Roads and Cape Henry.

The Susquehanna River apparently did not flow down the Mainstem of the Bay during late-Wisconsin or early-Holocene time, but rather in the Tangier Sound region.

The seismic sub-bottom survey does not show any major evidence to support theories concerning the existence of major crustal movements in the lower Bay region during late-Wisconsin or early-Holocene time.

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**APPENDIX A**

**DETAILED METHODOLOGY USED IN DETERMINING  
THE SEDIMENTATION RATES FROM BATHYMETRIC  
COMPARISONS FOR THE CHESAPEAKE BAY IN VIRGINIA**

Method. During the summer and fall of 1978 the bathymetric boat sheets of the 1950-and-later-series (Figure A1) and the 1850-series (Figure A2) were digitized<sup>1</sup> and stored on magnetic tape. These data were then grouped into one of a possible 420,000 six-second (approximately 150 x 200 m) rectangles. The depths for each six-second rectangle were then averaged. Since each rectangle is only approximately three-hundredths of a square kilometer it was felt that a simple average of data points was sufficient to represent the depth in the rectangle. The 1850-series data were then corrected for relative sea level changes which would in effect change the vertical datum between surveys. Three corrections were applied:

1. Eustatic sea level change,
2. Crustal changes,
3. Semi-annual and annual tidal variations.

Eustatic sea level change was assumed to be 1 mm/year. The correction was applied to the number of years between the center of the 1950 tidal epoch (1950) and the survey date for the 1850-series survey.

Crustal changes which would appear to be bottom erosion (all changes were downward) when in fact no mass balance change took place were accounted for by applying a fifth order trend surface equation to the data of Holdahl and Morrison (1974) (Figure A3) giving vertical

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<sup>1</sup> Many of the more recent surveys were received in magnetic tape form from the Environmental Data Service of the National Oceanic and Atmospheric Administration.

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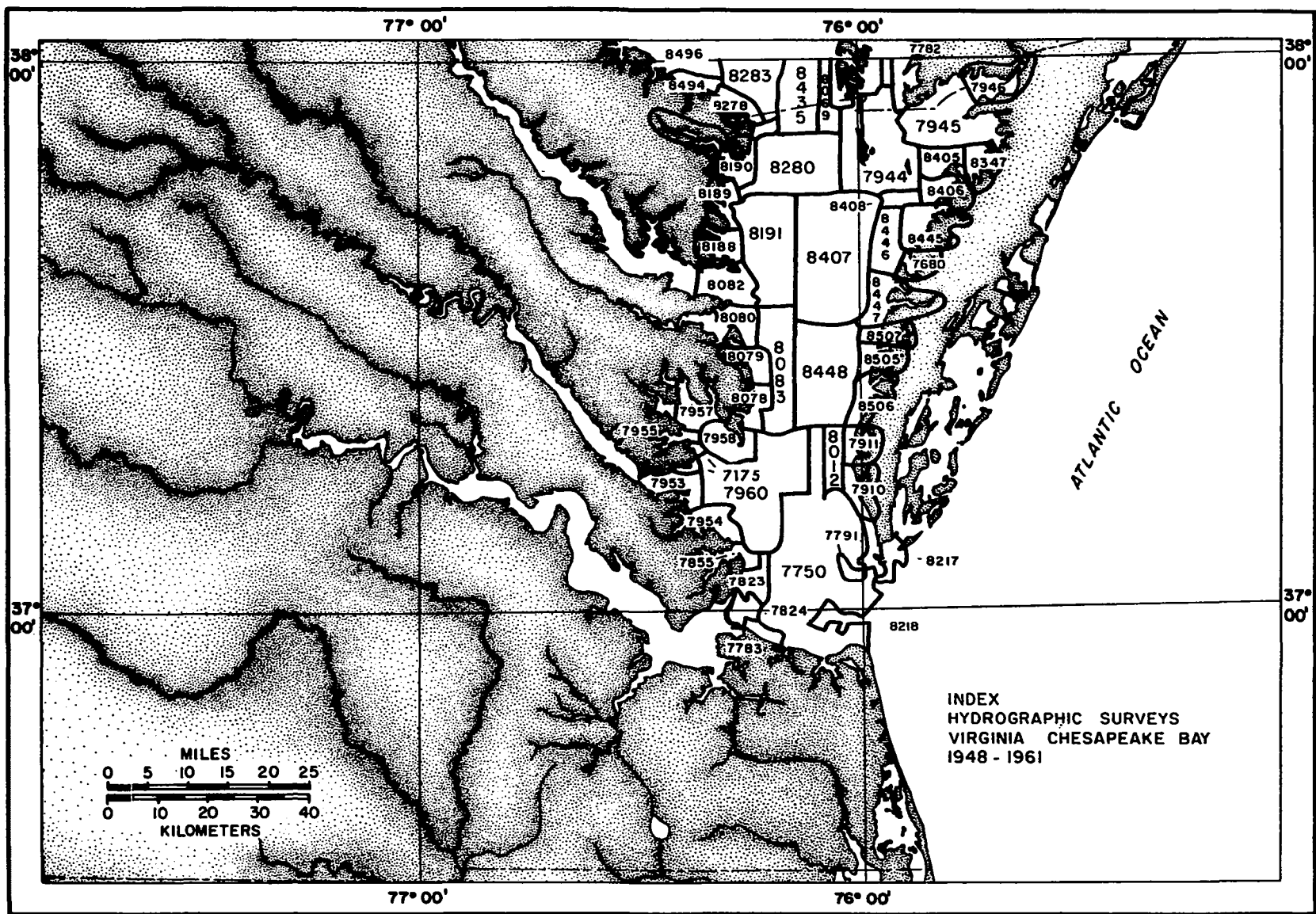


FIGURE A1.

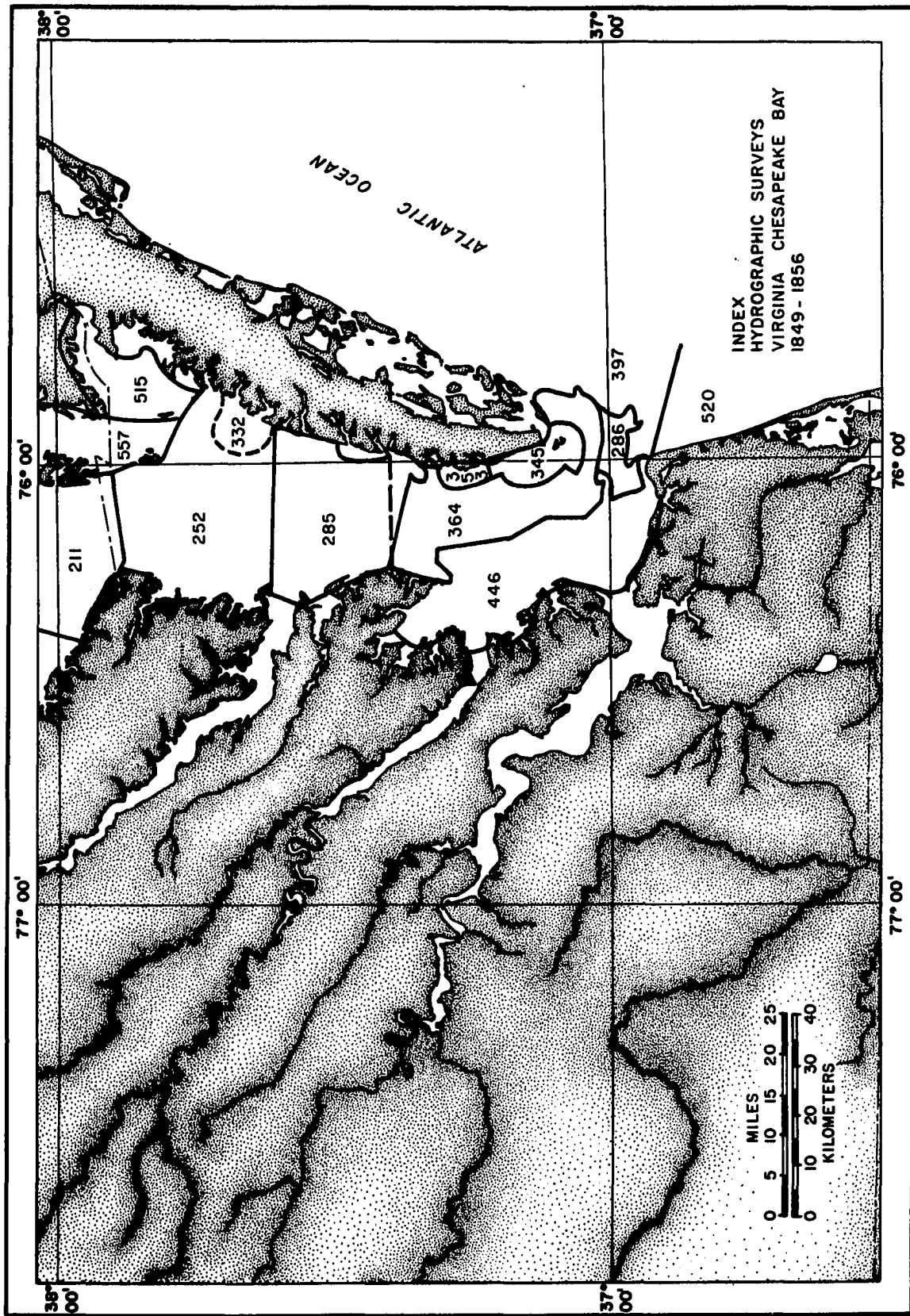


FIGURE A2.

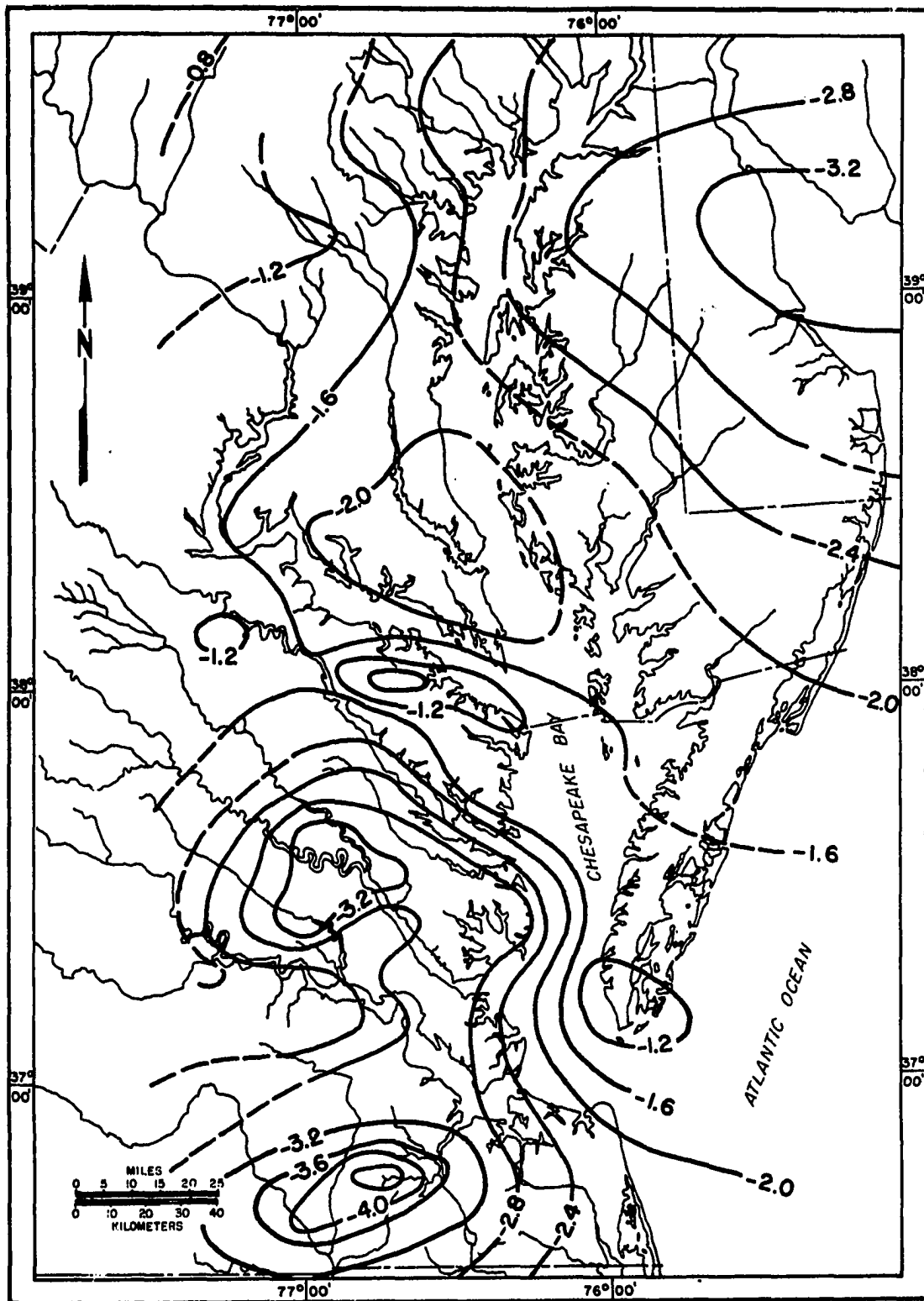


Figure A3. Rates of crustal change (mm/yr) of the Chesapeake Bay region in recent time. (from Holdahl and Morrison, 1974)

crustal movement rates for the same period used in this sedimentation and erosion study. For all geographical positions in question the rate of crustal change was multiplied by the difference in survey years.

Semi-annual and annual tidal variation (Figure A4) corrections were applied to the 1850-series data to correct for minor deviations of observed mean low water and actual mean low water.

The resulting comparison equation is as follows:

$$\Delta D = \frac{D_0 - D_n + (E \times (1950 - Y_0)) - ((C \times (\Delta Y)) - T)}{\Delta Y}$$

where,

$$C = b_0 + b_1 X_1 + b_2 X_2 + b_3 X_1^2 + b_4 X_2^2 + b_5 X_1 X_2 + \dots + b_{21} X_1^2 X_2^3$$

where,  $b_i$  = trend surface coefficients  
 $X_i$  = geographic coordinates

$\Delta D$  = change in average depth in 6-second rectangle per century.

$D_0$  = old average depth in 6-second rectangle.

$D_n$  = new average depth in 6-second rectangle.

$E$  = eustatic sea level change per year.

$Y_0$  = average date of old depths in 6-second rectangle.

$Y_n$  = average date of new depths in 6-second rectangle.

$\Delta Y = Y_n - Y_0$

$T$  = semi-annual and annual constituents tidal correction.

Approximately 40,000 comparisons were made and normalized to give the change in depth for 100 years for each rectangle that contained depth data for both the 1850-series and 1950-series. These data were then divided into seven groups,  $<-2.3$  m/cent.,  $-1.3$  to  $-2.3$  m/cent.,  $-0.3$  to  $-1.3$  m/cent.,  $-0.3$  to  $0.3$  m/cent.,  $0.3$  to  $1.3$  m/cent.,  $1.3$  to  $2.3$  m/cent., and  $>2.3$  m/cent. These groups were then plotted on



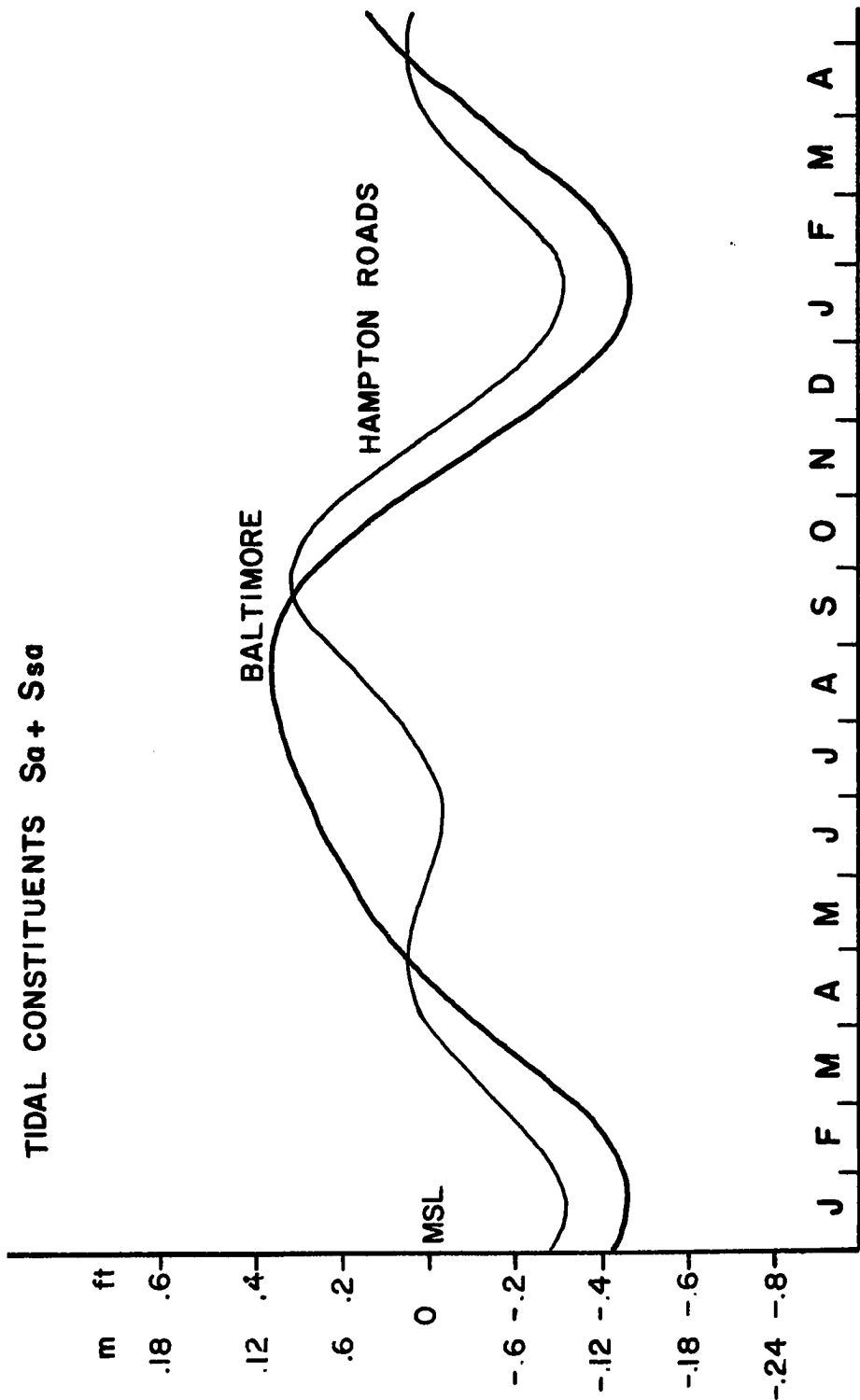


FIGURE A4.

1:80,000 scale charts (Charts 1 and 2 located in the map envelope of Volume I).

Additionally the study area was divided into 66 one-minute north-south intervals. These one-minute intervals were then divided into four sub-segments: western shore; eastern shore; eastern side of Smith-Tangier Islands; and, western side of Smith-Tangier Islands (Figure A5). Two additional sub-segments were used for Pocomoke Sound and Mobjack Bay.

Each sub-segment was further sub-divided into eight zones (0-6 ft, 6-12 ft .....>42 ft). The units used are English because depth data available is only in English units and it would have been awkward to use their metric equivalents. The area for each zone was then determined and all sedimentation rate data points falling within the zone were averaged. The product of the average sedimentation rate and the area for each zone gives the volume change per unit time for that zone. The surface area for each zone, average sedimentation rate for each zone, the volume change in each zone for 100 years and accumulation of each is given in tabular form (Appendix B) and graphic form (Appendix C and Appendix D). Appendix E gives west to east comparative cross-sections for each one-minute of latitude between 38°00N and 36°56N.

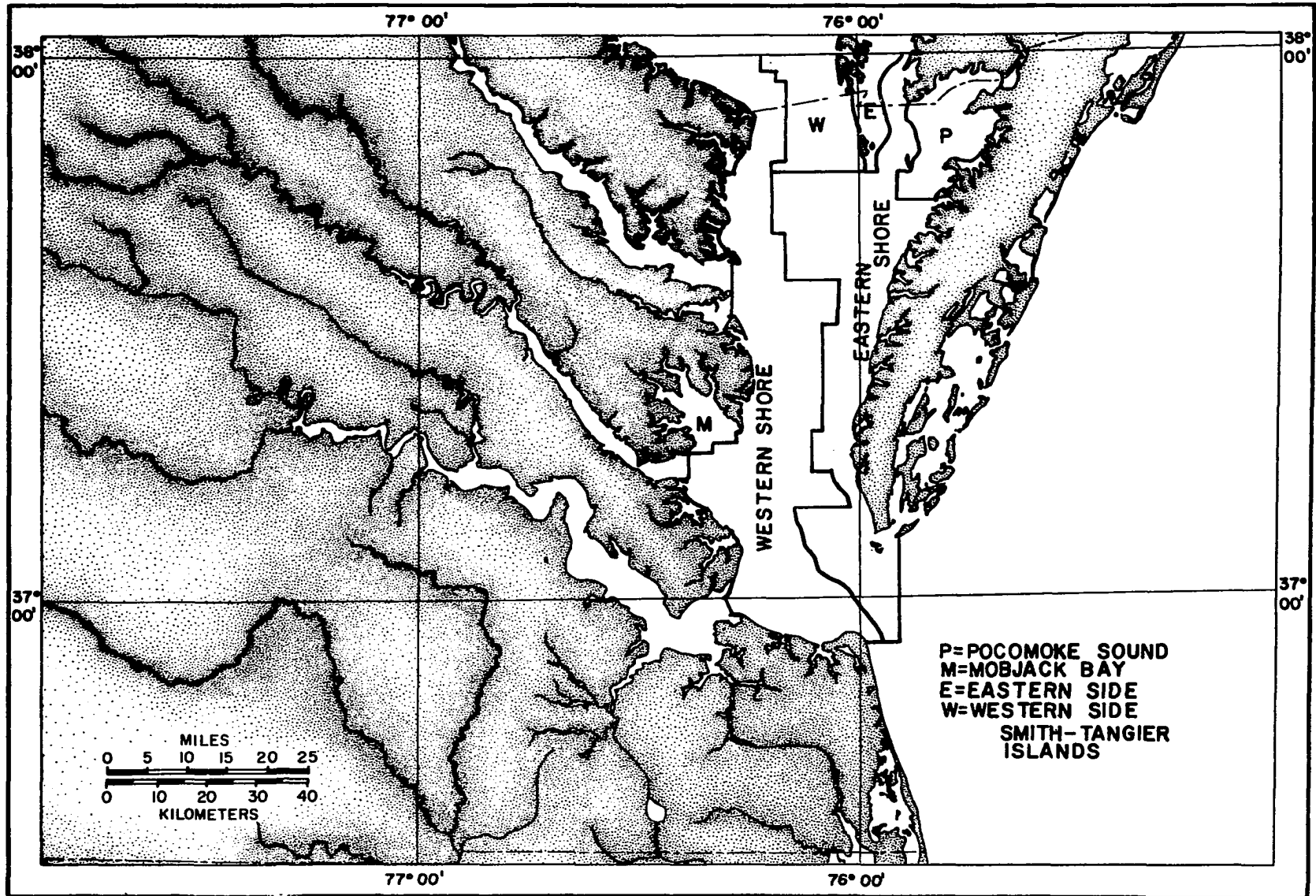


Figure A5. Subdivisions of the Chesapeake Bay used in sedimentation rate and sediment volume change calculations.

## VITA

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## APPENDIX B

### AREA, SEDIMENTATION RATE AND VOLUME DATA FROM BATHYMETRIC COMPARISONS 1850-SERIES TO 1950-SERIES

Figure B-1 gives the subdivisions used in these calculations.

#### Nomenclature

L	Segment number (1-66) each being 1-minute of latitude from 38°00'N to 36°56'N. (ex. L = 1 is 38°00'N to 37°59'N)
AYD2	Area in square yards.
$\Sigma$ AYD2	Cumulative area in square yards.
M2	Area in square meters.
$\Sigma$ M2	Cumulative area in square meters.
SRM	Sedimentation rate in meters per 100 years.
SRF	Sedimentation rate in feet per 100 years.
YD3	Volume change in cubic yards in 100 years.
$\Sigma$ YD3	Cumulative volume change in cubic yards per 100 years.
M3	Volume change in cubic meters in 100 years.
$\Sigma$ M3	Cumulative volume change in square meters per 100 years.

#### Exponential Notation

E signals exponent base 10 (i.e. 2.0 E 06 is equivalent to  $2.0 \times 10^6$ )

WESTERN SHORE (DEPTH 0-6 FEET)

L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	2.53E 06	2.53E 06	2.12E 06	2.12E 06	0.54	1.77	1.49E 06	1.49E 06	1.14E 06	1.14E 06
4	1.78E 06	4.31E 06	1.49E 06	3.60E 06	0.72	2.36	1.40E 06	2.89E 06	1.07E 06	2.21E 06
5	1.85E 06	6.16E 06	1.55E 06	5.15E 06	0.47	1.54	9.52E 05	3.85E 06	7.28E 05	2.94E 06
6	1.48E 06	7.64E 06	1.24E 06	6.39E 06	0.64	2.10	1.04E 06	4.88E 06	7.93E 05	3.73E 06
7	2.91E 06	1.06E 07	2.44E 06	8.83E 06	0.83	2.72	2.64E 06	7.53E 06	2.02E 06	5.75E 06
8	1.10E 06	1.17E 07	9.19E 05	9.74E 06	0.64	2.10	7.69E 05	8.29E 06	5.88E 05	6.34E 06
9	1.02E 06	1.27E 07	8.57E 05	1.06E 07	0.46	1.51	5.15E 05	8.81E 06	3.94E 05	6.74E 06
10	7.90E 05	1.35E 07	6.61E 05	1.13E 07	-0.08	-0.26	-6.91E 04	8.74E 06	-5.28E 04	6.68E 06
11	2.40E 06	1.59E 07	2.00E 06	1.33E 07	0.51	1.67	1.34E 06	1.01E 07	1.02E 06	7.70E 06
12	2.72E 05	1.61E 07	2.27E 05	1.35E 07	0.21	0.69	6.24E 04	1.01E 07	4.77E 04	7.75E 06
13	1.57E 06	1.77E 07	1.31E 06	1.48E 07	0.05	0.16	8.57E 04	1.02E 07	6.55E 04	7.82E 06
14	6.72E 06	2.44E 07	5.62E 06	2.04E 07	0.20	0.66	1.47E 06	1.17E 07	1.12E 06	8.94E 06
15	3.53E 06	2.80E 07	2.95E 06	2.34E 07	0.55	1.80	2.12E 06	1.38E 07	1.62E 06	1.06E 07
16	1.02E 06	2.90E 07	8.57E 05	2.42E 07	1.38	4.53	1.55E 06	1.54E 07	1.18E 06	1.17E 07
17	2.16E 06	3.11E 07	1.81E 06	2.60E 07	0.17	0.56	4.02E 05	1.58E 07	3.07E 05	1.21E 07
18	1.49E 06	3.26E 07	1.25E 06	2.73E 07	0.11	0.36	1.80E 05	1.59E 07	1.37E 05	1.22E 07
19	2.95E 06	3.56E 07	2.47E 06	2.97E 07	0.19	0.62	6.13E 05	1.66E 07	4.69E 05	1.27E 07
20	1.63E 06	3.72E 07	1.36E 06	3.11E 07	-0.10	-0.33	-1.78E 05	1.64E 07	-1.36E 05	1.25E 07
21	1.19E 06	3.84E 07	9.91E 05	3.21E 07	0.27	0.89	3.50E 05	1.67E 07	2.67E 05	1.28E 07
22	3.81E 06	4.22E 07	3.19E 06	3.53E 07	0.49	1.61	2.04E 06	1.88E 07	1.56E 06	1.44E 07
23	2.94E 06	4.51E 07	2.46E 06	3.77E 07	0.31	1.02	9.96E 05	1.98E 07	7.61E 05	1.51E 07
24	4.17E 06	4.93E 07	3.49E 06	4.12E 07	0.86	2.82	3.92E 06	2.37E 07	3.00E 06	1.81E 07
25	0.0	4.93E 07	0.0	4.12E 07	0.0	0.0	0.0	2.37E 07	0.0	1.81E 07
26	6.91E 05	5.00E 07	5.78E 05	4.18E 07	0.17	0.56	1.29E 05	2.38E 07	9.82E 04	1.82E 07
27	4.22E 06	5.42E 07	3.53E 06	4.53E 07	0.30	0.98	1.38E 06	2.52E 07	1.06E 06	1.93E 07
28	6.17E 04	5.43E 07	5.16E 04	4.54E 07	0.0	0.0	0.0	2.52E 07	0.0	1.93E 07
29	8.27E 05	5.51E 07	6.92E 05	4.61E 07	-0.45	-1.48	-4.07E 05	2.48E 07	-3.11E 05	1.90E 07
30	1.52E 06	5.66E 07	1.27E 06	4.74E 07	-0.36	-1.18	-5.98E 05	2.42E 07	-4.57E 05	1.85E 07
31	7.53E 05	5.74E 07	6.30E 05	4.80E 07	-0.87	-2.85	-7.16E 05	2.35E 07	-5.48E 05	1.80E 07



WESTERN SHORE (DEPTH 6-12 FEET)

L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	2.89E 06	2.89E 06	2.42E 06	2.42E 06	0.64	2.10	2.02E 06	2.02E 06	1.55E 06	1.55E 06
4	5.56E 05	3.44E 06	4.64E 06	2.88E 06	0.30	0.98	1.82E 06	2.20E 06	1.39E 05	1.68E 06
5	6.17E 05	4.06E 06	5.16E 06	3.40E 06	0.72	2.36	4.86E 06	2.69E 06	3.72E 05	2.06E 06
6	2.35E 06	6.41E 06	1.96E 06	5.36E 06	0.27	0.89	6.92E 06	3.38E 06	5.29E 05	2.59E 06
7	6.77E 06	1.32E 07	5.66E 06	1.10E 07	0.66	2.16	4.88E 06	8.26E 06	3.73E 06	6.32E 06
8	1.41E 06	1.46E 07	1.18E 07	1.22E 07	0.39	1.28	6.00E 06	8.86E 06	4.59E 05	6.78E 06
9	2.35E 05	1.48E 07	1.96E 05	1.24E 07	0.74	2.43	1.90E 06	9.05E 06	1.45E 05	6.92E 06
10	4.32E 05	1.52E 07	3.61E 05	1.27E 07	-0.40	-1.31	-1.89E 06	8.86E 06	-1.44E 05	6.78E 06
11	1.57E 06	1.68E 07	1.31E 06	1.41E 07	0.50	1.64	8.57E 06	9.72E 06	6.55E 05	7.43E 06
12	1.38E 06	1.82E 07	1.16E 06	1.52E 07	0.78	2.56	1.18E 06	1.09E 07	9.02E 05	8.33E 06
13	1.06E 06	1.93E 07	8.88E 05	1.61E 07	0.22	0.72	2.55E 05	1.12E 07	1.95E 05	8.53E 06
14	2.16E 06	2.14E 07	1.81E 06	1.79E 07	0.10	0.33	2.36E 05	1.14E 07	1.81E 05	8.71E 06
15	5.05E 06	2.65E 07	4.22E 06	2.21E 07	0.34	1.12	1.88E 06	1.33E 07	1.44E 06	1.01E 07
16	6.38E 06	3.29E 07	5.34E 06	2.75E 07	0.67	2.20	4.68E 06	1.79E 07	3.57E 06	1.37E 07
17	2.85E 06	3.57E 07	2.38E 07	2.99E 07	0.32	1.05	9.98E 05	1.89E 07	7.63E 05	1.45E 07
18	1.79E 06	3.75E 07	1.50E 06	3.13E 07	0.17	0.56	3.33E 05	1.93E 07	2.54E 05	1.47E 07
19	1.23E 06	3.87E 07	1.03E 06	3.24E 07	0.21	0.69	2.83E 05	1.96E 07	2.17E 05	1.50E 07
20	4.07E 06	4.28E 07	3.41E 06	3.58E 07	0.42	1.38	1.87E 06	2.14E 07	1.43E 06	1.64E 07
21	2.37E 06	4.52E 07	1.98E 07	3.78E 07	0.43	1.41	1.11E 06	2.25E 07	8.52E 05	1.72E 07
22	1.62E 06	4.68E 07	1.35E 06	3.91E 07	0.08	0.26	1.41E 05	2.27E 07	1.08E 05	1.73E 07
23	1.26E 06	4.80E 07	1.05E 06	4.02E 07	0.44	1.44	6.06E 05	2.33E 07	4.63E 05	1.78E 07
24	3.68E 06	5.17E 07	3.08E 06	4.32E 07	0.39	1.28	1.57E 06	2.49E 07	1.20E 06	1.90E 07
25	2.22E 06	5.40E 07	1.86E 06	4.51E 07	0.59	1.94	1.43E 06	2.63E 07	1.10E 06	2.01E 07
26	8.40E 05	5.48E 07	7.02E 05	4.58E 07	-0.10	-0.33	-9.18E 04	2.62E 07	-7.02E 04	2.00E 07
27	1.15E 06	5.59E 07	9.60E 05	4.68E 07	0.55	1.80	6.90E 05	2.69E 07	5.28E 05	2.06E 07
28	2.47E 05	5.62E 07	2.06E 05	4.70E 07	0.19	0.62	5.13E 04	2.69E 07	3.92E 04	2.06E 07
29	1.42E 06	5.76E 07	1.19E 06	4.82E 07	-0.38	-1.25	-5.90E 05	2.64E 07	-4.51E 05	2.01E 07
30	5.68E 05	5.82E 07	4.75E 05	4.86E 07	-0.41	-1.34	-2.55E 05	2.61E 07	-1.95E 05	2.00E 07
31	3.33E 05	5.85E 07	2.79E 05	4.89E 07	-1.75	-5.74	-6.38E 05	2.55E 07	-4.88E 05	1.95E 07



L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
32	1.57E 06	6.01E 07	1.31E 06	5.02E 07	-0.94	-3.08	-1.61E 06	2.39E 07	-1.23E 06	1.82E 07
33	4.59E 06	6.47E 07	3.84E 06	5.41E 07	0.73	2.39	3.67E 06	2.75E 07	2.80E 06	2.10E 07
34	2.16E 06	6.68E 07	1.81E 06	5.59E 07	-0.11	-0.36	-2.60E 05	2.73E 07	-1.99E 05	2.08E 07
35	1.12E 06	6.80E 07	9.39E 05	5.68E 07	0.32	1.05	3.93E 05	2.76E 07	3.01E 05	2.11E 07
36	3.58E 06	7.15E 07	2.99E 06	5.98E 07	0.07	0.23	2.74E 05	2.79E 07	2.09E 05	2.13E 07
37	3.52E 06	7.50E 07	2.94E 06	6.27E 07	0.45	1.48	1.73E 06	2.97E 07	1.32E 06	2.27E 07
38	4.57E 05	7.55E 07	3.82E 05	6.31E 07	1.75	5.74	8.74E 05	3.05E 07	6.68E 05	2.33E 07
39	5.19E 05	7.60E 07	4.54E 05	6.36E 07	2.01	6.59	1.14E 06	3.17E 07	8.71E 05	2.42E 07
40	9.38E 05	7.70E 07	7.84E 05	6.43E 07	1.50	4.92	1.54E 06	3.32E 07	1.18E 06	2.54E 07
41	1.12E 06	7.81E 07	9.39E 05	6.53E 07	1.15	3.77	1.41E 06	3.46E 07	1.08E 06	2.65E 07
42	2.63E 06	8.07E 07	2.20E 06	6.75E 07	1.10	3.61	3.16E 06	3.78E 07	2.42E 06	2.89E 07
43	8.27E 05	8.15E 07	6.92E 05	6.82E 07	0.46	1.51	4.16E 05	3.82E 07	3.18E 05	2.92E 07
44	2.25E 06	8.38E 07	1.88E 06	7.01E 07	0.77	2.53	1.89E 06	4.01E 07	1.45E 06	3.07E 07
45	4.07E 06	8.79E 07	3.41E 06	7.35E 07	0.30	0.98	1.34E 06	4.14E 07	1.02E 06	3.17E 07
46	2.12E 06	9.00E 07	1.78E 06	7.52E 07	0.44	1.44	1.02E 06	4.24E 07	7.81E 05	3.25E 07
47	2.67E 06	9.27E 07	2.23E 06	7.75E 07	-0.08	-0.26	-2.33E 05	4.22E 07	-1.78E 05	3.23E 07
48	1.57E 06	9.42E 07	1.31E 06	7.88E 07	0.13	0.43	2.23E 05	4.24E 07	1.70E 05	3.24E 07
49	4.49E 06	9.87E 07	3.76E 06	8.25E 07	-0.08	-0.26	-3.93E 05	4.20E 07	-3.01E 05	3.21E 07
50	4.88E 06	1.04E 08	4.08E 06	8.66E 07	-0.08	-0.26	-4.27E 05	4.16E 07	-3.26E 05	3.18E 07
51	6.54E 05	1.04E 08	5.47E 05	8.72E 07	-0.50	-1.64	-3.58E 05	4.13E 07	-2.73E 05	3.15E 07
52	1.67E 06	1.06E 08	1.39E 06	8.86E 07	0.07	0.23	1.28E 05	4.14E 07	9.75E 04	3.16E 07
53	1.96E 06	1.08E 08	1.64E 06	9.02E 07	0.14	0.46	3.00E 05	4.17E 07	2.30E 05	3.19E 07
54	3.46E 06	1.11E 08	2.89E 06	9.31E 07	0.54	1.77	2.04E 06	4.37E 07	1.56E 06	3.34E 07
55	2.10E 06	1.13E 08	1.75E 06	9.48E 07	0.46	1.51	1.06E 06	4.48E 07	8.07E 05	3.42E 07
56	4.69E 06	1.18E 08	3.92E 06	9.88E 07	0.42	1.38	2.15E 06	4.69E 07	1.65E 06	3.59E 07
57	4.64E 06	1.23E 08	3.88E 06	1.03E 08	0.07	0.23	3.55E 05	4.73E 07	2.72E 05	3.62E 07
58	1.32E 06	1.24E 08	1.10E 06	1.04E 08	-0.73	-2.39	-1.05E 06	4.62E 07	-8.06E 05	3.54E 07
59	1.81E 06	1.26E 08	1.52E 06	1.05E 08	0.17	0.56	3.37E 05	4.66E 07	2.58E 05	3.56E 07
60	4.94E 05	1.26E 08	4.13E 05	1.06E 08	1.61	5.28	8.69E 05	4.74E 07	6.65E 05	3.63E 07
61	2.04E 06	1.28E 08	1.70E 06	1.07E 08	1.66	5.44	3.70E 06	5.11E 07	2.83E 06	3.91E 07
62	1.75E 06	1.30E 08	1.47E 06	1.09E 08	-0.12	-0.39	-2.30E 05	5.09E 07	-1.76E 05	3.89E 07
63	6.67E 05	1.31E 08	5.57E 05	1.09E 08	0.0	0.0	0.0	5.09E 07	0.0	3.89E 07
64	5.93E 05	1.31E 08	4.95E 05	1.10E 08	0.0	0.0	0.0	5.09E 07	0.0	3.89E 07
65	3.09E 06	1.35E 08	2.58E 06	1.12E 08	0.0	0.0	0.0	5.09E 07	0.0	3.89E 07
66	4.20E 05	1.35E 08	3.51E 05	1.13E 08	1.25	4.10	5.74E 05	5.15E 07	4.39E 05	3.94E 07

WESTERN SHORE (DEPTH 12-18 FEET)

L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	1.26E 06	1.26E 06	1.05E 06	1.05E 06	0.48	1.57	6.61E 05	6.61E 05	5.05E 05	5.05E 05
3	1.65E 06	2.91E 06	1.38E 06	2.44E 06	0.50	1.64	9.04E 05	1.57E 06	6.91E 05	1.20E 06
4	8.15E 05	3.73E 06	6.81E 05	3.12E 06	0.76	2.49	6.77E 05	2.24E 06	5.18E 05	1.71E 06
5	1.41E 06	5.14E 06	1.18E 06	4.29E 06	0.48	1.57	7.39E 05	2.98E 06	5.65E 05	2.28E 06
6	3.80E 06	8.94E 06	3.18E 06	7.47E 06	0.58	1.90	2.41E 06	5.39E 06	1.84E 06	4.12E 06
7	5.43E 05	9.48E 06	4.54E 05	7.93E 06	1.04	3.41	6.18E 05	6.01E 06	4.72E 05	4.59E 06
8	1.81E 06	1.13E 07	1.52E 06	9.44E 06	0.31	1.02	6.15E 05	6.62E 06	4.70E 05	5.07E 06
9	6.05E 05	1.19E 07	5.06E 05	9.95E 06	-0.21	-0.69	-1.39E 05	6.49E 06	-1.06E 05	4.96E 06
10	7.28E 05	1.26E 07	6.09E 05	1.06E 07	-0.43	-1.41	-3.42E 05	6.14E 06	-2.62E 05	4.70E 06
11	2.98E 06	1.56E 07	2.49E 06	1.30E 07	0.11	0.36	3.58E 05	6.50E 06	2.74E 05	4.97E 06
12	2.17E 06	1.78E 07	1.82E 06	1.49E 07	0.16	0.52	3.80E 05	6.88E 06	2.91E 05	5.26E 06
13	1.75E 06	1.95E 07	1.47E 06	1.63E 07	0.18	0.59	3.45E 05	7.23E 06	2.64E 05	5.53E 06
14	8.77E 05	2.04E 07	7.33E 05	1.71E 07	0.35	1.15	3.35E 05	7.56E 06	2.56E 05	5.78E 06
15	1.96E 06	2.24E 07	1.64E 06	1.87E 07	0.18	0.59	3.86E 05	7.95E 06	2.95E 05	6.08E 06
16	4.70E 06	2.71E 07	3.93E 06	2.26E 07	0.49	1.61	2.52E 06	1.05E 07	1.93E 06	8.00E 06
17	5.77E 06	3.28E 07	4.82E 06	2.75E 07	0.51	1.67	3.21E 06	1.37E 07	2.46E 06	1.05E 07
18	4.33E 06	3.72E 07	3.62E 06	3.11E 07	0.28	0.92	1.33E 06	1.50E 07	1.01E 06	1.15E 07
19	7.90E 05	3.80E 07	6.61E 05	3.17E 07	0.72	2.36	6.22E 05	1.56E 07	4.76E 05	1.20E 07
20	1.40E 06	3.94E 07	1.17E 06	3.29E 07	0.55	1.80	8.39E 05	1.65E 07	6.41E 05	1.26E 07
21	2.52E 06	4.19E 07	2.11E 06	3.50E 07	0.25	0.82	6.88E 05	1.72E 07	5.26E 05	1.31E 07
22	2.56E 06	4.44E 07	2.14E 06	3.71E 07	0.23	0.75	6.43E 05	1.78E 07	4.91E 05	1.36E 07
23	1.59E 06	4.60E 07	1.33E 06	3.85E 07	0.60	1.97	1.04E 06	1.88E 07	7.99E 05	1.44E 07
24	2.48E 06	4.85E 07	2.07E 06	4.06E 07	0.41	1.34	1.11E 06	2.00E 07	8.50E 05	1.53E 07
25	4.49E 06	5.30E 07	3.76E 06	4.43E 07	0.70	2.30	3.44E 06	2.34E 07	2.63E 06	1.79E 07
26	1.75E 06	5.48E 07	1.47E 06	4.58E 07	-0.05	-0.16	-9.58E 04	2.33E 07	-7.33E 04	1.78E 07
27	9.38E 05	5.57E 07	7.84E 05	4.66E 07	0.52	1.71	5.33E 05	2.38E 07	4.08E 05	1.82E 07
28	1.41E 06	5.71E 07	1.18E 06	4.77E 07	0.14	0.46	2.15E 05	2.41E 07	1.65E 05	1.84E 07
29	2.80E 06	5.99E 07	2.34E 06	5.01E 07	-0.02	-0.07	-6.13E 04	2.40E 07	-4.69E 04	1.83E 07
30	2.40E 06	6.23E 07	2.00E 06	5.21E 07	-0.12	-0.39	-3.14E 05	2.37E 07	-2.40E 05	1.81E 07
31	2.86E 06	6.52E 07	2.39E 06	5.45E 07	-0.92	-3.02	-2.88E 06	2.08E 07	-2.20E 06	1.59E 07

L	AYD2	ΣAYD2	M2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
32	3.33E 06	6.85E 07	2.79E 06	-0.90	-2.95	-3.28E 06	1.75E 07	-2.51E 06	1.34E 07
33	1.53E 06	7.00E 07	1.28E 06	0.72	2.36	1.21E 06	1.87E 07	9.21E 05	1.43E 07
34	3.80E 06	7.38E 07	3.18E 06	0.43	1.41	1.79E 06	2.05E 07	1.37E 06	1.57E 07
35	4.19E 06	7.80E 07	3.50E 06	0.42	1.38	1.92E 06	2.24E 07	1.47E 06	1.71E 07
36	5.86E 06	8.39E 07	4.90E 06	0.26	0.85	1.67E 06	2.41E 07	1.27E 06	1.84E 07
37	2.57E 06	8.64E 07	2.15E 06	0.36	1.18	1.01E 06	2.51E 07	7.73E 05	1.92E 07
38	2.57E 06	8.90E 07	2.15E 06	3.08	10.10	8.65E 06	3.38E 07	6.61E 06	2.58E 07
39	3.17E 06	9.22E 07	2.65E 06	1.55	5.08	5.38E 06	3.91E 07	4.11E 06	2.99E 07
40	2.07E 06	9.43E 07	1.73E 06	1.50	4.92	3.40E 06	4.25E 07	2.60E 06	3.25E 07
41	2.52E 06	9.68E 07	2.11E 06	1.16	3.80	3.19E 06	4.57E 07	2.44E 06	3.50E 07
42	2.77E 06	9.95E 07	2.31E 06	0.95	3.12	2.87E 06	4.86E 07	2.20E 06	3.72E 07
43	3.67E 06	1.03E 08	3.07E 06	0.28	0.92	1.12E 06	4.97E 07	8.58E 05	3.80E 07
44	2.10E 06	1.05E 08	1.75E 06	-0.18	-0.59	-4.13E 05	4.93E 07	-3.16E 05	3.77E 07
45	4.62E 06	1.10E 08	5.86E 06	0.0	0.0	0.0	4.93E 07	0.0	3.77E 07
46	4.78E 06	1.15E 08	3.99E 06	0.40	1.31	2.09E 06	5.14E 07	1.60E 06	3.93E 07
47	5.79E 06	1.20E 08	4.84E 06	0.34	1.12	2.15E 06	5.36E 07	1.65E 06	4.09E 07
48	8.12E 06	1.29E 08	6.79E 06	0.10	0.33	8.88E 05	5.44E 07	6.79E 05	4.16E 07
49	5.83E 06	1.34E 08	4.87E 06	-0.02	-0.07	-1.27E 05	5.43E 07	-9.74E 04	4.15E 07
50	3.65E 06	1.38E 08	3.06E 06	0.0	0.0	0.0	5.43E 07	0.0	4.15E 07
51	2.47E 06	1.41E 08	2.06E 06	0.28	0.92	7.56E 05	5.51E 07	5.78E 05	4.21E 07
52	3.53E 06	1.44E 08	2.95E 06	-0.20	-0.66	-7.72E 05	5.43E 07	-5.90E 05	4.15E 07
53	4.28E 06	1.48E 08	3.58E 06	0.06	0.20	2.81E 05	5.46E 07	2.15E 05	4.17E 07
54	1.89E 06	1.50E 08	1.58E 06	0.25	0.82	5.16E 05	5.51E 07	3.95E 05	4.21E 07
55	2.74E 06	1.53E 08	2.29E 06	0.56	1.84	1.68E 06	5.68E 07	1.28E 06	4.34E 07
56	3.95E 06	1.57E 08	3.30E 06	0.52	1.71	2.25E 06	5.90E 07	1.72E 06	4.51E 07
57	6.62E 06	1.64E 08	5.53E 06	-0.01	-0.03	-7.23E 04	5.89E 07	-5.53E 04	4.51E 07
58	1.44E 07	1.78E 08	1.21E 07	0.47	1.54	7.42E 06	6.64E 07	5.67E 06	5.07E 07
59	1.87E 07	1.97E 08	1.56E 07	0.30	0.98	6.14E 06	7.25E 07	4.69E 06	5.54E 07
60	3.41E 06	2.00E 08	2.85E 06	0.51	1.67	1.90E 06	7.44E 07	1.45E 06	5.69E 07
61	8.98E 06	2.09E 08	7.50E 06	0.83	2.72	8.14E 06	8.25E 07	6.23E 06	6.31E 07
62	5.27E 06	2.14E 08	4.41E 06	0.19	0.62	1.10E 06	8.36E 07	8.37E 05	6.40E 07
63	1.14E 06	2.16E 08	9.50E 05	-0.43	-1.41	-5.34E 05	8.31E 07	-4.08E 05	6.35E 07
64	1.62E 06	2.17E 08	1.35E 06	0.06	0.20	1.06E 05	8.32E 07	8.11E 04	6.36E 07
65	4.60E 06	2.22E 08	3.85E 06	0.09	0.30	4.53E 05	8.37E 07	3.46E 05	6.40E 07
66	3.70E 04	2.22E 08	3.10E 04	0.0	0.0	0.0	8.37E 07	0.0	6.40E 07

WESTERN SHORE (DEPTH 18-24 FEET)

L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	1.72E 06	1.72E 06	1.43E 06	1.43E 06	0.43	1.41	8.07E 05	8.07E 05	6.17E 05	6.17E 05
3	2.72E 05	1.99E 06	2.27E 05	1.66E 06	-0.82	-2.69	-2.44E 05	5.63E 05	-1.86E 05	4.31E 05
4	2.54E 06	4.53E 06	2.13E 06	3.79E 06	0.11	0.36	3.06E 05	8.69E 05	2.34E 05	6.65E 05
5	6.01E 06	1.05E 07	5.03E 06	8.82E 06	0.46	1.51	3.02E 06	3.89E 06	2.31E 06	2.98E 06
6	1.78E 06	1.23E 07	1.49E 06	1.03E 07	0.22	0.72	4.28E 05	4.32E 06	3.27E 05	3.30E 06
7	6.54E 05	1.30E 07	5.47E 05	1.08E 07	1.64	5.38	1.17E 06	5.49E 06	8.97E 05	4.20E 06
8	2.05E 06	1.50E 07	1.71E 06	1.26E 07	0.13	0.43	2.91E 05	5.79E 06	2.23E 05	4.42E 06
9	7.16E 05	1.57E 07	5.99E 05	1.32E 07	-0.66	-2.16	-5.17E 05	5.27E 06	-3.95E 05	4.03E 06
10	1.04E 06	1.68E 07	8.67E 05	1.40E 07	0.03	0.10	3.40E 04	5.30E 06	2.60E 04	4.05E 06
11	1.11E 06	1.79E 07	9.29E 05	1.50E 07	0.34	1.12	4.13E 05	5.72E 06	3.16E 05	4.37E 06
12	3.25E 06	2.11E 07	2.71E 06	1.77E 07	0.77	2.53	2.73E 06	8.45E 06	2.09E 06	6.46E 06
13	1.64E 06	2.28E 07	1.37E 06	1.90E 07	0.96	3.15	1.72E 06	1.02E 07	1.32E 06	7.78E 06
14	8.89E 05	2.37E 07	7.43E 05	1.98E 07	0.59	1.94	5.73E 05	1.07E 07	4.38E 05	8.22E 06
15	2.49E 06	2.62E 07	2.09E 06	2.19E 07	0.64	2.10	1.75E 06	1.25E 07	1.33E 06	9.55E 06
16	2.19E 06	2.83E 07	1.83E 06	2.37E 07	0.83	2.72	1.98E 06	1.45E 07	1.52E 06	1.11E 07
17	2.89E 06	3.12E 07	2.42E 06	2.61E 07	1.35	4.43	4.26E 06	1.87E 07	3.26E 06	1.43E 07
18	1.77E 06	3.30E 07	1.48E 06	2.76E 07	0.52	1.71	1.00E 06	1.97E 07	7.67E 05	1.51E 07
19	8.27E 05	3.38E 07	6.92E 05	2.83E 07	0.46	1.51	4.16E 05	2.02E 07	3.18E 05	1.54E 07
20	1.59E 06	3.54E 07	1.33E 06	2.96E 07	0.70	2.30	1.22E 06	2.14E 07	9.32E 05	1.63E 07
21	1.60E 06	3.70E 07	1.34E 06	3.10E 07	0.64	2.10	1.12E 06	2.25E 07	8.59E 05	1.72E 07
22	1.43E 06	3.85E 07	1.20E 06	3.22E 07	0.92	3.02	1.44E 06	2.39E 07	1.10E 06	1.83E 07
23	1.72E 06	4.02E 07	1.43E 06	3.36E 07	0.91	2.98	1.71E 06	2.56E 07	1.31E 06	1.96E 07
24	3.86E 06	4.40E 07	3.23E 06	3.68E 07	0.68	2.23	2.87E 06	2.85E 07	2.20E 06	2.18E 07
25	1.84E 06	4.59E 07	1.54E 06	3.84E 07	0.44	1.44	8.85E 05	2.94E 07	6.77E 05	2.25E 07
26	2.42E 06	4.83E 07	2.02E 06	4.04E 07	0.43	1.41	1.14E 06	3.05E 07	8.70E 05	2.34E 07
27	1.75E 06	5.00E 07	1.47E 06	4.18E 07	0.96	3.15	1.84E 06	3.24E 07	1.41E 06	2.48E 07
28	4.52E 06	5.46E 07	3.78E 06	4.56E 07	0.33	1.08	1.63E 06	3.40E 07	1.25E 06	2.60E 07
29	2.72E 06	5.73E 07	2.27E 06	4.79E 07	0.21	0.69	6.24E 05	3.46E 07	4.77E 05	2.65E 07
30	4.25E 06	6.15E 07	3.55E 06	5.14E 07	0.19	0.62	8.82E 05	3.55E 07	6.75E 05	2.72E 07
31	4.37E 06	6.59E 07	3.65E 06	5.51E 07	0.22	0.72	1.05E 06	3.66E 07	8.04E 05	2.80E 07

L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
32	2.94E 06	6.88E 07	2.46E 06	5.76E 07	-0.05	-0.16	-1.61E 05	3.64E 07	-1.23E 05	2.78E 07
33	1.54E 06	7.04E 07	1.29E 06	5.88E 07	1.69	5.54	2.85E 06	3.93E 07	2.18E 06	3.00E 07
34	2.31E 06	7.27E 07	1.93E 06	6.08E 07	0.96	3.15	2.42E 06	4.17E 07	1.85E 06	3.19E 07
35	1.62E 06	7.43E 07	1.35E 06	6.21E 07	0.58	1.90	1.03E 06	4.27E 07	7.84E 05	3.27E 07
36	7.04E 05	7.50E 07	5.88E 06	6.27E 07	0.38	1.25	2.92E 05	4.30E 07	2.24E 05	3.29E 07
37	2.12E 06	7.71E 07	1.78E 06	6.45E 07	1.16	3.80	2.69E 06	4.57E 07	2.06E 06	3.49E 07
38	5.25E 06	8.24E 07	4.39E 06	6.89E 07	0.88	2.89	5.05E 06	5.07E 07	3.86E 06	3.88E 07
39	3.88E 06	8.63E 07	3.24E 06	7.21E 07	1.74	5.71	7.37E 06	5.81E 07	5.64E 06	4.44E 07
40	3.69E 06	9.00E 07	3.09E 06	7.52E 07	1.54	5.05	6.22E 06	6.43E 07	4.75E 06	4.92E 07
41	1.09E 06	9.10E 07	9.08E 05	7.61E 07	1.90	6.23	2.26E 06	6.66E 07	1.73E 06	5.09E 07
42	2.01E 06	9.30E 07	1.68E 06	7.78E 07	1.20	3.94	2.64E 06	6.92E 07	2.02E 06	5.29E 07
43	5.60E 06	9.87E 07	4.69E 06	8.25E 07	0.88	2.89	5.39E 06	7.46E 07	4.12E 06	5.71E 07
44	8.09E 06	1.07E 08	6.76E 06	8.92E 07	0.61	2.00	5.39E 06	8.00E 07	4.12E 06	6.12E 07
45	5.63E 06	1.12E 08	4.71E 06	9.40E 07	0.69	2.26	4.25E 06	8.43E 07	3.25E 06	6.44E 07
46	4.09E 06	1.16E 08	3.42E 06	9.74E 07	-0.02	-0.07	-8.94E 04	8.42E 07	-6.83E 04	6.44E 07
47	4.70E 06	1.21E 08	3.93E 06	1.01E 08	0.44	1.44	2.26E 06	8.64E 07	1.73E 06	6.61E 07
48	7.21E 06	1.28E 08	6.03E 06	1.07E 08	0.09	0.30	7.09E 05	8.71E 07	5.42E 05	6.66E 07
49	6.49E 06	1.35E 08	5.43E 06	1.13E 08	0.37	1.21	2.63E 06	8.98E 07	2.01E 06	6.86E 07
50	1.52E 06	1.36E 08	1.27E 06	1.14E 08	0.49	1.61	8.14E 05	9.06E 07	6.22E 05	6.93E 07
51	2.43E 06	1.39E 08	2.03E 06	1.16E 08	0.09	0.30	2.39E 05	9.08E 07	1.83E 05	6.94E 07
52	2.44E 06	1.41E 08	2.04E 06	1.18E 08	-0.22	-0.72	-5.88E 05	9.02E 07	-4.50E 05	6.90E 07
53	2.69E 06	1.44E 08	2.25E 06	1.20E 08	-0.13	-0.43	-3.83E 05	8.99E 07	-2.92E 05	6.87E 07
54	6.52E 06	1.50E 08	5.45E 06	1.26E 08	0.34	1.12	2.42E 06	9.23E 07	1.85E 06	7.06E 07
55	8.83E 06	1.59E 08	7.38E 06	1.33E 08	0.78	2.56	7.53E 06	9.98E 07	5.76E 06	7.63E 07
56	8.85E 06	1.68E 08	7.40E 06	1.41E 08	0.40	1.31	3.87E 06	1.04E 08	2.96E 06	7.93E 07
57	1.09E 07	1.79E 08	9.10E 06	1.50E 08	0.63	2.07	7.50E 06	1.11E 08	5.73E 06	8.50E 07
58	1.21E 07	1.91E 08	1.01E 07	1.60E 08	0.65	2.13	8.58E 06	1.20E 08	6.56E 06	9.16E 07
59	1.12E 07	2.02E 08	9.40E 06	1.69E 08	0.60	1.97	7.38E 06	1.27E 08	5.64E 06	9.72E 07
60	1.84E 07	2.21E 08	1.54E 07	1.85E 08	1.09	3.58	2.20E 07	1.49E 08	1.68E 07	1.14E 08
61	1.03E 07	2.31E 08	8.62E 06	1.93E 08	1.17	3.84	1.32E 07	1.62E 08	1.01E 07	1.24E 08
62	1.71E 07	2.48E 08	1.43E 07	2.07E 08	0.83	2.72	1.55E 07	1.78E 08	1.19E 07	1.36E 08
63	2.30E 07	2.71E 08	1.92E 07	2.27E 08	0.82	2.69	2.06E 07	1.98E 08	1.58E 07	1.52E 08
64	1.06E 07	2.82E 08	8.88E 06	2.36E 08	0.84	2.76	9.75E 06	2.08E 08	7.46E 06	1.59E 08
65	6.93E 06	2.89E 08	5.79E 06	2.41E 08	0.51	1.67	3.86E 06	2.12E 08	2.95E 06	1.62E 08

WESTERN SHORE (DEPTH 24-30 FEET)

L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
1	1.48E 05	1.48E 05	1.24E 05	1.24E 05	0.0	0.0	0.0	0.0	0.0	0.0
2	1.36E 06	1.51E 06	1.14E 06	1.26E 06	-0.12	-0.39	-1.78E 05	-1.78E 05	-1.36E 05	-1.36E 05
3	2.52E 06	4.02E 06	2.11E 06	3.37E 06	0.21	0.69	5.78E 05	4.00E 05	4.42E 05	3.06E 05
4	5.93E 06	9.95E 06	4.95E 06	8.32E 06	0.28	0.92	1.81E 06	2.21E 06	1.39E 06	1.69E 06
5	1.75E 06	1.17E 07	1.47E 06	9.79E 06	0.32	1.05	6.13E 05	2.83E 06	4.69E 05	2.16E 06
6	4.57E 05	1.22E 07	3.82E 05	1.02E 07	0.99	3.25	4.94E 05	3.32E 06	3.78E 05	2.54E 06
7	2.84E 05	1.24E 07	2.37E 05	1.04E 07	0.74	2.43	2.30E 05	3.55E 06	1.76E 05	2.72E 06
8	4.68E 06	1.71E 07	3.91E 06	1.43E 07	0.0	0.0	0.0	3.55E 06	0.0	2.72E 06
9	2.96E 06	2.01E 07	2.48E 06	1.68E 07	0.46	1.51	1.49E 06	5.04E 06	1.14E 06	3.85E 06
10	2.31E 06	2.24E 07	1.93E 06	1.87E 07	0.11	0.36	2.78E 05	5.32E 06	2.12E 05	4.07E 06
11	4.57E 05	2.29E 07	3.82E 05	1.91E 07	0.65	2.13	3.25E 05	5.64E 06	2.48E 05	4.32E 06
12	1.09E 06	2.39E 07	9.08E 05	2.00E 07	1.02	3.35	1.21E 06	6.86E 06	9.26E 05	5.24E 06
13	1.31E 06	2.52E 07	1.09E 06	2.11E 07	1.00	3.28	1.43E 06	8.29E 06	1.09E 06	6.34E 06
14	1.16E 06	2.64E 07	9.70E 05	2.21E 07	1.25	4.10	1.59E 06	9.87E 06	1.21E 06	7.55E 06
15	2.80E 06	2.92E 07	2.34E 06	2.44E 07	0.50	1.64	1.53E 06	1.14E 07	1.17E 06	8.72E 06
16	2.21E 06	3.14E 07	1.85E 06	2.63E 07	0.36	1.18	8.70E 05	1.23E 07	6.65E 05	9.38E 06
17	2.33E 06	3.38E 07	1.95E 06	2.82E 07	0.87	2.85	2.22E 06	1.45E 07	1.70E 06	1.11E 07
18	1.94E 06	3.57E 07	1.62E 06	2.98E 07	1.29	4.23	2.73E 06	1.72E 07	2.09E 06	1.32E 07
19	2.78E 06	3.85E 07	2.32E 06	3.22E 07	0.81	2.66	2.46E 06	1.97E 07	1.88E 06	1.51E 07
20	1.67E 06	4.01E 07	1.39E 06	3.36E 07	0.67	2.20	1.22E 06	2.09E 07	9.33E 05	1.60E 07
21	2.84E 06	4.30E 07	2.37E 06	3.59E 07	0.96	3.15	2.98E 06	2.39E 07	2.28E 06	1.83E 07
22	1.21E 06	4.42E 07	1.01E 06	3.69E 07	0.66	2.16	8.73E 05	2.48E 07	6.67E 05	1.89E 07
23	3.68E 06	4.79E 07	3.08E 06	4.00E 07	0.56	1.84	2.25E 06	2.70E 07	1.72E 06	2.07E 07
24	2.62E 06	5.05E 07	2.19E 06	4.22E 07	0.94	3.08	2.69E 06	2.97E 07	2.06E 06	2.27E 07
25	4.47E 06	5.50E 07	3.74E 06	4.59E 07	1.05	3.44	5.13E 06	3.48E 07	3.92E 06	2.66E 07
26	9.90E 06	6.49E 07	8.28E 06	5.42E 07	0.67	2.20	7.25E 06	4.21E 07	5.55E 06	3.22E 07
27	8.52E 06	7.34E 07	7.12E 06	6.13E 07	0.49	1.61	4.56E 06	4.67E 07	3.49E 06	3.57E 07
28	1.18E 07	8.51E 07	9.85E 06	7.12E 07	0.64	2.10	8.24E 06	5.49E 07	6.30E 06	4.20E 07
29	1.14E 07	9.65E 07	9.50E 06	8.07E 07	0.72	2.36	8.94E 06	6.38E 07	6.84E 06	4.88E 07
30	9.07E 06	1.06E 08	7.59E 06	8.83E 07	0.75	2.46	7.44E 06	7.13E 07	5.69E 06	5.45E 07
31	6.26E 06	1.12E 08	5.23E 06	9.35E 07	0.75	2.46	5.13E 06	7.64E 07	3.92E 06	5.84E 07

L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
32	2.60E 06	1.14E 08	2.18E 06	9.57E 07	0.49	1.61	1.40E 06	7.78E 07	1.07E 06	5.95E 07
33	2.81E 06	1.17E 08	2.35E 06	9.80E 07	0.71	2.33	2.19E 06	8.00E 07	1.67E 06	6.12E 07
34	4.54E 06	1.22E 08	3.80E 06	1.02E 08	0.75	2.46	3.73E 06	8.37E 07	2.85E 06	6.40E 07
35	5.67E 06	1.27E 08	4.74E 06	1.07E 08	0.98	3.21	6.07E 06	8.98E 07	4.64E 06	6.86E 07
36	2.69E 06	1.30E 08	2.25E 06	1.09E 08	0.87	2.85	2.56E 06	9.23E 07	1.96E 06	7.06E 07
37	2.63E 06	1.33E 08	2.20E 06	1.11E 08	0.13	0.43	3.74E 05	9.27E 07	2.86E 05	7.09E 07
38	2.74E 06	1.36E 08	2.29E 06	1.13E 08	-0.65	-2.13	-1.95E 06	9.08E 07	-1.49E 06	6.94E 07
39	4.33E 06	1.40E 08	3.62E 06	1.17E 08	0.20	0.66	9.48E 05	9.17E 07	7.24E 05	7.01E 07
40	7.32E 06	1.47E 08	6.12E 06	1.23E 08	1.38	4.53	1.10E 07	1.03E 08	8.45E 06	7.86E 07
41	8.58E 06	1.56E 08	7.17E 06	1.30E 08	1.17	3.84	1.10E 07	1.14E 08	8.39E 06	8.70E 07
42	5.60E 06	1.61E 08	4.69E 06	1.35E 08	0.92	3.02	5.64E 06	1.19E 08	4.31E 06	9.13E 07
43	8.89E 05	1.62E 08	7.43E 05	1.36E 08	0.58	1.90	5.64E 05	1.20E 08	4.31E 05	9.17E 07
44	8.72E 06	1.71E 08	7.29E 06	1.43E 08	0.48	1.57	4.57E 06	1.25E 08	3.50E 06	9.52E 07
45	1.02E 07	1.81E 08	8.53E 06	1.51E 08	0.56	1.84	6.24E 06	1.31E 08	4.77E 06	1.00E 08
46	1.05E 07	1.92E 08	8.78E 06	1.60E 08	0.52	1.71	5.97E 06	1.37E 08	4.57E 06	1.05E 08
47	7.79E 06	1.99E 08	6.51E 06	1.67E 08	0.53	1.74	4.51E 06	1.41E 08	3.45E 06	1.08E 08
48	8.11E 06	2.08E 08	6.78E 06	1.74E 08	0.33	1.08	2.93E 06	1.44E 08	2.24E 06	1.10E 08
49	9.12E 06	2.17E 08	7.63E 06	1.81E 08	0.78	2.56	7.78E 06	1.52E 08	5.95E 06	1.16E 08
50	2.72E 07	2.44E 08	2.28E 07	2.04E 08	0.64	2.10	1.91E 07	1.71E 08	1.46E 07	1.31E 08
51	2.68E 06	2.47E 08	2.24E 06	2.06E 08	0.51	1.67	1.49E 06	1.73E 08	1.14E 06	1.32E 08
52	3.84E 06	2.50E 08	3.21E 06	2.09E 08	0.18	0.59	7.56E 05	1.73E 08	5.78E 05	1.32E 08
53	4.72E 06	2.55E 08	3.94E 06	2.13E 08	0.05	0.16	2.58E 05	1.74E 08	1.97E 05	1.33E 08
54	4.47E 06	2.60E 08	3.74E 06	2.17E 08	0.39	1.28	1.91E 06	1.75E 08	1.46E 06	1.34E 08
55	7.36E 06	2.67E 08	6.15E 06	2.23E 08	0.57	1.87	4.59E 06	1.80E 08	3.51E 06	1.38E 08
56	1.10E 07	2.78E 08	9.18E 06	2.32E 08	0.81	2.66	9.72E 06	1.90E 08	7.43E 06	1.45E 08
57	9.37E 06	2.87E 08	7.83E 06	2.40E 08	0.76	2.49	7.79E 06	1.98E 08	5.95E 06	1.51E 08
58	8.42E 06	2.96E 08	7.04E 06	2.47E 08	0.93	3.05	8.56E 06	2.06E 08	6.55E 06	1.58E 08
59	8.75E 06	3.05E 08	7.32E 06	2.55E 08	0.84	2.76	8.04E 06	2.14E 08	6.15E 06	1.64E 08
60	1.22E 07	3.17E 08	1.02E 07	2.65E 08	1.08	3.54	1.44E 07	2.28E 08	1.10E 07	1.75E 08
61	2.01E 07	3.37E 08	1.68E 07	2.82E 08	0.94	3.08	2.07E 07	2.49E 08	1.58E 07	1.91E 08
62	1.32E 07	3.50E 08	1.10E 07	2.93E 08	1.74	5.71	2.51E 07	2.74E 08	1.92E 07	2.10E 08
63	5.05E 06	3.55E 08	4.22E 06	2.97E 08	1.46	4.79	8.06E 06	2.82E 08	6.16E 06	2.16E 08
64	1.82E 07	3.73E 08	1.52E 07	3.12E 08	0.76	2.49	1.51E 07	2.97E 08	1.16E 07	2.27E 08
65	6.35E 06	3.80E 08	5.31E 06	3.17E 08	0.22	0.72	1.53E 06	2.99E 08	1.17E 06	2.29E 08

WESTERN SHORE (DEPTH 30-36 FEET)

L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
1	5.19E 05	5.19E 05	4.34E 05	4.34E 05	-0.24	-0.79	-1.36E 05	-1.36E 05	-1.04E 05	-1.04E 05
2	6.05E 05	1.12E 06	5.06E 05	9.39E 05	0.80	2.62	5.29E 05	3.93E 05	4.05E 05	3.01E 05
3	3.11E 06	4.23E 06	2.60E 06	3.54E 06	0.33	1.08	1.12E 06	1.52E 06	8.58E 05	1.16E 06
4	9.88E 05	5.22E 06	8.26E 05	4.37E 06	-0.81	-2.66	-8.75E 05	6.41E 05	-6.69E 05	4.90E 05
5	2.04E 06	7.26E 06	1.70E 06	6.07E 06	0.96	3.15	2.14E 06	2.78E 06	1.63E 06	2.12E 06
6	2.84E 05	7.54E 06	2.37E 05	6.31E 06	0.61	2.00	1.89E 05	2.97E 06	1.45E 05	2.27E 06
7	3.58E 05	7.90E 06	2.99E 05	6.61E 06	0.75	2.46	2.94E 05	3.26E 06	2.24E 05	2.49E 06
8	8.15E 05	8.72E 06	6.81E 05	7.29E 06	0.74	2.43	6.59E 05	3.92E 06	5.04E 05	3.00E 06
9	4.49E 06	1.32E 07	3.76E 06	1.10E 07	0.34	1.12	1.67E 06	5.59E 06	1.28E 06	4.28E 06
10	2.85E 06	1.61E 07	2.38E 06	1.34E 07	0.55	1.80	1.71E 06	7.31E 06	1.31E 06	5.59E 06
11	1.02E 06	1.71E 07	8.57E 05	1.43E 07	-0.21	-0.69	-2.35E 05	7.07E 06	-1.80E 05	5.41E 06
12	2.96E 06	2.00E 07	2.48E 06	1.68E 07	0.40	1.31	1.30E 06	8.37E 06	9.91E 05	6.40E 06
13	2.89E 06	2.29E 07	2.42E 06	1.92E 07	0.66	2.16	2.08E 06	1.05E 07	1.59E 06	7.99E 06
14	1.60E 06	2.45E 07	1.34E 06	2.05E 07	0.57	1.87	1.00E 06	1.15E 07	7.65E 05	8.76E 06
15	5.56E 05	2.51E 07	4.64E 05	2.10E 07	0.18	0.59	1.09E 05	1.16E 07	8.36E 04	8.84E 06
16	9.63E 05	2.61E 07	8.05E 05	2.18E 07	0.99	3.25	1.04E 06	1.26E 07	7.97E 05	9.64E 06
17	2.84E 05	2.63E 07	2.37E 05	2.20E 07	0.0	0.0	0.0	1.26E 07	0.0	9.64E 06
18	8.15E 05	2.72E 07	6.81E 05	2.27E 07	0.94	3.08	8.37E 05	1.34E 07	6.40E 05	1.03E 07
19	3.21E 06	3.04E 07	2.68E 06	2.54E 07	1.12	3.67	3.93E 06	1.74E 07	3.01E 06	1.33E 07
20	3.42E 06	3.38E 07	2.86E 06	2.83E 07	0.18	0.59	6.73E 05	1.80E 07	5.15E 05	1.38E 07
21	1.18E 07	4.56E 07	9.89E 06	3.81E 07	0.50	1.64	6.47E 06	2.45E 07	4.94E 06	1.87E 07
22	1.12E 07	5.68E 07	9.38E 06	4.75E 07	0.93	3.05	1.14E 07	3.59E 07	8.72E 06	2.75E 07
23	5.74E 06	6.26E 07	4.80E 06	5.23E 07	0.66	2.16	4.14E 06	4.01E 07	3.17E 06	3.06E 07
24	1.44E 06	6.40E 07	1.21E 06	5.35E 07	1.09	3.58	1.72E 06	4.18E 07	1.32E 06	3.19E 07
25	5.65E 06	6.97E 07	4.73E 06	5.83E 07	0.74	2.43	4.57E 06	4.64E 07	3.50E 06	3.54E 07
26	5.05E 06	7.47E 07	4.22E 06	6.25E 07	0.49	1.61	2.71E 06	4.91E 07	2.07E 06	3.75E 07
27	3.17E 06	7.79E 07	2.65E 06	6.51E 07	0.21	0.69	7.28E 05	4.98E 07	5.57E 05	3.81E 07
28	6.62E 06	8.45E 07	5.53E 06	7.07E 07	0.35	1.15	2.53E 06	5.23E 07	1.94E 06	4.00E 07
29	9.38E 06	9.39E 07	7.84E 06	7.85E 07	0.62	2.03	6.36E 06	5.87E 07	4.86E 06	4.49E 07
30	9.65E 06	1.04E 08	8.07E 06	8.66E 07	0.61	2.00	6.44E 06	6.51E 07	4.92E 06	4.98E 07
31	1.14E 07	1.15E 08	9.53E 06	9.61E 07	0.57	1.87	7.10E 06	7.22E 07	5.43E 06	5.52E 07



L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
32	1.23E 07	1.27E 08	1.03E 07	1.06E 08	0.75	2.46	1.01E 07	8.23E 07	7.72E 06	6.29E 07
33	1.03E 07	1.38E 08	8.59E 06	1.15E 08	0.59	1.94	6.63E 06	8.89E 07	5.07E 06	6.80E 07
34	7.11E 06	1.45E 08	5.95E 06	1.21E 08	0.53	1.74	4.12E 06	9.31E 07	3.15E 06	7.12E 07
35	4.16E 06	1.49E 08	3.48E 06	1.24E 08	0.82	2.69	3.73E 06	9.68E 07	2.85E 06	7.40E 07
36	4.02E 06	1.53E 08	3.37E 06	1.28E 08	1.03	3.38	4.53E 06	1.01E 08	3.47E 06	7.75E 07
37	3.40E 06	1.56E 08	2.84E 06	1.31E 08	1.22	4.00	4.53E 06	1.06E 08	3.46E 06	8.09E 07
38	3.04E 06	1.59E 08	2.54E 06	1.33E 08	1.76	5.77	5.84E 06	1.12E 08	4.47E 06	8.54E 07
39	4.20E 06	1.63E 08	3.51E 06	1.37E 08	1.35	4.43	6.20E 06	1.18E 08	4.74E 06	9.01E 07
40	5.36E 06	1.69E 08	4.48E 06	1.41E 08	1.03	3.38	6.03E 06	1.24E 08	4.61E 06	9.48E 07
41	5.15E 06	1.74E 08	4.30E 06	1.45E 08	1.41	4.62	7.94E 06	1.32E 08	6.07E 06	1.01E 08
42	5.83E 06	1.80E 08	4.87E 06	1.50E 08	1.05	3.44	6.69E 06	1.39E 08	5.11E 06	1.06E 08
43	5.81E 06	1.86E 08	4.86E 06	1.55E 08	0.44	1.44	2.80E 06	1.41E 08	2.14E 06	1.08E 08
44	6.44E 06	1.92E 08	5.39E 06	1.61E 08	0.11	0.36	7.75E 05	1.42E 08	5.93E 05	1.09E 08
45	9.05E 06	2.01E 08	7.57E 06	1.68E 08	0.37	1.21	3.66E 06	1.46E 08	2.80E 06	1.11E 08
46	1.50E 07	2.16E 08	1.26E 07	1.81E 08	0.44	1.44	7.22E 06	1.53E 08	5.52E 06	1.17E 08
47	2.36E 07	2.40E 08	1.97E 07	2.00E 08	0.73	2.39	1.88E 07	1.72E 08	1.44E 07	1.31E 08
48	3.26E 07	2.72E 08	2.72E 07	2.28E 08	0.81	2.66	2.88E 07	2.01E 08	2.20E 07	1.53E 08
49	3.48E 07	3.07E 08	2.91E 07	2.57E 08	0.70	2.30	2.67E 07	2.27E 08	2.04E 07	1.74E 08
50	1.91E 07	3.26E 08	1.59E 07	2.73E 08	0.98	3.21	2.04E 07	2.48E 08	1.56E 07	1.89E 08
51	1.46E 07	3.41E 08	1.22E 07	2.85E 08	0.59	1.94	9.45E 06	2.57E 08	7.22E 06	1.97E 08
52	1.08E 07	3.52E 08	9.00E 06	2.94E 08	0.68	2.23	8.00E 06	2.65E 08	6.12E 06	2.03E 08
53	8.89E 06	3.60E 08	7.43E 06	3.01E 08	0.57	1.87	5.54E 06	2.71E 08	4.24E 06	2.07E 08
54	8.62E 06	3.69E 08	7.20E 06	3.09E 08	0.63	2.07	5.94E 06	2.77E 08	4.54E 06	2.12E 08
55	4.79E 06	3.74E 08	4.01E 06	3.13E 08	0.60	1.97	3.14E 06	2.80E 08	2.40E 06	2.14E 08
56	1.21E 06	3.75E 08	1.01E 06	3.14E 08	0.29	0.95	3.84E 05	2.80E 08	2.93E 05	2.14E 08
57	2.41E 06	3.77E 08	2.01E 06	3.16E 08	0.24	0.79	6.32E 05	2.81E 08	4.83E 05	2.15E 08
58	3.56E 06	3.81E 08	2.97E 06	3.19E 08	1.05	3.44	4.08E 06	2.85E 08	3.12E 06	2.18E 08
59	3.01E 06	3.84E 08	2.52E 06	3.21E 08	0.70	2.30	2.31E 06	2.87E 08	1.76E 06	2.20E 08
60	5.95E 06	3.90E 08	4.98E 06	3.26E 08	1.24	4.07	8.07E 06	2.95E 08	6.17E 06	2.26E 08
61	7.37E 06	3.97E 08	6.16E 06	3.32E 08	0.88	2.89	7.09E 06	3.02E 08	5.42E 06	2.31E 08
62	8.93E 06	4.06E 08	7.46E 06	3.40E 08	1.66	5.44	1.62E 07	3.19E 08	1.24E 07	2.44E 08
63	3.09E 06	4.09E 08	2.58E 06	3.42E 08	1.13	3.71	3.81E 06	3.22E 08	2.92E 06	2.47E 08
64	2.75E 06	4.12E 08	2.30E 06	3.45E 08	0.31	1.02	9.33E 05	3.23E 08	7.13E 05	2.47E 08
65	1.78E 06	4.14E 08	1.49E 06	3.46E 08	-1.29	-4.23	-2.51E 06	3.21E 08	-1.92E 06	2.45E 08

WESTERN SHORE (DEPTH 36-42 FEET)

L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
1	2.18E 07	2.18E 07	1.82E 07	1.82E 07	0.96	3.15	2.29E 07	2.29E 07	1.75E 07	1.75E 07
2	2.28E 07	4.46E 07	1.91E 07	3.73E 07	1.30	4.26	3.24E 07	5.53E 07	2.48E 07	4.23E 07
3	1.60E 07	6.06E 07	1.34E 07	5.07E 07	-0.42	-1.38	-7.34E 06	4.80E 07	-5.61E 06	3.67E 07
4	8.37E 06	6.90E 07	7.00E 06	5.77E 07	0.82	2.69	7.50E 06	5.55E 07	5.74E 06	4.24E 07
5	3.74E 06	7.27E 07	3.13E 06	6.08E 07	1.06	3.48	4.34E 06	5.98E 07	3.31E 06	4.57E 07
6	2.36E 06	7.51E 07	1.97E 06	6.28E 07	0.68	2.23	1.75E 06	6.16E 07	1.34E 06	4.71E 07
7	4.69E 05	7.55E 07	3.92E 05	6.32E 07	0.50	1.64	2.56E 05	6.18E 07	1.96E 05	4.73E 07
8	3.58E 05	7.59E 07	2.99E 05	6.35E 07	0.16	0.52	6.26E 04	6.19E 07	4.79E 04	4.73E 07
9	1.93E 06	7.78E 07	1.61E 06	6.51E 07	0.74	2.43	1.56E 06	6.34E 07	1.19E 06	4.85E 07
10	2.79E 06	8.06E 07	2.33E 06	6.74E 07	1.14	3.74	3.48E 06	6.69E 07	2.66E 06	5.12E 07
11	2.09E 06	8.27E 07	1.74E 06	6.91E 07	0.48	1.57	1.09E 06	6.80E 07	8.37E 05	5.20E 07
12	2.09E 06	8.48E 07	1.74E 06	7.09E 07	0.92	3.02	2.10E 06	7.01E 07	1.60E 06	5.36E 07
13	3.15E 06	8.79E 07	2.63E 06	7.35E 07	0.84	2.76	2.89E 06	7.30E 07	2.21E 06	5.58E 07
14	2.60E 06	9.05E 07	2.18E 06	7.57E 07	0.89	2.92	2.53E 06	7.55E 07	1.94E 06	5.78E 07
15	1.01E 06	9.16E 07	8.46E 05	7.65E 07	0.88	2.89	9.74E 05	7.65E 07	7.45E 05	5.85E 07
16	4.69E 05	9.20E 07	3.92E 05	7.69E 07	-0.18	-0.59	-9.23E 04	7.64E 07	-7.06E 04	5.84E 07
17	7.04E 05	9.27E 07	5.88E 05	7.75E 07	-2.71	-8.89	-2.09E 06	7.43E 07	-1.59E 06	5.68E 07
18	2.10E 06	9.48E 07	1.75E 06	7.93E 07	0.75	2.46	1.72E 06	7.61E 07	1.32E 06	5.81E 07
19	3.38E 06	9.82E 07	2.83E 06	8.21E 07	0.83	2.72	3.07E 06	7.91E 07	2.35E 06	6.05E 07
20	1.03E 07	1.08E 08	8.58E 06	9.07E 07	0.85	2.79	9.53E 06	8.87E 07	7.29E 06	6.78E 07
21	6.04E 06	1.15E 08	5.05E 06	9.57E 07	0.87	2.85	5.74E 06	9.44E 07	4.39E 06	7.22E 07
22	3.65E 06	1.18E 08	3.06E 06	9.88E 07	1.24	4.07	4.95E 06	9.94E 07	3.79E 06	7.60E 07
23	4.16E 06	1.22E 08	3.48E 06	1.02E 08	0.91	2.98	4.14E 06	1.03E 08	3.16E 06	7.91E 07
24	5.47E 06	1.28E 08	4.57E 06	1.07E 08	0.83	2.72	4.96E 06	1.08E 08	3.79E 06	8.29E 07
25	5.60E 06	1.33E 08	4.69E 06	1.12E 08	0.64	2.10	3.92E 06	1.12E 08	3.00E 06	8.59E 07
26	2.49E 07	1.58E 08	2.08E 07	1.32E 08	0.75	2.46	2.04E 07	1.33E 08	1.56E 07	1.02E 08
27	2.38E 07	1.82E 08	1.99E 07	1.52E 08	0.63	2.07	1.64E 07	1.49E 08	1.26E 07	1.14E 08
28	1.96E 07	2.02E 08	1.64E 07	1.69E 08	0.56	1.84	1.20E 07	1.61E 08	9.16E 06	1.23E 08
29	1.60E 07	2.18E 08	1.34E 07	1.82E 08	0.22	0.72	3.85E 06	1.65E 08	2.94E 06	1.26E 08
30	1.30E 07	2.31E 08	1.09E 07	1.93E 08	0.20	0.66	2.85E 06	1.68E 08	2.18E 06	1.28E 08
31	1.02E 07	2.41E 08	8.57E 06	2.01E 08	0.15	0.49	1.68E 06	1.70E 08	1.28E 06	1.30E 08

L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
32	9.15E 06	2.50E 08	7.65E 06	2.09E 08	0.24	0.79	2.40E 06	1.72E 08	1.84E 06	1.31E 08
33	8.06E 06	2.58E 08	6.74E 06	2.16E 08	0.17	0.56	1.50E 06	1.73E 08	1.15E 06	1.33E 08
34	8.67E 06	2.67E 08	7.25E 06	2.23E 08	0.34	1.12	3.22E 06	1.77E 08	2.46E 06	1.35E 08
35	9.67E 06	2.77E 08	8.08E 06	2.31E 08	0.64	2.10	6.76E 06	1.83E 08	5.17E 06	1.40E 08
36	1.03E 07	2.87E 08	8.58E 06	2.40E 08	0.77	2.53	8.64E 06	1.92E 08	6.60E 06	1.47E 08
37	9.60E 06	2.96E 08	8.03E 06	2.48E 08	0.97	3.18	1.02E 07	2.02E 08	7.79E 06	1.55E 08
38	9.63E 06	3.06E 08	8.05E 06	2.56E 08	0.78	2.56	8.21E 06	2.11E 08	6.28E 06	1.61E 08
39	7.91E 06	3.14E 08	6.62E 06	2.62E 08	0.94	3.08	8.13E 06	2.19E 08	6.22E 06	1.67E 08
40	6.07E 06	3.20E 08	5.08E 06	2.68E 08	1.83	6.00	1.22E 07	2.31E 08	9.29E 06	1.76E 08
41	7.85E 06	3.28E 08	6.56E 06	2.74E 08	0.95	3.12	8.16E 06	2.39E 08	6.24E 06	1.83E 08
42	8.99E 06	3.37E 08	7.51E 06	2.82E 08	1.41	4.62	1.39E 07	2.53E 08	1.06E 07	1.93E 08
43	1.03E 07	3.47E 08	8.65E 06	2.90E 08	1.00	3.28	1.13E 07	2.64E 08	8.65E 06	2.02E 08
44	1.21E 07	3.59E 08	1.01E 07	3.00E 08	0.60	1.97	7.96E 06	2.72E 08	6.09E 06	2.08E 08
45	9.65E 06	3.69E 08	8.07E 06	3.08E 08	0.73	2.39	7.71E 06	2.80E 08	5.89E 06	2.14E 08
46	9.73E 06	3.79E 08	8.13E 06	3.17E 08	0.34	1.12	3.62E 06	2.83E 08	2.76E 06	2.17E 08
47	1.23E 07	3.91E 08	1.03E 07	3.27E 08	0.49	1.61	6.61E 06	2.90E 08	5.05E 06	2.22E 08
48	7.06E 06	3.98E 08	5.90E 06	3.33E 08	0.74	2.43	5.71E 06	2.96E 08	4.37E 06	2.26E 08
49	2.93E 06	4.01E 08	2.45E 06	3.35E 08	0.44	1.44	1.41E 06	2.97E 08	1.08E 06	2.27E 08
50	6.91E 05	4.02E 08	5.78E 05	3.36E 08	0.93	3.05	7.03E 05	2.98E 08	5.37E 05	2.28E 08
51	2.58E 06	4.04E 08	2.16E 06	3.38E 08	0.42	1.38	1.18E 06	2.99E 08	9.06E 05	2.29E 08
52	3.83E 06	4.08E 08	3.20E 06	3.41E 08	0.37	1.21	1.55E 06	3.01E 08	1.18E 06	2.30E 08
53	3.35E 06	4.11E 08	2.80E 06	3.44E 08	0.71	2.33	2.60E 06	3.03E 08	1.99E 06	2.32E 08
54	6.91E 05	4.12E 08	5.78E 05	3.45E 08	-0.19	-0.62	-1.44E 05	3.03E 08	-1.10E 05	2.32E 08
55	9.51E 05	4.13E 08	7.95E 05	3.45E 08	-0.71	-2.33	-7.38E 05	3.02E 08	-5.64E 05	2.31E 08
56	1.83E 06	4.15E 08	1.53E 06	3.47E 08	0.63	2.07	1.26E 06	3.04E 08	9.62E 05	2.32E 08
57	1.49E 06	4.16E 08	1.25E 06	3.48E 08	1.80	5.90	2.94E 06	3.06E 08	2.25E 06	2.34E 08
58	1.06E 06	4.17E 08	8.88E 05	3.49E 08	0.75	2.46	8.71E 05	3.07E 08	6.66E 05	2.35E 08
59	7.78E 05	4.18E 08	6.50E 05	3.50E 08	1.12	3.67	9.52E 05	3.08E 08	7.28E 05	2.36E 08
60	3.54E 06	4.22E 08	2.96E 06	3.53E 08	0.76	2.49	2.94E 06	3.11E 08	2.25E 06	2.38E 08
61	1.73E 06	4.24E 08	1.45E 06	3.54E 08	-0.71	-2.33	-1.34E 06	3.10E 08	-1.03E 06	2.37E 08
62	4.60E 06	4.28E 08	3.85E 06	3.58E 08	1.06	3.48	5.34E 06	3.15E 08	4.08E 06	2.41E 08
63	6.12E 06	4.34E 08	5.12E 06	3.63E 08	0.97	3.18	6.49E 06	3.22E 08	4.97E 06	2.46E 08
64	2.28E 06	4.37E 08	1.91E 06	3.65E 08	0.14	0.46	3.50E 05	3.22E 08	2.67E 05	2.46E 08
65	1.04E 06	4.38E 08	8.67E 05	3.66E 08	-1.20	-3.94	-1.36E 06	3.21E 08	-1.04E 06	2.45E 08

WESTERN SHORE (DEPTH >42 FEET)

L	AYD2	AYD2	M2	M2	SRM	SRF	YD3	YD3	M3	M3
1	6.80E 06	6.80E 06	5.69E 06	5.69E 06	0.68	2.23	5.06E 06	5.06E 06	3.87E 06	3.87E 06
2	1.95E 06	8.75E 06	1.63E 06	7.32E 06	0.88	2.89	1.88E 06	6.93E 06	1.43E 06	5.30E 06
3	7.48E 06	1.62E 07	6.26E 06	1.36E 07	0.98	3.21	8.02E 06	1.50E 07	6.13E 06	1.14E 07
4	1.07E 07	2.69E 07	8.92E 06	2.25E 07	0.82	2.69	9.56E 06	2.45E 07	7.31E 06	1.87E 07
5	8.15E 06	3.50E 07	6.81E 06	2.93E 07	0.74	2.43	6.59E 06	3.11E 07	5.04E 06	2.38E 07
6	5.85E 06	4.09E 07	4.89E 06	3.42E 07	0.93	3.05	5.95E 06	3.71E 07	4.55E 06	2.83E 07
7	3.04E 06	4.39E 07	2.54E 06	3.67E 07	0.65	2.13	2.16E 06	3.92E 07	1.65E 06	3.00E 07
8	1.88E 06	4.58E 07	1.57E 06	3.83E 07	1.40	4.59	2.87E 06	4.21E 07	2.20E 06	3.22E 07
9	3.43E 06	4.92E 07	2.87E 06	4.12E 07	0.82	2.69	3.08E 06	4.52E 07	2.35E 06	3.45E 07
10	5.49E 06	5.47E 07	4.59E 06	4.58E 07	1.15	3.77	6.91E 06	5.21E 07	5.28E 06	3.98E 07
11	7.37E 06	6.21E 07	6.16E 06	5.19E 07	0.55	1.80	4.43E 06	5.65E 07	3.39E 06	4.32E 07
12	7.22E 06	6.93E 07	6.04E 06	5.80E 07	0.51	1.67	4.03E 06	6.05E 07	3.08E 06	4.63E 07
13	5.05E 06	7.44E 07	4.22E 06	6.22E 07	0.95	3.12	5.24E 06	6.58E 07	4.01E 06	5.03E 07
14	6.60E 06	8.10E 07	5.52E 06	6.77E 07	0.76	2.49	5.49E 06	7.13E 07	4.20E 06	5.45E 07
15	6.63E 06	8.76E 07	5.54E 06	7.33E 07	1.46	4.79	1.06E 07	8.18E 07	8.09E 06	6.26E 07
16	6.74E 06	9.44E 07	5.64E 06	7.89E 07	1.67	5.48	1.23E 07	9.42E 07	9.41E 06	7.20E 07
17	8.10E 06	1.02E 08	6.77E 06	8.57E 07	1.06	3.48	9.39E 06	1.04E 08	7.18E 06	7.92E 07
18	9.11E 06	1.12E 08	7.62E 06	9.33E 07	0.86	2.82	8.57E 06	1.12E 08	6.55E 06	8.57E 07
19	8.11E 06	1.20E 08	6.78E 06	1.00E 08	1.01	3.31	8.96E 06	1.21E 08	6.85E 06	9.26E 07
20	2.42E 06	1.22E 08	2.02E 06	1.02E 08	1.19	3.90	3.15E 06	1.24E 08	2.41E 06	9.50E 07
21	3.85E 06	1.26E 08	3.22E 06	1.05E 08	0.73	2.39	3.07E 06	1.27E 08	2.35E 06	9.73E 07
22	2.43E 06	1.28E 08	2.03E 06	1.07E 08	1.59	5.22	4.23E 06	1.32E 08	3.23E 06	1.01E 08
23	1.95E 06	1.30E 08	1.63E 06	1.09E 08	0.83	2.72	1.77E 06	1.33E 08	1.35E 06	1.02E 08
24	2.33E 06	1.33E 08	1.95E 06	1.11E 08	0.53	1.74	1.35E 06	1.35E 08	1.03E 06	1.03E 08
25	4.64E 06	1.37E 08	3.88E 06	1.15E 08	0.45	1.48	2.28E 06	1.37E 08	1.75E 06	1.05E 08
26	2.81E 06	1.40E 08	2.35E 06	1.17E 08	0.40	1.31	1.23E 06	1.38E 08	9.41E 05	1.06E 08
27	2.06E 06	1.42E 08	1.72E 06	1.19E 08	-0.07	-0.23	-1.58E 05	1.38E 08	-1.21E 05	1.06E 08
28	2.49E 06	1.45E 08	2.09E 06	1.21E 08	0.56	1.84	1.53E 06	1.40E 08	1.17E 06	1.07E 08
29	3.47E 06	1.48E 08	2.90E 06	1.24E 08	0.50	1.64	1.90E 06	1.41E 08	1.45E 06	1.08E 08
30	5.56E 06	1.54E 08	4.64E 06	1.29E 08	0.14	0.46	8.50E 05	1.42E 08	6.50E 05	1.09E 08
31	6.79E 05	1.54E 08	5.68E 05	1.29E 08	0.17	0.56	1.26E 05	1.42E 08	9.65E 04	1.09E 08

L	AYD2	AYD2	M2	M2	SPM	SPF	YD3	YD3	M3	M3
32	1.80E 06	1.56E 08	1.51E 06	1.31E 08	0.11	0.36	2.17E 05	1.43E 08	1.66E 05	1.09E 08
33	2.38E 06	1.59E 08	1.99E 06	1.33E 08	-0.13	-0.43	-3.39E 05	1.42E 08	-2.59E 05	1.09E 08
34	2.94E 06	1.62E 08	2.46E 06	1.35E 08	-1.25	-4.10	-4.02E 06	1.38E 08	-3.07E 06	1.06E 08
35	3.05E 06	1.65E 08	2.55E 06	1.38E 08	-0.02	-0.07	-6.67E 04	1.38E 08	-5.10E 04	1.06E 08
36	4.01E 06	1.69E 08	3.35E 06	1.41E 08	0.57	1.87	2.50E 06	1.41E 08	1.91E 06	1.08E 08
37	2.88E 06	1.71E 08	2.41E 06	1.43E 08	0.28	0.92	8.81E 05	1.42E 08	6.73E 05	1.08E 08
F 38	3.37E 06	1.75E 08	2.82E 06	1.46E 08	0.80	2.62	2.95E 06	1.45E 08	2.25E 06	1.10E 08
39	4.54E 06	1.79E 08	3.80E 06	1.50E 08	2.01	6.59	9.98E 06	1.55E 08	7.63E 06	1.18E 08
40	6.01E 06	1.85E 08	5.03E 06	1.55E 08	2.12	6.95	1.39E 07	1.68E 08	1.07E 07	1.29E 08
41	8.56E 06	1.94E 08	7.15E 06	1.62E 08	2.20	7.22	2.06E 07	1.89E 08	1.57E 07	1.45E 08
42	8.75E 06	2.03E 08	7.32E 06	1.69E 08	1.01	3.31	9.67E 06	1.99E 08	7.39E 06	1.52E 08
43	6.01E 06	2.09E 08	5.03E 06	1.74E 08	1.29	4.23	8.48E 06	2.07E 08	6.48E 06	1.58E 08
44	4.74E 06	2.13E 08	3.96E 06	1.78E 08	0.75	2.46	3.89E 06	2.11E 08	2.97E 06	1.61E 08
45	4.65E 06	2.18E 08	3.89E 06	1.82E 08	1.08	3.54	5.50E 06	2.17E 08	4.20E 06	1.66E 08
46	5.52E 06	2.24E 08	4.61E 06	1.87E 08	0.33	1.08	1.99E 06	2.19E 08	1.52E 06	1.67E 08
47	3.88E 06	2.27E 08	3.24E 06	1.90E 08	0.68	2.23	2.88E 06	2.21E 08	2.20E 06	1.69E 08
48	1.04E 06	2.29E 08	8.67E 05	1.91E 08	1.22	4.00	1.38E 06	2.23E 08	1.06E 06	1.70E 08
49	9.14E 05	2.29E 08	7.64E 05	1.92E 08	0.76	2.49	7.59E 05	2.24E 08	5.80E 05	1.71E 08
50	5.80E 05	2.30E 08	4.85E 05	1.92E 08	-0.99	-3.25	-6.28E 05	2.23E 08	-4.80E 05	1.70E 08
51	1.23E 04	2.30E 08	1.03E 04	1.92E 08	-0.08	-0.26	-1.08E 03	2.23E 08	-8.26E 02	1.70E 08
52	2.96E 05	2.30E 08	2.48E 05	1.93E 08	0.0	0.0	0.0	2.23E 08	0.0	1.70E 08
53	6.17E 05	2.31E 08	5.16E 05	1.93E 08	0.54	1.77	3.64E 05	2.23E 08	2.79E 05	1.71E 08
54	1.01E 06	2.32E 08	8.46E 05	1.94E 08	0.52	1.71	5.76E 05	2.24E 08	4.40E 05	1.71E 08
55	4.06E 06	2.36E 08	3.40E 06	1.97E 08	0.76	2.49	3.38E 06	2.27E 08	2.58E 06	1.74E 08
56	4.05E 06	2.40E 08	3.39E 06	2.01E 08	0.60	1.97	2.66E 06	2.30E 08	2.03E 06	1.76E 08
57	8.89E 05	2.41E 08	7.43E 05	2.01E 08	0.55	1.80	5.35E 05	2.30E 08	4.09E 05	1.76E 08
58	2.27E 06	2.43E 08	1.90E 06	2.03E 08	1.38	4.53	3.43E 06	2.34E 08	2.62E 06	1.79E 08
59	2.54E 06	2.46E 08	2.13E 06	2.05E 08	1.05	3.44	2.92E 06	2.37E 08	2.23E 06	1.81E 08
60	3.11E 06	2.49E 08	2.60E 06	2.08E 08	0.11	0.36	3.74E 05	2.37E 08	2.86E 05	1.81E 08
61	5.68E 06	2.55E 08	4.75E 06	2.13E 08	0.26	0.85	1.61E 06	2.39E 08	1.23E 06	1.83E 08
62	2.36E 06	2.57E 08	1.97E 06	2.15E 08	0.52	1.71	1.34E 06	2.40E 08	1.02E 06	1.84E 08
63	8.56E 06	2.65E 08	7.15E 06	2.22E 08	0.21	0.69	1.96E 06	2.42E 08	1.50E 06	1.85E 08
64	1.40E 07	2.79E 08	1.17E 07	2.34E 08	-0.08	-0.26	-1.23E 06	2.41E 08	-9.38E 05	1.84E 08
65	4.51E 06	2.84E 08	3.77E 06	2.37E 08	-1.68	-5.51	-8.28E 06	2.33E 08	-6.33E 06	1.78E 08

EASTERN SHORE (DEPTH 0-6 FEET)

L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
1	2.58E 06	2.58E 06	2.16E 06	2.16E 06	-0.01	-0.03	-2.82E 04	-2.82E 04	-2.16E 04	-2.16E 04
2	2.78E 06	5.36E 06	2.32E 06	4.48E 06	0.66	2.16	2.00E 06	1.98E 06	1.53E 06	1.51E 06
3	1.12E 06	6.48E 06	9.39E 05	5.42E 06	0.95	3.12	1.17E 06	3.14E 06	8.92E 05	2.40E 06
4	5.68E 05	7.05E 06	4.75E 05	5.89E 06	0.0	0.0	0.0	3.14E 06	0.0	2.40E 06
5	1.80E 06	8.85E 06	1.51E 06	7.40E 06	-0.79	-2.59	-1.56E 06	1.59E 06	-1.19E 06	1.21E 06
6	1.02E 06	9.88E 06	8.57E 05	8.26E 06	0.0	0.0	0.0	1.59E 06	0.0	1.21E 06
7	9.63E 05	1.08E 07	8.05E 05	9.06E 06	0.0	0.0	0.0	1.59E 06	0.0	1.21E 06
8	2.09E 06	1.29E 07	1.74E 06	1.08E 07	1.61	5.28	3.67E 06	5.26E 06	2.81E 06	4.02E 06
9	2.51E 06	1.54E 07	2.10E 06	1.29E 07	-0.57	-1.87	-1.56E 06	3.70E 06	-1.19E 06	2.83E 06
10	2.17E 06	1.76E 07	1.82E 06	1.47E 07	-0.18	-0.59	-4.28E 05	3.27E 06	-3.27E 05	2.50E 06
11	3.52E 06	2.11E 07	2.94E 06	1.77E 07	-0.16	-0.52	-6.16E 05	2.65E 06	-4.71E 05	2.03E 06
12	9.14E 05	2.20E 07	7.64E 05	1.84E 07	0.0	0.0	0.0	2.65E 06	0.0	2.03E 06
13	2.11E 06	2.41E 07	1.77E 06	2.02E 07	-0.40	-1.31	-9.23E 05	1.73E 06	-7.06E 05	1.32E 06
14	0.0	2.41E 07	0.0	2.02E 07	0.0	0.0	0.0	1.73E 06	0.0	1.32E 06
15	0.0	2.41E 07	0.0	2.02E 07	0.0	0.0	0.0	1.73E 06	0.0	1.32E 06
16	0.0	2.41E 07	0.0	2.02E 07	0.0	0.0	0.0	1.73E 06	0.0	1.32E 06
17	3.12E 06	2.73E 07	2.61E 06	2.28E 07	0.10	0.33	3.41E 05	2.07E 06	2.61E 05	1.58E 06
18	6.96E 06	3.42E 07	5.82E 06	2.86E 07	0.28	0.92	2.13E 06	4.20E 06	1.63E 06	3.21E 06
19	5.32E 06	3.96E 07	4.45E 06	3.31E 07	0.35	1.15	2.04E 06	6.24E 06	1.56E 06	4.77E 06
20	5.90E 06	4.55E 07	4.93E 06	3.80E 07	0.58	1.90	3.74E 06	9.98E 06	2.86E 06	7.63E 06
21	1.93E 06	4.74E 07	1.61E 06	3.96E 07	0.44	1.44	9.26E 05	1.09E 07	7.08E 05	8.34E 06
22	1.20E 06	4.86E 07	1.00E 06	4.06E 07	0.39	1.28	5.11E 05	1.14E 07	3.90E 05	8.73E 06
23	1.94E 06	5.05E 07	1.62E 06	4.22E 07	0.62	2.03	1.31E 06	1.27E 07	1.00E 06	9.74E 06
24	1.56E 06	5.21E 07	1.30E 06	4.35E 07	0.35	1.15	5.95E 05	1.33E 07	4.55E 05	1.02E 07
25	1.93E 06	5.40E 07	1.61E 06	4.51E 07	0.45	1.48	9.48E 05	1.43E 07	7.24E 05	1.09E 07
26	1.62E 06	5.56E 07	1.35E 06	4.65E 07	0.57	1.87	1.01E 06	1.53E 07	7.71E 05	1.17E 07
27	2.48E 06	5.81E 07	2.07E 06	4.86E 07	0.76	2.49	2.06E 06	1.73E 07	1.58E 06	1.33E 07
28	3.25E 06	6.13E 07	2.71E 06	5.13E 07	0.60	1.97	2.13E 06	1.95E 07	1.63E 06	1.49E 07
29	1.47E 06	6.28E 07	1.23E 06	5.25E 07	0.34	1.12	5.46E 05	2.00E 07	4.18E 05	1.53E 07
30	1.83E 06	6.46E 07	1.53E 06	5.40E 07	0.83	2.72	1.66E 06	2.17E 07	1.27E 06	1.66E 07
31	1.20E 06	6.58E 07	1.00E 06	5.50E 07	0.10	0.33	1.31E 05	2.18E 07	1.00E 05	1.67E 07

L	AYD2	ΣAYD2	MZ	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
32	1.26E 06	6.71E 07	1.05E 06	5.61E 07	0.37	1.21	5.09E 05	2.23E 07	3.89E 05	1.71E 07
33	1.54E 06	6.86E 07	1.29E 06	5.74E 07	0.13	0.43	2.19E 05	2.25E 07	1.68E 05	1.72E 07
34	1.63E 06	7.03E 07	1.36E 06	5.88E 07	0.11	0.36	1.96E 05	2.27E 07	1.50E 05	1.74E 07
35	1.72E 06	7.20E 07	1.43E 06	6.02E 07	0.15	0.49	2.81E 05	2.30E 07	2.15E 05	1.76E 07
36	2.16E 06	7.41E 07	1.81E 06	6.20E 07	1.05	3.44	2.48E 06	2.55E 07	1.90E 06	1.95E 07
37	1.88E 06	7.60E 07	1.57E 06	6.36E 07	0.76	2.49	1.56E 06	2.71E 07	1.19E 06	2.07E 07
38	1.89E 06	7.79E 07	1.58E 06	6.51E 07	0.98	3.21	2.02E 06	2.91E 07	1.55E 06	2.22E 07
39	9.88E 05	7.89E 07	8.26E 05	6.60E 07	0.70	2.30	7.56E 05	2.98E 07	5.78E 05	2.28E 07
40	1.04E 06	7.99E 07	8.67E 05	6.68E 07	-0.45	-1.48	-5.10E 05	2.93E 07	-3.90E 05	2.24E 07
41	1.04E 06	8.10E 07	8.67E 05	6.77E 07	0.0	0.0	0.0	2.93E 07	0.0	2.24E 07
42	1.99E 06	8.30E 07	1.66E 06	6.94E 07	1.70	5.58	3.69E 06	3.30E 07	2.82E 06	2.52E 07
43	2.86E 06	8.58E 07	2.39E 06	7.18E 07	1.47	4.82	4.60E 06	3.76E 07	3.52E 06	2.88E 07
44	3.21E 06	8.90E 07	2.68E 06	7.44E 07	1.32	4.33	4.63E 06	4.23E 07	3.54E 06	3.23E 07
45	2.78E 06	9.18E 07	2.32E 06	7.68E 07	1.20	3.94	3.64E 06	4.59E 07	2.79E 06	3.51E 07
46	1.00E 06	9.28E 07	8.36E 05	7.76E 07	0.0	0.0	0.0	4.59E 07	0.0	3.51E 07
47	1.63E 06	9.44E 07	1.36E 06	7.90E 07	0.0	0.0	0.0	4.59E 07	0.0	3.51E 07
48	2.00E 06	9.64E 07	1.67E 06	8.06E 07	0.0	0.0	0.0	4.59E 07	0.0	3.51E 07
49	1.36E 06	9.78E 07	1.14E 06	8.18E 07	0.61	2.00	9.06E 05	4.68E 07	6.92E 05	3.58E 07
50	4.20E 05	9.82E 07	3.51E 05	8.21E 07	0.40	1.31	1.84E 05	4.70E 07	1.40E 05	3.59E 07
51	4.32E 05	9.87E 07	3.61E 05	8.25E 07	0.0	0.0	0.0	4.70E 07	0.0	3.59E 07
52	7.41E 05	9.94E 07	6.19E 05	8.31E 07	0.67	2.20	5.43E 05	4.75E 07	4.15E 05	3.63E 07
53	1.26E 06	1.01E 08	1.05E 06	8.42E 07	0.51	1.67	7.02E 05	4.82E 07	5.37E 05	3.69E 07
54	7.65E 05	1.01E 08	6.40E 05	8.48E 07	0.66	2.16	5.52E 05	4.88E 07	4.22E 05	3.73E 07
55	3.36E 06	1.05E 08	2.81E 06	8.76E 07	1.86	6.10	6.83E 06	5.56E 07	5.22E 06	4.25E 07
56	1.33E 06	1.06E 08	1.11E 06	8.87E 07	2.90	9.51	4.23E 06	5.98E 07	3.23E 06	4.58E 07
57	0.0	1.06E 08	0.0	8.87E 07	0.0	0.0	0.0	5.98E 07	0.0	4.58E 07
58	0.0	1.06E 08	0.0	8.87E 07	0.0	0.0	0.0	5.98E 07	0.0	4.58E 07
59	0.0	1.06E 08	0.0	8.87E 07	0.0	0.0	0.0	5.98E 07	0.0	4.58E 07
60	0.0	1.06E 08	0.0	8.87E 07	0.0	0.0	0.0	5.98E 07	0.0	4.58E 07

EASTERN SHORE (DEPTH 6-12 FEET)

L	1	5.56E 05	AYD2	5.56E 05	ΣAYD2	M2	4.64E 05	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3	ΣM3
1	2	3.83E 05	3.83E 05	9.38E 05	7.84E 05	3.20E 05	7.84E 05	4.64E 05	-0.29	-0.95	-1.76E 05	-1.76E 05	-1.35E 05	-1.35E 05	
2	3	2.54E 06	3.48E 06	3.48E 06	2.91E 06	2.13E 06	2.91E 06	7.84E 05	-0.57	-1.87	-2.39E 05	-4.15E 05	-1.82E 05	-3.17E 05	
3	4	1.59E 06	5.07E 06	5.07E 06	4.24E 06	1.33E 06	4.24E 06	2.91E 06	-0.04	-0.13	-1.11E 05	-5.26E 05	-8.50E 04	-4.02E 05	
4	5	1.70E 06	6.78E 06	6.78E 06	1.42E 06	1.42E 06	5.67E 06	4.24E 06	-1.08	-3.54	-1.88E 06	-2.41E 06	-1.44E 06	-1.84E 06	
5	6	3.48E 06	1.03E 07	1.03E 07	2.91E 06	1.42E 06	8.58E 06	5.67E 06	-0.35	-1.15	-6.52E 05	-3.06E 06	-4.98E 05	-2.34E 06	
6	7	3.68E 06	1.39E 07	1.39E 07	3.08E 06	2.91E 06	1.17E 07	8.58E 06	-0.20	-0.66	-7.61E 05	-3.82E 06	-5.82E 05	-2.92E 06	
7	8	2.32E 06	1.63E 07	1.63E 07	1.94E 06	1.94E 06	1.36E 07	1.17E 07	-0.02	-0.07	-8.04E 04	-3.90E 06	-6.15E 04	-2.98E 06	
8	9	3.43E 06	1.97E 07	1.97E 07	2.87E 06	2.87E 06	1.65E 07	1.36E 07	1.01	3.31	2.56E 06	-1.34E 06	1.96E 06	-1.02E 06	
9	10	3.20E 06	2.29E 07	2.29E 07	2.67E 06	2.67E 06	1.91E 07	1.65E 07	-0.11	-0.36	-4.13E 05	-1.75E 06	-3.16E 05	-1.34E 06	
10	11	4.35E 06	2.72E 07	2.72E 07	3.63E 06	3.63E 06	2.28E 07	1.91E 07	0.37	1.21	1.29E 06	-4.56E 05	9.89E 05	-3.49E 05	
11	12	4.58E 06	3.18E 07	3.18E 07	3.83E 06	3.83E 06	2.66E 07	2.28E 07	0.08	0.26	3.80E 05	-7.63E 04	2.91E 05	-5.83E 04	
12	13	4.36E 06	3.62E 07	3.62E 07	3.64E 06	3.64E 06	3.02E 07	2.66E 07	-0.04	-0.13	-2.00E 05	-2.77E 05	-1.53E 05	-2.11E 05	
13	14	3.15E 06	3.93E 07	3.93E 07	2.63E 06	2.63E 06	3.29E 07	3.02E 07	0.34	1.12	1.62E 06	1.34E 06	1.24E 06	1.03E 06	
14	15	3.16E 06	4.25E 07	4.25E 07	2.64E 06	2.64E 06	3.55E 07	3.29E 07	1.24	4.07	4.27E 06	5.61E 06	3.26E 06	4.29E 06	
15	16	1.48E 05	4.26E 07	4.26E 07	1.24E 05	1.24E 05	3.56E 07	3.55E 07	0.82	2.69	2.83E 06	8.44E 06	2.17E 06	6.46E 06	
16	17	2.89E 06	4.55E 07	4.55E 07	2.42E 06	2.42E 06	3.81E 07	3.56E 07	0.0	0.0	0.0	8.44E 06	0.0	6.46E 06	
17	18	4.90E 06	5.04E 07	5.04E 07	4.10E 06	4.10E 06	4.22E 07	3.81E 07	-0.26	-0.85	-8.21E 05	7.62E 06	-6.28E 05	5.83E 06	
18	19	3.37E 06	5.38E 07	5.38E 07	2.82E 06	2.82E 06	4.50E 07	4.22E 07	0.27	0.89	1.45E 06	9.07E 06	1.11E 06	6.94E 06	
19	20	4.51E 06	5.83E 07	5.83E 07	3.77E 06	3.77E 06	4.87E 07	4.50E 07	0.14	0.46	5.16E 05	9.59E 06	3.94E 05	7.33E 06	
20	21	4.44E 06	6.27E 07	6.27E 07	3.72E 06	3.72E 06	5.25E 07	4.87E 07	0.54	1.77	2.66E 06	1.22E 07	2.03E 06	9.36E 06	
21	22	1.91E 06	6.47E 07	6.47E 07	1.60E 06	1.60E 06	5.41E 07	5.25E 07	0.74	2.43	3.60E 06	1.58E 07	2.75E 06	1.21E 07	
22	23	1.59E 06	6.62E 07	6.62E 07	1.33E 06	1.33E 06	5.54E 07	5.41E 07	-0.05	-0.16	-1.05E 05	1.57E 07	-8.00E 04	1.20E 07	
23	24	2.06E 06	6.83E 07	6.83E 07	1.72E 06	1.72E 06	5.71E 07	5.54E 07	-0.13	-0.43	-2.26E 05	1.55E 07	-1.73E 05	1.19E 07	
24	25	9.51E 05	6.93E 07	6.93E 07	7.95E 05	7.95E 05	5.79E 07	5.71E 07	0.69	2.26	1.56E 06	1.77E 07	1.19E 06	1.30E 07	
25	26	1.40E 06	7.07E 07	7.07E 07	1.17E 06	1.17E 06	5.91E 07	5.79E 07	-0.26	-0.85	6.76E 05	1.77E 07	5.17E 05	1.36E 07	
26	27	1.38E 06	7.20E 07	7.20E 07	1.16E 06	1.16E 06	6.02E 07	5.91E 07	0.14	0.46	-3.97E 05	1.73E 07	-3.03E 05	1.33E 07	
27	28	2.02E 06	7.41E 07	7.41E 07	1.69E 06	1.69E 06	6.19E 07	6.02E 07	0.03	0.10	2.12E 05	1.76E 07	1.62E 05	1.34E 07	
28	29	3.44E 06	7.75E 07	7.75E 07	2.88E 06	2.88E 06	6.48E 07	6.19E 07	-0.07	-0.23	6.64E 04	1.76E 07	5.08E 04	1.35E 07	
29	30	2.63E 06	8.01E 07	8.01E 07	2.20E 06	2.20E 06	6.70E 07	6.48E 07	-0.07	-0.23	-2.64E 05	1.74E 07	-2.02E 05	1.33E 07	
30	31	3.15E 06	8.33E 07	8.33E 07	2.63E 06	2.63E 06	6.96E 07	6.70E 07	0.44	1.44	1.27E 06	1.86E 07	9.67E 05	1.42E 07	
31									0.10	0.33	3.44E 05	1.90E 07	2.63E 05	1.45E 07	



L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
32	1.16E 06	8.44E 07	9.70E 05	7.06E 07	-0.22	-0.72	-2.79E 05	1.87E 07	-2.13E 05	1.43E 07
33	7.41E 05	8.52E 07	6.19E 05	7.12E 07	-1.44	-4.72	-1.17E 06	1.75E 07	-8.92E 05	1.34E 07
34	8.64E 05	8.60E 07	7.23E 05	7.19E 07	-0.64	-2.10	-6.05E 05	1.69E 07	-4.62E 05	1.29E 07
35	1.17E 06	8.72E 07	9.81E 05	7.29E 07	1.54	5.05	1.97E 06	1.89E 07	1.51E 06	1.44E 07
36	8.02E 05	8.80E 07	6.71E 05	7.36E 07	1.01	3.31	8.86E 05	1.98E 07	6.78E 05	1.51E 07
37	1.38E 06	8.94E 07	1.16E 06	7.48E 07	-0.85	-2.79	-1.29E 06	1.85E 07	-9.82E 05	1.41E 07
38	8.77E 05	9.03E 07	7.33E 05	7.55E 07	1.01	3.31	9.68E 05	1.95E 07	7.40E 05	1.49E 07
39	5.68E 05	9.09E 07	4.75E 05	7.60E 07	-0.32	-1.05	-1.99E 05	1.93E 07	-1.52E 05	1.47E 07
40	6.05E 05	9.15E 07	5.06E 05	7.65E 07	-0.99	-3.25	-6.55E 05	1.86E 07	-5.01E 05	1.42E 07
41	9.63E 05	9.24E 07	8.05E 05	7.73E 07	0.0	0.0	0.0	1.86E 07	0.0	1.42E 07
42	1.15E 06	9.36E 07	9.60E 05	7.82E 07	1.03	3.38	1.29E 06	1.99E 07	9.89E 05	1.52E 07
43	6.91E 05	9.43E 07	5.78E 05	7.88E 07	0.36	1.18	2.72E 05	2.02E 07	2.08E 05	1.54E 07
44	1.20E 06	9.55E 07	1.00E 06	7.98E 07	-0.62	-2.03	-8.12E 05	1.94E 07	-6.21E 05	1.48E 07
45	1.68E 06	9.71E 07	1.40E 06	8.12E 07	0.62	2.03	1.14E 06	2.05E 07	8.70E 05	1.57E 07
46	2.31E 06	9.94E 07	1.93E 06	8.31E 07	0.0	0.0	0.0	2.05E 07	0.0	1.57E 07
47	1.09E 06	1.01E 08	9.08E 05	8.47E 07	1.68	5.51	2.00E 06	2.25E 07	1.53E 06	1.72E 07
48	7.16E 05	1.01E 08	5.99E 05	8.47E 07	0.0	0.0	0.0	2.25E 07	0.0	1.72E 07
49	1.58E 06	1.03E 08	1.32E 06	8.60E 07	0.26	0.85	4.49E 05	2.29E 07	3.43E 05	1.75E 07
50	1.47E 06	1.04E 08	1.23E 06	8.72E 07	0.62	2.03	9.96E 05	2.39E 07	7.61E 05	1.83E 07
51	2.47E 05	1.05E 08	2.06E 05	8.74E 07	0.0	0.0	0.0	2.39E 07	0.0	1.83E 07
52	2.84E 05	1.05E 08	2.37E 05	8.76E 07	-0.23	-0.75	-7.14E 04	2.39E 07	-5.46E 04	1.83E 07
53	2.72E 05	1.05E 08	2.27E 05	8.79E 07	-0.42	-1.38	-1.25E 05	2.37E 07	-9.54E 04	1.82E 07
54	2.28E 06	1.07E 08	1.91E 06	8.98E 07	-0.64	-2.10	-1.60E 06	2.21E 07	-1.22E 06	1.69E 07
55	4.53E 06	1.12E 08	3.79E 06	9.36E 07	1.21	3.97	5.99E 06	2.81E 07	4.58E 06	2.15E 07
56	4.63E 06	1.17E 08	3.87E 06	9.74E 07	0.65	2.13	3.29E 06	3.14E 07	2.52E 06	2.40E 07
57	2.73E 06	1.19E 08	2.28E 06	9.97E 07	3.14	10.30	9.37E 06	4.08E 07	7.16E 06	3.12E 07
58	6.67E 05	1.20E 08	5.57E 05	1.00E 08	0.0	0.0	0.0	4.08E 07	0.0	3.12E 07
59	0.0	1.20E 08	0.0	1.00E 08	0.0	0.0	0.0	4.08E 07	0.0	3.12E 07
60	0.0	1.20E 08	0.0	1.00E 08	0.0	0.0	0.0	4.08E 07	0.0	3.12E 07

EASTERN SHORE (DEPTH 12-18 FEET)

L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
1	1.11E 05	1.11E 05	9.29E 04	9.29E 04	0.0	0.0	0.0	0.0	0.0	0.0
2	3.58E 05	4.69E 05	2.99E 05	3.92E 05	0.02	0.07	7.83E 03	7.83E 03	5.99E 03	5.99E 03
3	1.51E 06	1.98E 06	1.26E 06	1.65E 06	0.0	0.0	0.0	7.83E 03	0.0	5.99E 03
4	2.90E 06	4.88E 06	2.43E 06	4.08E 06	-0.04	-0.13	-1.27E 05	-1.19E 05	-9.70E 04	-9.10E 04
5	3.57E 06	8.44E 06	2.98E 06	7.06E 06	0.31	1.02	1.21E 06	1.09E 06	9.25E 05	8.34E 05
6	2.36E 06	1.08E 07	1.97E 06	9.03E 06	-0.21	-0.69	-5.41E 05	5.49E 05	-4.14E 05	4.20E 05
7	9.38E 05	1.17E 07	7.84E 05	9.82E 06	0.43	1.41	4.41E 05	9.90E 05	3.37E 05	7.57E 05
8	1.74E 06	1.35E 07	1.46E 06	1.13E 07	0.87	2.85	1.66E 06	2.65E 06	1.27E 06	2.02E 06
9	1.23E 06	1.47E 07	1.03E 06	1.23E 07	2.49	8.17	3.36E 06	6.01E 06	2.57E 06	4.59E 06
10	1.67E 06	1.64E 07	1.39E 06	1.37E 07	0.77	2.53	1.40E 06	7.41E 06	1.07E 06	5.67E 06
11	1.38E 06	1.78E 07	1.16E 06	1.49E 07	0.52	1.71	7.86E 05	8.20E 06	6.01E 05	6.27E 06
12	2.40E 06	2.02E 07	2.00E 06	1.69E 07	0.02	0.07	5.24E 04	8.25E 06	4.00E 04	6.31E 06
13	3.12E 06	2.33E 07	2.61E 06	1.95E 07	0.38	1.25	1.30E 06	9.55E 06	9.92E 05	7.30E 06
14	1.18E 07	3.51E 07	9.89E 06	2.94E 07	0.67	2.20	8.66E 06	1.82E 07	6.62E 06	1.39E 07
15	8.60E 06	4.37E 07	7.19E 06	3.66E 07	1.07	3.51	1.01E 07	2.83E 07	7.70E 06	2.16E 07
16	5.72E 06	4.94E 07	4.78E 06	4.13E 07	0.77	2.53	4.81E 06	3.31E 07	3.68E 06	2.53E 07
17	6.47E 06	5.59E 07	5.41E 06	4.67E 07	0.09	0.30	6.37E 05	3.37E 07	4.87E 05	2.58E 07
18	2.01E 06	5.79E 07	1.68E 06	4.84E 07	0.85	2.79	1.87E 06	3.56E 07	1.43E 06	2.72E 07
19	2.79E 06	6.07E 07	2.33E 06	5.08E 07	0.16	0.52	4.88E 05	3.61E 07	3.73E 05	2.76E 07
20	1.95E 06	6.27E 07	1.63E 06	5.24E 07	0.26	0.85	5.54E 05	3.66E 07	4.24E 05	2.80E 07
21	4.59E 06	6.72E 07	3.84E 06	5.62E 07	0.31	1.02	1.56E 06	3.82E 07	1.19E 06	2.92E 07
22	7.53E 06	7.48E 07	6.30E 06	6.25E 07	0.05	0.16	4.12E 05	3.86E 07	3.15E 05	2.95E 07
23	2.96E 06	7.77E 07	2.48E 06	6.50E 07	0.45	1.48	1.46E 06	4.01E 07	1.11E 06	3.06E 07
24	1.49E 06	7.92E 07	1.25E 06	6.62E 07	0.73	2.39	1.19E 06	4.13E 07	9.12E 05	3.15E 07
25	3.44E 06	8.27E 07	2.88E 06	6.91E 07	-0.43	-1.41	-1.62E 06	3.96E 07	-1.24E 06	3.03E 07
26	2.99E 06	8.57E 07	2.50E 06	7.16E 07	-0.15	-0.49	-4.90E 05	3.91E 07	-3.75E 05	2.99E 07
27	1.54E 06	8.72E 07	1.29E 06	7.29E 07	-0.03	-0.10	-5.06E 04	3.91E 07	-3.87E 04	2.99E 07
28	2.94E 06	9.01E 07	2.46E 06	7.54E 07	-0.34	-1.12	-1.09E 06	3.80E 07	-8.35E 05	2.91E 07
29	1.96E 06	9.21E 07	1.64E 06	7.70E 07	0.28	0.92	6.01E 05	3.86E 07	4.59E 05	2.95E 07
30	4.81E 05	9.26E 07	4.03E 05	7.74E 07	0.56	1.84	2.95E 05	3.89E 07	2.25E 05	2.97E 07
31	1.36E 06	9.40E 07	1.16E 06	7.86E 07	0.02	0.07	3.02E 04	3.89E 07	2.31E 04	2.98E 07

L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
32	1.81E 06	9.58E 07	1.52E 06	8.01E 07	-0.07	-0.23	-1.39E 05	3.88E 07	-1.06E 05	2.97E 07
33	2.26E 06	9.80E 07	1.89E 06	8.20E 07	-0.64	-2.10	-1.58E 06	3.72E 07	-1.21E 06	2.84E 07
34	2.12E 06	1.00E 08	1.78E 06	8.38E 07	-0.37	-1.21	-8.59E 05	3.64E 07	-6.57E 05	2.78E 07
35	4.69E 05	1.01E 08	3.92E 05	8.41E 07	1.60	5.25	8.21E 05	3.72E 07	6.27E 05	2.84E 07
36	8.15E 05	1.01E 08	6.81E 05	8.48E 07	1.26	4.13	1.12E 06	3.83E 07	8.58E 05	2.93E 07
37	1.35E 06	1.03E 08	1.13E 06	8.60E 07	-0.37	-1.21	-5.44E 05	3.77E 07	-4.16E 05	2.89E 07
38	8.27E 05	1.04E 08	6.92E 05	8.66E 07	0.71	2.33	6.42E 05	3.84E 07	4.91E 05	2.94E 07
39	6.67E 05	1.04E 08	5.57E 05	8.72E 07	-0.86	-2.82	-6.27E 05	3.78E 07	-4.79E 05	2.89E 07
40	7.28E 05	1.05E 08	6.09E 05	8.78E 07	-1.47	-4.82	-1.17E 06	3.66E 07	-8.95E 05	2.80E 07
41	7.65E 05	1.06E 08	6.40E 05	8.85E 07	1.57	5.15	1.31E 06	3.79E 07	1.00E 06	2.90E 07
42	4.44E 05	1.06E 08	3.72E 05	8.88E 07	0.25	0.82	1.21E 05	3.80E 07	9.29E 04	2.91E 07
43	7.04E 05	1.07E 08	5.88E 05	8.94E 07	-2.03	-6.66	-1.56E 06	3.65E 07	-1.19E 06	2.79E 07
44	1.27E 06	1.08E 08	1.06E 06	9.05E 07	-1.46	-4.79	-2.03E 06	3.44E 07	-1.55E 06	2.63E 07
45	1.58E 06	1.10E 08	1.32E 06	9.18E 07	-0.81	-2.66	-1.40E 06	3.30E 07	-1.07E 06	2.53E 07
46	3.10E 06	1.13E 08	2.59E 06	9.44E 07	0.73	2.39	2.47E 06	3.55E 07	1.89E 06	2.72E 07
47	2.46E 06	1.15E 08	2.05E 06	9.64E 07	0.20	0.66	5.37E 05	3.60E 07	4.11E 05	2.76E 07
48	1.06E 06	1.16E 08	8.88E 05	9.73E 07	-1.04	-3.41	-1.21E 06	3.48E 07	-9.23E 05	2.66E 07
49	8.27E 05	1.17E 08	6.92E 05	9.80E 07	-0.54	-1.77	-4.88E 05	3.44E 07	-3.73E 05	2.63E 07
50	3.21E 05	1.18E 08	2.68E 05	9.83E 07	0.42	1.38	1.47E 05	3.45E 07	1.13E 05	2.64E 07
51	6.05E 05	1.18E 08	5.06E 05	9.88E 07	0.0	0.0	0.0	3.45E 07	0.0	2.64E 07
52	2.26E 06	1.20E 08	1.89E 06	1.01E 08	2.51	8.23	6.20E 06	4.07E 07	4.74E 06	3.11E 07
53	3.88E 06	1.24E 08	3.24E 06	1.04E 08	1.52	4.99	6.44E 06	4.71E 07	4.93E 06	3.60E 07
54	5.10E 06	1.29E 08	4.26E 06	1.08E 08	-0.21	-0.69	-1.17E 06	4.60E 07	-8.95E 05	3.51E 07
55	4.19E 06	1.34E 08	3.50E 06	1.12E 08	0.74	2.43	3.39E 06	4.94E 07	2.59E 06	3.77E 07
56	4.40E 06	1.38E 08	3.67E 06	1.15E 08	1.45	4.76	6.97E 06	5.63E 07	5.33E 06	4.31E 07
57	5.49E 06	1.43E 08	4.59E 06	1.20E 08	2.17	7.12	1.30E 07	6.94E 07	9.97E 06	5.30E 07
58	8.56E 06	1.52E 08	7.15E 06	1.27E 08	1.20	3.94	1.12E 07	8.06E 07	8.58E 06	6.16E 07
59	8.73E 06	1.61E 08	7.30E 06	1.34E 08	2.56	8.40	2.44E 07	1.05E 08	1.87E 07	8.03E 07
60	1.44E 06	1.62E 08	1.21E 06	1.36E 08	0.0	0.0	0.0	1.05E 08	0.0	8.03E 07

EASTERN SHORE (DEPTH 18-24 FEET)

L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
1	2.47E 04	2.47E 04	2.06E 04	2.06E 04	0.0	0.0	0.0	0.0	0.0	0.0
2	4.94E 04	7.41E 04	4.13E 04	6.19E 04	0.51	1.67	2.75E 04	2.75E 04	2.11E 04	2.11E 04
3	1.65E 06	1.73E 06	1.38E 06	1.45E 06	0.49	1.61	8.86E 05	9.14E 05	6.78E 05	6.99E 05
4	2.06E 06	3.79E 06	1.72E 06	3.17E 06	-0.10	-0.33	-2.25E 05	6.88E 05	-1.72E 05	5.26E 05
5	1.15E 06	4.94E 06	9.60E 05	4.13E 06	-0.27	-0.89	-3.39E 05	3.49E 05	-2.59E 05	2.67E 05
6	2.59E 05	5.20E 06	2.17E 05	4.35E 06	0.0	0.0	0.0	3.49E 05	0.0	2.67E 05
7	3.09E 05	5.51E 06	2.58E 05	4.60E 06	1.07	3.51	3.61E 05	7.11E 05	2.76E 05	5.43E 05
8	5.19E 05	6.02E 06	4.34E 05	5.04E 06	0.0	0.0	0.0	7.11E 05	0.0	5.43E 05
9	1.01E 06	7.04E 06	8.46E 05	5.88E 06	0.82	2.69	9.08E 05	1.62E 06	6.94E 05	1.24E 06
10	1.21E 06	8.25E 06	1.01E 06	6.90E 06	0.38	1.25	5.03E 05	2.12E 06	3.84E 05	1.62E 06
11	1.20E 06	9.44E 06	1.00E 06	7.90E 06	0.43	1.41	5.63E 05	2.68E 06	4.30E 05	2.05E 06
12	7.78E 05	1.02E 07	6.50E 05	8.55E 06	-0.07	-0.23	-5.95E 04	2.62E 06	-4.55E 04	2.01E 06
13	1.01E 06	1.12E 07	8.46E 05	9.39E 06	0.58	1.90	6.42E 05	3.27E 06	4.91E 05	2.50E 06
14	7.78E 06	1.90E 07	6.50E 06	1.59E 07	1.09	3.58	9.27E 06	1.25E 07	7.09E 06	9.58E 06
15	1.17E 07	3.07E 07	9.74E 06	2.56E 07	1.01	3.31	1.29E 07	2.54E 07	9.84E 06	1.94E 07
16	6.84E 06	3.75E 07	5.72E 06	3.14E 07	0.80	2.62	5.98E 06	3.14E 07	4.57E 06	2.40E 07
17	3.69E 06	4.12E 07	3.09E 06	3.44E 07	0.63	2.07	2.54E 06	3.39E 07	1.94E 06	2.59E 07
18	2.02E 06	4.32E 07	1.69E 06	3.61E 07	1.19	3.90	2.63E 06	3.66E 07	2.01E 06	2.80E 07
19	4.90E 06	4.81E 07	4.10E 06	4.02E 07	0.90	2.95	4.82E 06	4.14E 07	3.69E 06	3.16E 07
20	8.80E 06	5.69E 07	7.36E 06	4.76E 07	0.43	1.41	4.14E 06	4.55E 07	3.16E 06	3.48E 07
21	6.19E 06	6.31E 07	5.17E 06	5.28E 07	0.65	2.13	4.40E 06	4.99E 07	3.36E 06	3.82E 07
22	3.22E 06	6.63E 07	2.69E 06	5.55E 07	0.76	2.49	2.68E 06	5.26E 07	2.05E 06	4.02E 07
23	4.56E 06	7.09E 07	3.81E 06	5.93E 07	0.95	3.12	4.73E 06	5.73E 07	3.62E 06	4.38E 07
24	4.95E 06	7.58E 07	4.14E 06	6.34E 07	0.36	1.18	1.95E 06	5.93E 07	1.49E 06	4.53E 07
25	3.07E 06	7.89E 07	2.57E 06	6.60E 07	0.27	0.89	9.07E 05	6.02E 07	6.94E 05	4.60E 07
26	2.21E 06	8.11E 07	1.85E 06	6.78E 07	-0.09	-0.30	-2.17E 05	6.00E 07	-1.66E 05	4.58E 07
27	2.70E 06	8.38E 07	2.26E 06	7.01E 07	0.75	2.46	2.22E 06	6.22E 07	1.70E 06	4.75E 07
28	1.30E 06	8.51E 07	1.08E 06	7.12E 07	-0.11	-0.36	-1.56E 05	6.20E 07	-1.19E 05	4.74E 07
29	1.43E 06	8.66E 07	1.20E 06	7.24E 07	0.73	2.39	1.14E 06	6.32E 07	8.74E 05	4.83E 07
30	2.01E 06	8.86E 07	1.68E 06	7.41E 07	0.59	1.94	1.30E 06	6.45E 07	9.92E 05	4.93E 07
31	1.96E 06	9.05E 07	1.64E 06	7.57E 07	-0.27	-0.89	-5.79E 05	6.39E 07	-4.43E 05	4.88E 07

L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
32	2.47E 06	9.30E 07	2.06E 06	7.78E 07	-0.16	-0.52	-4.32E 05	6.35E 07	-3.30E 05	4.85E 07
33	3.77E 06	9.68E 07	3.15E 06	8.09E 07	0.57	1.87	2.35E 06	6.58E 07	1.79E 06	5.03E 07
34	2.81E 06	9.96E 07	2.35E 06	8.33E 07	1.29	4.23	3.97E 06	6.98E 07	3.04E 06	5.33E 07
35	2.70E 06	1.02E 08	2.26E 06	8.55E 07	-0.30	-0.98	-8.87E 05	6.89E 07	-6.78E 05	5.27E 07
36	2.78E 06	1.05E 08	2.32E 06	8.78E 07	0.70	2.30	-2.13E 06	7.10E 07	1.63E 06	5.43E 07
37	1.42E 06	1.06E 08	1.19E 06	8.90E 07	-0.22	-0.72	-3.41E 05	7.07E 07	-2.61E 05	5.40E 07
38	8.40E 05	1.07E 08	7.02E 05	8.97E 07	1.19	3.90	1.09E 06	7.18E 07	8.35E 05	5.49E 07
39	1.35E 06	1.09E 08	1.13E 06	9.09E 07	-0.44	-1.44	-6.47E 05	7.11E 07	-4.95E 05	5.44E 07
40	1.74E 06	1.10E 08	1.46E 06	9.23E 07	-1.99	-6.53	-3.79E 06	6.73E 07	-2.90E 06	5.15E 07
41	1.23E 06	1.12E 08	1.03E 06	9.33E 07	1.68	5.51	2.27E 06	6.96E 07	1.73E 06	5.32E 07
42	1.21E 06	1.13E 08	1.01E 06	9.44E 07	-0.14	-0.46	-1.85E 05	6.94E 07	-1.42E 05	5.31E 07
43	1.78E 06	1.15E 08	1.49E 06	9.58E 07	-1.76	-5.77	-3.42E 06	6.60E 07	-2.62E 06	5.05E 07
44	1.40E 06	1.16E 08	1.17E 06	9.70E 07	0.09	0.30	1.37E 05	6.61E 07	1.05E 05	5.06E 07
45	1.93E 06	1.18E 08	1.61E 06	9.86E 07	-0.39	-1.28	-8.21E 05	6.53E 07	-6.28E 05	4.99E 07
46	1.07E 06	1.19E 08	8.98E 05	9.95E 07	-0.46	-1.51	-5.40E 05	6.48E 07	-4.13E 05	4.95E 07
47	1.47E 06	1.20E 08	1.23E 06	1.01E 08	0.0	0.0	0.0	6.48E 07	0.0	4.95E 07
48	1.00E 06	1.21E 08	8.36E 05	1.02E 08	0.0	0.0	0.0	6.48E 07	0.0	4.95E 07
49	3.09E 05	1.22E 08	2.58E 05	1.02E 08	0.10	0.33	3.37E 04	6.48E 07	2.58E 04	4.95E 07
50	1.23E 05	1.22E 08	1.03E 05	1.02E 08	2.64	8.66	3.56E 05	6.52E 07	2.72E 05	4.98E 07
51	7.23E 06	1.29E 08	6.05E 06	1.08E 08	1.90	6.23	1.50E 07	8.02E 07	1.15E 07	6.13E 07
52	1.63E 07	1.46E 08	1.37E 07	1.22E 08	0.16	0.52	2.86E 06	8.30E 07	2.19E 06	6.35E 07
53	1.45E 07	1.60E 08	1.21E 07	1.34E 08	-0.50	-1.64	-7.91E 06	7.51E 07	-6.05E 06	5.74E 07
54	8.26E 06	1.68E 08	6.91E 06	1.41E 08	-0.98	-3.21	-8.85E 06	6.63E 07	-6.77E 06	5.07E 07
55	3.73E 06	1.72E 08	3.12E 06	1.44E 08	0.43	1.41	1.75E 06	6.80E 07	1.34E 06	5.20E 07
56	6.26E 06	1.78E 08	5.23E 06	1.49E 08	0.10	0.33	6.84E 05	6.87E 07	5.23E 05	5.25E 07
57	9.22E 06	1.87E 08	7.71E 06	1.57E 08	0.64	2.10	6.45E 06	7.52E 07	4.93E 06	5.75E 07
58	1.40E 07	2.01E 08	1.17E 07	1.68E 08	0.63	2.07	9.68E 06	8.49E 07	7.40E 06	6.49E 07
59	1.57E 07	2.17E 08	1.31E 07	1.82E 08	1.07	3.51	1.83E 07	1.03E 08	1.40E 07	7.89E 07
60	1.01E 07	2.27E 08	8.46E 06	1.90E 08	1.61	5.28	1.78E 07	1.21E 08	1.36E 07	9.25E 07
61	2.10E 05	2.28E 08	1.75E 05	1.90E 08	0.0	0.0	0.0	1.21E 08	0.0	9.25E 07
62	8.27E 05	2.28E 08	6.92E 05	1.91E 08	0.37	1.21	3.35E 05	1.21E 08	2.56E 05	9.28E 07
63	3.43E 06	2.32E 08	2.87E 06	1.94E 08	3.28	10.76	1.23E 07	1.34E 08	9.41E 06	1.02E 08

EASTERN SHORE (DEPTH 24-30 FEET)

L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
1	1.23E 04	1.23E 04	1.03E 04	1.03E 04	0.0	0.0	0.0	0.0	0.0	0.0
2	1.23E 04	2.47E 04	1.03E 04	2.06E 04	0.0	0.0	0.0	0.0	0.0	0.0
3	2.10E 05	2.35E 05	1.75E 05	1.96E 05	0.10	0.33	2.29E 04	2.29E 04	1.75E 04	1.75E 04
4	1.00E 06	1.23E 06	8.36E 05	1.03E 06	0.38	1.25	4.15E 05	4.38E 05	3.18E 05	3.35E 05
5	9.14E 05	2.15E 06	7.64E 05	1.80E 06	-1.24	-4.07	-1.24E 06	-8.00E 05	-9.47E 05	-6.12E 05
6	3.21E 05	2.47E 06	2.68E 05	2.06E 06	-0.43	-1.41	-1.51E 05	-9.51E 05	-1.15E 05	-7.27E 05
7	1.23E 05	2.59E 06	1.03E 05	2.17E 06	2.04	6.69	2.75E 05	-6.76E 05	2.11E 05	-5.17E 05
8	2.22E 05	2.81E 06	1.86E 05	2.35E 06	1.12	3.67	2.72E 05	-4.04E 05	2.08E 05	-3.09E 05
9	5.93E 05	3.41E 06	4.95E 05	2.85E 06	1.02	3.35	6.61E 05	2.57E 05	5.05E 05	1.97E 05
10	2.47E 05	3.65E 06	2.06E 05	3.06E 06	0.0	0.0	0.0	2.57E 05	0.0	1.97E 05
11	8.52E 05	4.51E 06	7.12E 05	3.77E 06	0.75	2.46	6.99E 05	9.56E 05	5.34E 05	7.31E 05
12	5.31E 05	5.04E 06	4.44E 05	4.21E 06	0.43	1.41	2.50E 05	1.21E 06	1.91E 05	9.22E 05
13	7.28E 05	5.77E 06	6.09E 05	4.82E 06	1.07	3.51	8.52E 05	2.06E 06	6.52E 05	1.57E 06
14	1.62E 07	2.20E 07	1.36E 07	1.84E 07	1.04	3.41	1.84E 07	2.05E 07	1.41E 07	1.57E 07
15	1.93E 07	4.13E 07	1.61E 07	3.45E 07	0.82	2.69	1.73E 07	3.78E 07	1.32E 07	2.89E 07
16	2.34E 07	6.47E 07	1.95E 07	5.41E 07	1.17	3.84	2.99E 07	6.77E 07	2.29E 07	5.18E 07
17	2.04E 07	8.51E 07	1.71E 07	7.12E 07	0.75	2.46	1.68E 07	8.45E 07	1.28E 07	6.46E 07
18	1.49E 07	1.00E 08	1.25E 07	8.36E 07	0.86	2.82	1.40E 07	9.85E 07	1.07E 07	7.53E 07
19	9.43E 06	1.09E 08	7.89E 06	9.15E 07	0.96	3.15	9.90E 06	1.08E 08	7.57E 06	8.29E 07
20	3.20E 06	1.13E 08	2.67E 06	9.42E 07	0.90	2.95	3.15E 06	1.12E 08	2.41E 06	8.53E 07
21	2.57E 06	1.15E 08	2.15E 06	9.63E 07	0.99	3.25	2.78E 06	1.14E 08	2.13E 06	8.74E 07
22	1.74E 06	1.17E 08	1.46E 06	9.78E 07	1.07	3.51	2.04E 06	1.16E 08	1.56E 06	8.90E 07
23	1.31E 06	1.18E 08	1.09E 06	9.89E 07	0.60	1.97	8.58E 05	1.17E 08	6.56E 05	8.96E 07
24	1.11E 06	1.19E 08	9.29E 05	9.98E 07	0.88	2.89	1.07E 06	1.18E 08	8.17E 05	9.04E 07
25	1.33E 06	1.21E 08	1.11E 06	1.01E 08	0.76	2.49	1.11E 06	1.19E 08	8.47E 05	9.13E 07
26	7.65E 05	1.21E 08	6.40E 05	1.02E 08	0.77	2.53	6.44E 05	1.20E 08	4.93E 05	9.18E 07
27	7.53E 05	1.22E 08	6.30E 05	1.02E 08	-0.10	-0.33	-8.23E 04	1.20E 08	-6.30E 04	9.17E 07
28	5.56E 05	1.23E 08	4.64E 05	1.03E 08	-2.00	-6.56	-1.21E 06	1.19E 08	-9.29E 05	9.08E 07
29	2.10E 05	1.23E 08	1.75E 05	1.03E 08	0.34	1.12	7.80E 04	1.19E 08	5.96E 04	9.09E 07
30	2.47E 05	1.23E 08	2.06E 05	1.03E 08	1.45	4.76	3.91E 05	1.19E 08	2.99E 05	9.12E 07
31	1.22E 06	1.24E 08	1.02E 06	1.04E 08	-0.09	-0.30	-1.20E 05	1.19E 08	-9.20E 04	9.11E 07

L 32	AYD2	5.28E 06	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
33		3.19E 06	1.30E 08	4.42E 06	1.08E 08	1.16	3.80	6.70E 06	1.26E 08	5.12E 06	9.62E 07
34		1.46E 06	1.33E 08	2.66E 06	1.11E 08	0.75	2.46	2.61E 06	1.28E 08	2.00E 06	9.82E 07
35		6.30E 05	1.34E 08	1.22E 06	1.12E 08	0.71	2.33	1.13E 06	1.30E 08	8.65E 05	9.90E 07
36		1.23E 05	1.35E 08	5.26E 05	1.13E 08	0.62	2.03	4.27E 05	1.30E 08	3.26E 05	9.94E 07
37		6.17E 05	1.35E 08	1.03E 05	1.13E 08	3.36	11.02	4.54E 05	1.30E 08	3.47E 05	9.97E 07
38		1.63E 06	1.36E 08	5.16E 05	1.14E 08	0.76	2.49	5.13E 05	1.31E 08	3.92E 05	1.00E 08
39		3.07E 06	1.37E 08	1.36E 06	1.15E 08	0.78	2.56	1.39E 06	1.32E 08	1.06E 06	1.01E 08
40		1.37E 06	1.40E 08	2.57E 06	1.17E 08	0.47	1.54	1.58E 06	1.34E 08	1.21E 06	1.02E 08
41		1.00E 06	1.42E 08	1.15E 06	1.19E 08	-0.55	-1.80	-8.24E 05	1.33E 08	-6.30E 05	1.02E 08
42		1.21E 06	1.43E 08	8.36E 05	1.19E 08	2.29	7.51	2.50E 06	1.36E 08	1.91E 06	1.04E 08
43		1.59E 06	1.44E 08	1.01E 06	1.20E 08	0.95	3.12	1.26E 06	1.37E 08	9.61E 05	1.05E 08
44		1.81E 06	1.46E 08	1.33E 06	1.22E 08	-0.87	-2.85	-1.51E 06	1.35E 08	-1.16E 06	1.03E 08
45		2.47E 05	1.47E 08	1.52E 06	1.23E 08	-0.04	-0.13	-7.94E 04	1.35E 08	-6.07E 04	1.03E 08
46		1.60E 05	1.48E 08	2.06E 05	1.24E 08	0.18	0.59	4.86E 04	1.35E 08	3.72E 04	1.03E 08
47		9.88E 04	1.48E 08	1.34E 05	1.24E 08	0.0	0.0	0.0	1.35E 08	0.0	1.03E 08
48		8.64E 04	1.48E 08	8.26E 04	1.24E 08	0.0	0.0	0.0	1.35E 08	0.0	1.03E 08
49		1.11E 05	1.48E 08	7.23E 04	1.24E 08	4.24	13.91	4.01E 05	1.36E 08	3.06E 05	1.04E 08
50		9.26E 05	1.49E 08	9.29E 04	1.24E 08	3.00	9.84	3.64E 05	1.36E 08	2.79E 05	1.04E 08
51		2.28E 07	1.72E 08	7.74E 05	1.25E 08	2.22	7.28	2.25E 06	1.38E 08	1.72E 06	1.06E 08
52		9.48E 06	1.81E 08	1.91E 07	1.44E 08	0.40	1.31	9.99E 06	1.48E 08	7.64E 06	1.13E 08
53		1.09E 07	1.92E 08	7.93E 06	1.52E 08	-1.00	-3.28	-1.04E 07	1.38E 08	-7.93E 06	1.05E 08
54		4.47E 06	1.97E 08	9.11E 06	1.61E 08	0.37	1.21	4.41E 06	1.42E 08	3.37E 06	1.09E 08
55		3.32E 06	2.00E 08	3.74E 06	1.65E 08	-0.17	-0.56	-8.31E 05	1.42E 08	-6.35E 05	1.08E 08
56		6.49E 06	2.07E 08	2.78E 06	1.67E 08	-0.54	-1.77	-1.96E 06	1.40E 08	-1.50E 06	1.07E 08
57		6.70E 06	2.13E 08	5.43E 06	1.73E 08	0.42	1.38	2.98E 06	1.43E 08	2.28E 06	1.09E 08
58		1.83E 06	2.15E 08	5.60E 06	1.78E 08	0.79	2.59	5.79E 06	1.48E 08	4.43E 06	1.13E 08
59		9.01E 05	2.16E 08	1.53E 06	1.80E 08	-0.56	-1.84	-1.12E 06	1.47E 08	-8.55E 05	1.13E 08
60		5.16E 06	2.21E 08	7.54E 05	1.81E 08	1.46	4.79	1.44E 06	1.49E 08	1.10E 06	1.14E 08
61		1.20E 07	2.33E 08	4.31E 06	1.85E 08	1.21	3.97	6.83E 06	1.55E 08	5.22E 06	1.19E 08
62		1.48E 07	2.48E 08	9.99E 06	1.95E 08	-0.25	-0.82	-3.27E 06	1.52E 08	-2.50E 06	1.16E 08
63		3.89E 06	2.52E 08	1.24E 07	2.07E 08	-0.23	-0.75	-3.72E 06	1.48E 08	-2.84E 06	1.14E 08
				3.25E 06	2.11E 08	2.56	8.40	1.09E 07	1.59E 08	8.32E 06	1.22E 08

EASTERN SHORE (DEPTH 30-36 FEET)

L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
1	4.94E 05	4.94E 05	4.13E 05	4.13E 05	0.0	0.0	0.0	0.0	0.0	0.0
2	3.70E 04	5.31E 05	3.10E 04	4.44E 05	0.0	0.0	0.0	0.0	0.0	0.0
3	3.33E 05	8.64E 05	2.79E 05	7.23E 05	-0.60	-1.97	-2.19E 05	-2.19E 05	-1.67E 05	-1.67E 05
4	5.80E 05	1.44E 06	4.85E 05	1.21E 06	0.43	1.41	2.73E 05	5.41E 04	2.09E 05	4.14E 04
5	5.80E 05	2.02E 06	4.85E 05	1.69E 06	1.50	4.92	9.52E 05	1.01E 06	7.28E 05	7.69E 05
6	6.54E 05	2.68E 06	5.47E 05	2.24E 06	1.29	4.23	9.23E 05	1.93E 06	7.06E 05	1.47E 06
7	1.85E 05	2.86E 06	1.55E 05	2.39E 06	0.46	1.51	9.31E 04	2.02E 06	7.12E 04	1.55E 06
8	3.70E 05	3.23E 06	3.10E 05	2.70E 06	0.13	0.43	5.26E 04	2.07E 06	4.02E 04	1.59E 06
9	2.47E 05	3.48E 06	2.06E 05	2.91E 06	2.58	8.46	6.96E 05	2.77E 06	5.33E 05	2.12E 06
10	2.22E 05	3.70E 06	1.86E 05	3.10E 06	1.28	4.20	3.11E 05	3.08E 06	2.38E 05	2.36E 06
11	2.47E 05	3.95E 06	2.06E 05	3.30E 06	-0.13	-0.43	-3.51E 04	3.05E 06	-2.68E 04	2.33E 06
12	7.04E 05	4.65E 06	5.88E 05	3.89E 06	0.59	1.94	4.54E 05	3.50E 06	3.47E 05	2.68E 06
13	4.44E 05	5.10E 06	3.72E 05	4.26E 06	0.0	0.0	0.0	3.50E 06	0.0	2.68E 06
14	7.51E 06	1.26E 07	6.28E 06	1.05E 07	0.52	1.71	4.27E 06	7.77E 06	3.26E 06	5.94E 06
15	1.43E 06	1.40E 07	1.20E 06	1.17E 07	0.31	1.02	4.85E 05	8.25E 06	3.71E 05	6.31E 06
16	4.53E 06	1.86E 07	3.79E 06	1.55E 07	1.24	4.07	6.14E 06	1.44E 07	4.70E 06	1.10E 07
17	8.17E 06	2.67E 07	6.83E 06	2.24E 07	0.90	2.95	8.04E 06	2.24E 07	6.15E 06	1.72E 07
18	1.20E 07	3.87E 07	9.99E 06	3.23E 07	1.13	3.71	1.48E 07	3.72E 07	1.13E 07	2.84E 07
19	1.36E 07	5.23E 07	1.14E 07	4.37E 07	0.62	2.03	9.24E 06	4.64E 07	7.06E 06	3.55E 07
20	1.03E 07	6.26E 07	8.62E 06	5.24E 07	0.80	2.62	9.02E 06	5.55E 07	6.89E 06	4.24E 07
21	5.70E 06	6.83E 07	4.77E 06	5.71E 07	1.74	5.71	1.09E 07	6.63E 07	8.30E 06	5.07E 07
22	8.70E 06	7.70E 07	7.28E 06	6.44E 07	0.75	2.46	7.14E 06	7.34E 07	5.46E 06	5.62E 07
23	4.91E 06	8.20E 07	4.11E 06	6.85E 07	0.40	1.31	2.15E 06	7.56E 07	1.64E 06	5.78E 07
24	1.65E 06	8.36E 07	1.38E 06	6.99E 07	0.39	1.28	7.05E 05	7.63E 07	5.39E 05	5.83E 07
25	4.30E 06	8.79E 07	3.59E 06	7.35E 07	0.57	1.87	2.68E 06	7.90E 07	2.05E 06	6.04E 07
26	4.10E 06	9.20E 07	3.43E 06	7.69E 07	1.04	3.41	4.66E 06	8.36E 07	3.56E 06	6.39E 07
27	1.17E 06	9.32E 07	9.81E 05	7.79E 07	0.55	1.80	7.05E 05	8.43E 07	5.39E 05	6.45E 07
28	1.56E 06	9.47E 07	1.30E 06	7.92E 07	-0.80	-2.62	-1.36E 06	8.30E 07	-1.04E 06	6.34E 07
29	2.21E 06	9.69E 07	1.85E 06	8.10E 07	0.35	1.15	8.46E 05	8.38E 07	6.47E 05	6.41E 07
30	5.48E 06	1.02E 08	4.58E 06	8.56E 07	0.51	1.67	3.06E 06	8.69E 07	2.34E 06	6.64E 07
31	6.05E 06	1.08E 08	5.06E 06	9.07E 07	0.52	1.71	3.44E 06	9.03E 07	2.63E 06	6.91E 07



L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
32	2.10E 06	1.11E 08	1.75E 06	9.24E 07	0.63	2.07	1.45E 06	9.18E 07	1.11E 06	7.02E 07
33	6.79E 05	1.11E 08	5.68E 05	9.30E 07	-0.16	-0.52	-1.19E 05	9.17E 07	-9.08E 04	7.01E 07
34	4.57E 05	1.12E 08	3.82E 05	9.34E 07	1.35	4.43	6.74E 05	9.23E 07	5.15E 05	7.06E 07
35	1.48E 05	1.12E 08	1.24E 05	9.35E 07	0.0	0.0	0.0	9.23E 07	0.0	7.06E 07
36	3.58E 05	1.12E 08	2.99E 05	9.38E 07	1.54	5.05	6.03E 05	9.29E 07	4.61E 05	7.10E 07
37	8.77E 05	1.13E 08	7.33E 05	9.46E 07	0.86	2.82	8.24E 05	9.38E 07	6.30E 05	7.17E 07
38	1.73E 06	1.15E 08	1.45E 06	9.60E 07	0.88	2.89	1.66E 06	9.54E 07	1.27E 06	7.30E 07
39	1.63E 06	1.16E 08	1.36E 06	9.74E 07	0.51	1.67	9.09E 05	9.63E 07	6.95E 05	7.36E 07
40	2.62E 06	1.19E 08	2.19E 06	9.95E 07	0.78	2.56	2.23E 06	9.86E 07	1.71E 06	7.54E 07
41	2.90E 06	1.22E 08	2.43E 06	1.02E 08	1.08	3.54	3.43E 06	1.02E 08	2.62E 06	7.80E 07
42	2.72E 06	1.25E 08	2.27E 06	1.04E 08	0.30	0.98	8.91E 05	1.03E 08	6.81E 05	7.87E 07
43	2.22E 06	1.27E 08	1.86E 06	1.06E 08	-0.28	-0.92	-6.80E 05	1.02E 08	-5.20E 05	7.81E 07
44	2.36E 06	1.29E 08	1.97E 06	1.08E 08	0.66	2.16	1.70E 06	1.04E 08	1.30E 06	7.94E 07
45	4.94E 05	1.30E 08	4.13E 05	1.08E 08	-2.25	-7.38	-1.21E 06	1.03E 08	-9.29E 05	7.85E 07
46	1.23E 05	1.30E 08	1.03E 05	1.09E 08	-4.34	-14.24	-5.86E 05	1.02E 08	-4.48E 05	7.81E 07
47	8.64E 04	1.30E 08	7.23E 04	1.09E 08	0.0	0.0	0.0	1.02E 08	0.0	7.81E 07
48	9.88E 04	1.30E 08	8.26E 04	1.09E 08	-0.50	-1.64	-5.40E 04	1.02E 08	-4.13E 04	7.80E 07
49	1.11E 05	1.30E 08	9.29E 04	1.09E 08	-0.06	-0.20	-7.29E 03	1.02E 08	-5.57E 03	7.80E 07
50	4.94E 05	1.31E 08	4.13E 05	1.09E 08	1.81	5.94	9.77E 05	1.03E 08	7.47E 05	7.88E 07
51	1.46E 06	1.32E 08	1.22E 06	1.10E 08	0.10	0.33	1.59E 05	1.03E 08	1.22E 05	7.89E 07
52	2.49E 06	1.35E 08	2.09E 06	1.13E 08	0.58	1.90	1.58E 06	1.05E 08	1.21E 06	8.01E 07
53	2.86E 06	1.37E 08	2.39E 06	1.15E 08	0.05	0.16	1.57E 05	1.05E 08	1.20E 05	8.02E 07
54	3.49E 06	1.41E 08	2.92E 06	1.18E 08	-0.81	-2.66	-3.09E 06	1.02E 08	-2.37E 06	7.78E 07
55	2.53E 06	1.44E 08	2.12E 06	1.20E 08	-0.47	-1.54	-1.30E 06	1.01E 08	-9.94E 05	7.68E 07
56	4.88E 06	1.48E 08	4.08E 06	1.24E 08	0.87	2.85	4.64E 06	1.05E 08	3.55E 06	8.04E 07
57	4.64E 06	1.53E 08	3.88E 06	1.28E 08	0.46	1.51	2.33E 06	1.07E 08	1.78E 06	8.22E 07
58	1.32E 06	1.54E 08	1.10E 06	1.29E 08	-1.44	-4.72	-2.08E 06	1.05E 08	-1.59E 06	8.06E 07
59	7.53E 05	1.55E 08	6.30E 05	1.30E 08	-0.44	-1.44	-3.62E 05	1.05E 08	-2.77E 05	8.03E 07
60	3.58E 06	1.59E 08	2.99E 06	1.33E 08	0.93	3.05	3.64E 06	1.09E 08	2.78E 06	8.31E 07
61	5.83E 06	1.65E 08	4.87E 06	1.38E 08	-0.77	-2.53	-4.91E 06	1.04E 08	-3.75E 06	7.93E 07
62	1.35E 06	1.66E 08	1.13E 06	1.39E 08	-0.70	-2.30	-1.03E 06	1.03E 08	-7.87E 05	7.86E 07
63	3.83E 06	1.70E 08	3.20E 06	1.42E 08	1.94	6.36	8.12E 06	1.11E 08	6.21E 06	8.48E 07
64	4.20E 05	1.70E 08	3.51E 05	1.42E 08	0.0	0.0	0.0	1.11E 08	0.0	8.48E 07
65	9.88E 04	1.70E 08	8.26E 04	1.42E 08	0.0	0.0	0.0	1.11E 08	0.0	8.48E 07

EASTERN SHORE (DEPTH 36-42 FEET)

L	AYD2	ΣAYD2	MZ	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
1	9.88E 04	9.88E 04	8.26E 04	8.26E 04	0.0	0.0	0.0	0.0	0.0	0.0
2	1.11E 05	2.10E 05	9.29E 04	1.75E 05	0.0	0.0	0.0	0.0	0.0	0.0
3	2.22E 05	4.32E 05	1.86E 05	3.61E 05	-1.26	-4.13	-3.06E 05	-3.06E 05	-2.34E 05	-2.34E 05
4	2.47E 05	6.79E 05	2.06E 05	5.68E 05	-1.82	-5.97	-4.91E 05	-7.97E 05	-3.76E 05	-6.10E 05
5	4.69E 05	1.15E 06	3.92E 05	9.60E 05	1.50	4.92	7.69E 05	-2.81E 04	5.88E 05	-2.15E 04
6	4.69E 05	1.62E 06	3.92E 05	1.35E 06	0.13	0.43	6.67E 04	3.86E 04	5.10E 04	2.95E 04
7	2.59E 05	1.88E 06	2.17E 05	1.57E 06	0.0	0.0	0.0	3.86E 04	0.0	2.95E 04
8	3.21E 05	2.20E 06	2.68E 05	1.84E 06	-0.10	-0.33	-3.51E 04	3.51E 03	-2.68E 04	2.68E 03
9	1.60E 05	2.36E 06	1.34E 05	1.97E 06	0.86	2.82	1.51E 05	1.54E 05	1.15E 05	1.18E 05
10	1.48E 05	2.51E 06	1.24E 05	2.10E 06	0.0	0.0	0.0	1.54E 05	0.0	1.18E 05
11	3.33E 05	2.84E 06	2.79E 05	2.37E 06	0.0	0.0	0.0	1.54E 05	0.0	1.18E 05
12	8.02E 05	3.64E 06	6.71E 05	3.05E 06	1.43	4.69	1.25E 06	1.41E 06	9.59E 05	1.08E 06
13	3.09E 05	3.95E 06	2.58E 05	3.30E 06	-1.27	-4.17	-4.29E 05	9.80E 05	-3.28E 05	7.50E 05
14	9.01E 05	4.85E 06	7.54E 05	4.06E 06	-1.62	-5.31	-1.60E 06	-6.16E 05	-1.22E 06	-4.71E 05
15	1.54E 06	6.40E 06	1.29E 06	5.35E 06	0.51	1.67	8.60E 05	2.45E 05	6.58E 05	1.87E 05
16	3.91E 06	1.03E 07	3.27E 06	8.62E 06	0.40	1.31	1.71E 06	1.96E 06	1.31E 06	1.50E 06
17	9.23E 06	1.95E 07	7.72E 06	1.63E 07	1.03	3.38	1.04E 07	1.24E 07	7.95E 06	9.45E 06
18	1.29E 07	3.24E 07	1.08E 07	2.71E 07	1.12	3.67	1.58E 07	2.81E 07	1.21E 07	2.15E 07
19	1.32E 07	4.56E 07	1.10E 07	3.82E 07	0.64	2.10	9.23E 06	3.74E 07	7.06E 06	2.86E 07
20	1.39E 07	5.95E 07	1.16E 07	4.98E 07	0.05	0.16	7.59E 05	3.81E 07	5.80E 05	2.92E 07
21	1.94E 07	7.90E 07	1.62E 07	6.60E 07	0.77	2.53	1.64E 07	5.45E 07	1.25E 07	4.17E 07
22	1.87E 07	9.76E 07	1.56E 07	8.16E 07	0.63	2.07	1.29E 07	6.74E 07	9.84E 06	5.15E 07
23	1.47E 07	1.12E 08	1.23E 07	9.39E 07	0.63	2.07	1.01E 07	7.75E 07	7.72E 06	5.92E 07
24	1.44E 07	1.27E 08	1.20E 07	1.06E 08	0.68	2.23	1.07E 07	8.81E 07	8.18E 06	6.74E 07
25	1.65E 07	1.43E 08	1.38E 07	1.20E 08	0.88	2.89	1.59E 07	1.04E 08	1.21E 07	7.95E 07
26	4.36E 06	1.48E 08	3.64E 06	1.23E 08	0.81	2.66	3.86E 06	1.08E 08	2.95E 06	8.25E 07
27	4.95E 06	1.52E 08	4.14E 06	1.27E 08	0.57	1.87	3.09E 06	1.11E 08	2.36E 06	8.48E 07
28	3.38E 06	1.56E 08	2.83E 06	1.30E 08	0.64	2.10	2.37E 06	1.13E 08	1.81E 06	8.66E 07
29	3.65E 06	1.60E 08	3.06E 06	1.33E 08	0.42	1.38	1.68E 06	1.15E 08	1.28E 06	8.79E 07
30	1.60E 06	1.61E 08	1.34E 06	1.35E 08	0.12	0.39	2.11E 05	1.15E 08	1.61E 05	8.81E 07
31	1.11E 05	1.61E 08	9.29E 04	1.35E 08	0.86	2.82	1.04E 05	1.15E 08	7.99E 04	8.82E 07

L	AYDZ	ΣAYDZ	MZ	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
32	1.60E 05	1.61E 08	1.34E 05	1.35E 08	0.0	0.0	0.0	1.15E 08	0.0	8.82E 07
33	2.22E 05	1.62E 08	1.86E 05	1.35E 08	0.76	2.49	1.85E 05	1.16E 08	1.41E 05	8.83E 07
34	1.63E 06	1.63E 08	1.36E 06	1.36E 08	0.48	1.57	8.55E 05	1.16E 08	6.54E 05	8.90E 07
35	6.80E 06	1.70E 08	5.69E 06	1.42E 08	0.55	1.80	4.09E 06	1.20E 08	3.13E 06	9.21E 07
36	7.49E 06	1.78E 08	6.27E 06	1.48E 08	0.89	2.92	7.29E 06	1.28E 08	5.58E 06	9.77E 07
37	6.59E 06	1.84E 08	5.51E 06	1.54E 08	0.70	2.30	5.05E 06	1.33E 08	3.86E 06	1.02E 08
38	2.79E 06	1.87E 08	2.33E 06	1.56E 08	0.66	2.16	2.01E 06	1.35E 08	1.54E 06	1.03E 08
39	2.41E 06	1.89E 08	2.01E 06	1.58E 08	0.95	3.12	2.50E 06	1.37E 08	1.91E 06	1.05E 08
40	6.62E 06	1.96E 08	5.53E 06	1.64E 08	0.97	3.18	7.02E 06	1.44E 08	5.37E 06	1.10E 08
41	2.10E 06	1.98E 08	1.75E 06	1.66E 08	0.50	1.64	1.15E 06	1.45E 08	8.77E 05	1.11E 08
42	1.69E 06	2.00E 08	1.41E 06	1.67E 08	0.98	3.21	1.81E 06	1.47E 08	1.39E 06	1.13E 08
43	2.60E 06	2.02E 08	2.18E 06	1.69E 08	0.46	1.51	1.31E 06	1.49E 08	1.00E 06	1.14E 08
44	2.10E 05	2.03E 08	1.75E 05	1.69E 08	0.05	0.16	1.15E 04	1.49E 08	8.77E 03	1.14E 08
45	1.36E 05	2.03E 08	1.14E 05	1.69E 08	1.29	4.23	1.92E 05	1.49E 08	1.46E 05	1.14E 08
46	1.36E 05	2.03E 08	1.14E 05	1.70E 08	-3.08	-10.10	-4.57E 05	1.48E 08	-3.50E 05	1.13E 08
47	1.11E 05	2.03E 08	9.29E 04	1.70E 08	0.0	0.0	0.0	1.48E 08	0.0	1.13E 08
48	1.36E 05	2.03E 08	1.14E 05	1.70E 08	0.04	0.13	5.94E 03	1.48E 08	4.54E 03	1.13E 08
49	2.72E 05	2.03E 08	2.27E 05	1.70E 08	1.60	5.25	4.75E 05	1.49E 08	3.63E 05	1.14E 08
50	3.21E 05	2.04E 08	2.68E 05	1.70E 08	1.79	5.87	6.28E 05	1.49E 08	4.80E 05	1.14E 08
51	5.80E 05	2.04E 08	4.85E 05	1.71E 08	1.18	3.87	7.49E 05	1.50E 08	5.72E 05	1.15E 08
52	1.06E 06	2.05E 08	8.88E 05	1.72E 08	0.69	2.26	8.01E 05	1.51E 08	6.12E 05	1.15E 08
53	3.59E 06	2.09E 08	3.00E 06	1.75E 08	1.02	3.35	4.01E 06	1.55E 08	3.06E 06	1.19E 08
54	2.11E 06	2.11E 08	1.77E 06	1.76E 08	0.90	2.95	2.08E 06	1.57E 08	1.59E 06	1.20E 08
55	2.53E 06	2.14E 08	2.12E 06	1.79E 08	-0.92	-3.02	-2.55E 06	1.55E 08	-1.95E 06	1.18E 08
56	3.58E 06	2.17E 08	2.99E 06	1.82E 08	-1.01	-3.31	-3.95E 06	1.51E 08	-3.02E 06	1.15E 08
57	1.99E 06	2.19E 08	1.66E 06	1.83E 08	-1.51	-4.95	-3.28E 06	1.47E 08	-2.51E 06	1.13E 08
58	9.51E 05	2.20E 08	7.95E 05	1.84E 08	-2.95	-9.68	-3.07E 06	1.44E 08	-2.34E 06	1.10E 08
59	3.21E 05	2.20E 08	2.68E 05	1.84E 08	4.90	16.07	1.72E 06	1.46E 08	1.31E 06	1.12E 08
60	7.65E 05	2.21E 08	6.40E 05	1.85E 08	0.34	1.12	2.85E 05	1.46E 08	2.18E 05	1.12E 08
61	1.20E 06	2.22E 08	1.00E 06	1.86E 08	-0.71	-2.33	-9.30E 05	1.45E 08	-7.11E 05	1.11E 08
62	1.48E 06	2.24E 08	1.24E 06	1.87E 08	0.89	2.92	1.44E 06	1.47E 08	1.10E 06	1.12E 08
63	1.15E 06	2.25E 08	9.60E 05	1.88E 08	0.94	3.08	1.18E 06	1.48E 08	9.02E 05	1.13E 08
64	3.43E 06	2.28E 08	2.87E 06	1.91E 08	0.66	2.16	2.48E 06	1.50E 08	1.89E 06	1.15E 08
65	4.07E 05	2.29E 08	3.41E 05	1.91E 08	0.0	0.0	0.0	1.50E 08	0.0	1.15E 08

EASTERN SHORE (DEPTH >42 FEET)

L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
1	1.36E 06	1.36E 06	1.14E 06	1.14E 06	-1.56	-5.12	-2.32E 06	-2.32E 06	-1.77E 06	-1.77E 06
2	3.48E 06	4.84E 06	2.91E 06	4.05E 06	-0.40	-1.31	-1.52E 06	-3.84E 06	-1.16E 06	-2.94E 06
3	1.80E 06	6.64E 06	1.51E 06	5.55E 06	-0.21	-0.69	-4.14E 05	-4.25E 06	-3.16E 05	-3.25E 06
4	2.05E 06	8.69E 06	1.71E 06	7.27E 06	-0.02	-0.07	-4.48E 04	-4.30E 06	-3.43E 04	-3.29E 06
5	2.04E 06	1.07E 07	1.70E 06	8.97E 06	0.08	0.26	1.78E 05	-4.12E 06	1.36E 05	-3.15E 06
6	1.38E 06	1.21E 07	1.16E 06	1.01E 07	-0.34	-1.12	-5.14E 05	-4.63E 06	-3.93E 05	-3.54E 06
7	2.33E 06	1.44E 07	1.95E 06	1.21E 07	-1.06	-3.48	-2.70E 06	-7.34E 06	-2.07E 06	-5.61E 06
8	3.32E 06	1.78E 07	2.78E 06	1.49E 07	1.13	3.71	4.10E 06	-3.23E 06	3.14E 06	-2.47E 06
9	2.05E 06	1.98E 07	1.71E 06	1.66E 07	1.71	5.61	3.83E 06	5.97E 05	2.93E 06	4.56E 05
10	2.51E 06	2.23E 07	2.10E 06	1.87E 07	1.47	4.82	4.03E 06	4.62E 06	3.08E 06	3.54E 06
11	3.47E 06	2.58E 07	2.90E 06	2.16E 07	1.01	3.31	3.83E 06	8.46E 06	2.93E 06	6.46E 06
12	2.28E 06	2.81E 07	1.91E 06	2.35E 07	0.19	0.62	4.74E 05	8.93E 06	3.63E 05	6.83E 06
13	2.12E 06	3.02E 07	1.78E 06	2.52E 07	-0.20	-0.66	-4.64E 05	8.47E 06	-3.55E 05	6.47E 06
14	6.53E 06	3.67E 07	5.46E 06	3.07E 07	0.58	1.90	4.14E 06	1.26E 07	3.17E 06	9.64E 06
15	7.47E 06	4.42E 07	6.24E 06	3.70E 07	0.86	2.82	7.02E 06	1.96E 07	5.37E 06	1.50E 07
16	7.98E 06	5.22E 07	6.67E 06	4.36E 07	0.99	3.25	8.63E 06	2.83E 07	6.60E 06	2.16E 07
17	1.42E 07	6.64E 07	1.19E 07	5.55E 07	0.52	1.71	8.06E 06	3.63E 07	6.17E 06	2.78E 07
18	8.73E 06	7.51E 07	7.30E 06	6.28E 07	0.38	1.25	3.63E 06	4.00E 07	2.77E 06	3.05E 07
19	8.75E 06	8.38E 07	7.32E 06	7.01E 07	1.05	3.44	1.00E 07	5.00E 07	7.68E 06	3.82E 07
20	1.48E 07	9.87E 07	1.24E 07	8.25E 07	0.97	3.18	1.57E 07	6.57E 07	1.20E 07	5.03E 07
21	1.14E 07	1.10E 08	9.50E 06	9.20E 07	0.95	3.12	1.18E 07	7.75E 07	9.02E 06	5.93E 07
22	7.05E 06	1.17E 08	5.89E 06	9.79E 07	0.52	1.71	4.01E 06	8.15E 07	3.06E 06	6.23E 07
23	1.05E 07	1.28E 08	8.82E 06	1.07E 08	0.40	1.31	4.61E 06	8.62E 07	3.53E 06	6.59E 07
24	1.23E 07	1.40E 08	1.03E 07	1.17E 08	0.26	0.85	3.49E 06	8.96E 07	2.67E 06	6.85E 07
25	7.15E 06	1.47E 08	5.98E 06	1.23E 08	0.40	1.31	3.13E 06	9.28E 07	2.39E 06	7.09E 07
26	3.27E 06	1.50E 08	2.74E 06	1.26E 08	-0.15	-0.49	-5.37E 05	9.22E 07	-4.10E 05	7.05E 07
27	6.04E 06	1.56E 08	5.05E 06	1.31E 08	0.38	1.25	2.51E 06	9.47E 07	1.92E 06	7.24E 07
28	6.14E 06	1.63E 08	5.13E 06	1.36E 08	-0.55	-1.80	-3.69E 06	9.11E 07	-2.82E 06	6.96E 07
29	5.11E 06	1.68E 08	4.27E 06	1.40E 08	-0.14	-0.46	-7.82E 05	9.03E 07	-5.98E 05	6.90E 07
30	4.00E 06	1.72E 08	3.34E 06	1.43E 08	-1.17	-3.84	-5.12E 06	8.52E 07	-3.91E 06	6.51E 07
31	9.94E 06	1.82E 08	8.31E 06	1.52E 08	-0.10	-0.33	-1.09E 06	8.41E 07	-8.31E 05	6.43E 07

L	AYD2	AYD2	M2	M2	SRM	SRF	YD3	YD3	M3	M3
32	1.01E 07	1.92E 08	8.44E 06	1.60E 08	-0.52	-1.71	-5.74E 06	7.83E 07	-4.39E 06	5.99E 07
33	9.95E 06	2.02E 08	8.32E 06	1.69E 08	-0.33	-1.08	-3.59E 06	7.47E 07	-2.74E 06	5.71E 07
34	9.31E 06	2.11E 08	7.78E 06	1.76E 08	-0.23	-0.75	-2.34E 06	7.24E 07	-1.79E 06	5.54E 07
35	4.78E 06	2.16E 08	3.99E 06	1.80E 08	0.10	0.33	5.22E 05	7.29E 07	3.99E 05	5.58E 07
36	4.77E 06	2.20E 08	3.98E 06	1.84E 08	-0.63	-2.07	-3.28E 06	6.96E 07	-2.51E 06	5.32E 07
37	5.14E 06	2.26E 08	4.29E 06	1.89E 08	-0.22	-0.72	-1.24E 06	6.84E 07	-9.44E 05	5.23E 07
38	6.63E 06	2.32E 08	5.54E 06	1.94E 08	-0.15	-0.49	-1.09E 06	6.73E 07	-8.31E 05	5.15E 07
E 39	2.06E 06	2.34E 08	1.72E 06	1.96E 08	0.58	1.90	1.31E 06	6.86E 07	1.00E 06	5.25E 07
40	5.11E 06	2.39E 08	4.27E 06	2.00E 08	0.51	1.67	2.85E 06	7.15E 07	2.18E 06	5.46E 07
41	3.47E 06	2.43E 08	2.90E 06	2.03E 08	0.57	1.87	2.16E 06	7.36E 07	1.65E 06	5.63E 07
42	2.21E 06	2.45E 08	1.85E 06	2.05E 08	0.69	2.26	1.67E 06	7.53E 07	1.27E 06	5.76E 07
43	3.00E 06	2.48E 08	2.51E 06	2.07E 08	0.38	1.25	1.25E 06	7.65E 07	9.53E 05	5.85E 07
44	3.23E 06	2.51E 08	2.70E 06	2.10E 08	1.41	4.62	4.99E 06	8.15E 07	3.81E 06	6.23E 07
45	5.07E 06	2.56E 08	4.24E 06	2.14E 08	-1.02	-3.35	-5.66E 06	7.59E 07	-4.33E 06	5.80E 07
46	7.36E 06	2.64E 08	6.15E 06	2.21E 08	0.08	0.26	6.44E 05	7.65E 07	4.92E 05	5.85E 07
47	2.06E 06	2.66E 08	1.72E 06	2.22E 08	-0.67	-2.20	-1.51E 06	7.50E 07	-1.15E 06	5.73E 07
48	1.96E 06	2.68E 08	1.64E 06	2.24E 08	-1.03	-3.38	-2.21E 06	7.28E 07	-1.69E 06	5.57E 07
49	1.94E 06	2.70E 08	1.62E 06	2.25E 08	0.37	1.21	7.84E 05	7.36E 07	5.99E 05	5.63E 07
50	7.16E 05	2.70E 08	5.99E 05	2.26E 08	1.01	3.31	7.91E 05	7.44E 07	6.05E 05	5.69E 07
51	3.70E 04	2.70E 08	3.10E 04	2.26E 08	0.0	0.0	0.0	7.44E 07	0.0	5.69E 07
52	4.57E 05	2.71E 08	3.82E 05	2.27E 08	0.0	0.0	0.0	7.44E 07	0.0	5.69E 07
53	3.33E 05	2.71E 08	2.79E 05	2.27E 08	1.43	4.69	5.21E 05	7.49E 07	3.98E 05	5.73E 07
54	5.30E 06	2.77E 08	4.43E 06	2.31E 08	0.99	3.25	5.73E 06	8.06E 07	4.38E 06	6.16E 07
55	3.88E 06	2.80E 08	3.24E 06	2.34E 08	-0.18	-0.59	-7.63E 05	7.99E 07	-5.83E 05	6.11E 07
56	2.42E 06	2.83E 08	2.02E 06	2.36E 08	1.87	6.13	4.95E 06	8.48E 07	3.78E 06	6.48E 07
57	4.20E 06	2.87E 08	3.51E 06	2.40E 08	-0.11	-0.36	-5.05E 05	8.43E 07	-3.86E 05	6.45E 07
58	2.09E 06	2.89E 08	1.74E 06	2.42E 08	3.25	10.66	7.41E 06	9.17E 07	5.67E 06	7.01E 07
59	1.94E 06	2.91E 08	1.62E 06	2.43E 08	1.15	3.77	2.44E 06	9.42E 07	1.86E 06	7.20E 07
60	2.17E 06	2.93E 08	1.82E 06	2.45E 08	0.33	1.08	7.84E 05	9.49E 07	5.99E 05	7.26E 07
61	8.40E 05	2.94E 08	7.02E 05	2.46E 08	-0.47	-1.54	-4.31E 05	9.45E 07	-3.30E 05	7.23E 07
62	4.32E 05	2.95E 08	3.61E 05	2.46E 08	-0.11	-0.36	-5.20E 04	9.45E 07	-3.97E 04	7.22E 07
63	6.48E 06	3.01E 08	5.42E 06	2.52E 08	-1.36	-4.46	-9.64E 06	8.48E 07	-7.37E 06	6.49E 07
64	8.52E 06	3.10E 08	7.12E 06	2.59E 08	0.75	2.46	6.99E 06	9.18E 07	5.34E 06	7.02E 07
65	8.52E 06	3.18E 08	7.12E 06	2.66E 08	0.50	1.64	4.66E 06	9.65E 07	3.56E 06	7.38E 07

WESTERN SIDE OF TANGIER-SMITH ISLANDS (DEPTH 0-6 FEET)

L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
1	1.26E 06	1.26E 06	1.05E 06	1.05E 06	0.19	0.62	2.62E 05	2.62E 05	2.00E 05	2.00E 05
2	2.31E 06	3.57E 06	1.93E 06	2.98E 06	0.34	1.12	8.58E 05	1.12E 06	6.56E 05	8.56E 05
3	5.92E 05	4.16E 06	4.95E 05	3.47E 06	0.78	2.56	5.05E 05	1.63E 06	3.86E 05	1.25E 06
4	5.80E 05	4.74E 06	4.85E 05	3.97E 06	0.0	0.0	0.0	1.63E 06	0.0	1.25E 06
5	1.14E 06	5.89E 06	9.57E 05	4.92E 06	-0.38	-1.25	-4.77E 05	1.15E 06	-3.65E 05	8.79E 05
6	1.86E 06	7.74E 06	1.55E 06	6.48E 06	-0.21	-0.69	-4.25E 05	7.23E 05	-3.25E 05	5.53E 05
7	3.24E 06	1.10E 07	2.71E 06	9.19E 06	0.31	1.02	1.10E 06	1.82E 06	8.41E 05	1.39E 06
8	4.52E 06	1.56E 07	3.78E 06	1.30E 07	0.70	2.30	3.46E 06	5.28E 06	2.65E 06	4.04E 06
9	2.89E 06	1.84E 07	2.42E 06	1.54E 07	1.87	6.13	5.91E 06	1.12E 07	4.52E 06	8.56E 06
10	4.81E 05	1.89E 07	4.02E 05	1.58E 07	0.0	0.0	0.0	1.12E 07	0.0	8.56E 06
11	4.81E 05	1.93E 07	4.02E 05	1.62E 07	0.0	0.0	0.0	1.12E 07	0.0	8.56E 06
12	1.01E 06	2.03E 07	8.46E 05	1.70E 07	0.61	2.00	6.75E 05	1.19E 07	5.16E 05	9.10E 06
13	1.54E 06	2.19E 07	1.29E 06	1.83E 07	-0.16	-0.52	-2.70E 05	1.16E 07	-2.06E 05	8.87E 06

WESTERN SIDE OF TANGIER-SMITH ISLANDS (DEPTH 06-12 FEET)

L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
1	1.21E 06	1.21E 06	1.01E 06	1.01E 06	-1.47	-4.82	-1.94E 06	-1.94E 06	-1.48E 06	-1.48E 06
2	1.77E 06	2.98E 06	1.48E 06	2.49E 06	0.22	0.72	4.25E 05	-1.52E 06	3.25E 05	-1.16E 06
3	1.19E 06	4.16E 06	9.94E 05	3.47E 06	-0.97	-3.18	-1.26E 06	-2.78E 06	-9.63E 05	-2.13E 06
4	3.10E 06	7.26E 06	2.59E 06	6.07E 06	-0.95	-3.12	-3.22E 06	-6.00E 06	-2.46E 06	-4.59E 06
5	3.09E 06	1.03E 07	2.58E 06	8.65E 06	-0.95	-3.12	-3.21E 06	-9.20E 06	-2.45E 06	-7.03E 06
6	1.68E 06	1.20E 07	1.40E 06	1.00E 07	-0.58	-1.90	-1.06E 06	-1.03E 07	-8.10E 05	-7.87E 06
7	1.89E 06	1.39E 07	1.58E 06	1.16E 07	-0.18	-0.59	-3.72E 05	-1.06E 07	-2.84E 05	-8.10E 06
8	8.64E 05	1.48E 07	7.23E 05	1.24E 07	1.21	3.97	1.14E 06	-9.49E 06	8.72E 05	-7.26E 06
9	4.18E 06	1.90E 07	3.49E 06	1.59E 07	1.24	4.07	5.66E 06	-3.84E 06	4.33E 06	-2.94E 06
10	7.19E 06	2.61E 07	6.01E 06	2.18E 07	0.30	0.98	2.36E 06	-1.48E 06	1.80E 06	-1.13E 06
11	6.02E 06	3.21E 07	5.04E 06	2.68E 07	0.38	1.25	2.50E 06	1.02E 06	1.91E 06	7.80E 05
12	4.69E 06	3.69E 07	3.92E 06	3.08E 07	0.04	0.13	2.05E 05	1.23E 06	1.57E 05	9.40E 05
13	4.64E 06	4.14E 07	3.88E 06	3.47E 07	-0.39	-1.28	-1.98E 06	-7.51E 05	-1.51E 06	-5.74E 05

WESTERN SIDE OF TANGIER-SMITH ISLANDS (DEPTH 12-18 FEET)

L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
1	3.24E 06	3.24E 06	2.71E 06	2.71E 06	-0.11	-0.36	-3.90E 05	-3.90E 05	-2.98E 05	-2.98E 05
2	3.19E 06	6.43E 06	2.67E 06	5.38E 06	0.25	0.82	8.71E 05	4.80E 05	6.66E 05	3.67E 05
3	7.31E 06	1.38E 07	6.11E 06	1.15E 07	-0.05	-0.16	-4.00E 05	8.06E 04	-3.06E 05	6.16E 04
4	4.89E 06	1.87E 07	4.09E 06	1.56E 07	0.11	0.36	5.88E 05	6.69E 05	4.50E 05	5.11E 05
5	3.87E 06	2.24E 07	3.23E 06	1.88E 07	0.13	0.43	5.49E 05	1.22E 06	4.20E 05	9.33E 05
6	4.22E 06	2.67E 07	3.53E 06	2.23E 07	0.20	0.66	9.23E 05	2.14E 06	7.06E 05	1.64E 06
7	5.00E 06	3.17E 07	4.18E 06	2.65E 07	0.42	1.38	2.30E 06	4.44E 06	1.76E 06	3.39E 06
8	6.90E 06	3.87E 07	5.77E 06	3.23E 07	0.57	1.87	4.30E 06	8.74E 06	3.29E 06	6.68E 06
9	3.71E 06	4.23E 07	3.10E 06	3.54E 07	0.40	1.31	1.63E 06	1.04E 07	1.25E 06	7.95E 06
10	7.16E 05	4.30E 07	5.98E 05	3.60E 07	0.32	1.05	2.51E 05	1.06E 07	1.92E 05	8.10E 06
11	4.33E 06	4.73E 07	3.62E 06	3.96E 07	0.28	0.92	1.33E 06	1.19E 07	1.02E 06	9.10E 06
12	7.68E 06	5.51E 07	6.42E 06	4.61E 07	0.46	1.51	3.86E 06	1.58E 07	2.95E 06	1.21E 07
13	1.47E 07	6.98E 07	1.23E 07	5.83E 07	0.32	1.05	5.14E 06	2.09E 07	3.93E 06	1.60E 07



WESTERN SIDE OF TANGIER-SMITH ISLANDS (DEPTH 18-24 FEET)

L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
1	6.66E 06	6.66E 06	5.56E 06	5.56E 06	0.36	1.18	2.62E 06	2.62E 06	2.00E 06	2.00E 06
2	6.14E 06	1.28E 07	5.14E 06	1.07E 07	0.55	1.80	3.70E 06	6.32E 06	2.83E 06	4.83E 06
3	3.48E 06	1.63E 07	2.91E 06	1.37E 07	0.15	0.49	5.71E 05	6.89E 06	4.37E 05	5.27E 06
4	2.31E 06	1.86E 07	1.93E 06	1.55E 07	0.65	2.13	1.64E 06	8.53E 06	1.25E 06	6.52E 06
5	2.34E 06	2.09E 07	1.96E 06	1.75E 07	0.49	1.61	1.26E 06	9.78E 06	9.63E 05	7.48E 06
6	2.77E 06	2.37E 07	2.31E 06	1.98E 07	0.68	2.23	2.06E 06	1.18E 07	1.57E 06	9.02E 06
7	2.01E 06	2.57E 07	1.68E 06	2.15E 07	0.55	1.80	1.21E 06	1.31E 07	9.25E 05	1.00E 07
8	1.02E 06	2.68E 07	8.57E 05	2.24E 07	0.76	2.49	8.51E 05	1.39E 07	6.51E 05	1.06E 07
9	1.73E 05	2.69E 07	1.45E 05	2.25E 07	1.46	4.79	2.76E 05	1.42E 07	2.11E 05	1.09E 07
10	1.56E 06	2.84E 07	1.30E 06	2.38E 07	0.70	2.30	1.19E 06	1.54E 07	9.10E 05	1.18E 07
11	2.47E 06	3.09E 07	2.06E 06	2.58E 07	0.73	2.39	1.97E 06	1.73E 07	1.51E 06	1.32E 07
12	1.20E 06	3.21E 07	1.00E 06	2.68E 07	0.35	1.15	4.58E 05	1.78E 07	3.50E 05	1.36E 07
13	4.32E 05	3.26E 07	3.61E 05	2.72E 07	-0.23	-0.75	-1.09E 05	1.77E 07	-8.33E 04	1.35E 07

WESTERN SIDE OF TANGIER-SMITH ISLANDS (DEPTH 24-30 FEET)

L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
1	2.66E 06	2.66E 06	2.22E 06	2.22E 06	0.23	0.75	6.67E 05	6.67E 05	5.10E 05	5.10E 05
2	2.68E 06	5.33E 06	2.24E 06	4.46E 06	0.27	0.89	7.91E 05	1.46E 06	6.05E 05	1.12E 06
3	1.29E 06	6.62E 06	1.08E 06	5.54E 06	0.46	1.51	6.46E 05	2.10E 06	4.94E 05	1.61E 06
4	3.49E 06	1.01E 07	2.92E 06	8.45E 06	0.70	2.30	2.67E 06	4.78E 06	2.04E 06	3.65E 06
5	4.27E 06	1.43E 07	3.57E 06	1.20E 07	0.53	1.74	2.48E 06	7.25E 06	1.90E 06	5.54E 06
6	1.97E 06	1.63E 07	1.64E 06	1.37E 07	1.15	3.77	2.47E 06	9.72E 06	1.89E 06	7.43E 06
7	2.97E 05	1.67E 07	2.48E 05	1.39E 07	1.35	4.43	4.37E 05	1.02E 07	3.34E 05	7.80E 06
8	1.52E 06	1.81E 07	1.27E 06	1.51E 07	0.77	2.53	1.28E 06	1.14E 07	9.79E 05	8.72E 06
9	6.53E 06	2.47E 07	5.46E 06	2.06E 07	0.80	2.62	5.71E 06	1.71E 07	4.37E 06	1.31E 07
10	4.54E 06	2.92E 07	3.80E 06	2.44E 07	1.03	3.38	5.12E 06	2.23E 07	3.91E 06	1.70E 07
11	7.90E 05	3.00E 07	6.61E 05	2.51E 07	1.02	3.35	8.81E 05	2.31E 07	6.74E 05	1.77E 07
12	5.56E 05	3.06E 07	4.64E 05	2.55E 07	1.40	4.59	8.50E 05	2.40E 07	6.50E 05	1.83E 07
13	6.34E 06	3.69E 07	5.30E 06	3.08E 07	0.98	3.21	6.80E 06	3.08E 07	5.20E 06	2.35E 07

WESTERN SIDE OF TANGIER-SMITH ISLANDS (DEPTH 30-36 FEET)

L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
1	1.88E 06	1.88E 06	1.57E 06	1.57E 06	0.25	0.82	5.13E 05	5.13E 05	3.92E 05	3.92E 05
2	3.24E 06	5.12E 06	2.71E 06	4.28E 06	0.64	2.10	2.27E 06	2.78E 06	1.74E 06	2.13E 06
3	3.99E 06	9.11E 06	3.34E 06	7.62E 06	0.65	2.13	2.83E 06	5.62E 06	2.16E 06	4.30E 06
4	2.08E 06	1.12E 07	1.74E 06	9.38E 06	0.83	2.72	1.88E 06	7.50E 06	1.44E 06	5.73E 06
5	4.32E 05	1.17E 07	3.61E 05	9.75E 06	0.48	1.57	2.27E 05	7.73E 06	1.74E 05	5.91E 06
6	2.49E 06	1.41E 07	2.08E 06	1.18E 07	0.84	2.76	2.29E 06	1.00E 07	1.75E 06	7.65E 06
7	4.40E 06	1.86E 07	3.68E 06	1.55E 07	0.83	2.72	3.99E 06	1.40E 07	3.05E 06	1.07E 07
8	3.32E 06	2.18E 07	2.78E 06	1.82E 07	0.87	2.85	3.16E 06	1.72E 07	2.42E 06	1.32E 07
9	1.00E 06	2.28E 07	8.36E 05	1.90E 07	0.65	2.13	7.11E 05	1.79E 07	5.44E 05	1.37E 07
10	7.60E 06	3.04E 07	6.35E 06	2.55E 07	0.85	2.79	7.07E 06	2.49E 07	5.41E 06	1.90E 07
11	1.29E 07	4.33E 07	1.08E 07	3.62E 07	0.96	3.15	1.35E 07	3.84E 07	1.03E 07	2.94E 07
12	1.36E 07	5.69E 07	1.13E 07	4.76E 07	1.17	3.84	1.73E 07	5.58E 07	1.32E 07	4.27E 07
13	8.03E 06	6.49E 07	6.72E 06	5.43E 07	0.98	3.21	8.61E 06	6.44E 07	6.58E 06	4.92E 07

WESTERN SIDE OF TANGIER-SMITH ISLANDS (DEPTH 36-42 FEET)

L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
1	4.20E 05	4.20E 05	3.51E 05	3.51E 05	-2.08	-6.82	-9.55E 05	-9.55E 05	-7.30E 05	-7.30E 05
2	2.46E 06	2.88E 06	2.05E 06	2.41E 06	0.26	0.85	6.98E 05	-2.56E 05	5.34E 05	-1.96E 05
3	4.18E 06	7.04E 06	3.49E 06	5.89E 06	0.73	2.39	3.33E 06	3.07E 06	2.55E 06	2.35E 06
4	6.30E 05	7.68E 06	5.27E 05	6.42E 06	1.01	3.31	6.95E 05	3.77E 06	5.31E 05	2.88E 06
5	1.63E 06	9.31E 06	1.37E 06	7.79E 06	0.91	2.98	1.62E 06	5.39E 06	1.24E 06	4.12E 06
6	2.77E 06	1.21E 07	2.31E 06	1.01E 07	0.73	2.39	2.21E 06	7.60E 06	1.69E 06	5.81E 06
7	2.41E 06	1.44E 07	2.02E 06	1.21E 07	0.80	2.62	2.11E 06	9.70E 06	1.61E 06	7.42E 06
8	2.47E 06	1.70E 07	2.06E 06	1.42E 07	1.05	3.44	2.83E 06	1.25E 07	2.16E 06	9.56E 06
9	3.02E 06	2.00E 07	2.53E 06	1.67E 07	0.72	2.36	2.38E 06	1.49E 07	1.82E 06	1.14E 07
10	3.33E 06	2.33E 07	2.79E 06	1.95E 07	1.14	3.74	4.15E 06	1.91E 07	3.17E 06	1.46E 07
11	2.12E 06	2.54E 07	1.77E 06	2.13E 07	0.90	2.95	2.09E 06	2.12E 07	1.60E 06	1.62E 07
12	4.81E 05	2.59E 07	4.02E 05	2.16E 07	0.34	1.12	1.79E 05	2.13E 07	1.37E 05	1.63E 07
13	1.36E 05	2.60E 07	1.13E 05	2.17E 07	-0.75	-2.46	-1.11E 05	2.12E 07	-8.49E 04	1.62E 07

WESTERN SIDE OF TANGIER-SMITH ISLANDS (DEPTH >42 FEET)

L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
1	6.77E 06	6.77E 06	5.66E 06	5.66E 06	0.26	0.85	1.92E 06	1.92E 06	1.47E 06	1.47E 06
2	8.30E 06	1.51E 07	6.94E 06	1.26E 07	0.65	2.13	5.90E 06	7.82E 06	4.51E 06	5.98E 06
3	4.29E 06	1.93E 07	3.59E 06	1.62E 07	0.40	1.31	1.87E 06	9.69E 06	1.43E 06	7.41E 06
4	5.99E 06	2.53E 07	5.01E 06	2.12E 07	0.42	1.38	2.75E 06	1.24E 07	2.10E 06	9.48E 06
5	7.77E 06	3.31E 07	6.49E 06	2.77E 07	0.74	2.43	6.28E 06	1.87E 07	4.80E 06	1.43E 07
6	7.41E 06	4.06E 07	6.20E 06	3.39E 07	0.54	1.77	4.37E 06	2.31E 07	3.34E 06	1.77E 07
7	7.84E 06	4.83E 07	6.56E 06	4.04E 07	0.30	0.98	2.57E 06	2.57E 07	1.96E 06	1.96E 07
8	9.02E 06	5.73E 07	7.54E 06	4.79E 07	0.65	2.13	6.41E 06	3.21E 07	4.90E 06	2.45E 07
9	9.84E 06	6.72E 07	8.23E 06	5.62E 07	0.41	1.34	4.41E 06	3.65E 07	3.37E 06	2.79E 07
10	7.67E 06	7.49E 07	6.41E 06	6.26E 07	1.14	3.74	9.56E 06	4.60E 07	7.31E 06	3.52E 07
11	4.81E 06	7.97E 07	4.02E 06	6.66E 07	0.08	0.26	4.21E 05	4.65E 07	3.22E 05	3.56E 07
12	2.31E 06	8.20E 07	1.93E 06	6.86E 07	1.35	4.43	3.41E 06	4.99E 07	2.61E 06	3.82E 07
13	4.19E 06	8.62E 07	3.50E 06	7.21E 07	-0.61	-2.00	-2.79E 06	4.71E 07	-2.13E 06	3.60E 07

EASTERN SIDE OF TANGIER-SMITH ISLANDS (DEPTH 0-6 FEET)

L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
1	6.81E 06	6.81E 06	5.69E 06	5.69E 06	0.84	2.76	6.26E 06	6.26E 06	4.79E 06	4.79E 06
2	4.60E 06	1.14E 07	3.85E 06	9.57E 06	-0.17	-0.56	-8.56E 05	5.40E 06	-6.54E 05	4.13E 06
3	2.87E 06	1.43E 07	2.40E 06	1.20E 07	0.0	0.0	0.0	5.40E 06	0.0	4.13E 06
4	9.51E 05	1.52E 07	7.95E 05	1.27E 07	0.29	0.95	3.01E 05	5.70E 06	2.30E 05	4.36E 06
5	4.96E 06	2.02E 07	4.14E 06	1.69E 07	0.21	0.69	1.14E 06	6.84E 06	8.72E 05	5.23E 06
6	4.47E 06	2.47E 07	3.73E 06	2.06E 07	0.01	0.03	4.89E 04	6.89E 06	3.74E 04	5.27E 06
7	6.43E 06	3.11E 07	5.38E 06	2.60E 07	0.25	0.82	1.76E 06	8.65E 06	1.35E 06	6.61E 06
8	6.19E 06	3.72E 07	5.17E 06	3.11E 07	0.38	1.25	2.57E 06	1.12E 07	1.96E 06	8.56E 06
9	4.12E 06	4.14E 07	3.45E 06	3.47E 07	0.31	1.02	1.40E 06	1.26E 07	1.07E 06	9.63E 06
10	2.22E 06	4.37E 07	1.86E 06	3.65E 07	0.16	0.52	3.89E 05	1.30E 07	2.97E 05	9.94E 06
11	1.67E 06	4.53E 07	1.39E 06	3.79E 07	0.52	1.71	9.48E 05	1.40E 07	7.25E 05	1.07E 07
12	1.26E 06	4.66E 07	1.05E 06	3.89E 07	1.51	4.95	2.08E 06	1.60E 07	1.59E 06	1.22E 07
13	3.82E 05	4.69E 07	3.20E 05	3.92E 07	1.43	4.69	5.98E 05	1.66E 07	4.57E 05	1.27E 07

EASTERN SIDE OF TANGIER-SMITH ISLANDS (DEPTH 6-12 FEET)

L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
1	3.69E 06	3.69E 06	3.08E 06	3.08E 06	0.62	2.03	2.50E 06	2.50E 06	1.91E 06	1.91E 06
2	3.42E 06	7.11E 06	2.86E 06	5.95E 06	0.21	0.69	7.85E 05	3.29E 06	6.00E 05	2.52E 06
3	2.31E 06	9.42E 06	1.93E 06	7.88E 06	-0.55	-1.80	-1.39E 06	1.90E 06	-1.06E 06	1.45E 06
4	1.64E 06	1.11E 07	1.37E 06	9.25E 06	0.81	2.66	1.45E 06	3.35E 06	1.11E 06	2.56E 06
5	2.26E 06	1.33E 07	1.89E 06	1.11E 07	0.24	0.79	5.93E 05	3.95E 06	4.53E 05	3.02E 06
6	3.92E 06	1.72E 07	3.28E 06	1.44E 07	0.30	0.98	1.29E 06	5.23E 06	9.86E 05	4.00E 06
7	2.77E 06	2.00E 07	2.31E 06	1.67E 07	0.21	0.69	6.35E 05	5.87E 06	4.85E 05	4.49E 06
8	2.62E 06	2.27E 07	2.19E 06	1.90E 07	0.04	0.13	1.14E 05	5.98E 06	8.72E 04	4.57E 06
9	3.48E 06	2.61E 07	2.91E 06	2.18E 07	0.57	1.87	2.17E 06	8.15E 06	1.66E 06	6.23E 06
10	2.68E 06	2.88E 07	2.24E 06	2.41E 07	0.26	0.85	7.62E 05	8.91E 06	5.83E 05	6.81E 06
11	9.01E 05	2.97E 07	7.53E 05	2.48E 07	0.96	3.15	9.46E 05	9.86E 06	7.23E 05	7.54E 06
12	1.40E 06	3.11E 07	1.17E 06	2.60E 07	0.63	2.07	9.61E 05	1.08E 07	7.35E 05	8.26E 06
13	3.70E 05	3.14E 07	3.09E 05	2.63E 07	0.14	0.46	5.67E 04	1.09E 07	4.34E 04	8.33E 06

EASTERN SIDE OF TANGIER-SMITH ISLANDS (DEPTH 12-18 FEET)

L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
1	8.27E 05	8.27E 05	6.91E 05	6.91E 05	0.72	2.36	6.51E 05	6.51E 05	4.98E 05	4.98E 05
2	1.24E 06	2.08E 06	1.04E 06	1.74E 06	0.86	2.82	1.17E 06	1.82E 06	8.95E 05	1.39E 06
3	1.49E 06	3.57E 06	1.24E 06	2.98E 06	0.19	0.62	3.10E 05	2.13E 06	2.37E 05	1.63E 06
4	2.73E 06	6.30E 06	2.29E 06	5.27E 06	0.33	1.08	9.84E 05	3.12E 06	7.52E 05	2.39E 06
5	1.93E 06	8.23E 06	1.62E 06	6.88E 06	-0.32	-1.05	-6.78E 05	2.44E 06	-5.18E 05	1.87E 06
6	2.31E 06	1.05E 07	1.93E 06	8.82E 06	-0.08	-0.26	-2.02E 05	2.24E 06	-1.54E 05	1.71E 06
7	9.38E 05	1.14E 07	7.84E 05	9.57E 06	0.26	0.85	2.67E 05	2.50E 06	2.04E 05	1.91E 06
8	3.46E 05	1.18E 07	2.89E 05	9.85E 06	-0.28	-0.92	-1.06E 05	2.40E 06	-8.10E 04	1.83E 06
9	2.71E 05	1.21E 07	2.27E 05	1.01E 07	-0.53	-1.74	-1.57E 05	2.24E 06	-1.20E 05	1.71E 06
10	5.07E 05	1.26E 07	4.24E 05	1.05E 07	-0.07	-0.23	-3.87E 04	2.20E 06	-2.96E 04	1.68E 06
11	1.48E 05	1.28E 07	1.24E 05	1.07E 07	1.21	3.97	1.96E 05	2.40E 06	1.50E 05	1.83E 06
12	2.10E 05	1.30E 07	1.76E 05	1.09E 07	0.21	0.69	4.82E 04	2.45E 06	3.69E 04	1.87E 06
13	1.10E 06	1.41E 07	9.19E 05	1.18E 07	0.0	0.0	0.0	2.45E 06	0.0	1.87E 06



EASTERN SIDE OF TANGIER-SMITH ISLANDS (DEPTH 18-24 FEET)

L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
1	2.47E 05	2.47E 05	2.06E 05	2.06E 05	0.0	0.0	0.0	0.0	0.0	0.0
2	3.82E 05	6.30E 05	3.20E 05	5.27E 05	3.02	9.91	1.26E 06	1.26E 06	9.63E 05	9.63E 05
3	6.18E 04	6.91E 05	5.17E 04	5.78E 05	0.85	2.79	5.74E 04	1.32E 06	4.39E 04	1.01E 06
4	3.96E 05	1.09E 06	3.31E 05	9.09E 05	0.16	0.52	6.91E 04	1.39E 06	5.28E 04	1.06E 06
5	1.98E 05	1.29E 06	1.65E 05	1.08E 06	0.0	0.0	0.0	1.39E 06	0.0	1.06E 06
6	6.18E 04	1.34E 06	5.17E 04	1.12E 06	-0.43	-1.41	-2.90E 04	1.36E 06	-2.22E 04	1.04E 06
7	4.93E 03	1.36E 06	4.12E 03	1.13E 06	1.98	6.49	1.07E 04	1.37E 06	8.18E 03	1.05E 06
8	1.23E 04	1.37E 06	1.03E 04	1.14E 06	0.66	2.16	8.91E 03	1.38E 06	6.81E 03	1.06E 06
9	4.93E 04	1.41E 06	4.12E 04	1.18E 06	2.09	6.86	1.13E 05	1.49E 06	8.64E 04	1.14E 06
10	1.11E 05	1.52E 06	9.29E 04	1.27E 06	1.50	4.92	1.82E 05	1.68E 06	1.39E 05	1.28E 06
11	6.18E 04	1.59E 06	5.17E 04	1.33E 06	0.0	0.0	0.0	1.68E 06	0.0	1.28E 06
12	8.64E 04	1.67E 06	7.23E 04	1.39E 06	1.59	5.22	1.50E 05	1.83E 06	1.15E 05	1.40E 06
13	2.47E 04	1.70E 06	2.06E 04	1.42E 06	0.0	0.0	0.0	1.83E 06	0.0	1.40E 06

EASTERN SIDE OF TANGIER-SMITH ISLANDS (DEPTH 24-30 FEET)

L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
1	1.36E 05	1.36E 05	1.13E 05	1.13E 05	0.0	0.0	0.0	0.0	0.0	0.0
2	2.10E 05	3.46E 05	1.76E 05	2.89E 05	2.43	7.97	5.58E 05	5.58E 05	4.27E 05	4.27E 05
3	1.36E 05	4.81E 05	1.13E 05	4.02E 05	-1.10	-3.61	-1.63E 05	3.94E 05	-1.25E 05	3.01E 05
4	3.21E 05	8.02E 05	2.68E 05	6.71E 05	0.0	0.0	0.0	3.94E 05	0.0	3.01E 05
5	2.71E 05	1.07E 06	2.27E 05	8.98E 05	3.63	11.91	1.08E 06	1.47E 06	8.26E 05	1.12E 06
6	7.41E 04	1.14E 06	6.20E 04	9.57E 05	0.0	0.0	0.0	1.47E 06	0.0	1.12E 06
7	6.18E 03	1.16E 06	5.17E 03	9.66E 05	0.0	0.0	0.0	1.47E 06	0.0	1.12E 06
8	8.64E 03	1.17E 06	7.23E 03	9.75E 05	0.0	0.0	0.0	1.47E 06	0.0	1.12E 06
9	3.70E 04	1.20E 06	3.09E 04	1.00E 06	0.0	0.0	0.0	1.47E 06	0.0	1.12E 06
10	1.11E 05	1.31E 06	9.29E 04	1.10E 06	0.0	0.0	0.0	1.47E 06	0.0	1.12E 06
11	6.18E 04	1.38E 06	5.17E 04	1.15E 06	0.0	0.0	0.0	1.47E 06	0.0	1.12E 06
12	8.64E 04	1.46E 06	7.23E 04	1.22E 06	0.0	0.0	0.0	1.47E 06	0.0	1.12E 06
13	3.70E 04	1.50E 06	3.09E 04	1.25E 06	0.0	0.0	0.0	1.47E 06	0.0	1.12E 06

EASTERN SIDE OF TANGIER-SMITH ISLANDS (DEPTH 30-36 FEET)

L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
1	7.41E 04	7.41E 04	6.20E 04	6.20E 04	0.0	0.0	0.0	0.0	0.0	0.0
2	1.98E 05	2.71E 05	1.65E 05	2.27E 05	0.0	0.0	0.0	0.0	0.0	0.0
3	1.36E 05	4.08E 05	1.13E 05	3.41E 05	0.95	3.12	1.41E 05	1.41E 05	1.08E 05	1.08E 05
4	2.10E 05	6.18E 05	1.76E 05	5.17E 05	3.66	12.00	8.40E 05	9.81E 05	6.42E 05	7.50E 05
5	1.60E 05	7.78E 05	1.34E 05	6.50E 05	0.0	0.0	0.0	9.81E 05	0.0	7.50E 05
6	6.18E 04	8.40E 05	5.17E 04	7.02E 05	-2.41	-7.90	-1.63E 05	8.18E 05	-1.25E 05	6.25E 05
7	2.47E 04	8.64E 05	2.06E 04	7.23E 05	0.0	0.0	0.0	8.18E 05	0.0	6.25E 05
8	2.47E 04	8.89E 05	2.06E 04	7.43E 05	0.0	0.0	0.0	8.18E 05	0.0	6.25E 05
9	2.47E 04	9.13E 05	2.06E 04	7.64E 05	0.0	0.0	0.0	8.18E 05	0.0	6.25E 05
10	1.23E 05	1.04E 06	1.03E 05	8.67E 05	0.0	0.0	0.0	8.18E 05	0.0	6.25E 05
11	1.23E 05	1.16E 06	1.03E 05	9.66E 05	2.39	7.84	3.23E 05	1.14E 06	2.47E 05	8.72E 05
12	2.22E 05	1.38E 06	1.86E 05	1.15E 06	4.42	14.50	1.07E 06	2.21E 06	8.18E 05	1.69E 06
13	7.41E 04	1.46E 06	6.20E 04	1.22E 06	0.0	0.0	0.0	2.21E 06	0.0	1.69E 06

EASTERN SIDE OF TANGIER-SMITH ISLANDS (DEPTH 36-42 FEET)

L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
1	1.36E 05	1.36E 05	1.14E 05	1.14E 05	4.11	13.48	6.10E 05	6.10E 05	4.67E 05	4.67E 05
2	1.60E 05	2.96E 05	1.34E 05	2.48E 05	0.0	0.0	0.0	6.10E 05	0.0	4.67E 05
3	1.23E 05	4.20E 05	1.03E 05	3.51E 05	0.0	0.0	0.0	6.10E 05	0.0	4.67E 05
4	1.73E 05	5.93E 05	1.45E 05	4.95E 05	2.62	8.59	4.95E 05	1.11E 06	3.79E 05	8.45E 05
5	1.85E 05	7.78E 05	1.55E 05	6.50E 05	0.0	0.0	0.0	1.11E 06	0.0	8.45E 05
6	1.98E 05	9.75E 05	1.65E 05	8.15E 05	0.0	0.0	0.0	1.11E 06	0.0	8.45E 05
7	4.94E 04	1.02E 06	4.13E 04	8.57E 05	0.0	0.0	0.0	1.11E 06	0.0	8.45E 05
8	7.41E 04	1.10E 06	6.19E 04	9.19E 05	0.0	0.0	0.0	1.11E 06	0.0	8.45E 05
9	1.36E 05	1.23E 06	1.14E 05	1.03E 06	0.0	0.0	0.0	1.11E 06	0.0	8.45E 05
10	1.85E 05	1.42E 06	1.55E 05	1.19E 06	0.0	0.0	0.0	1.11E 06	0.0	8.45E 05
11	1.60E 05	1.58E 06	1.34E 05	1.32E 06	-2.25	-7.38	-3.95E 05	7.11E 05	-3.02E 05	5.43E 05
12	2.35E 05	1.81E 06	1.96E 05	1.52E 06	3.99	13.09	1.02E 06	1.73E 06	7.82E 05	1.33E 06
13	1.73E 05	1.99E 06	1.45E 05	1.66E 06	0.0	0.0	0.0	1.73E 06	0.0	1.33E 06

EASTERN SIDE OF TANGIER-SMITH ISLANDS (DEPTH >42 FEET)

L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
1	1.80E 06	1.80E 06	1.50E 06	1.50E 06	1.51	4.95	2.98E 06	2.98E 06	2.28E 06	2.28E 06
2	1.11E 06	2.91E 06	9.29E 05	2.43E 06	1.81	5.94	2.20E 06	5.17E 06	1.68E 06	3.95E 06
3	2.54E 06	5.46E 06	2.13E 06	4.56E 06	1.08	3.54	3.00E 06	8.18E 06	2.29E 06	6.25E 06
4	2.77E 06	8.22E 06	2.31E 06	6.87E 06	0.79	2.59	2.39E 06	1.06E 07	1.83E 06	8.10E 06
5	1.82E 06	1.00E 07	1.52E 06	8.40E 06	0.35	1.15	6.99E 05	1.13E 07	5.34E 05	8.64E 06
6	1.80E 06	1.19E 07	1.50E 06	9.94E 06	0.55	1.80	1.08E 06	1.23E 07	8.26E 05	9.40E 06
7	1.70E 06	1.36E 07	1.42E 06	1.13E 07	0.59	1.94	1.10E 06	1.34E 07	8.41E 05	1.02E 07
8	9.76E 05	1.46E 07	8.16E 05	1.22E 07	0.76	2.49	8.10E 05	1.43E 07	6.19E 05	1.09E 07
9	2.00E 06	1.66E 07	1.67E 06	1.38E 07	1.16	3.80	2.54E 06	1.68E 07	1.94E 06	1.28E 07
10	3.00E 06	1.96E 07	2.51E 06	1.64E 07	0.50	1.64	1.64E 06	1.84E 07	1.25E 06	1.41E 07
11	3.11E 06	2.27E 07	2.60E 06	1.90E 07	1.55	5.08	5.27E 06	2.37E 07	4.03E 06	1.81E 07
12	5.43E 05	2.32E 07	4.54E 05	1.94E 07	1.67	5.48	9.92E 05	2.47E 07	7.58E 05	1.89E 07
13	6.54E 05	2.39E 07	5.47E 05	2.00E 07	4.57	14.99	3.27E 06	2.80E 07	2.50E 06	2.14E 07

POCOMOKE SOUND (DEPTH 0-6 FEET)

L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	3.98E 06	3.98E 06	3.33E 06	3.33E 06	0.01	0.03	4.35E 04	4.35E 04	3.33E 04	3.33E 04
3	1.53E 07	1.93E 07	1.28E 07	1.62E 07	0.37	1.21	6.21E 06	6.26E 06	4.75E 06	4.79E 06
4	1.32E 07	3.26E 07	1.11E 07	2.72E 07	0.47	1.54	6.80E 06	1.31E 07	5.20E 06	1.00E 07
5	8.57E 06	4.11E 07	7.16E 06	3.44E 07	0.53	1.74	4.96E 06	1.80E 07	3.79E 06	1.38E 07
6	1.30E 07	5.42E 07	1.09E 07	4.53E 07	0.23	0.75	3.28E 06	2.13E 07	2.51E 06	1.63E 07
7	2.02E 07	7.44E 07	1.69E 07	6.22E 07	0.41	1.34	9.08E 06	3.04E 07	6.94E 06	2.32E 07
8	1.73E 07	9.18E 07	1.45E 07	7.67E 07	0.27	0.89	5.11E 06	3.55E 07	3.91E 06	2.71E 07
9	1.39E 07	1.06E 08	1.16E 07	8.83E 07	0.36	1.18	5.48E 06	4.10E 07	4.19E 06	3.13E 07
10	1.12E 07	1.17E 08	9.38E 06	9.75E 07	0.29	0.95	3.55E 06	4.45E 07	2.71E 06	3.40E 07
11	1.32E 07	1.30E 08	1.11E 07	1.09E 08	-0.06	-0.20	-8.70E 05	4.36E 07	-6.65E 05	3.33E 07
12	9.97E 06	1.40E 08	8.33E 06	1.17E 08	0.10	0.33	1.09E 06	4.47E 07	8.33E 05	3.42E 07
13	4.49E 06	1.44E 08	3.75E 06	1.21E 08	0.22	0.72	1.08E 06	4.58E 07	8.26E 05	3.50E 07
14	2.97E 06	1.48E 08	2.48E 06	1.24E 08	0.19	0.62	6.16E 05	4.64E 07	4.71E 05	3.55E 07
15	1.02E 06	1.49E 08	8.57E 05	1.24E 08	0.37	1.21	4.15E 05	4.68E 07	3.17E 05	3.58E 07
16	2.63E 06	1.51E 08	2.20E 06	1.26E 08	0.43	1.41	1.24E 06	4.81E 07	9.48E 05	3.68E 07

POCOMOKE SOUND (DEPTH 6-12 FEET)

L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	8.23E 06	8.23E 06	6.88E 06	6.88E 06	0.21	0.69	1.89E 06	1.89E 06	1.45E 06	1.45E 06
4	1.42E 07	2.24E 07	1.19E 07	1.88E 07	0.45	1.48	6.97E 06	8.86E 06	5.33E 06	6.77E 06
5	1.53E 07	3.78E 07	1.28E 07	3.16E 07	0.54	1.77	9.07E 06	1.79E 07	6.93E 06	1.37E 07
6	1.20E 07	4.98E 07	1.00E 07	4.16E 07	0.56	1.84	7.33E 06	2.53E 07	5.60E 06	1.93E 07
7	1.39E 07	6.36E 07	1.16E 07	5.31E 07	0.50	1.64	7.57E 06	3.28E 07	5.79E 06	2.51E 07
8	1.57E 07	7.93E 07	1.31E 07	6.63E 07	0.25	0.82	4.29E 06	3.71E 07	3.28E 06	2.84E 07
9	8.48E 06	8.78E 07	7.09E 06	7.34E 07	0.48	1.57	4.45E 06	4.16E 07	3.40E 06	3.18E 07
10	9.30E 06	9.71E 07	7.78E 06	8.12E 07	0.19	0.62	1.93E 06	4.35E 07	1.48E 06	3.33E 07
11	8.32E 06	1.05E 08	6.96E 06	8.81E 07	0.48	1.57	4.37E 06	4.79E 07	3.34E 06	3.66E 07
12	5.60E 06	1.11E 08	4.68E 06	9.28E 07	0.32	1.05	1.96E 06	4.98E 07	1.50E 06	3.81E 07

POCOMOKE SOUND (DEPTH 12-18 FEET)

L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.25	0.82	0.0	0.0	0.0	0.0
6	2.93E 06	2.93E 06	2.45E 06	2.45E 06	0.21	0.69	6.75E 05	6.75E 05	5.16E 05	5.16E 05
7	3.27E 06	6.21E 06	2.73E 06	5.19E 06	0.28	0.92	1.00E 06	1.68E 06	7.65E 05	1.28E 06
8	4.16E 06	1.04E 07	3.47E 06	8.67E 06	0.65	2.13	2.96E 06	4.63E 06	2.26E 06	3.54E 06
9	6.79E 06	1.71E 07	5.68E 06	1.43E 07	0.68	2.23	5.05E 06	9.68E 06	3.86E 06	7.40E 06
10	7.68E 06	2.49E 07	6.42E 06	2.08E 07	0.74	2.43	6.21E 06	1.59E 07	4.75E 06	1.22E 07
11	4.31E 06	2.91E 07	3.60E 06	2.43E 07	0.76	2.49	3.58E 06	1.95E 07	2.74E 06	1.49E 07
12	2.46E 06	3.16E 07	2.05E 06	2.64E 07	-0.31	-1.02	-8.33E 05	1.86E 07	-6.37E 05	1.42E 07



POCOMOKE SOUND (DEPTH 18-24 FEET)

L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	5.80E 05	5.80E 05	4.85E 05	4.85E 05	1.86	6.10	1.18E 06	1.18E 06	9.02E 05	9.02E 05
8	1.27E 06	1.86E 06	1.06E 06	1.55E 06	0.54	1.77	7.51E 05	1.93E 06	5.74E 05	1.48E 06
9	2.57E 06	4.42E 06	2.15E 06	3.70E 06	1.66	5.44	4.66E 06	6.59E 06	3.56E 06	5.04E 06
10	2.49E 06	6.91E 06	2.08E 06	5.78E 06	1.21	3.97	3.30E 06	9.89E 06	2.52E 06	7.56E 06
11	4.20E 05	7.33E 06	3.51E 05	6.13E 06	-0.07	-0.23	-3.21E 04	9.86E 06	-2.45E 04	7.54E 06
12	6.04E 05	7.93E 06	5.05E 05	6.63E 06	-0.76	-2.49	-5.03E 05	9.36E 06	-3.85E 05	7.16E 06

POCOMOKE SOUND (DEPTH 24-30 FEET)

L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	5.43E 05	5.43E 05	4.54E 05	4.54E 05	1.62	5.31	9.62E 05	9.62E 05	7.36E 05	7.36E 05
8	1.60E 05	7.03E 05	1.34E 05	5.88E 05	3.83	12.56	6.72E 05	1.63E 06	5.14E 05	1.25E 06
9	2.10E 05	9.13E 05	1.76E 05	7.64E 05	2.64	8.66	6.06E 05	2.24E 06	4.63E 05	1.71E 06
10	9.51E 05	1.87E 06	7.95E 05	1.56E 06	0.68	2.23	7.07E 05	2.95E 06	5.41E 05	2.26E 06
11	2.10E 05	2.08E 06	1.76E 05	1.74E 06	0.0	0.0	0.0	2.95E 06	0.0	2.26E 06
12	1.73E 05	2.24E 06	1.45E 05	1.88E 06	0.0	0.0	0.0	2.95E 06	0.0	2.26E 06

POCOMOKE SOUND (DEPTH 30-36FEET)

L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	4.93E 04	4.93E 04	4.12E 04	4.12E 04	0.0	0.0	0.0	0.0	0.0	0.0
10	6.54E 05	7.03E 05	5.47E 05	5.88E 05	2.27	7.45	1.62E 06	1.62E 06	1.24E 06	1.24E 06
11	1.36E 05	8.40E 05	1.13E 05	7.02E 05	0.0	0.0	0.0	1.62E 06	0.0	1.24E 06
12	1.36E 05	9.76E 05	1.13E 05	8.16E 05	-4.23-13.87	-6.28E 05	-6.28E 05	9.96E 05	-4.80E 05	7.62E 05

POCOMOKE SOUND (DEPTH 36--42FEET)

L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	4.20E 05	4.20E 05	3.51E 05	3.51E 05	0.0	0.0	0.0	0.0	0.0	0.0
11	2.22E 05	6.42E 05	1.86E 05	5.37E 05	0.0	0.0	0.0	0.0	0.0	0.0
12	1.36E 05	7.78E 05	1.13E 05	6.50E 05	0.0	0.0	0.0	0.0	0.0	0.0

POCOMOKE SOUND (DEPTH >42 FEET)

L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	8.14E 05	8.14E 05	6.81E 05	6.81E 05	2.26	7.41	2.01E 06	2.01E 06	1.54E 06	1.54E 06
11	1.69E 06	2.51E 06	1.41E 06	2.10E 06	0.0	0.0	0.0	2.01E 06	0.0	1.54E 06
12	1.41E 06	3.91E 06	1.18E 06	3.27E 06	0.0	0.0	0.0	2.01E 06	0.0	1.54E 06

MOBJACK BAY (DEPTH 0-6 FEET)

L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
38	1.27E 06	1.27E 06	1.06E 06	1.06E 06	1.59	5.22	2.21E 06	2.21E 06	1.69E 06	1.69E 06
39	2.31E 06	3.58E 06	1.93E 06	2.99E 06	1.57	5.15	3.96E 06	6.17E 06	3.03E 06	4.72E 06
40	3.26E 06	6.84E 06	2.73E 06	5.72E 06	0.42	1.38	1.50E 06	7.67E 06	1.14E 06	5.86E 06
41	4.51E 06	1.13E 07	3.77E 06	9.49E 06	0.71	2.33	3.50E 06	1.12E 07	2.67E 06	8.54E 06
42	3.26E 06	1.46E 07	2.73E 06	1.22E 07	1.25	4.10	4.45E 06	1.56E 07	3.41E 06	1.19E 07
43	3.10E 06	1.77E 07	2.59E 06	1.48E 07	0.17	0.56	5.76E 05	1.62E 07	4.40E 05	1.24E 07
44	6.77E 06	2.45E 07	5.66E 06	2.05E 07	0.24	0.79	1.78E 06	1.80E 07	1.36E 06	1.37E 07

MOBJACK BAY (DEPTH 6-12 FEET)

L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
38	2.35E 05	2.35E 05	1.96E 05	1.96E 05	0.89	2.92	2.28E 05	2.28E 05	1.75E 05	1.75E 05
39	2.25E 06	2.48E 06	1.88E 06	2.07E 06	0.81	2.66	1.99E 06	2.22E 06	1.52E 06	1.70E 06
40	2.53E 06	5.01E 06	2.12E 06	4.19E 06	-0.01	-0.03	-2.77E 04	2.19E 06	-2.12E 04	1.67E 06
41	3.30E 06	8.31E 06	2.76E 06	6.95E 06	0.73	2.39	2.63E 06	4.82E 06	2.01E 06	3.69E 06
42	2.43E 06	1.07E 07	2.03E 06	8.98E 06	-0.08	-0.26	-2.13E 05	4.61E 06	-1.63E 05	3.52E 06
43	4.93E 06	1.57E 07	4.12E 06	1.31E 07	0.13	0.43	7.00E 05	5.31E 06	5.35E 05	4.06E 06
44	2.22E 05	1.59E 07	1.86E 05	1.33E 07	0.34	1.12	8.26E 04	5.39E 06	6.32E 04	4.12E 06

MOBJACK BAY (DEPTH 12-18 FEET)

L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
38	3.09E 05	3.09E 05	2.58E 05	2.58E 05	0.52	1.71	1.75E 05	1.75E 05	1.34E 05	1.34E 05
39	2.93E 06	3.23E 06	2.45E 06	2.70E 06	0.81	2.66	2.59E 06	2.77E 06	1.98E 06	2.12E 06
40	6.58E 06	9.81E 06	5.50E 06	8.21E 06	0.23	0.75	1.65E 06	4.42E 06	1.27E 06	3.38E 06
41	1.30E 07	2.28E 07	1.09E 07	1.91E 07	0.66	2.16	9.39E 06	1.38E 07	7.18E 06	1.06E 07
42	1.29E 07	3.57E 07	1.07E 07	2.98E 07	0.49	1.61	6.89E 06	2.07E 07	5.26E 06	1.58E 07
43	3.30E 06	3.90E 07	2.76E 06	3.26E 07	0.52	1.71	1.87E 06	2.26E 07	1.43E 06	1.73E 07



MOBJACK BAY (DEPTH 18-24 FEET)

L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
38	2.22E 05	2.22E 05	1.86E 05	1.86E 05	0.94	3.08	2.28E 05	2.28E 05	1.75E 05	1.75E 05
39	6.05E 06	6.27E 06	5.06E 06	5.24E 06	0.94	3.08	6.22E 06	6.45E 06	4.75E 06	4.93E 06
40	4.48E 06	1.08E 07	3.75E 06	8.99E 06	0.67	2.20	3.28E 06	9.73E 06	2.51E 06	7.44E 06
41	1.43E 06	1.22E 07	1.20E 06	1.02E 07	0.81	2.66	1.27E 06	1.10E 07	9.70E 05	8.41E 06
42	3.16E 06	1.53E 07	2.64E 06	1.28E 07	0.59	1.94	2.04E 06	1.30E 07	1.56E 06	9.97E 06
43	3.86E 06	1.92E 07	3.23E 06	1.61E 07	0.54	1.77	2.28E 06	1.53E 07	1.74E 06	1.17E 07

MOBJACK BAY (DEPTH 24-30 FEET)

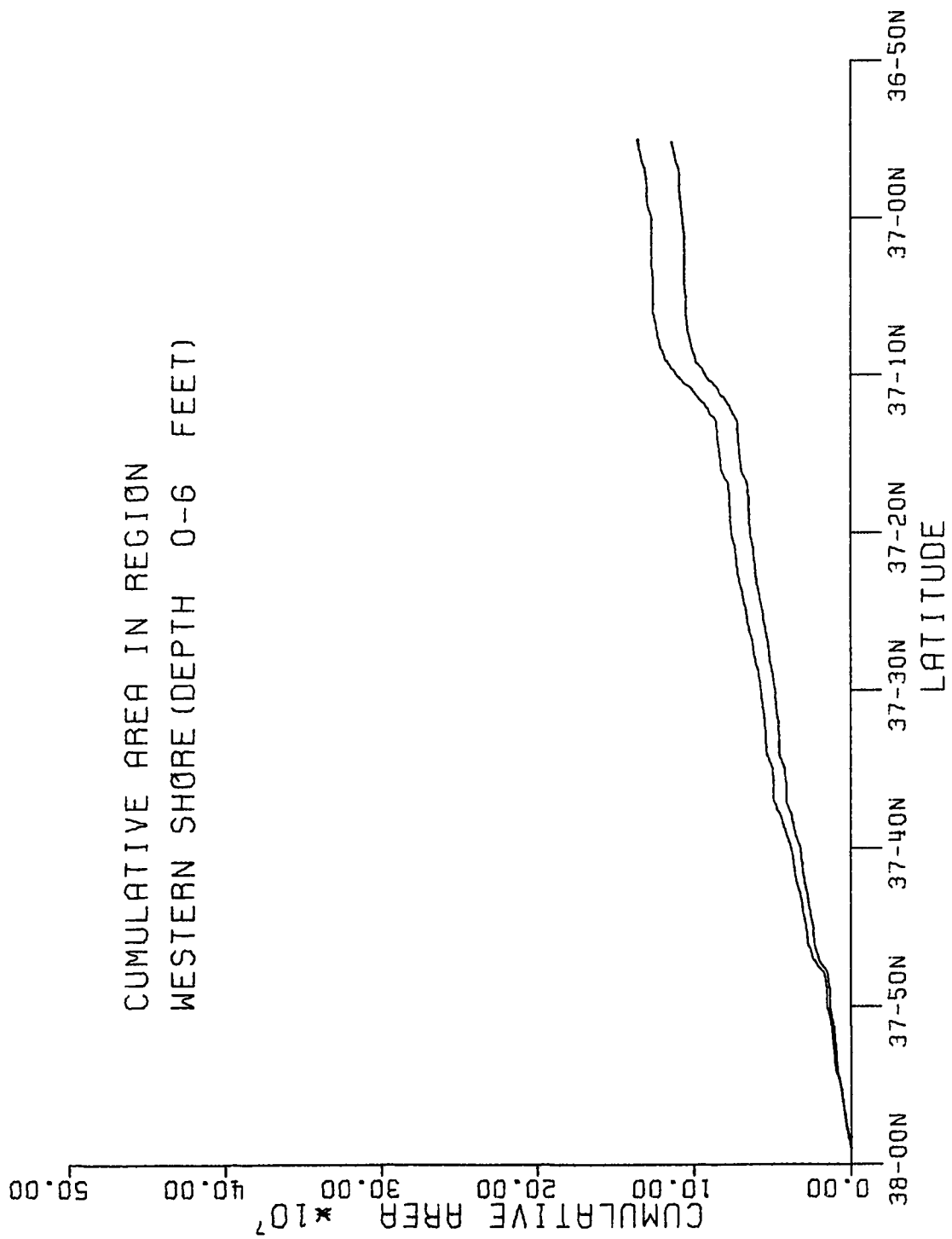
L	AYD2	ΣAYD2	M2	ΣM2	SRM	SRF	YD3	ΣYD3	M3	ΣM3
38	3.33E 05	3.33E 05	2.79E 05	2.79E 05	0.85	2.79	3.10E 05	3.10E 05	2.37E 05	2.37E 05
39	4.32E 05	7.65E 05	3.61E 05	6.40E 05	0.68	2.23	3.21E 05	6.31E 05	2.46E 05	4.82E 05
40	0.0	7.65E 05	0.0	6.40E 05	0.0	0.0	0.0	6.31E 05	0.0	4.82E 05
41	3.70E 04	8.02E 05	3.10E 04	6.71E 05	0.90	2.95	3.64E 04	6.67E 05	2.79E 04	5.10E 05
42	0.0	8.02E 05	0.0	6.71E 05	0.0	0.0	0.0	6.67E 05	0.0	5.10E 05
43	2.78E 06	3.58E 06	2.32E 06	2.99E 06	0.39	1.28	1.18E 06	1.85E 06	9.06E 05	1.42E 06

## APPENDIX C

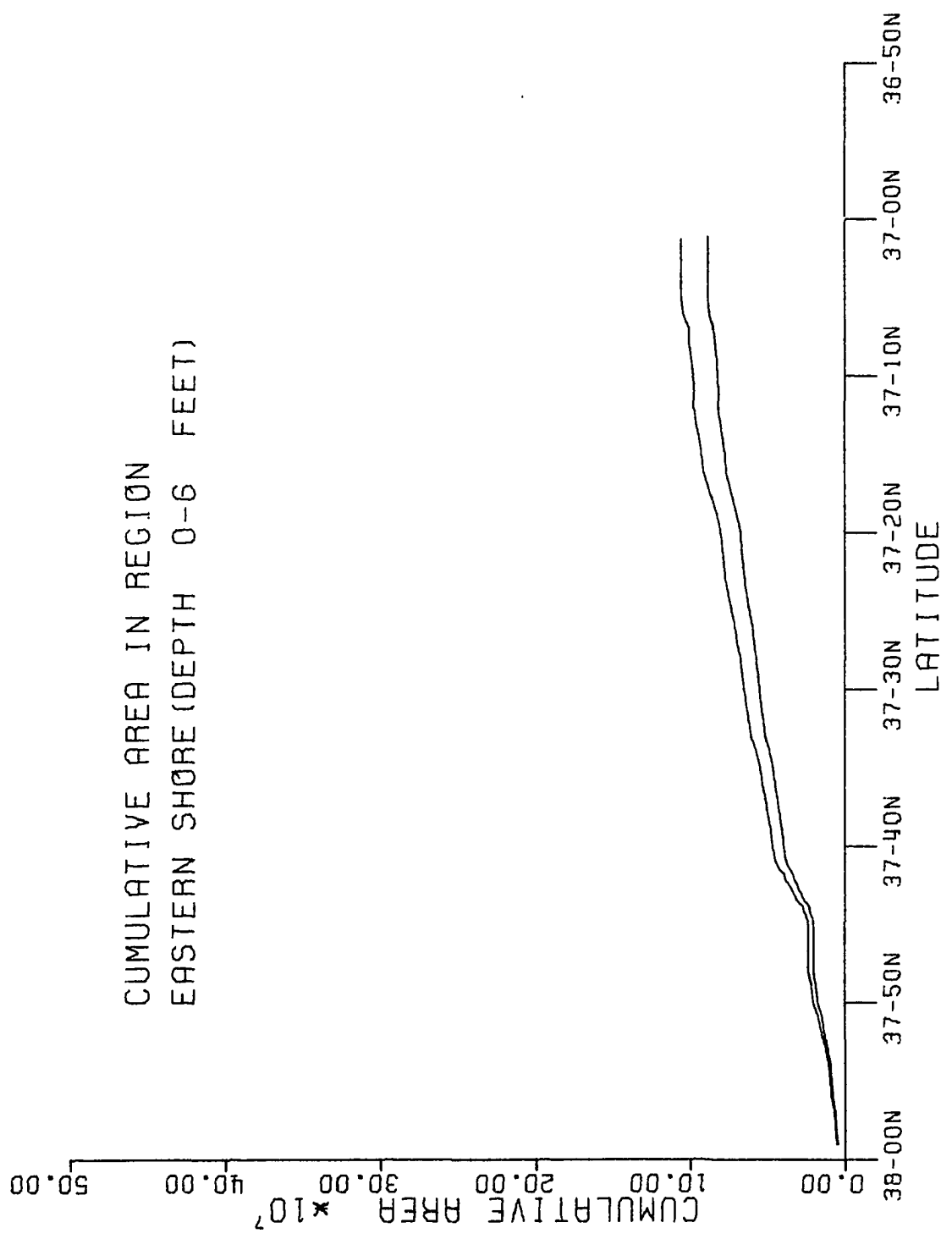
### CUMULATIVE AREA PLOTS FOR THE CHESAPEAKE BAY SUBSEQUENTS 38°00' N to 36°50' N

Note of caution: Although the horizontal scale (latitude) remains constant, the vertical scale (cumulative area) may change from one plot to the next.

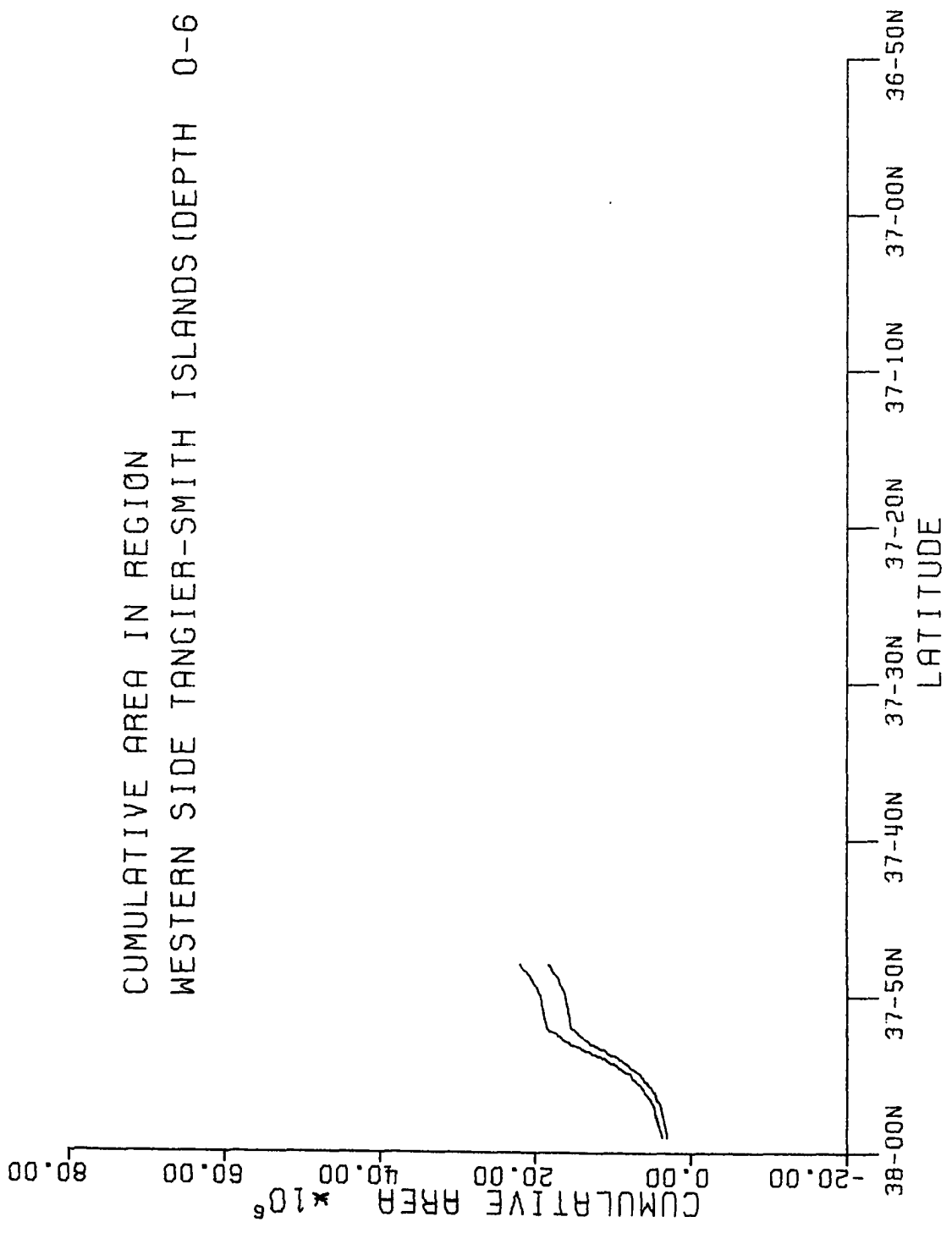
Each graph contains two lines. The upper line represents the cumulative area in square meters, while the lower line represents the cumulative area in square yards.



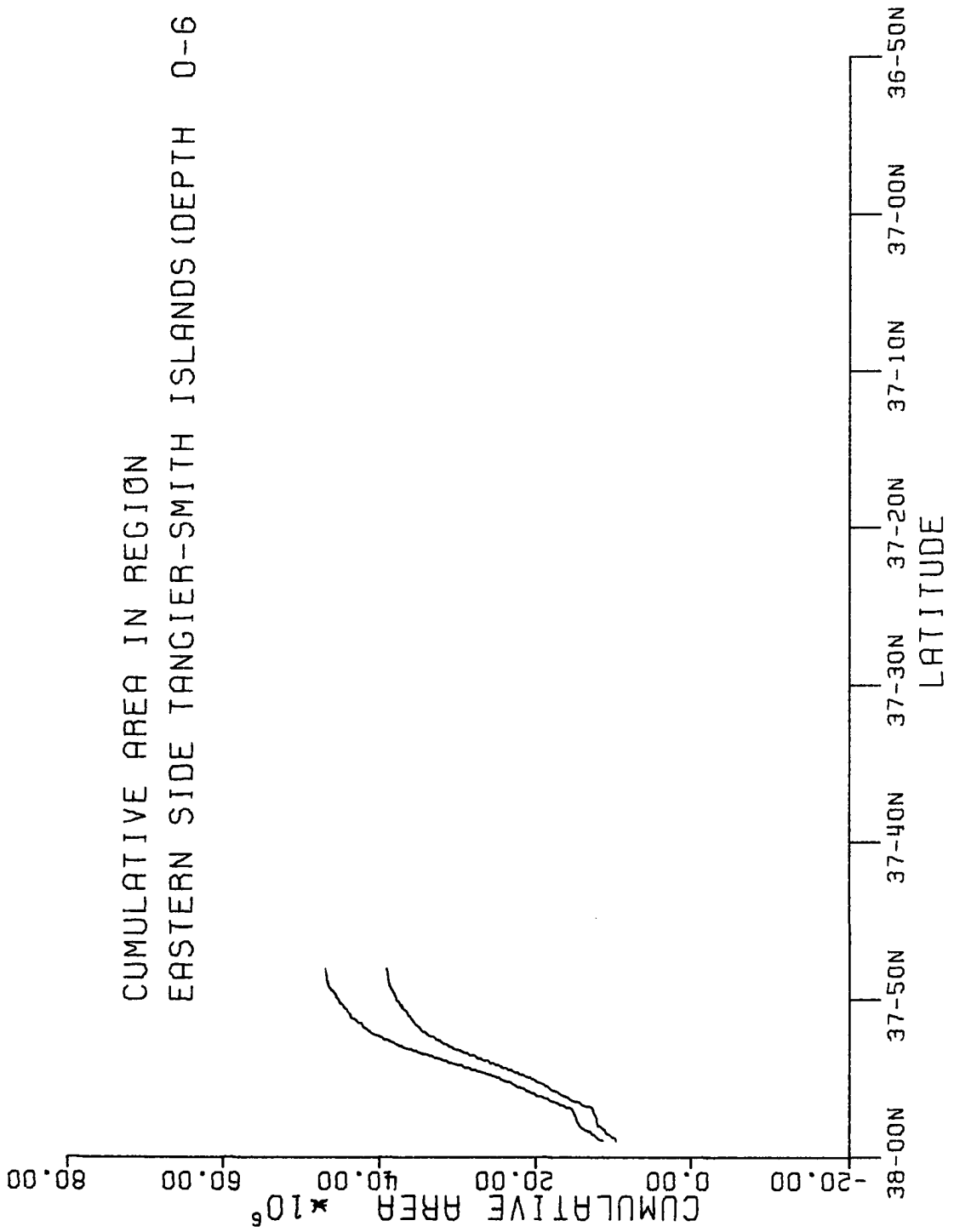
CUMULATIVE AREA IN REGION  
EASTERN SHORE (DEPTH 0-6 FEET)



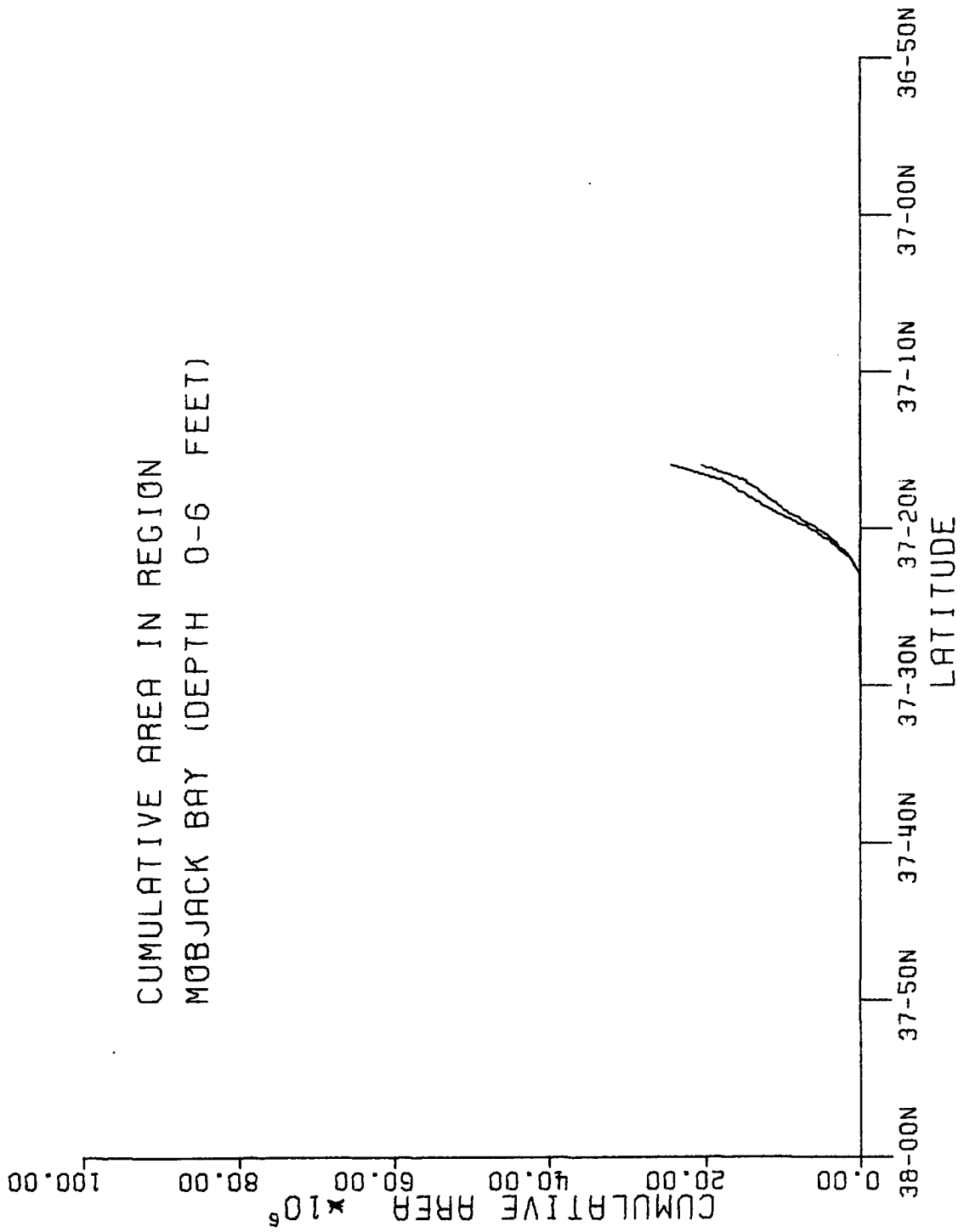
CUMULATIVE AREA IN REGION  
WESTERN SIDE TANGIER-SMITH ISLANDS (DEPTH 0-6 FEET)



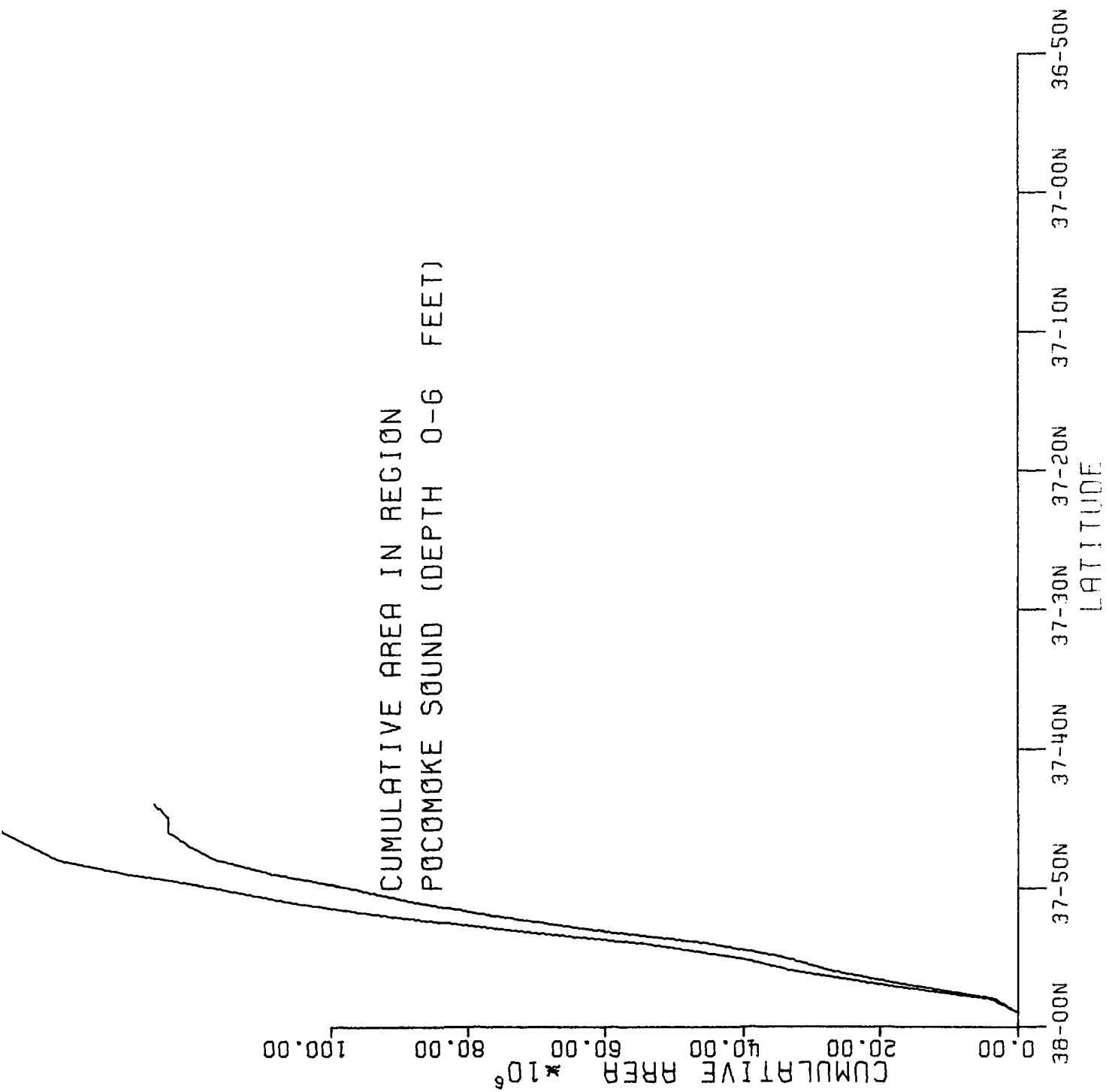
CUMULATIVE AREA IN REGION  
EASTERN SIDE TANGIER-SMITH ISLANDS (DEPTH 0-6 FEET)

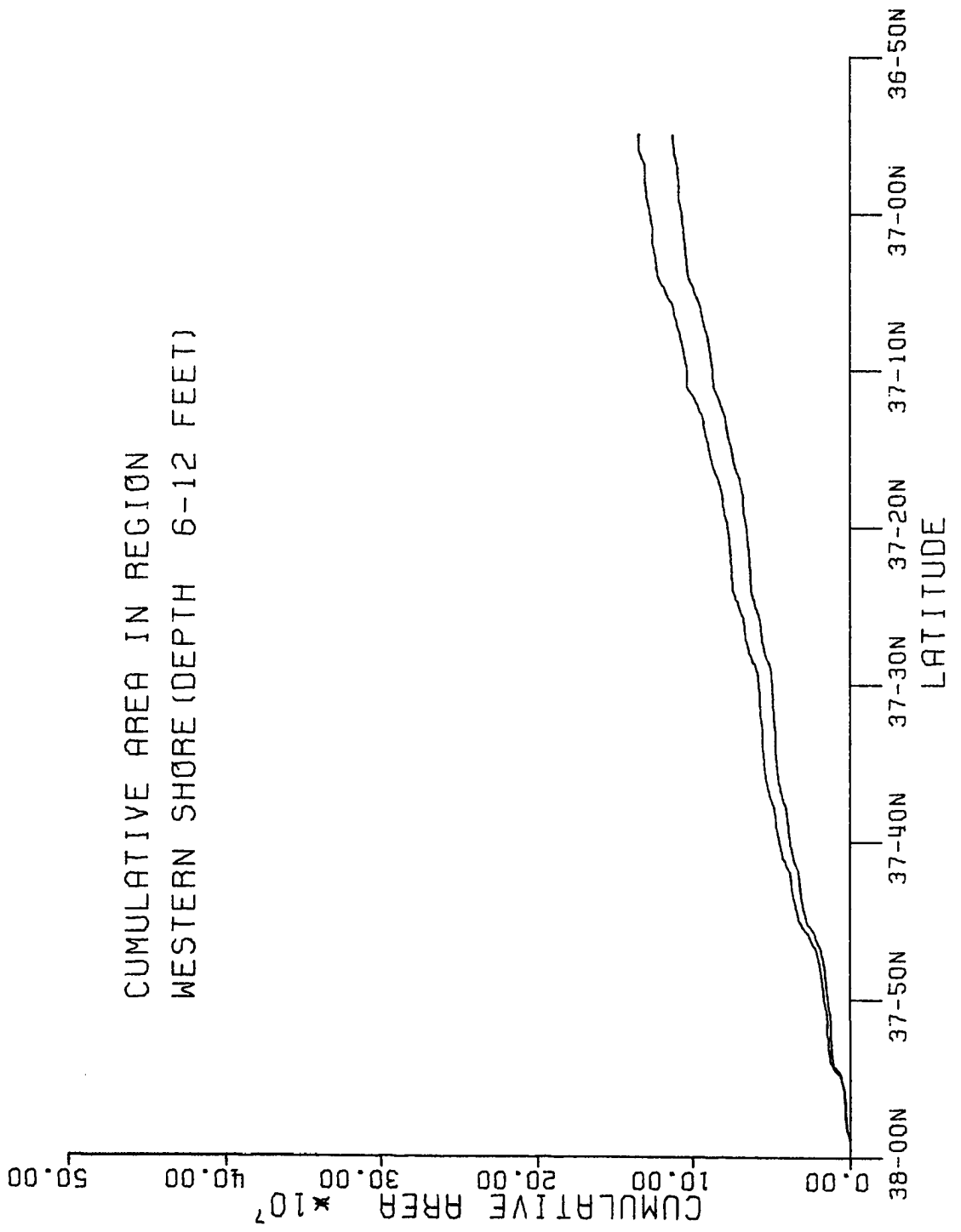


CUMULATIVE AREA IN REGION  
MOBJACK BAY (DEPTH 0-6 FEET)

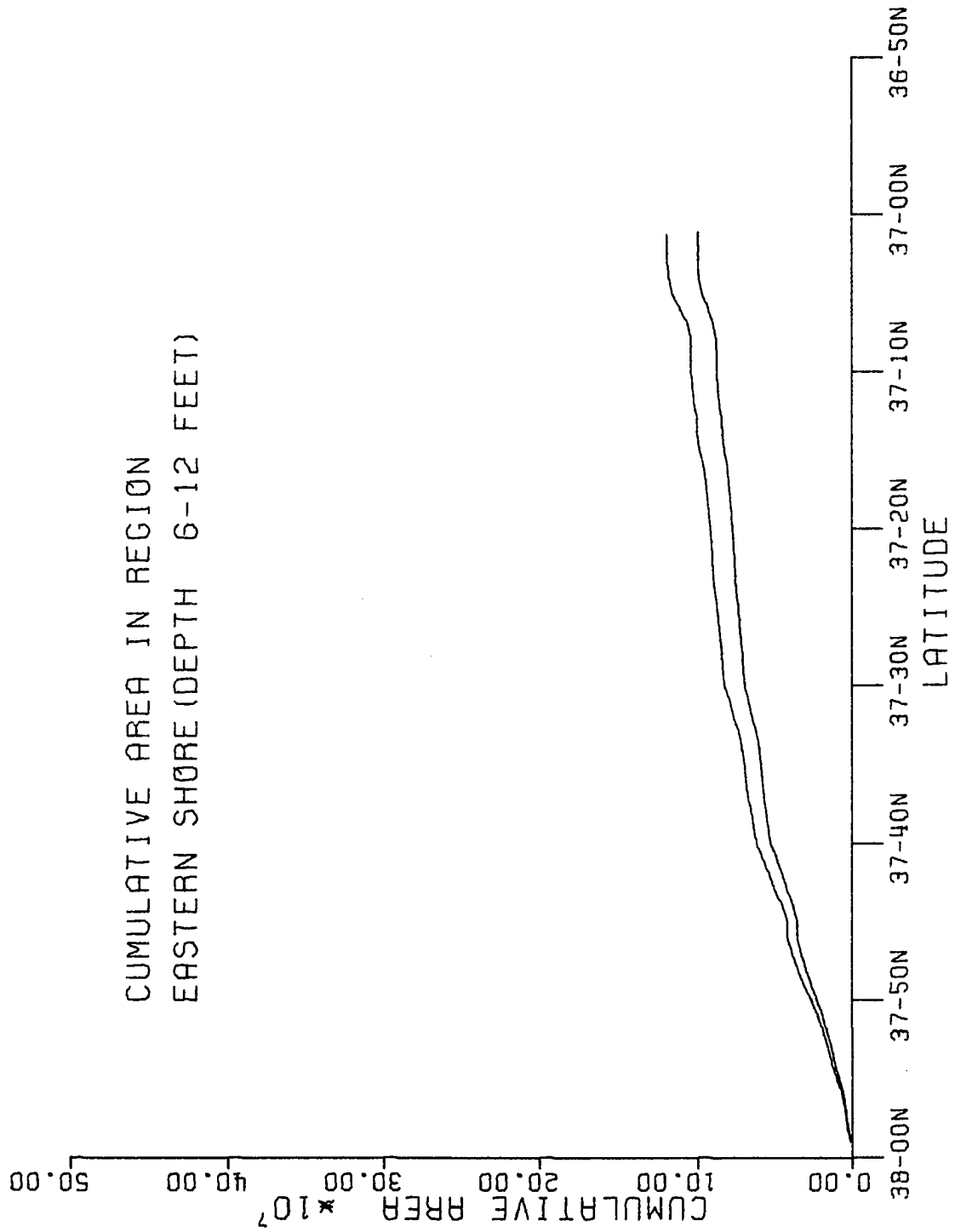


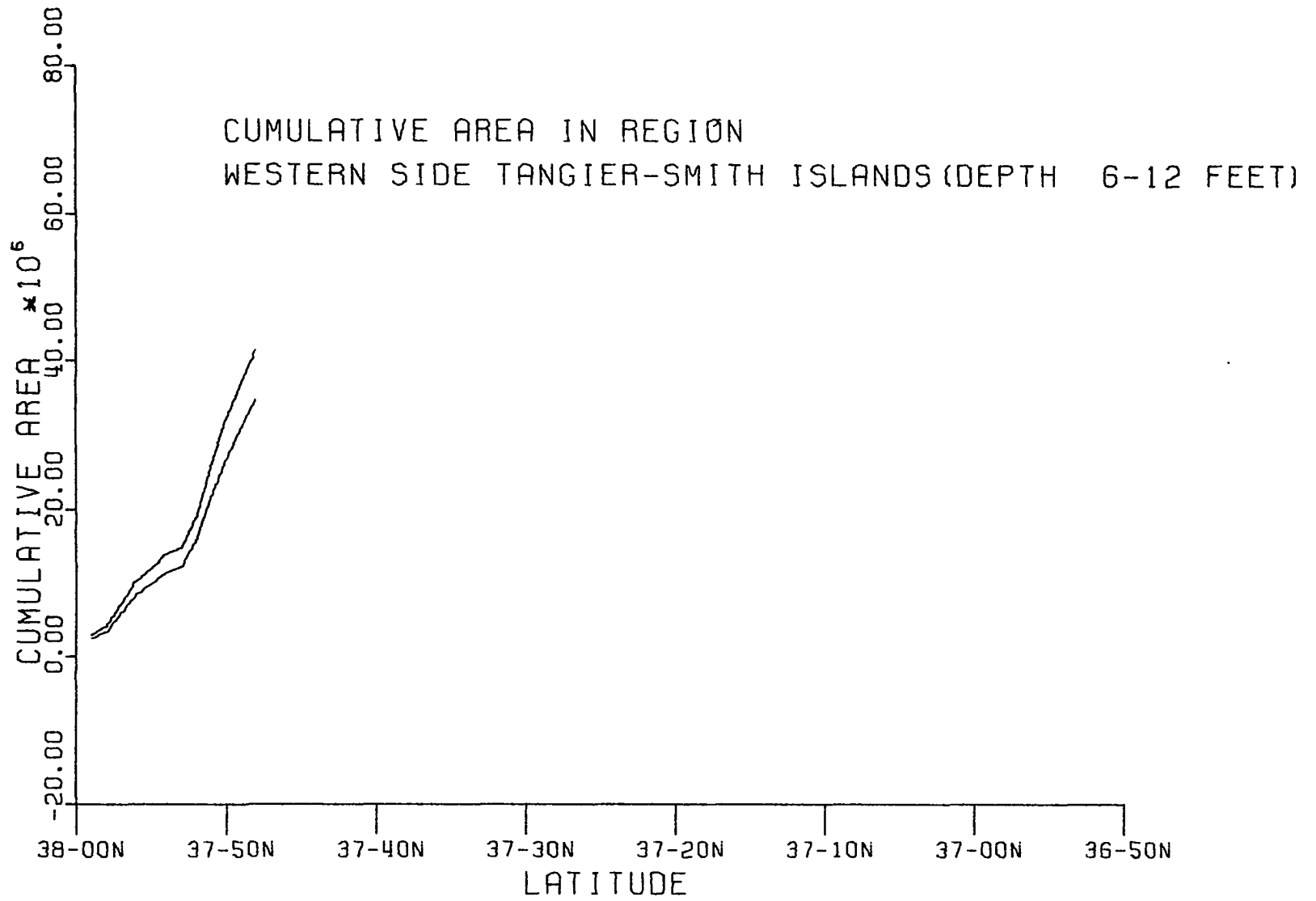




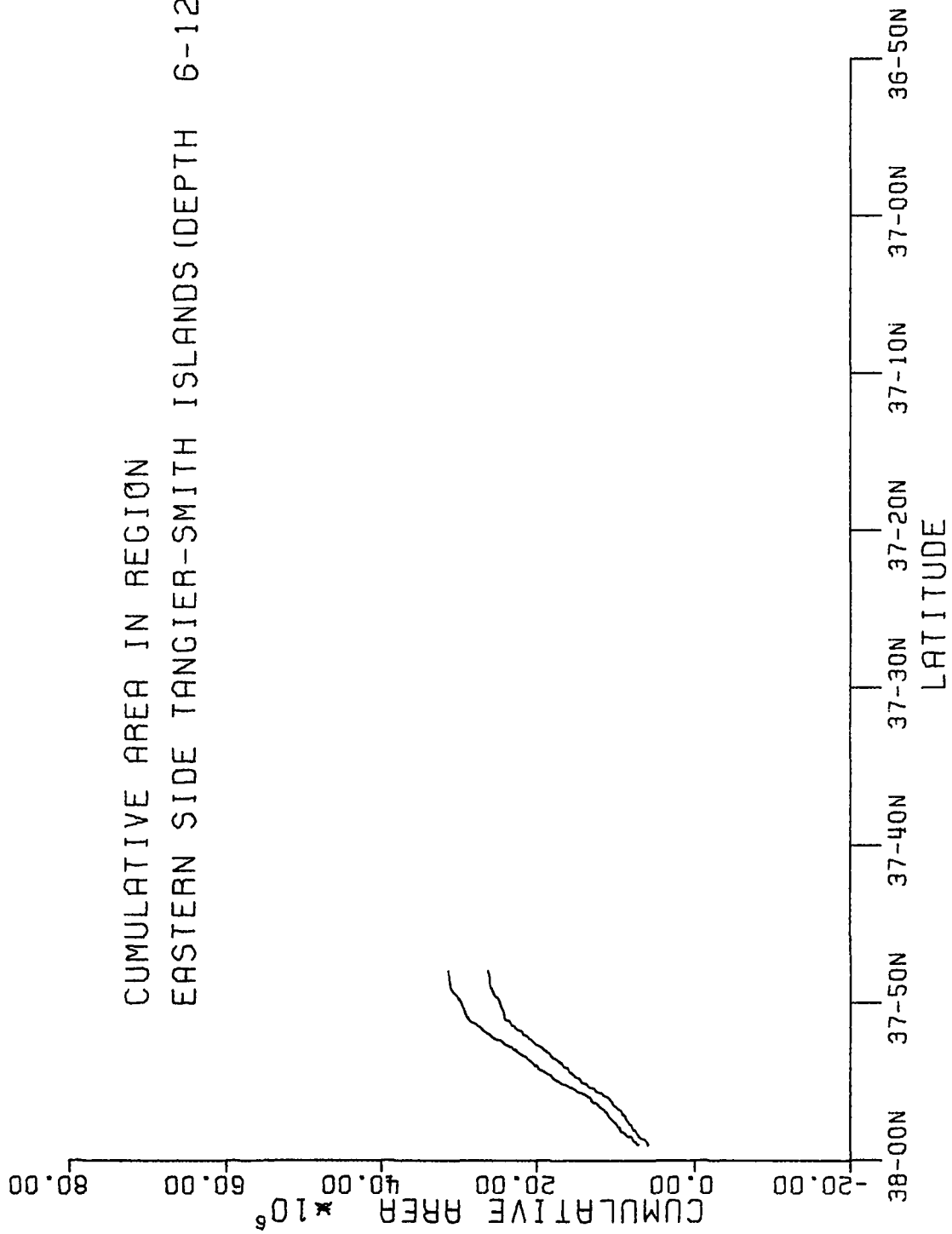


CUMULATIVE AREA IN REGION  
EASTERN SHORE (DEPTH 6-12 FEET)

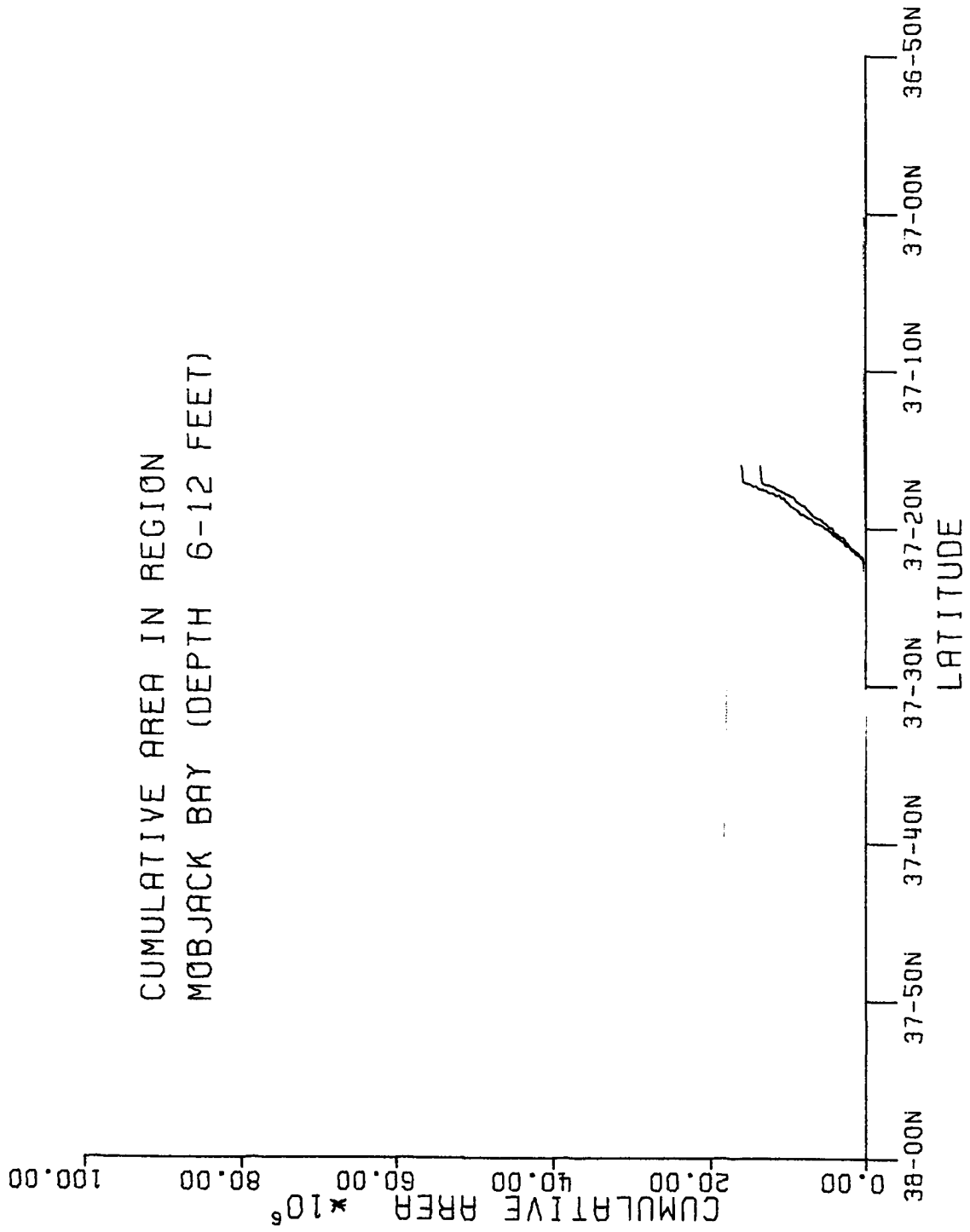


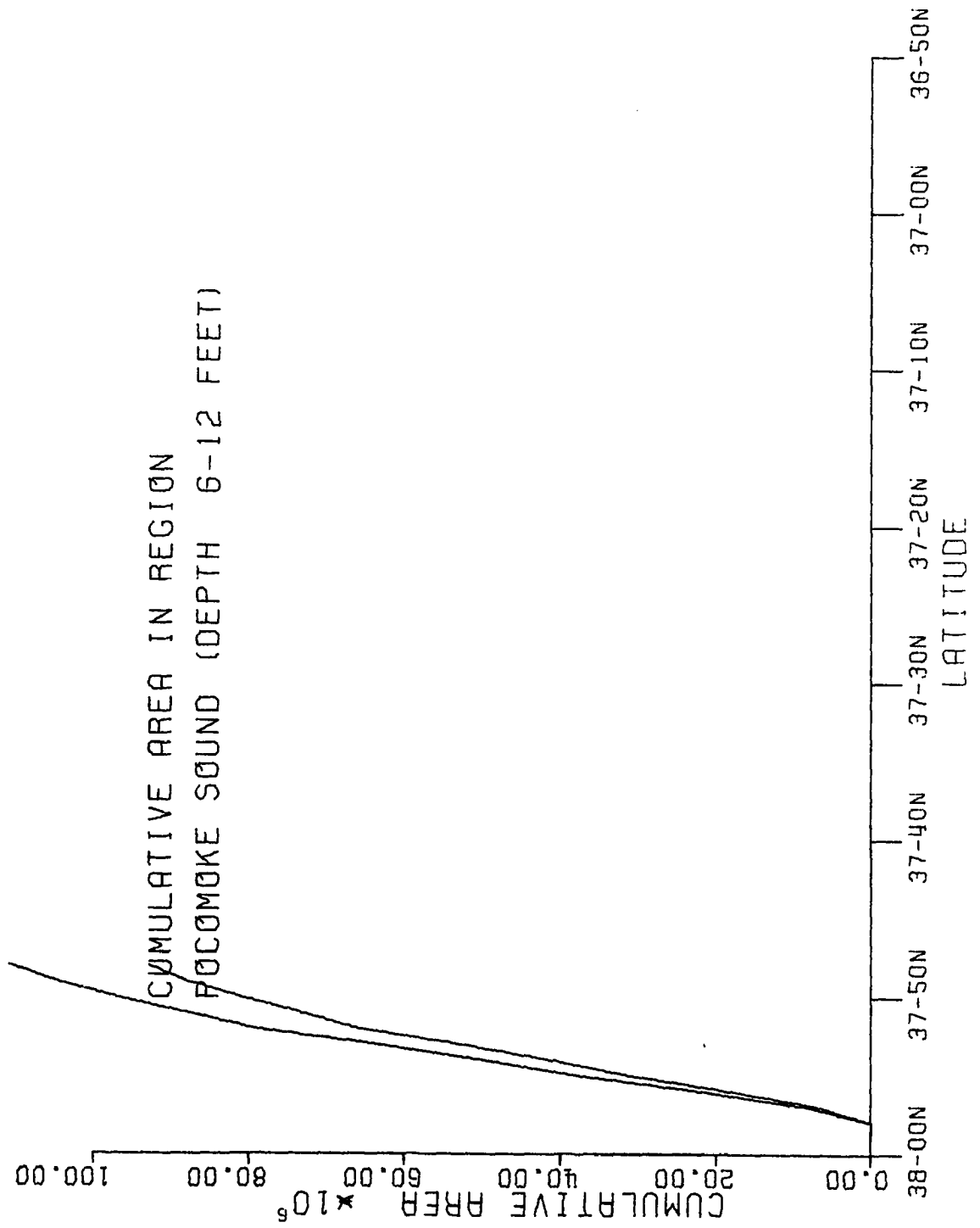


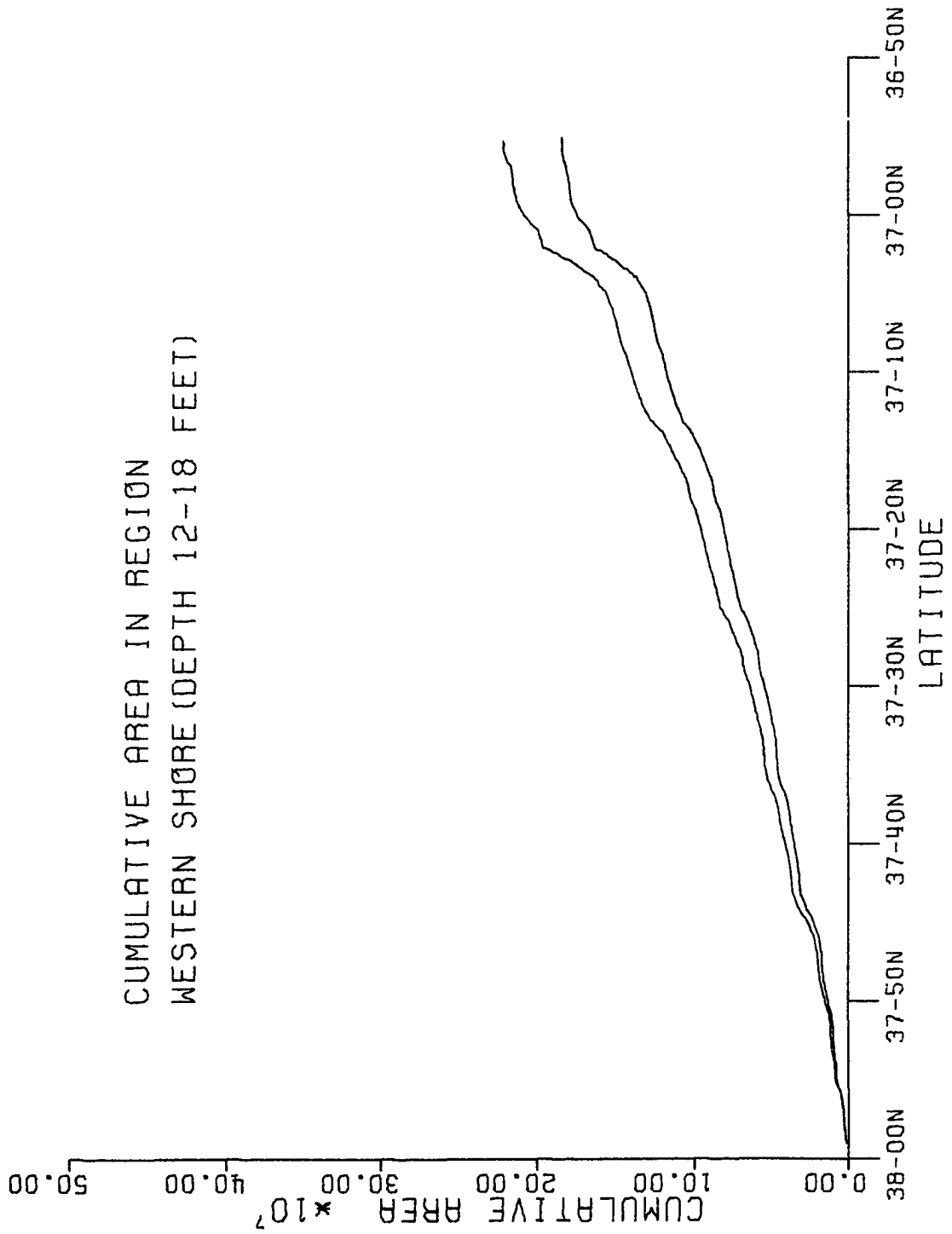
CUMULATIVE AREA IN REGION  
EASTERN SIDE TANGIER-SMITH ISLANDS (DEPTH 6-12 FEET)



CUMULATIVE AREA IN REGION  
MOBJACK BAY (DEPTH 6-12 FEET)

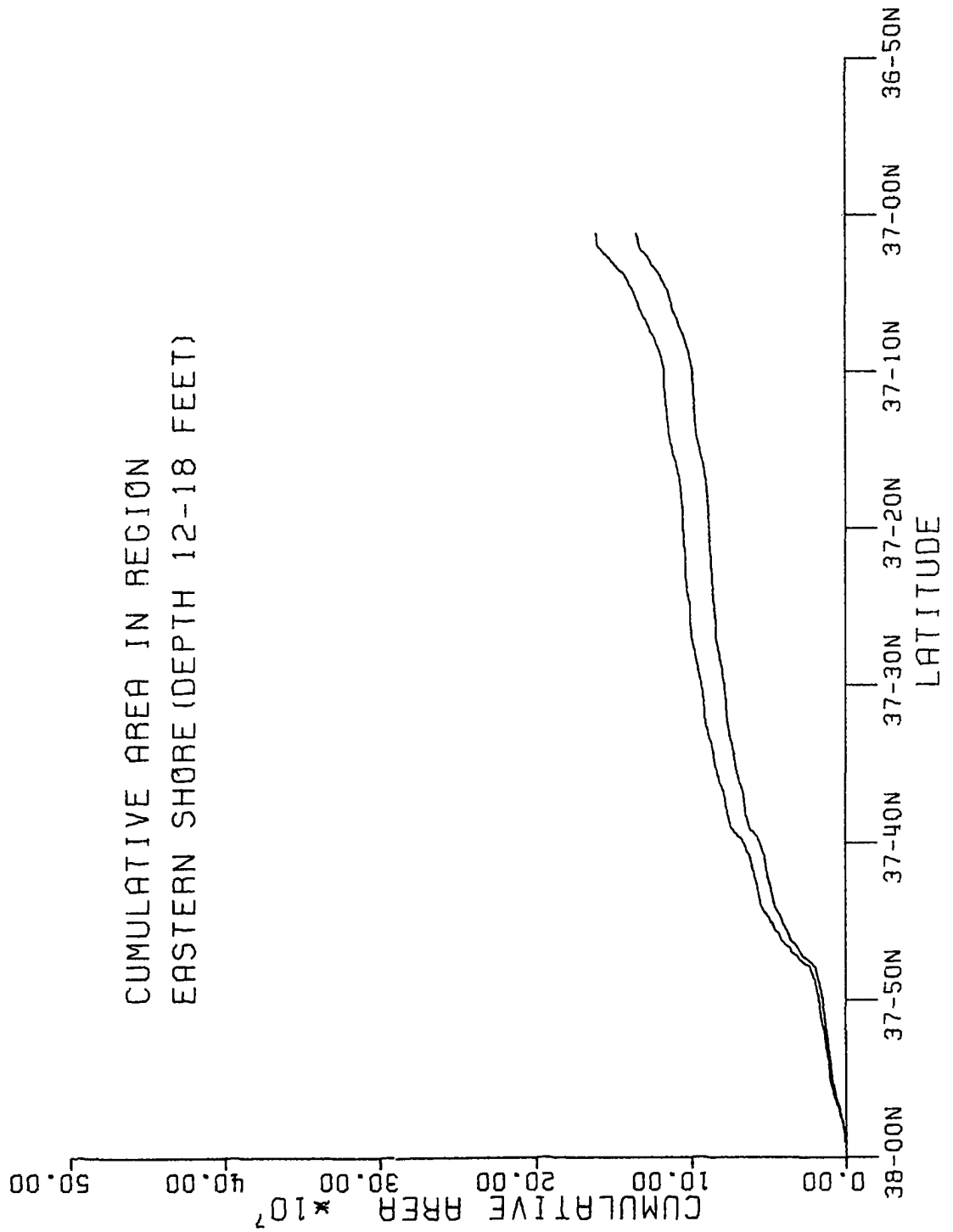


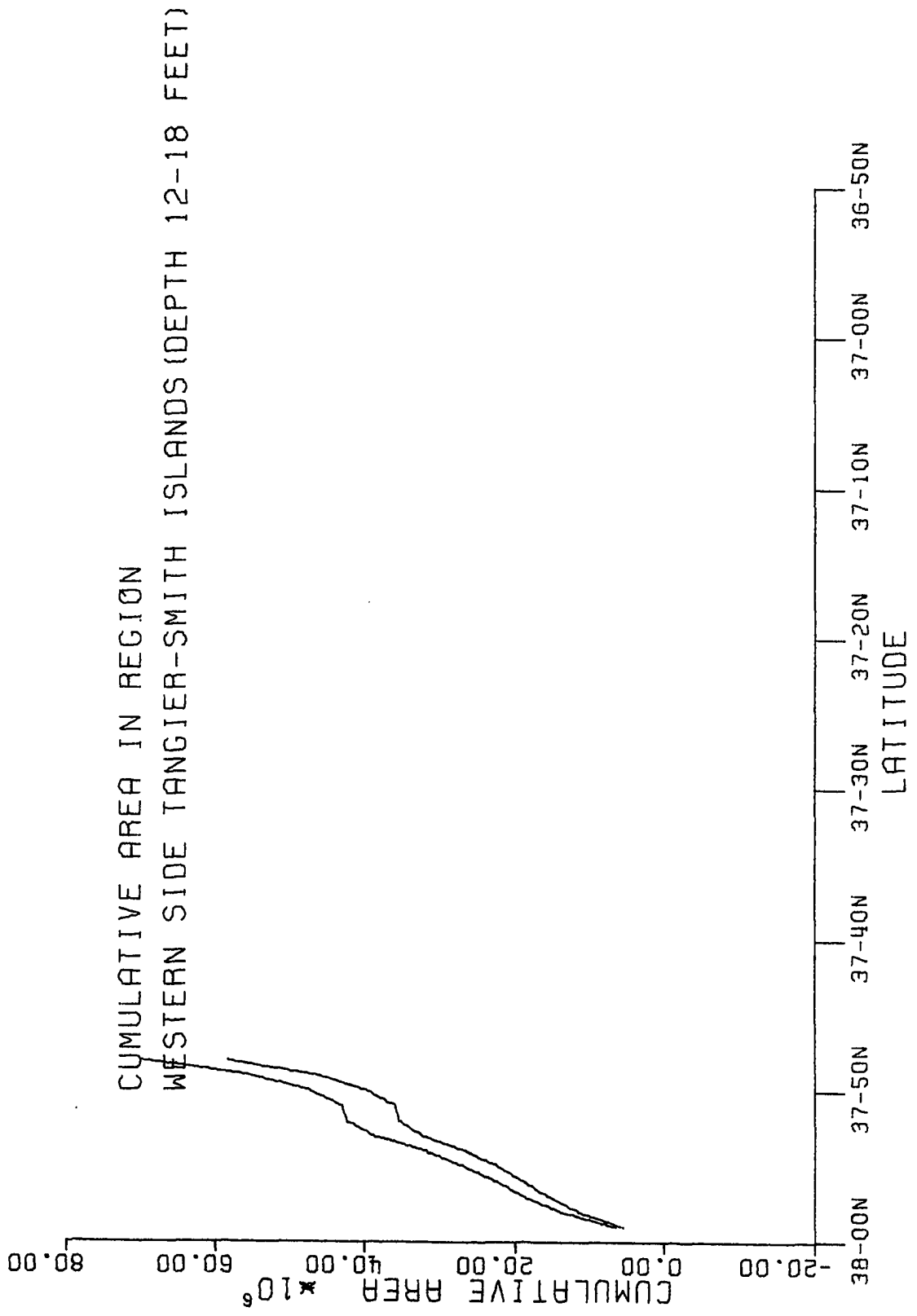


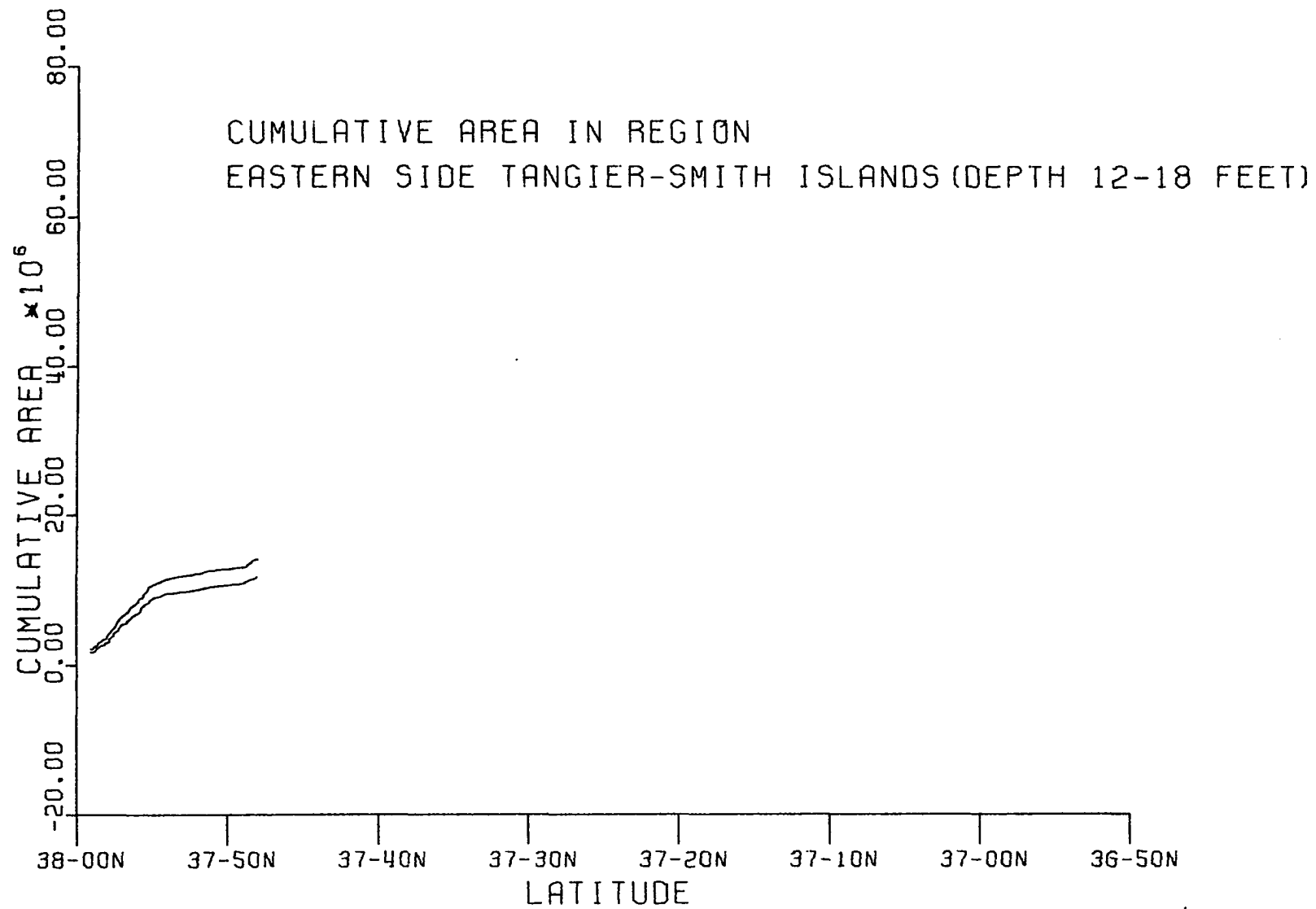




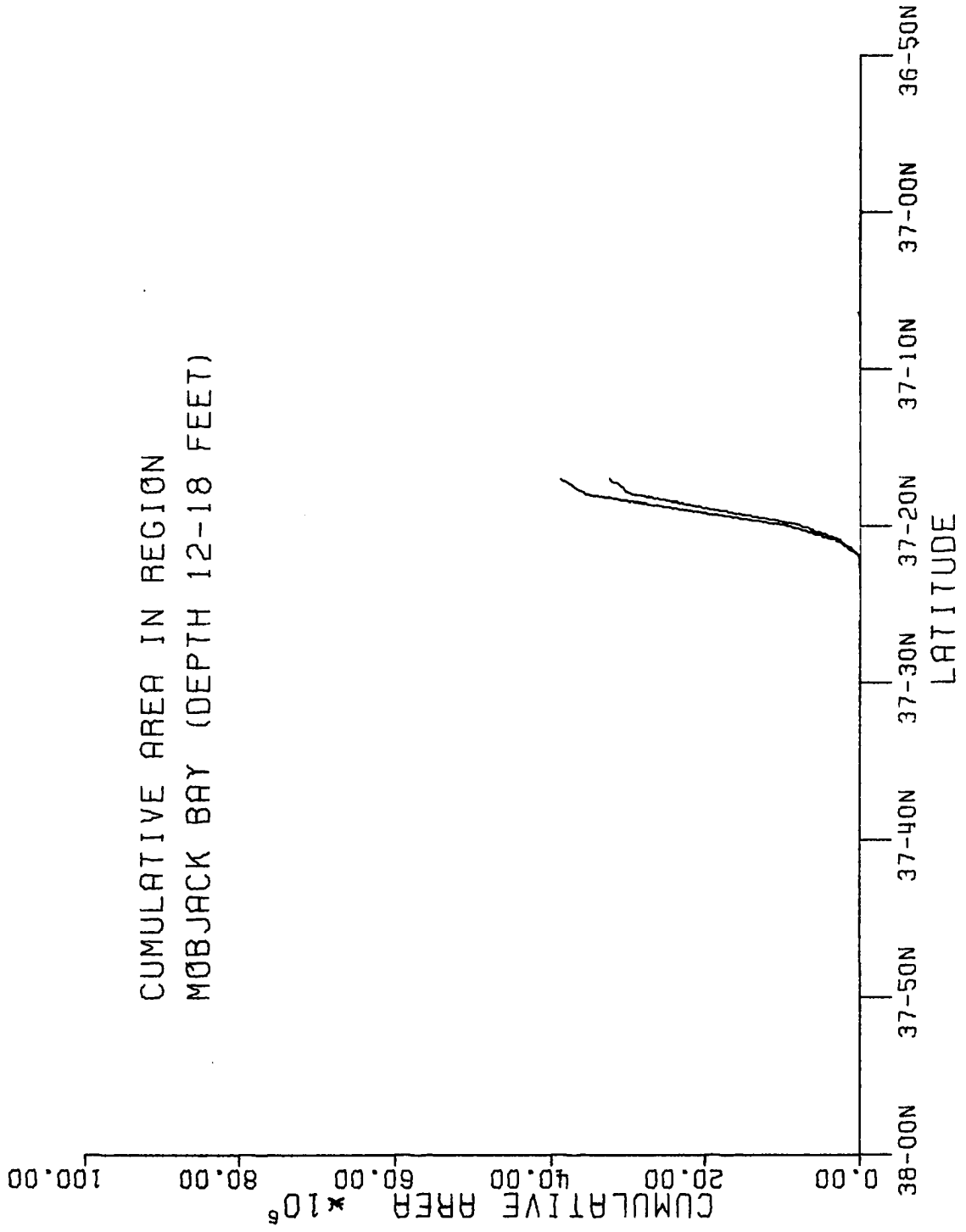
CUMULATIVE AREA IN REGION  
EASTERN SHORE (DEPTH 12-18 FEET)



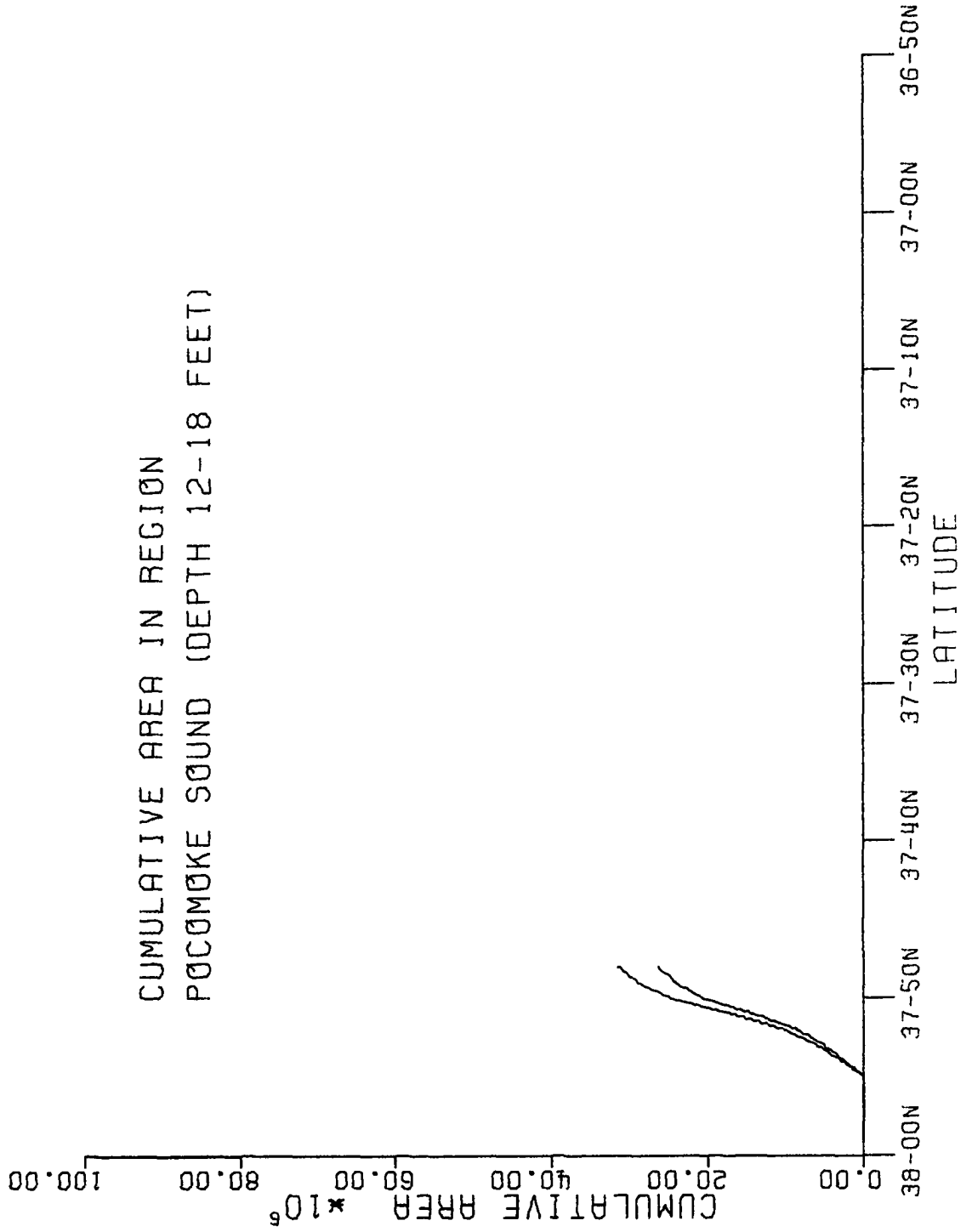


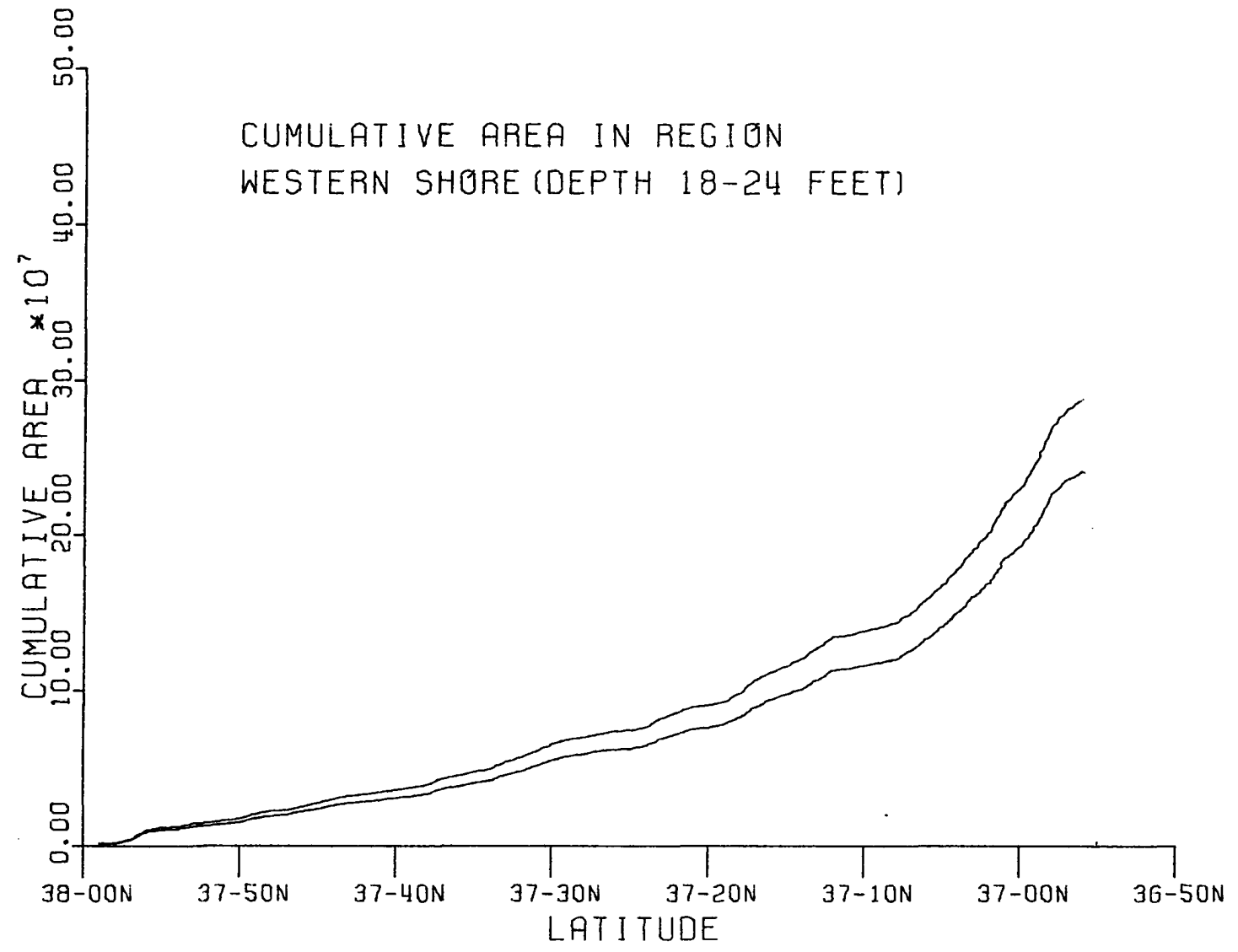


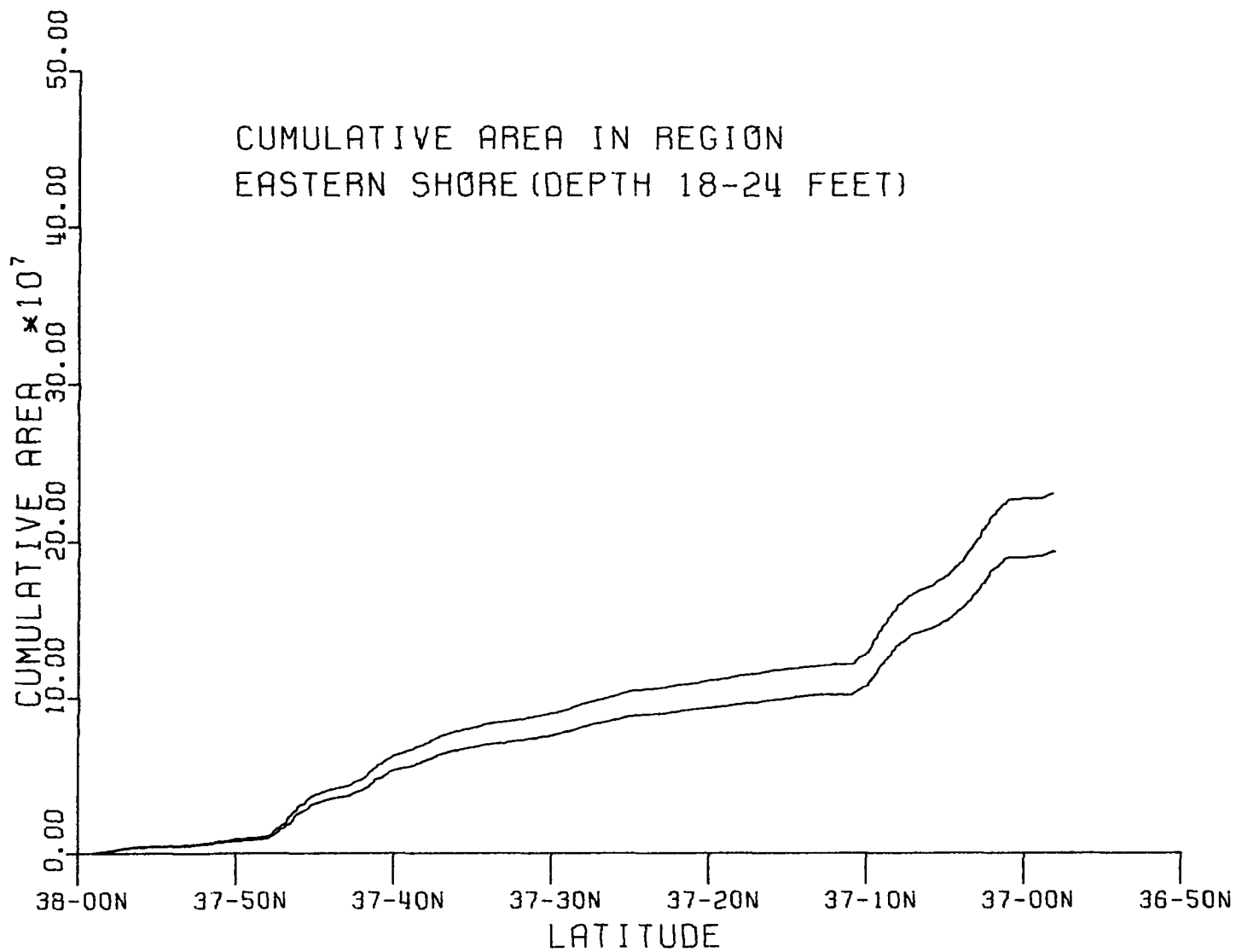
CUMULATIVE AREA IN REGION  
MOBJACK BAY (DEPTH 12-18 FEET)

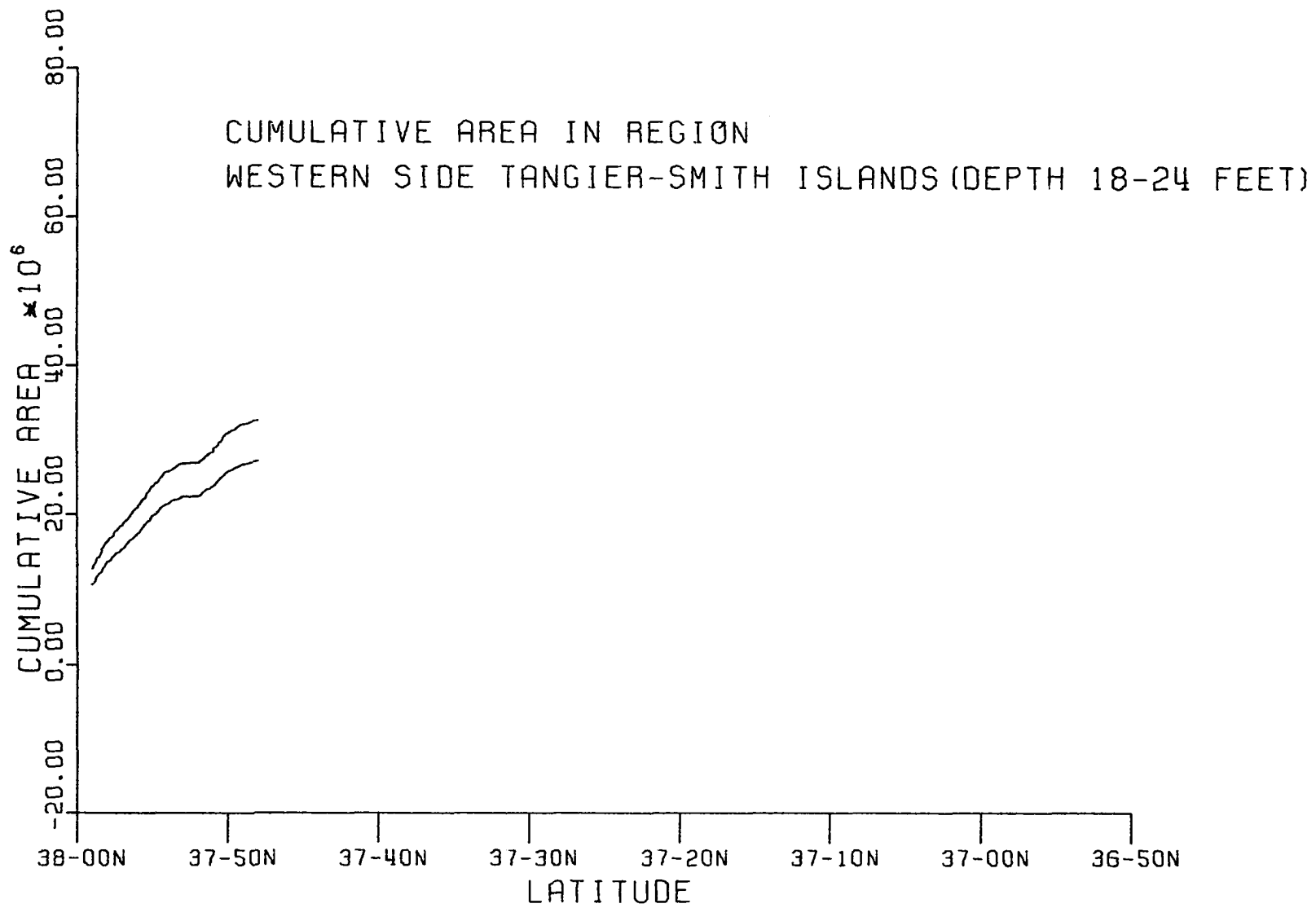


CUMULATIVE AREA IN REGION  
POCOMOKE SOUND (DEPTH 12-18 FEET)



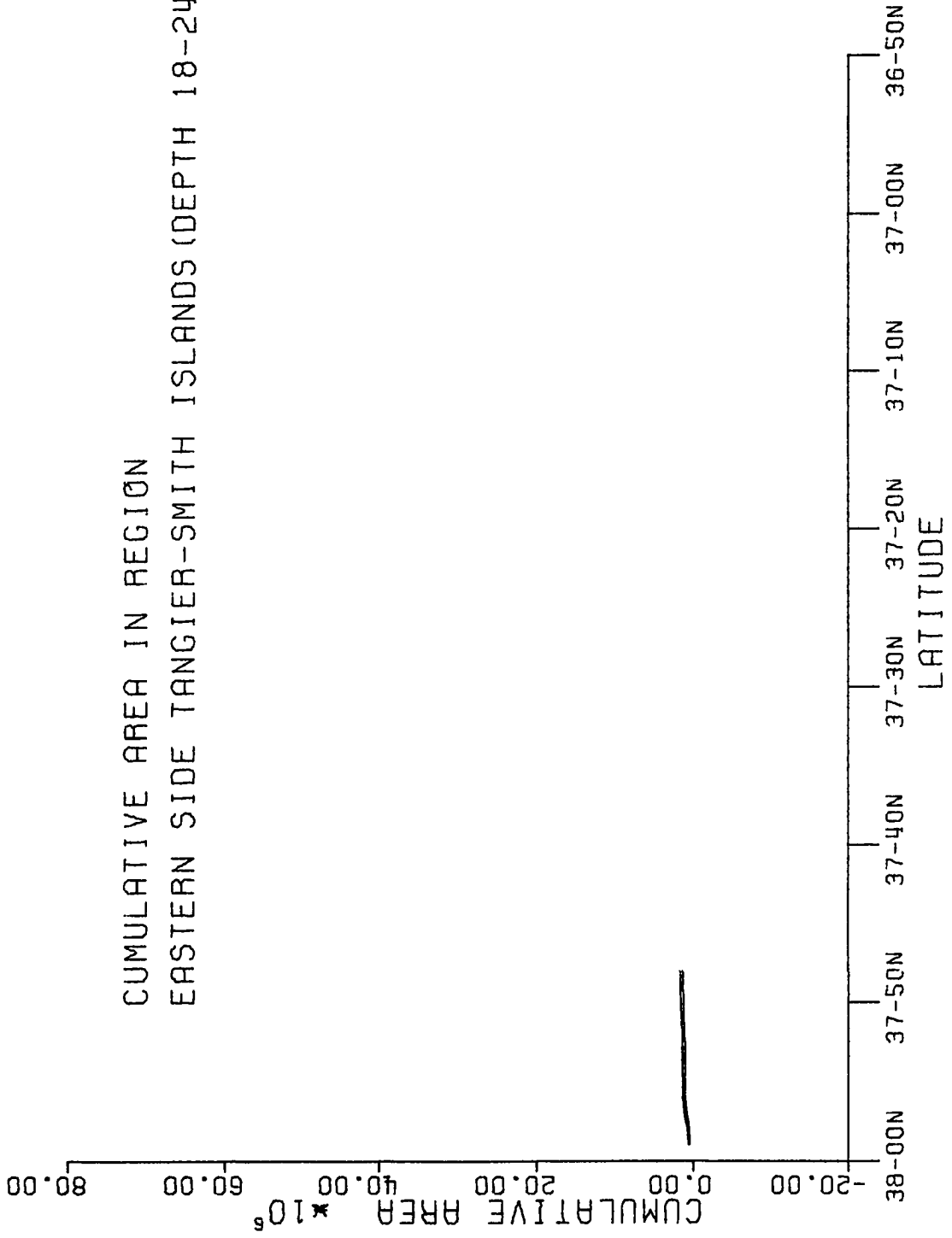




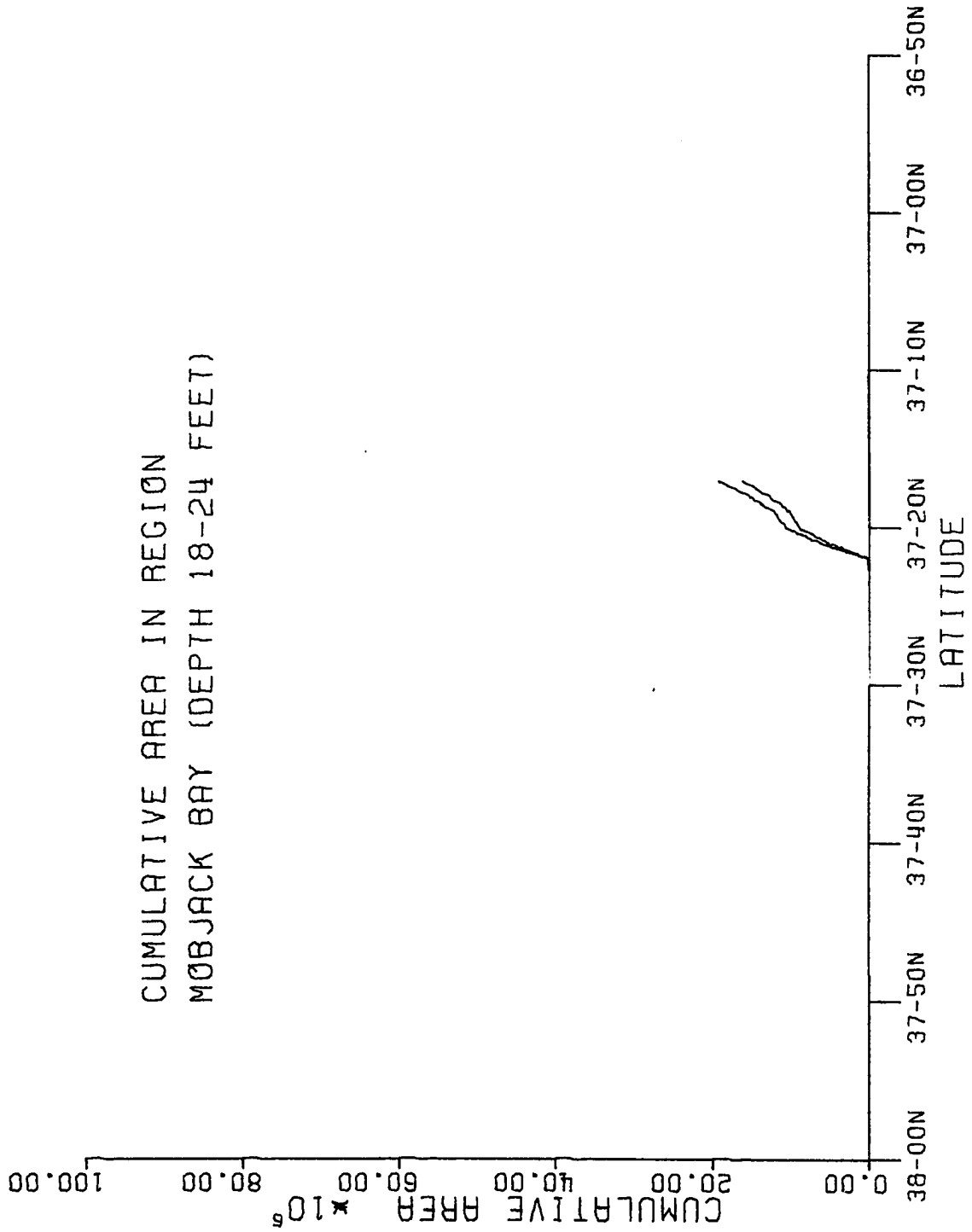


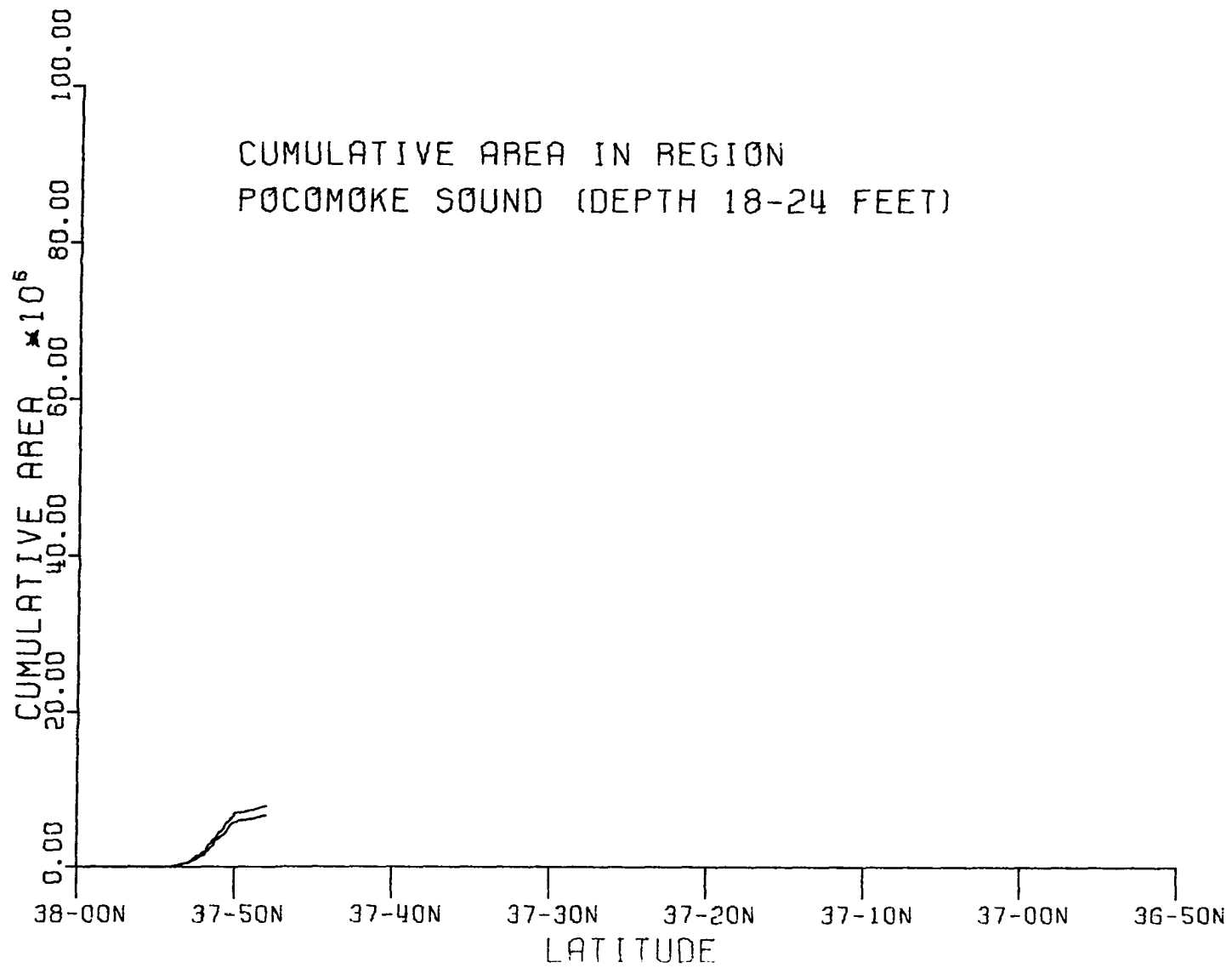


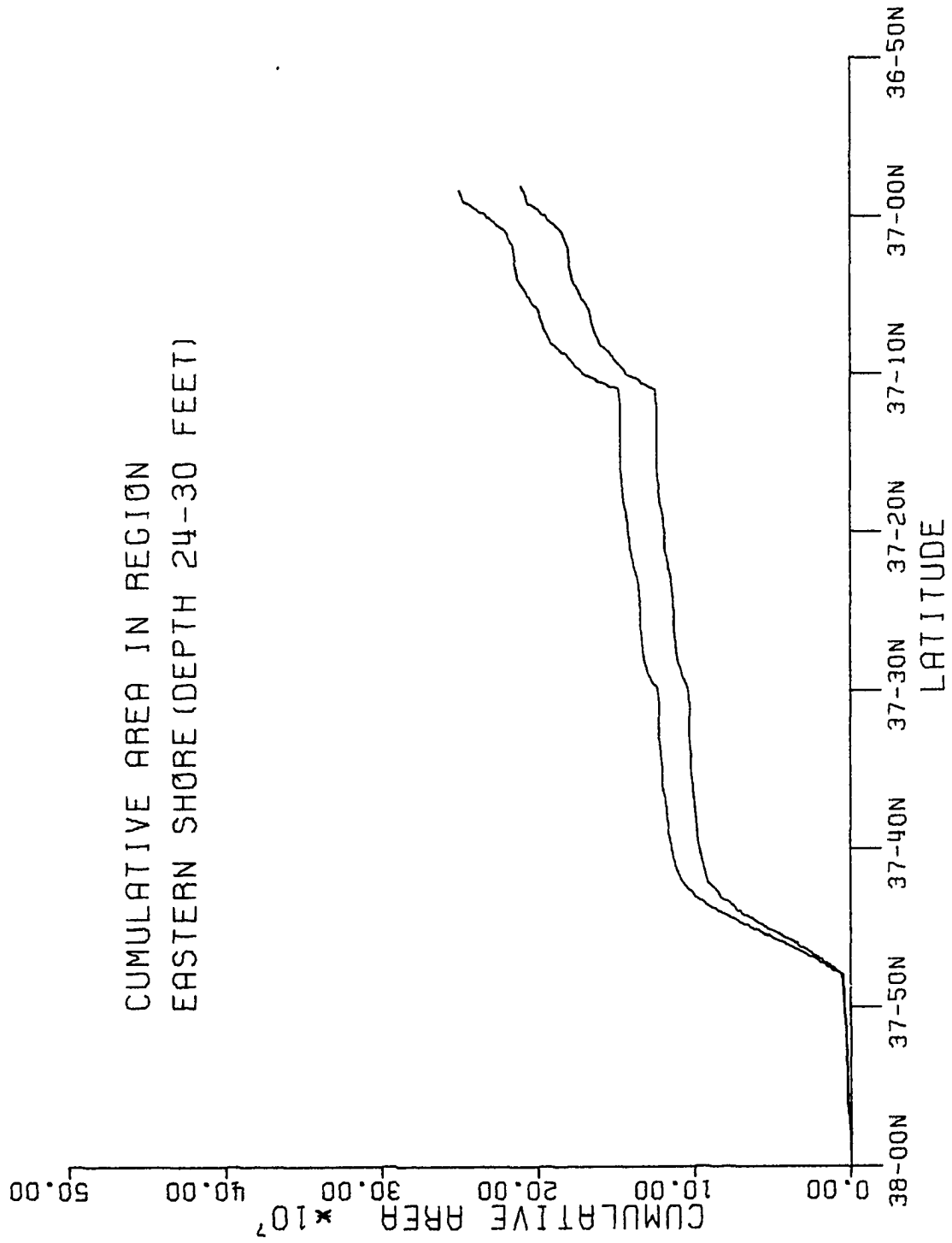
CUMULATIVE AREA IN REGION  
EASTERN SIDE TANGIER-SMITH ISLANDS (DEPTH 18-24 FEET)

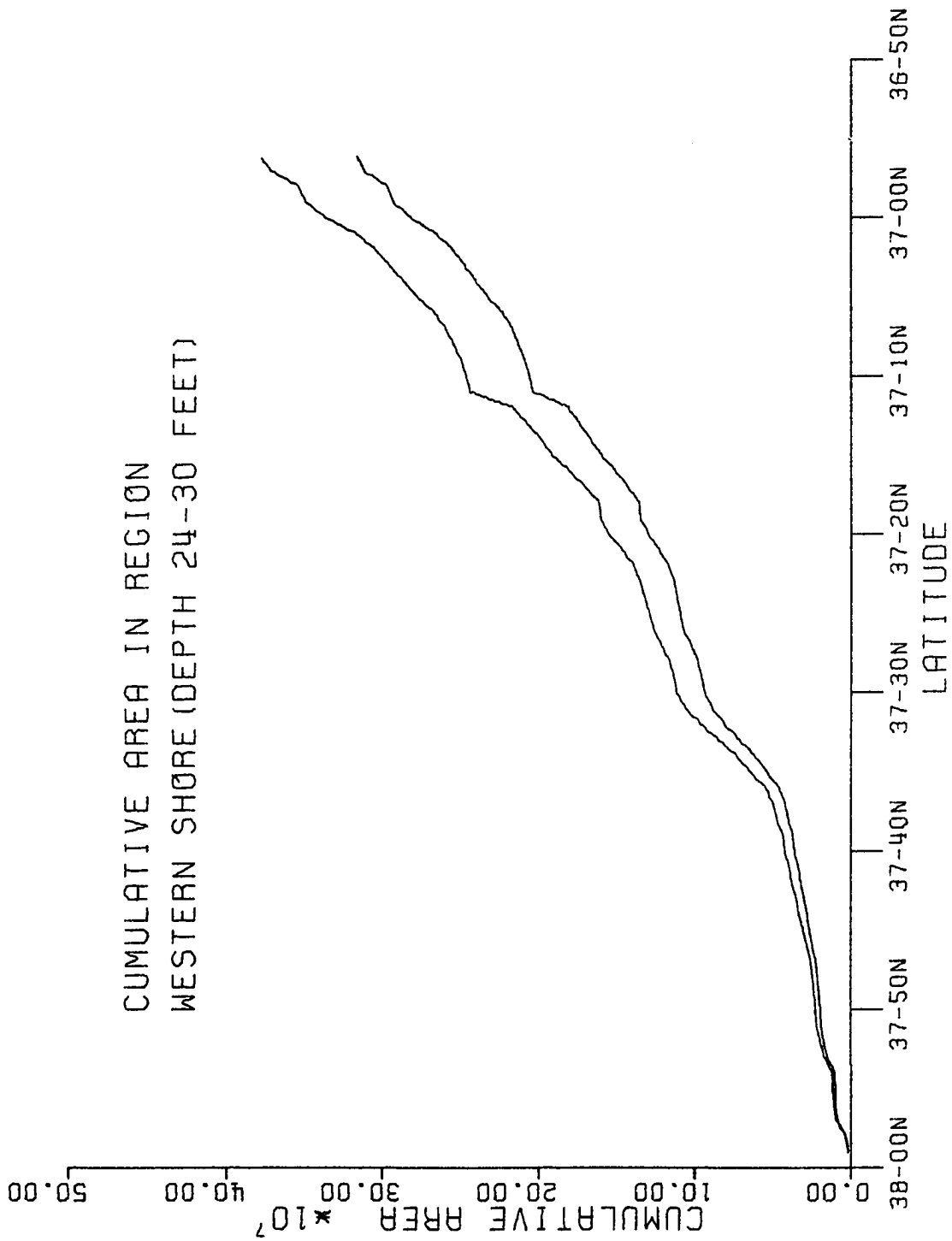


CUMULATIVE AREA IN REGION  
MOBJACK BAY (DEPTH 18-24 FEET)

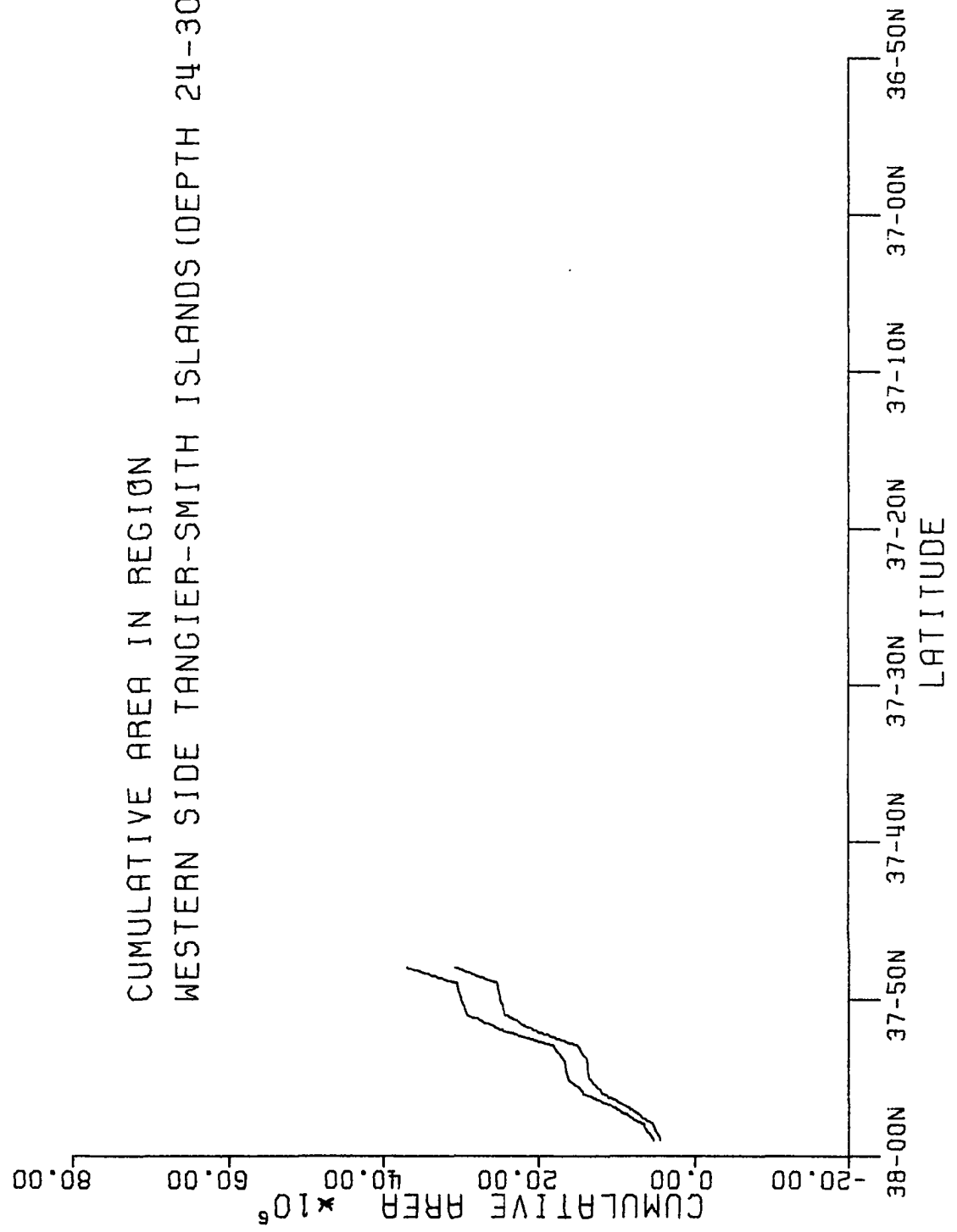




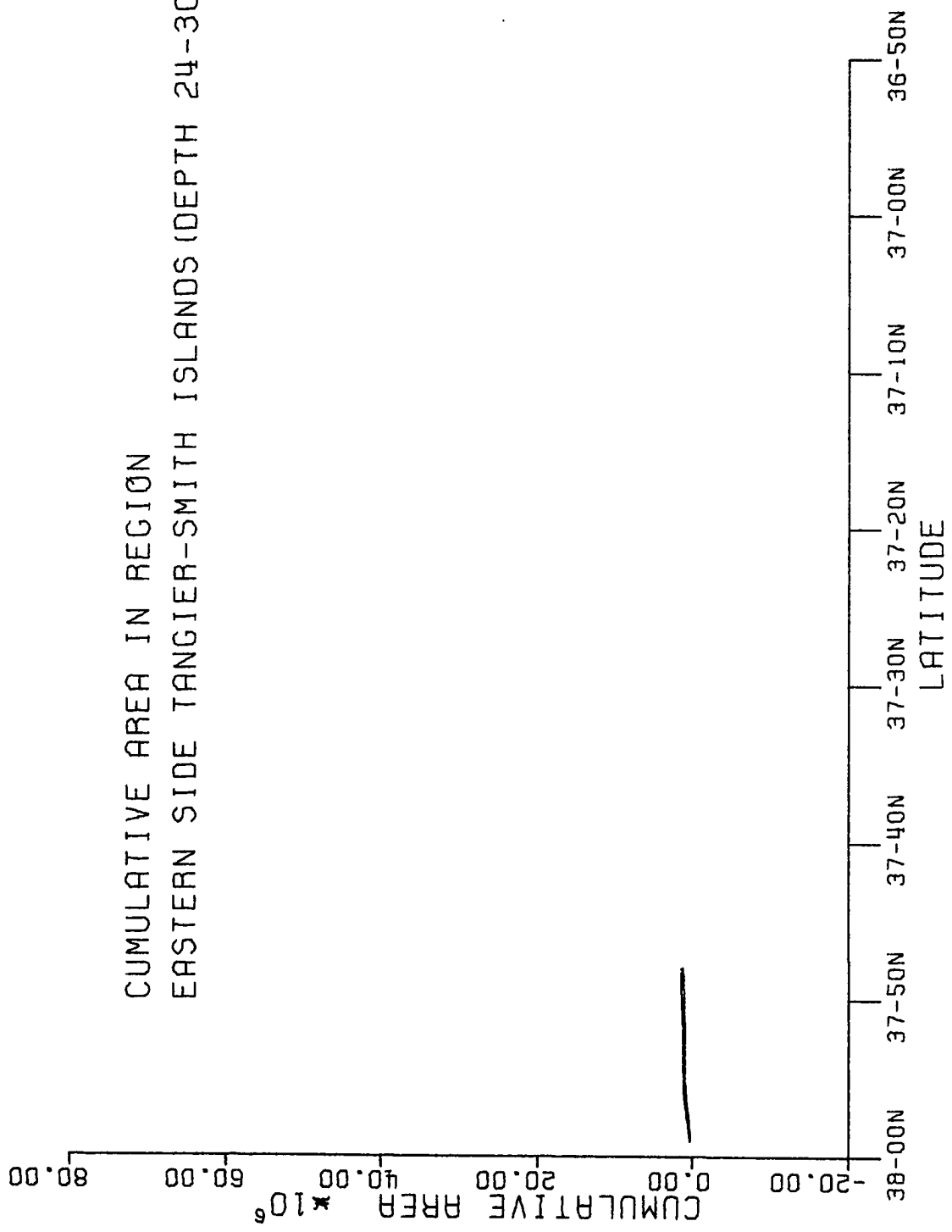




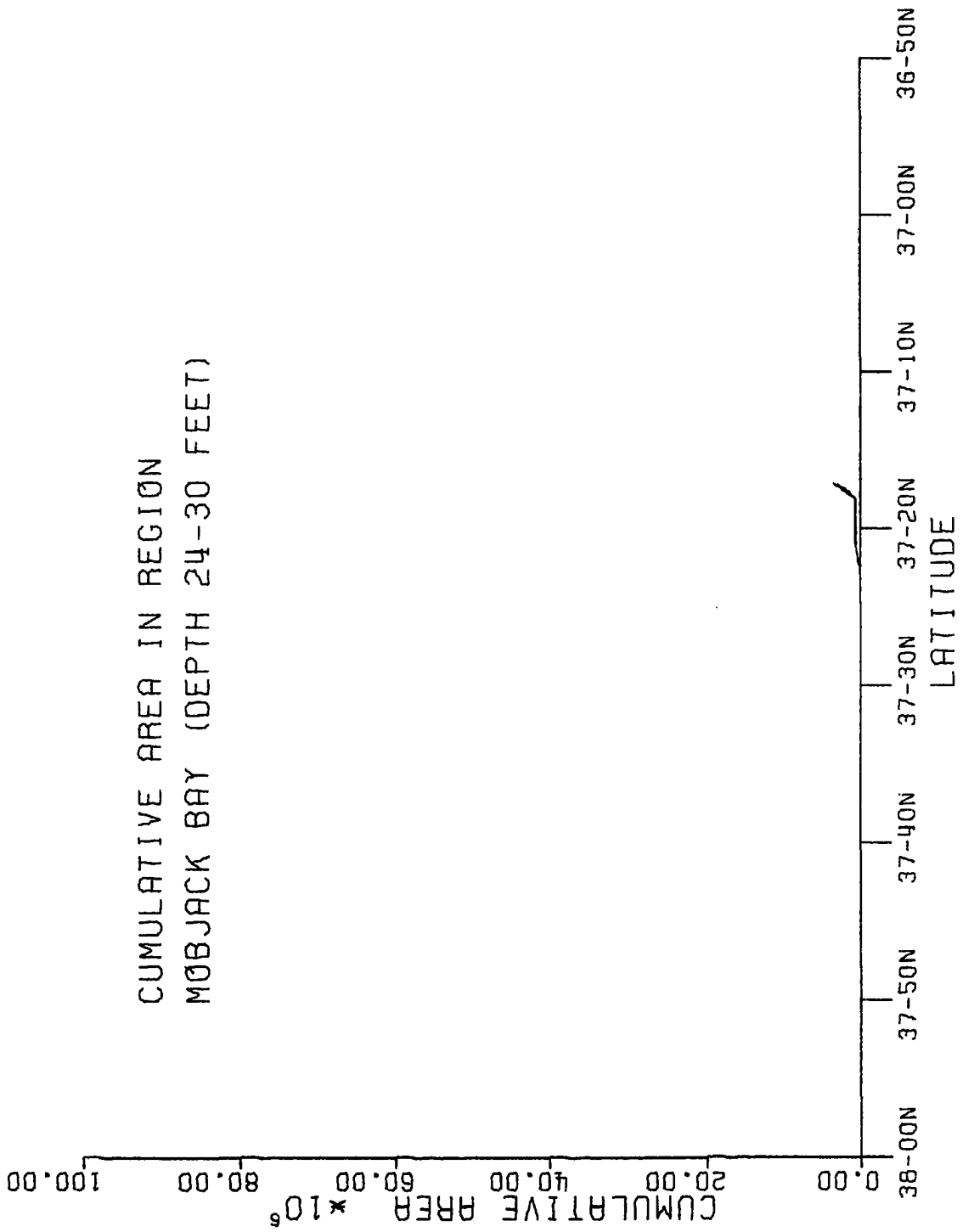
CUMULATIVE AREA IN REGION  
WESTERN SIDE TANGIER-SMITH ISLANDS (DEPTH 24-30 FEET)



CUMULATIVE AREA IN REGION  
EASTERN SIDE TANGIER-SMITH ISLANDS (DEPTH 24-30 FEET)

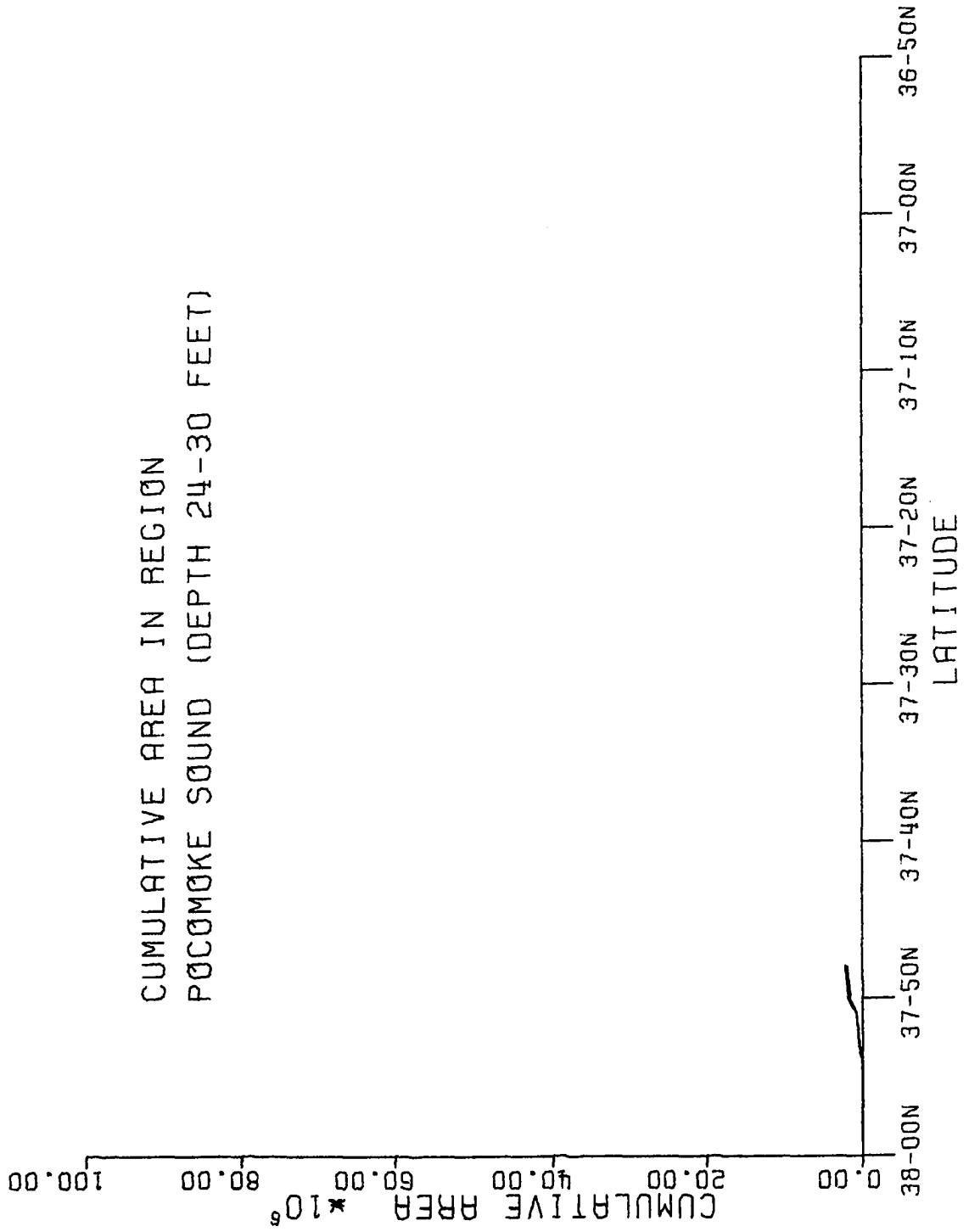


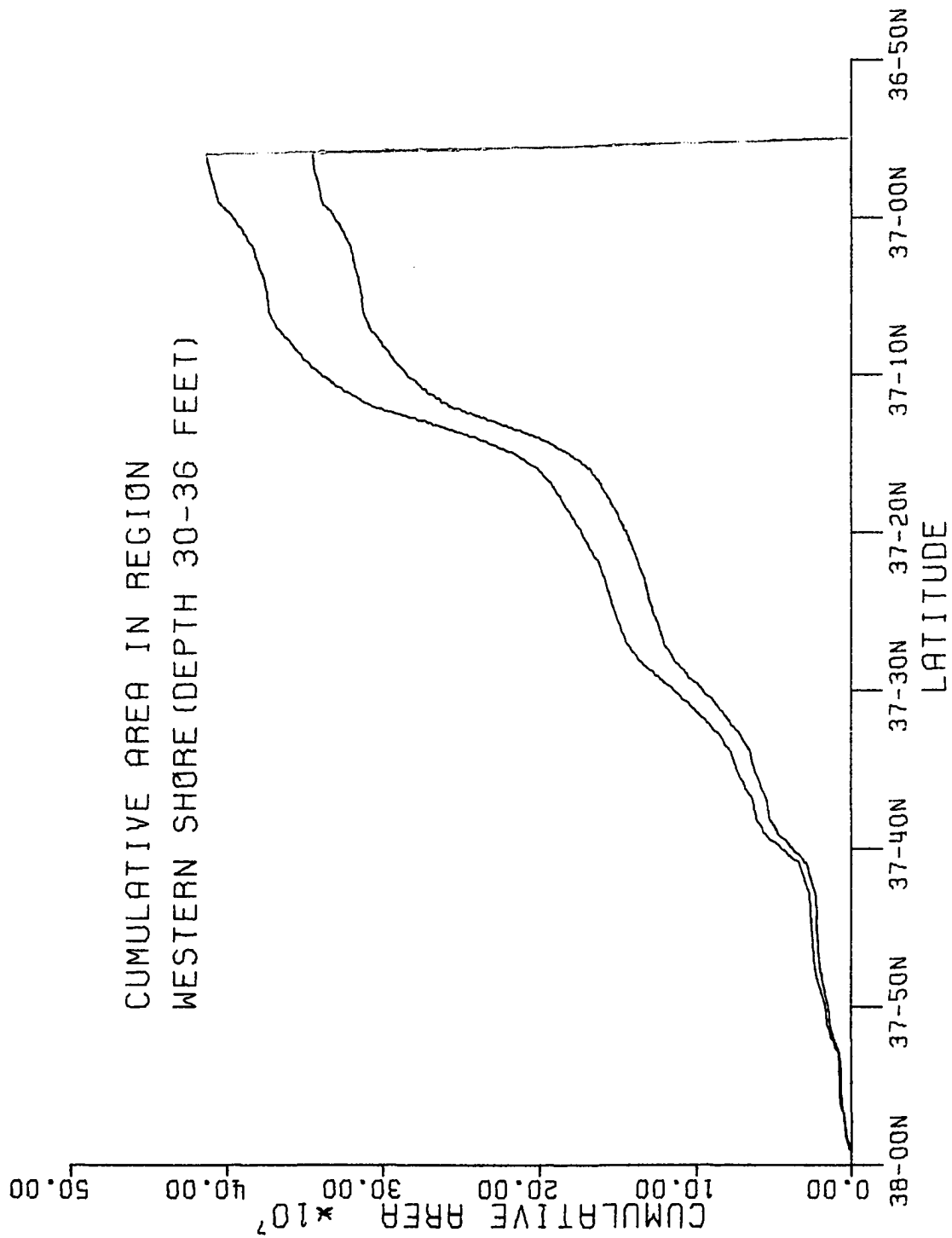
CUMULATIVE AREA IN REGION  
MOBJACK BAY (DEPTH 24-30 FEET)

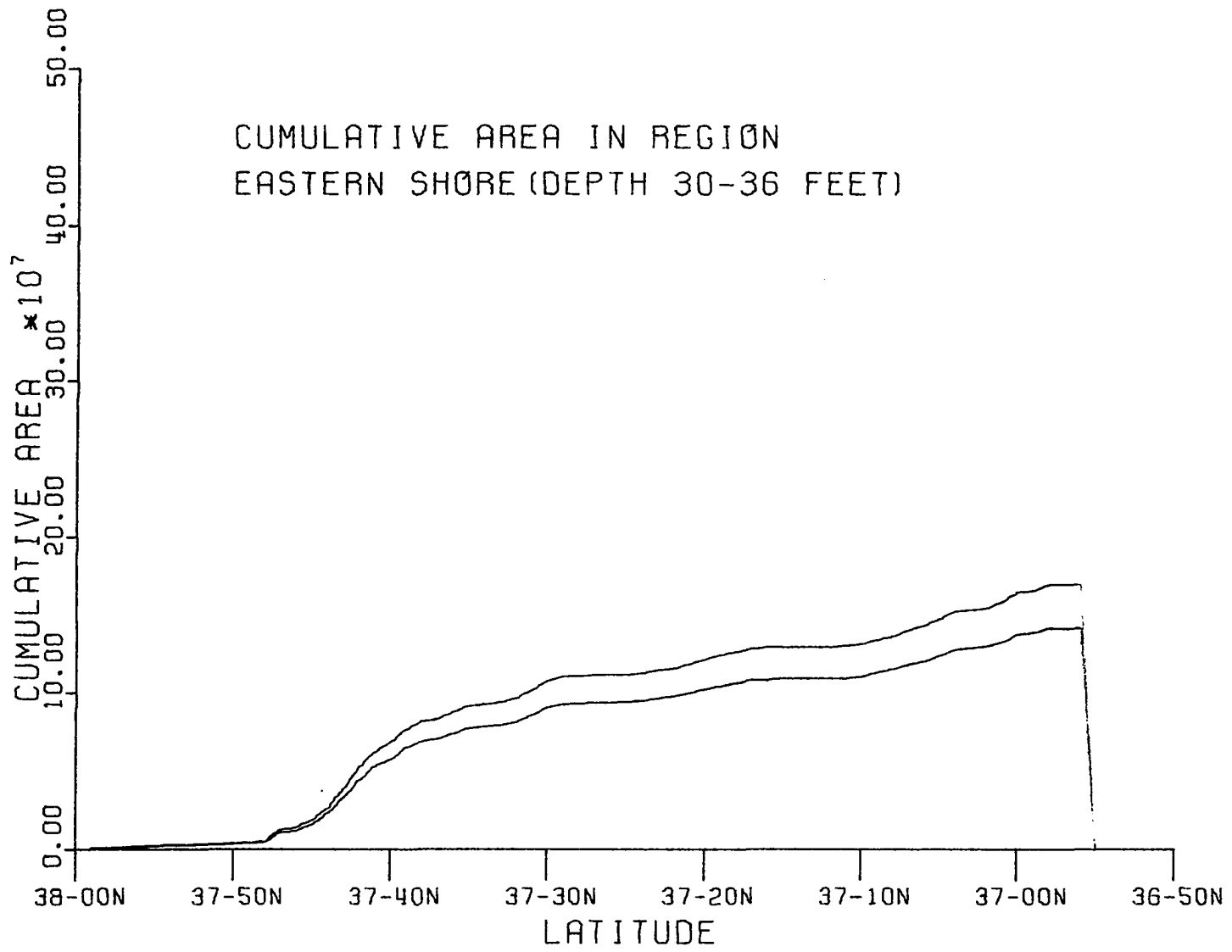


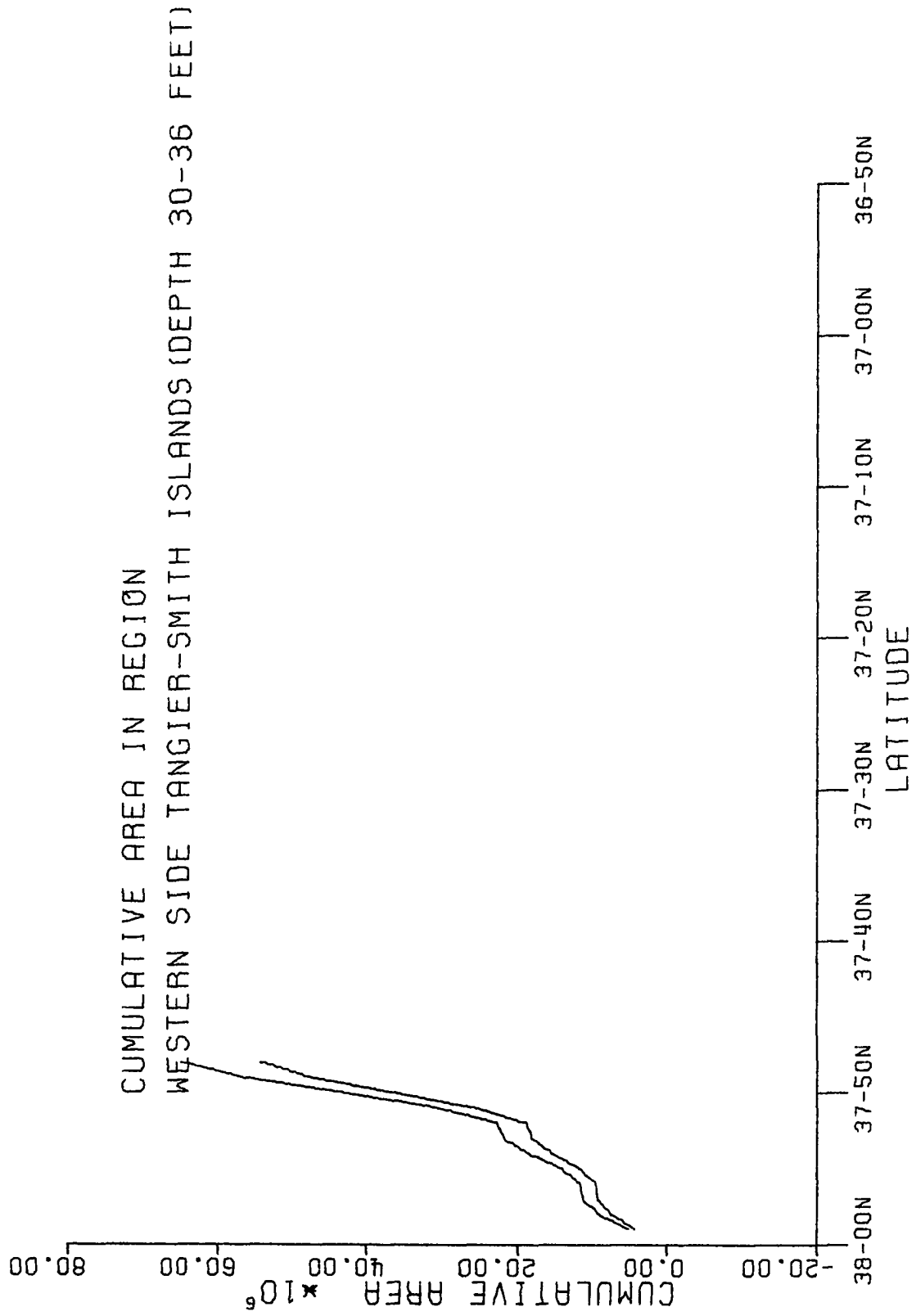


CUMULATIVE AREA IN REGION  
POCOMOKE SOUND (DEPTH 24-30 FEET)

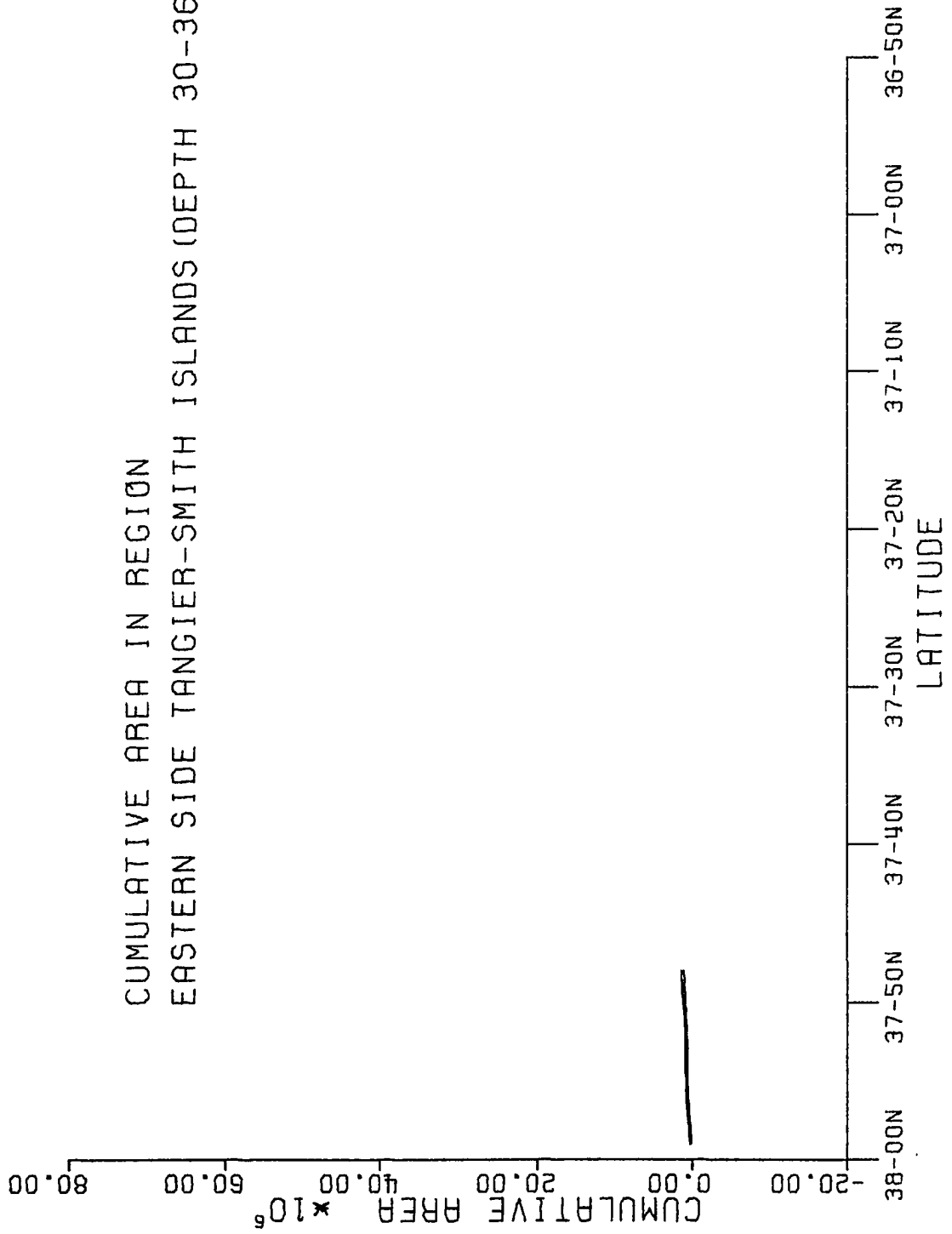




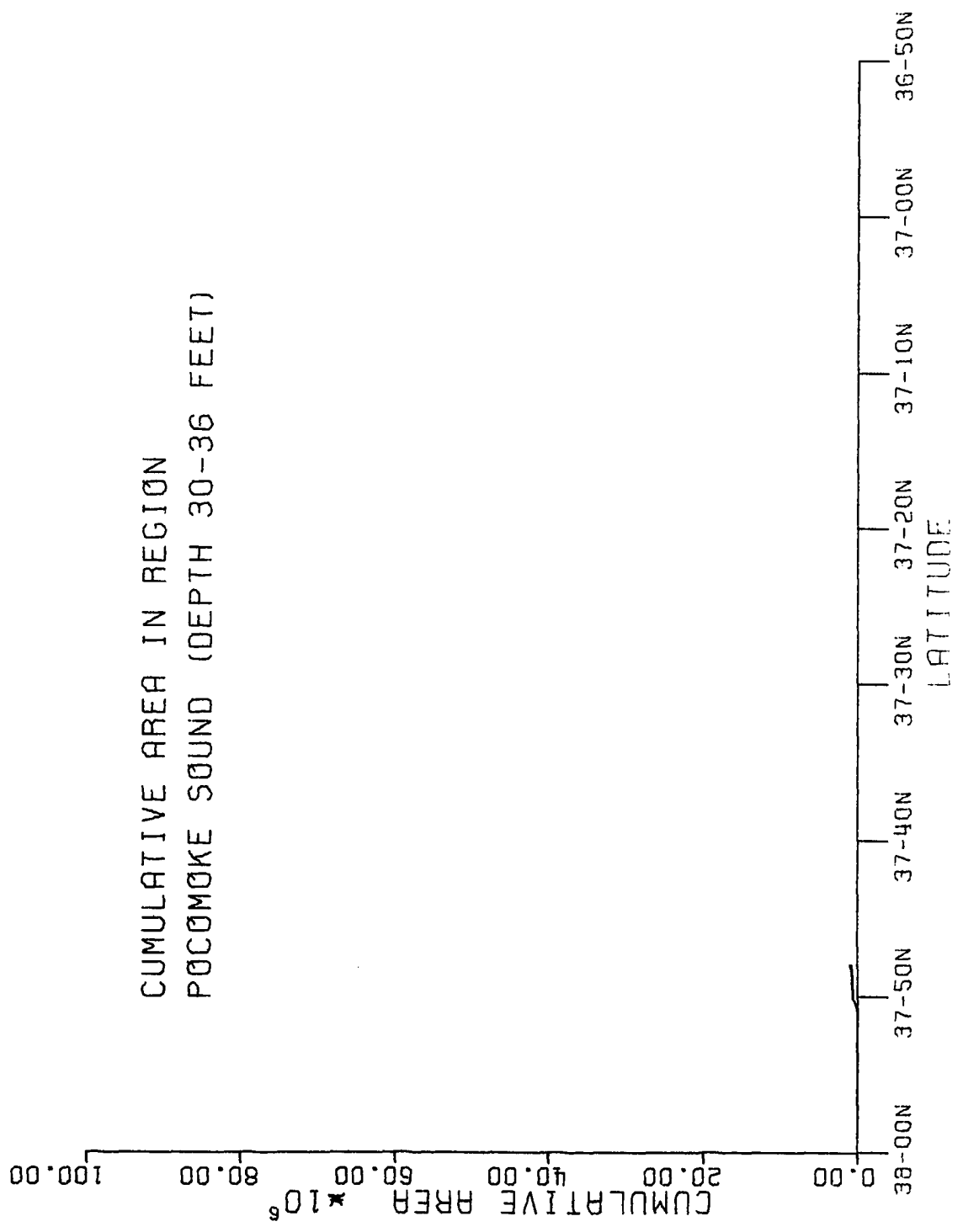


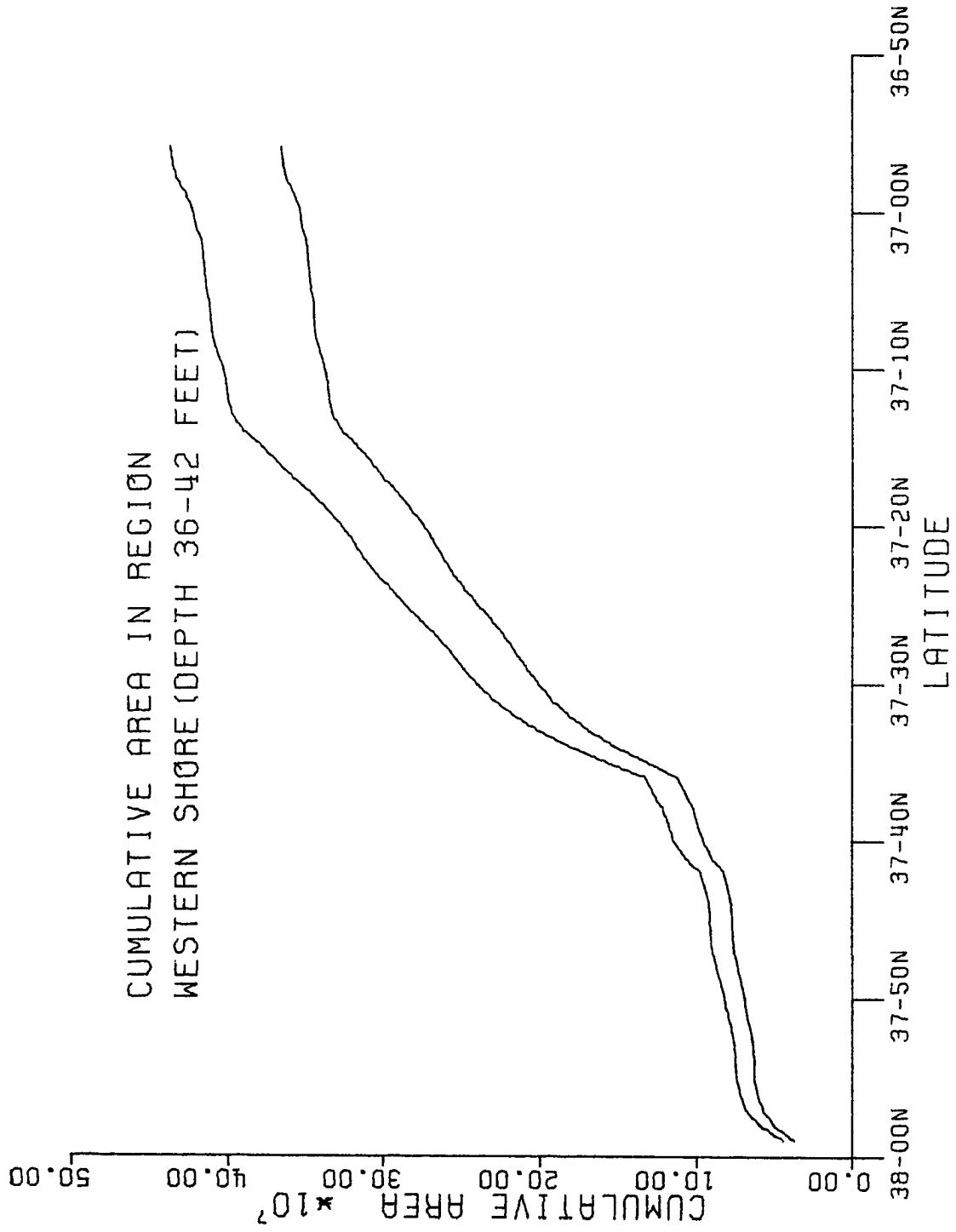


CUMULATIVE AREA IN REGION  
EASTERN SIDE TANGIER-SMITH ISLANDS (DEPTH 30-36 FEET)

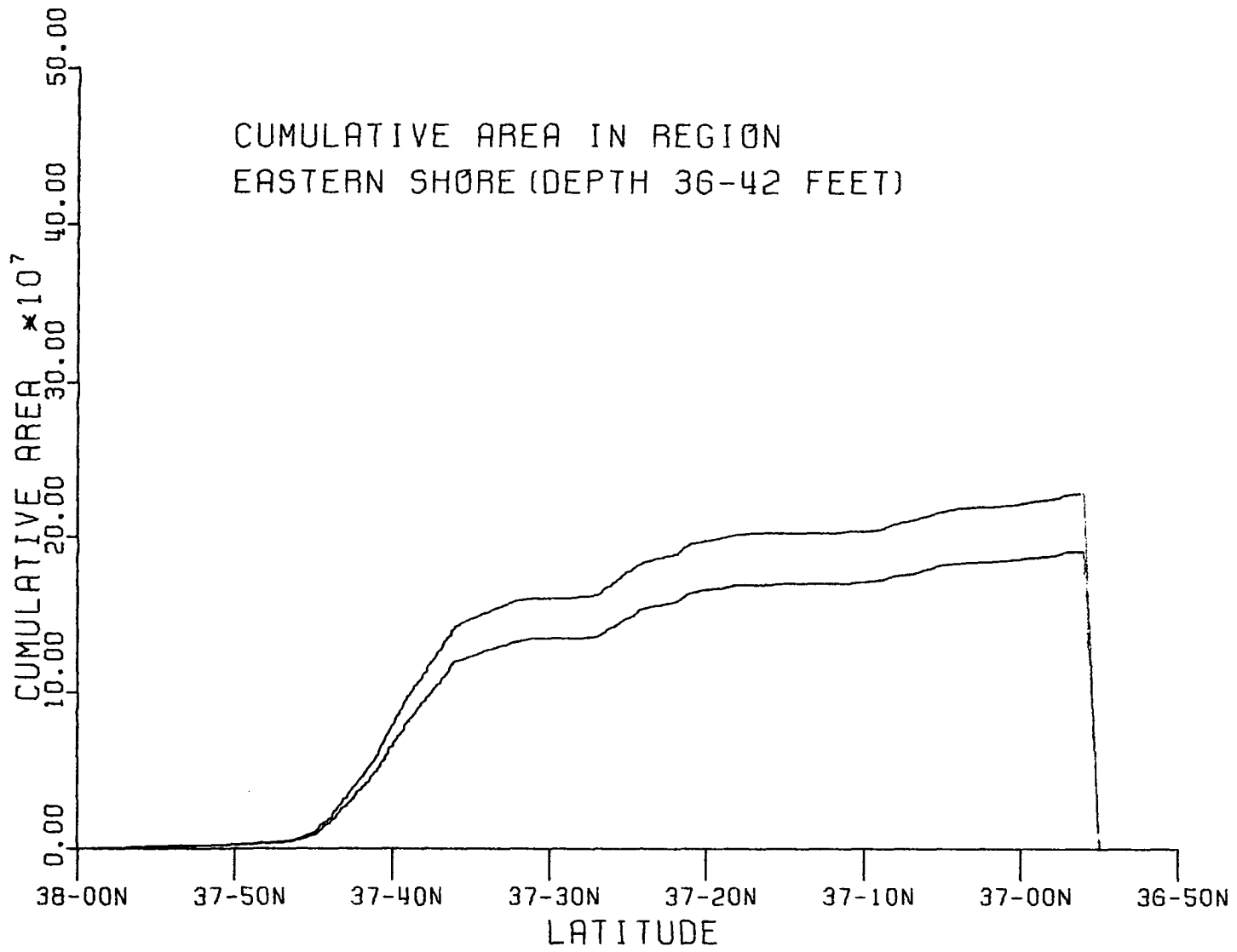


CUMULATIVE AREA IN REGION  
 POCOMOKE SOUND (DEPTH 30-36 FEET)

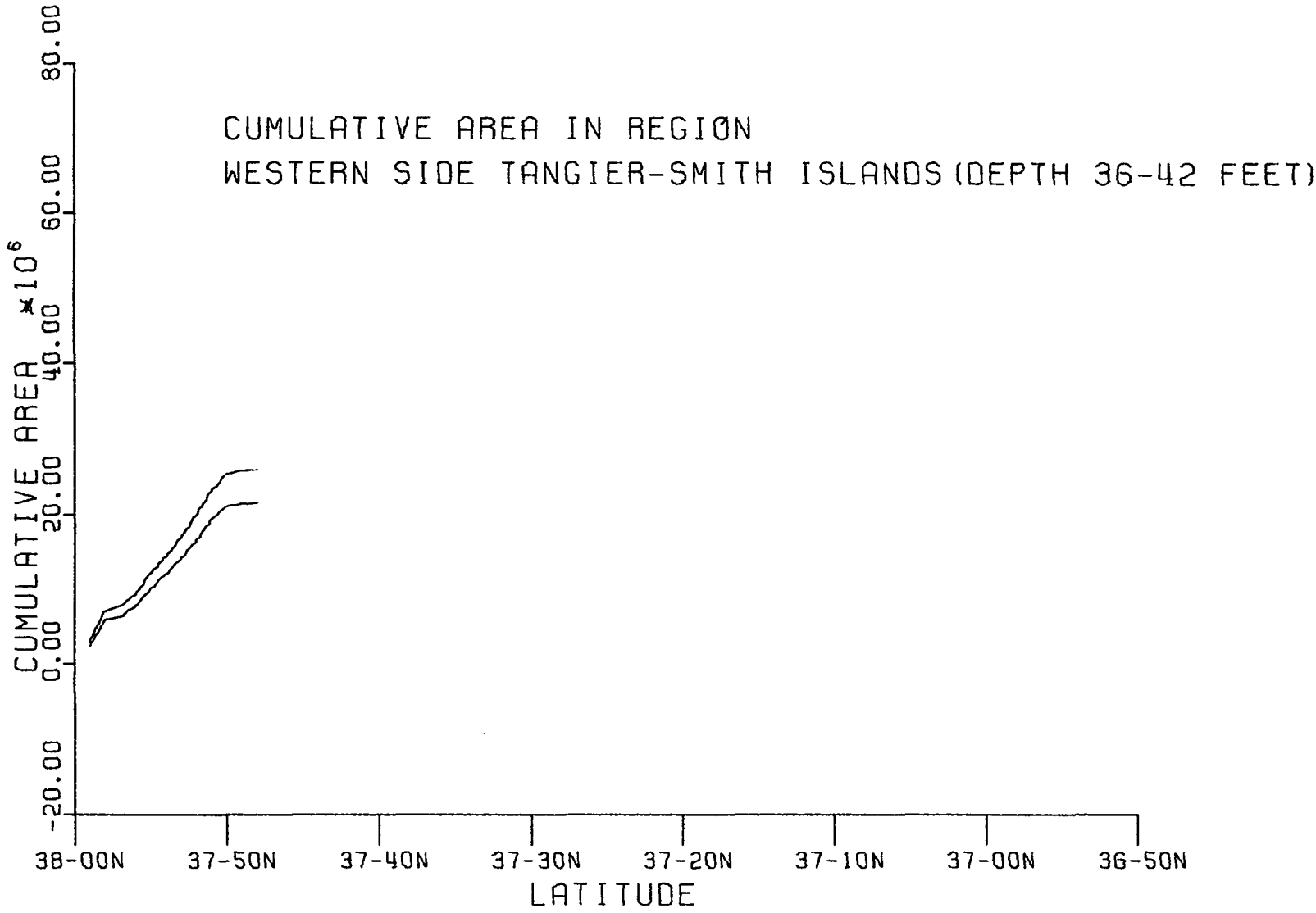




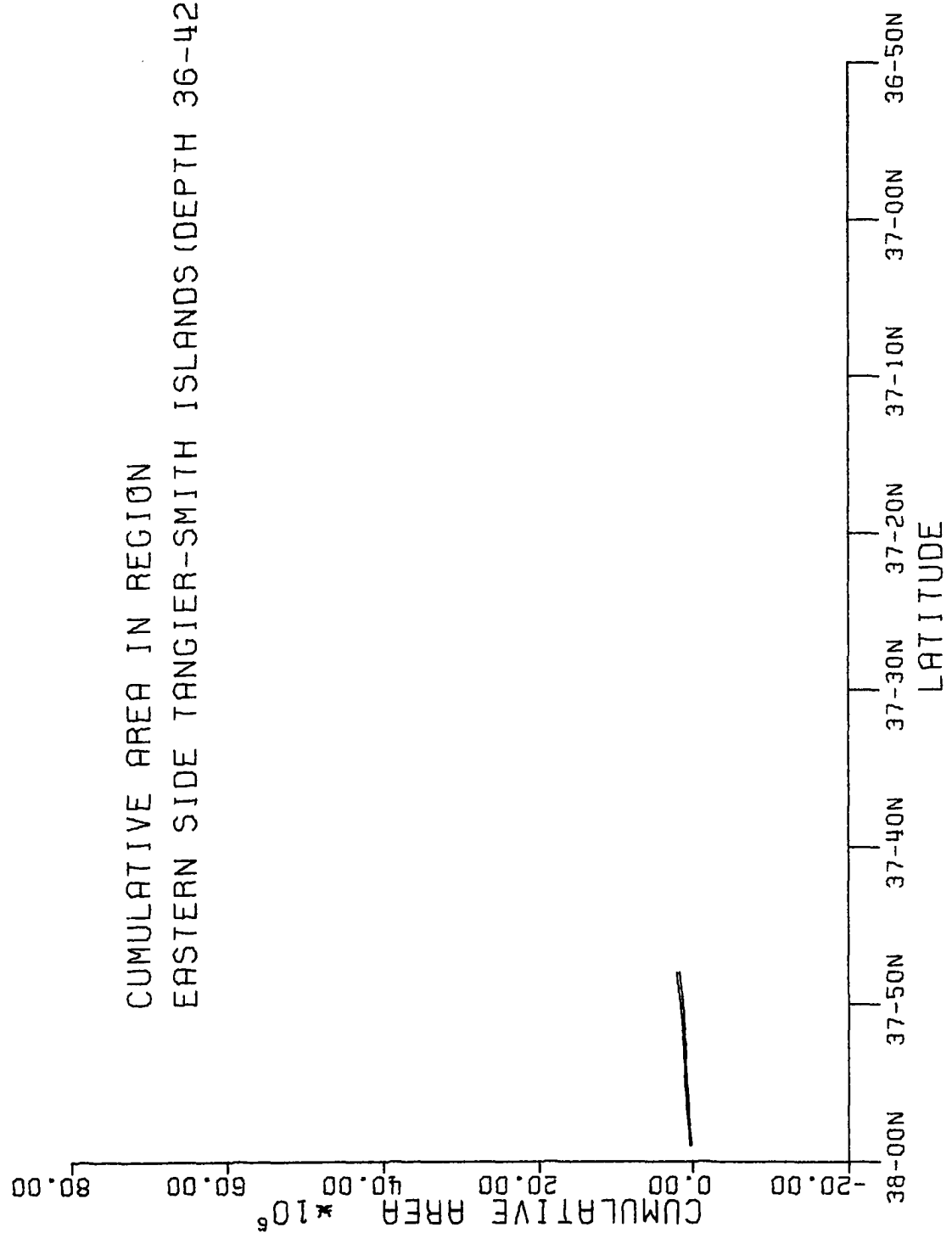
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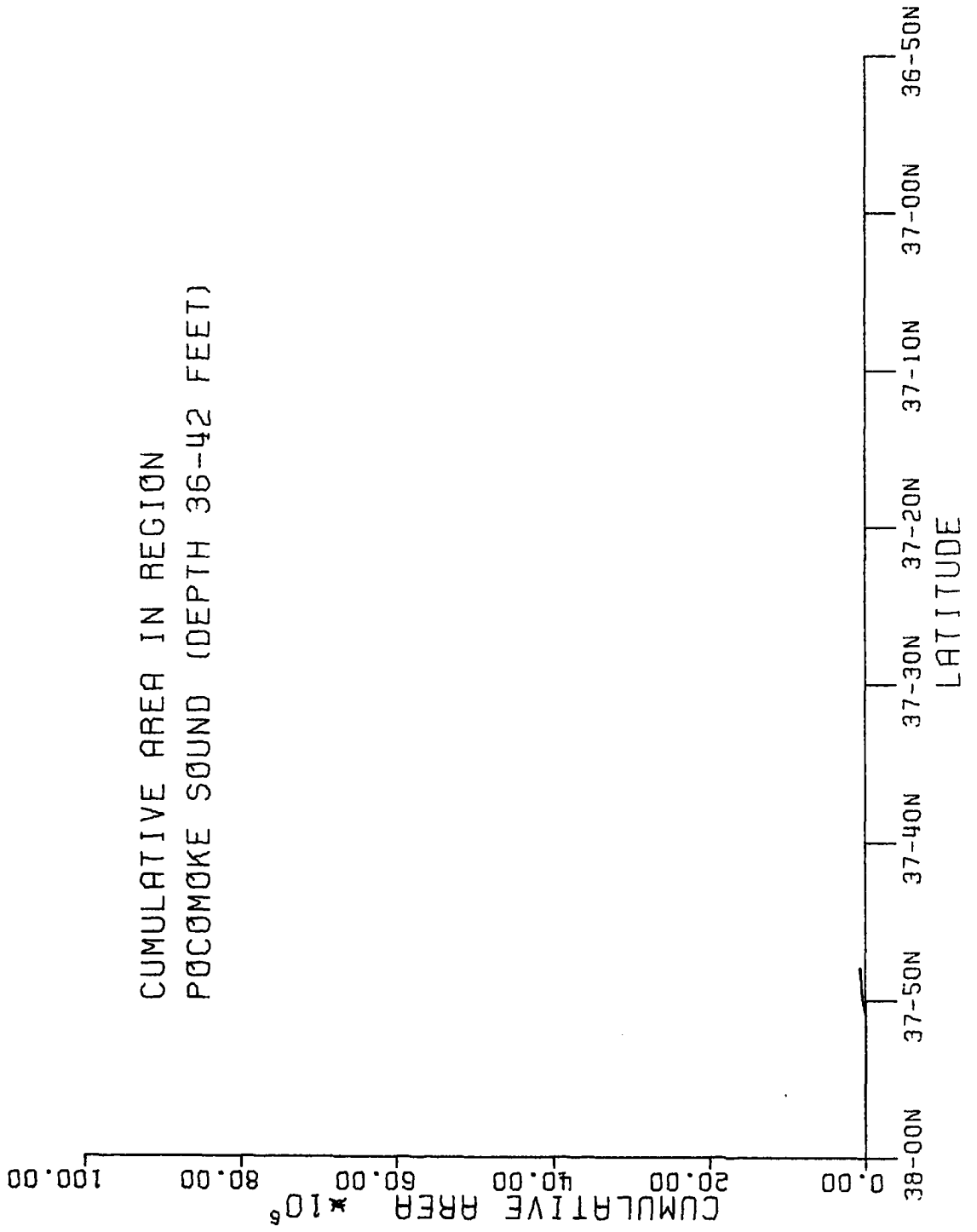


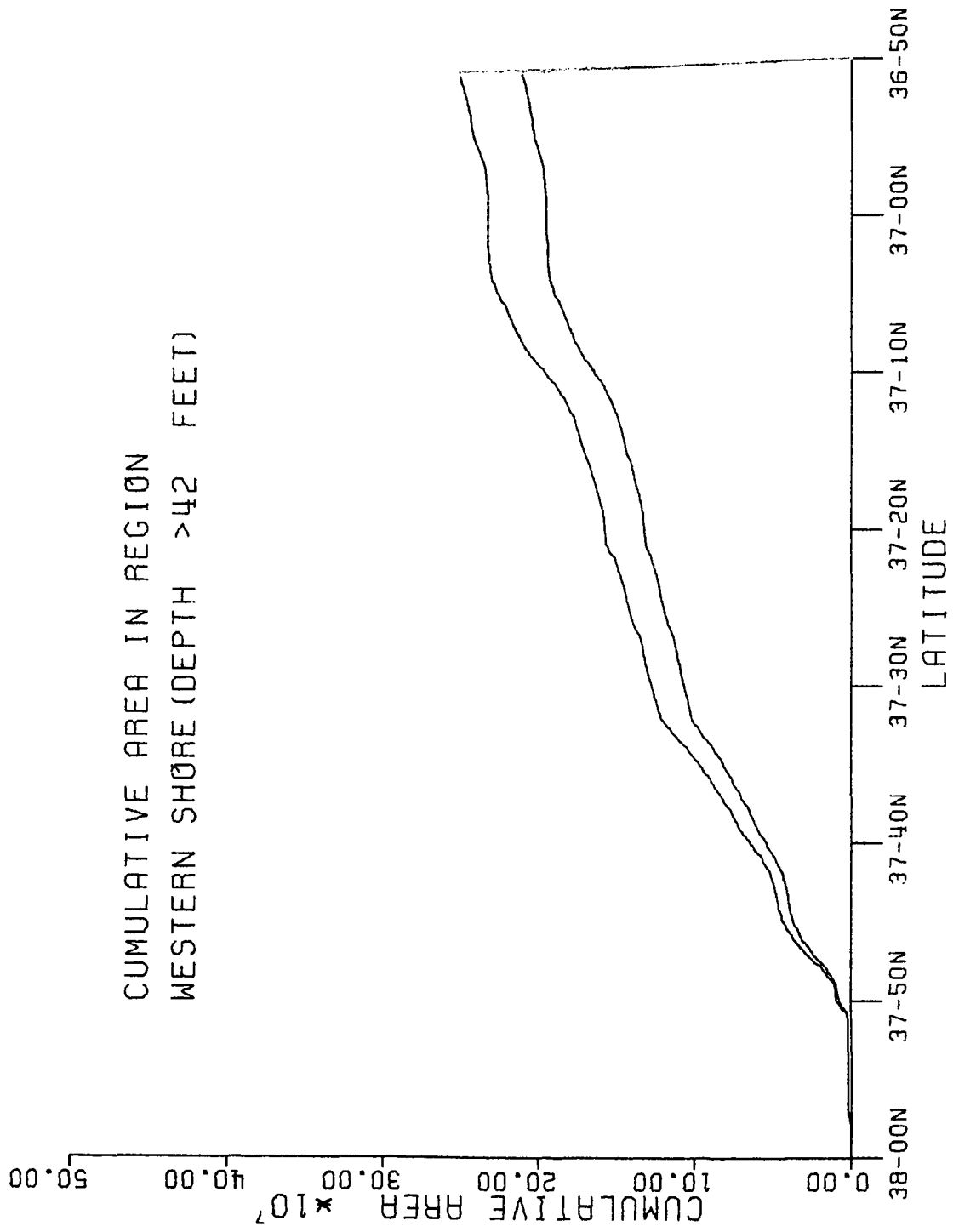


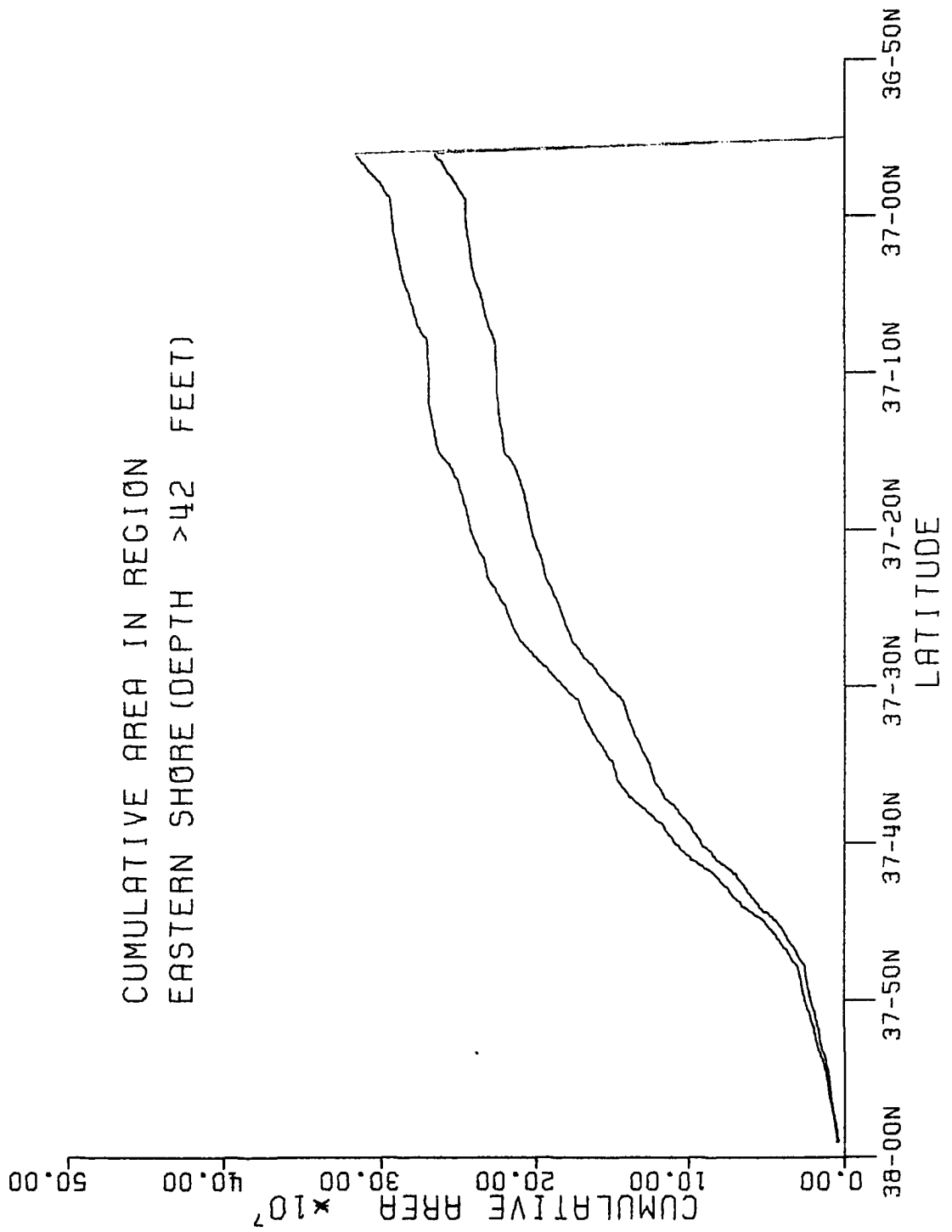
CUMULATIVE AREA IN REGION  
 EASTERN SIDE TANGIER-SMITH ISLANDS (DEPTH 36-42 FEET)

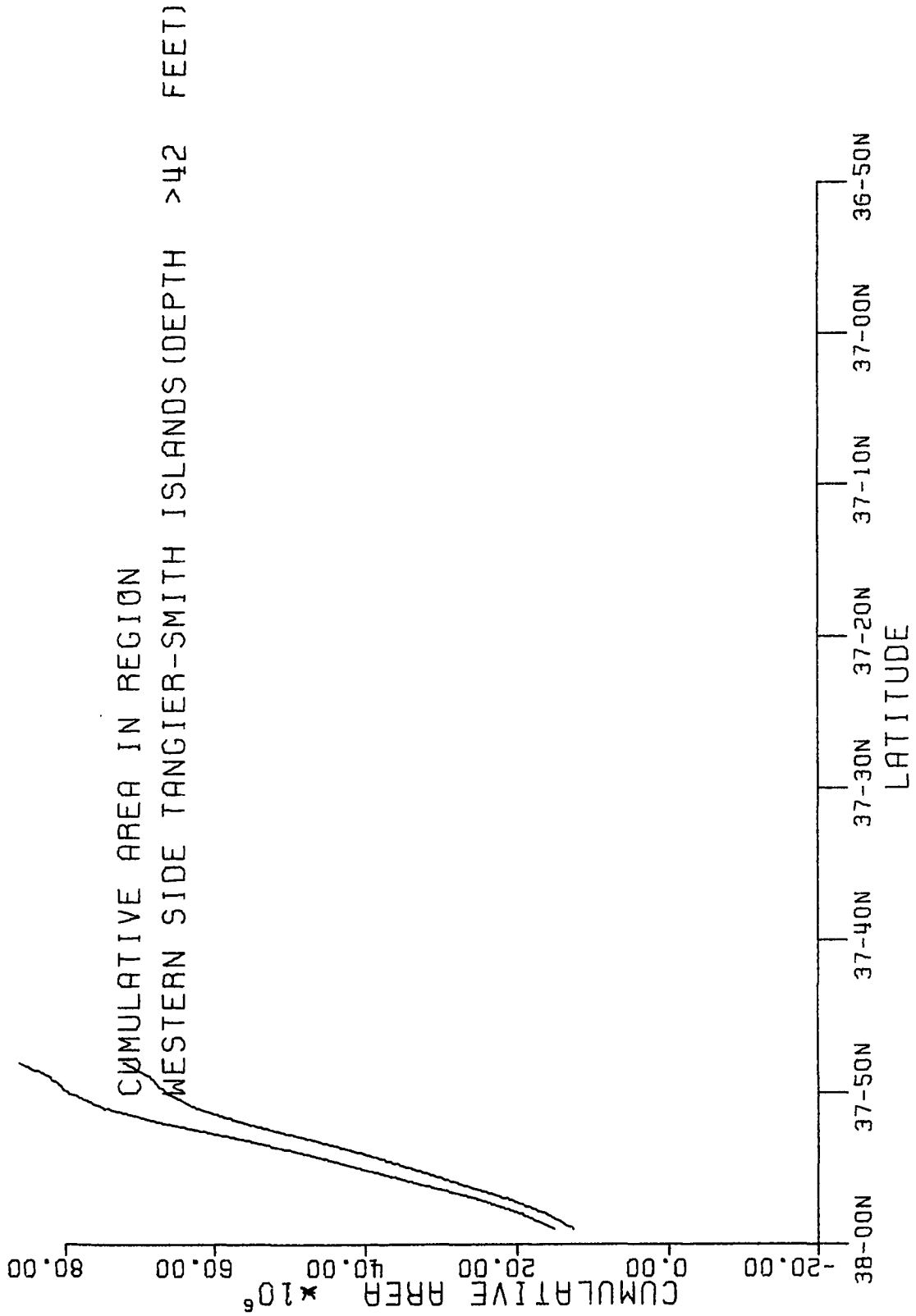


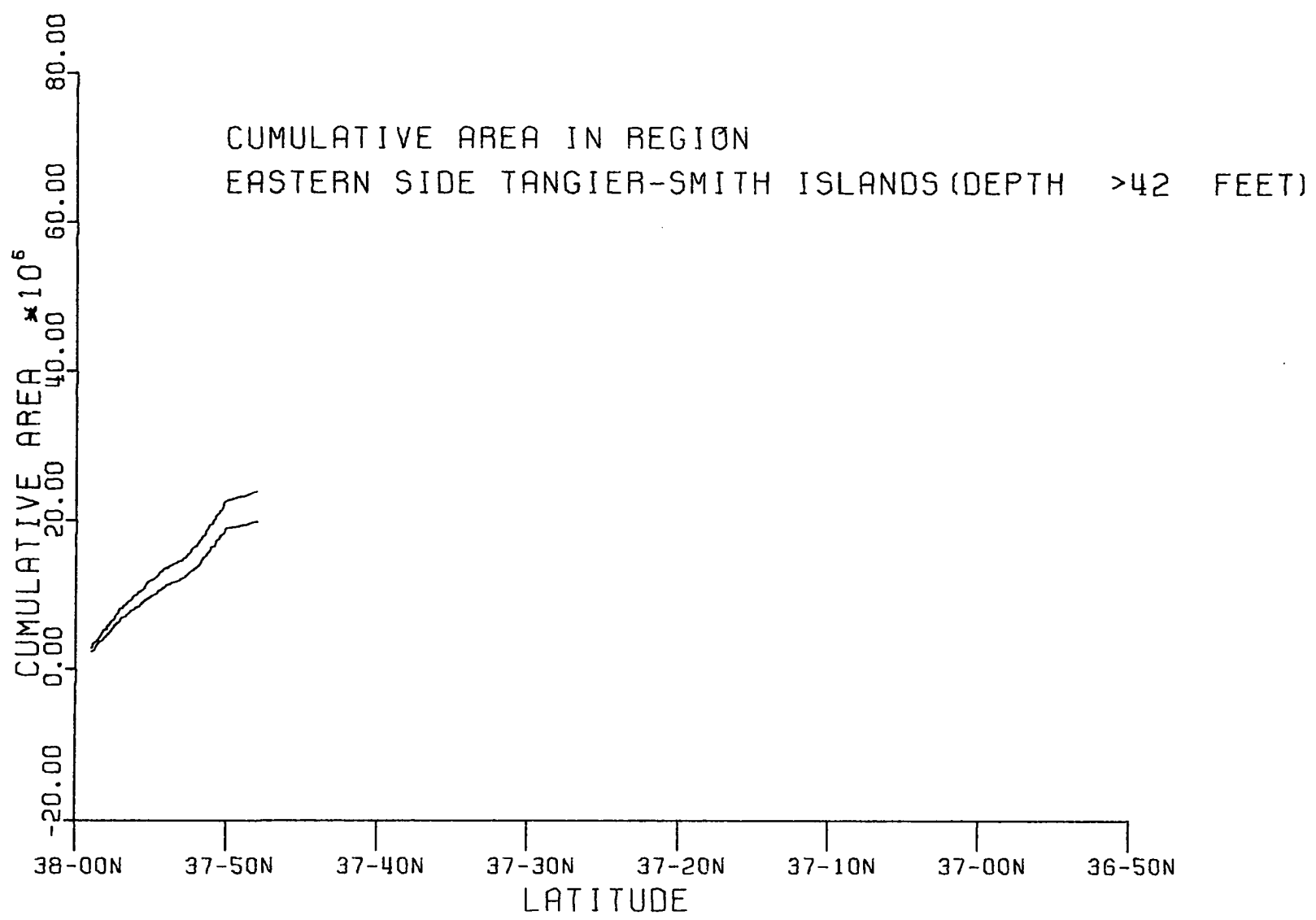
CUMULATIVE AREA IN REGION  
 POCOMOKE SOUND (DEPTH 36--42 FEET)



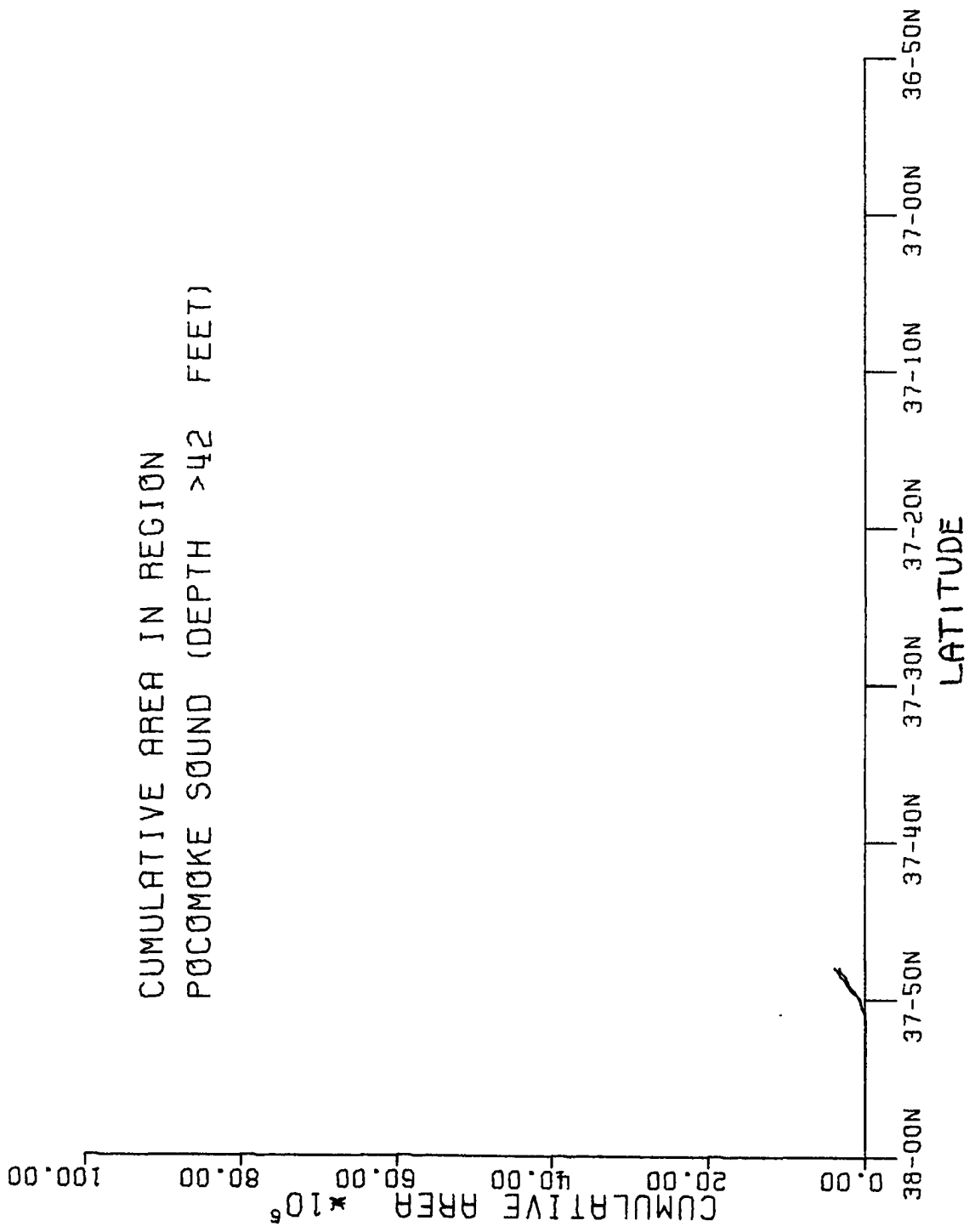








CUMULATIVE AREA IN REGION  
 POCOMOKE SOUND (DEPTH >42 FEET)





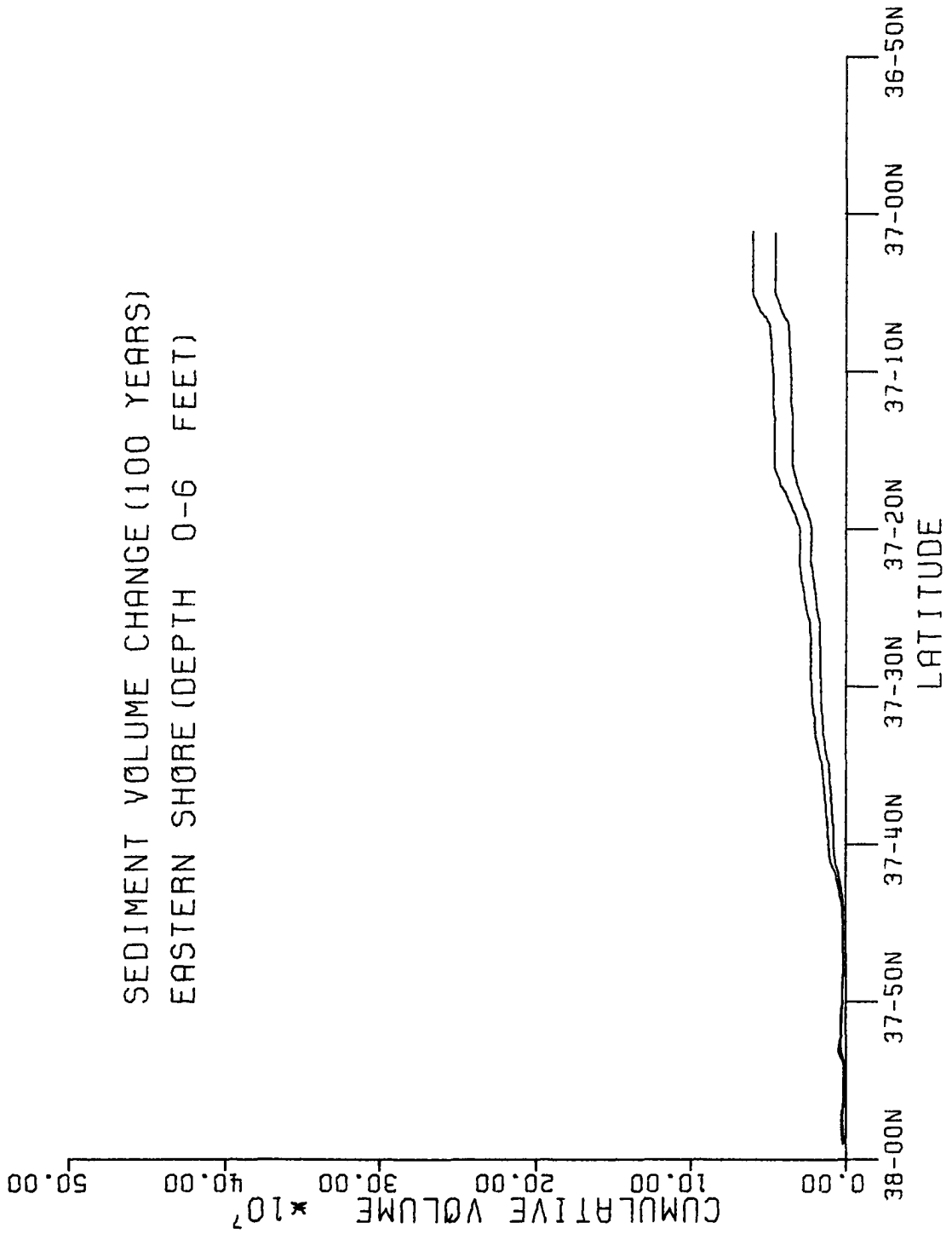
## APPENDIX D

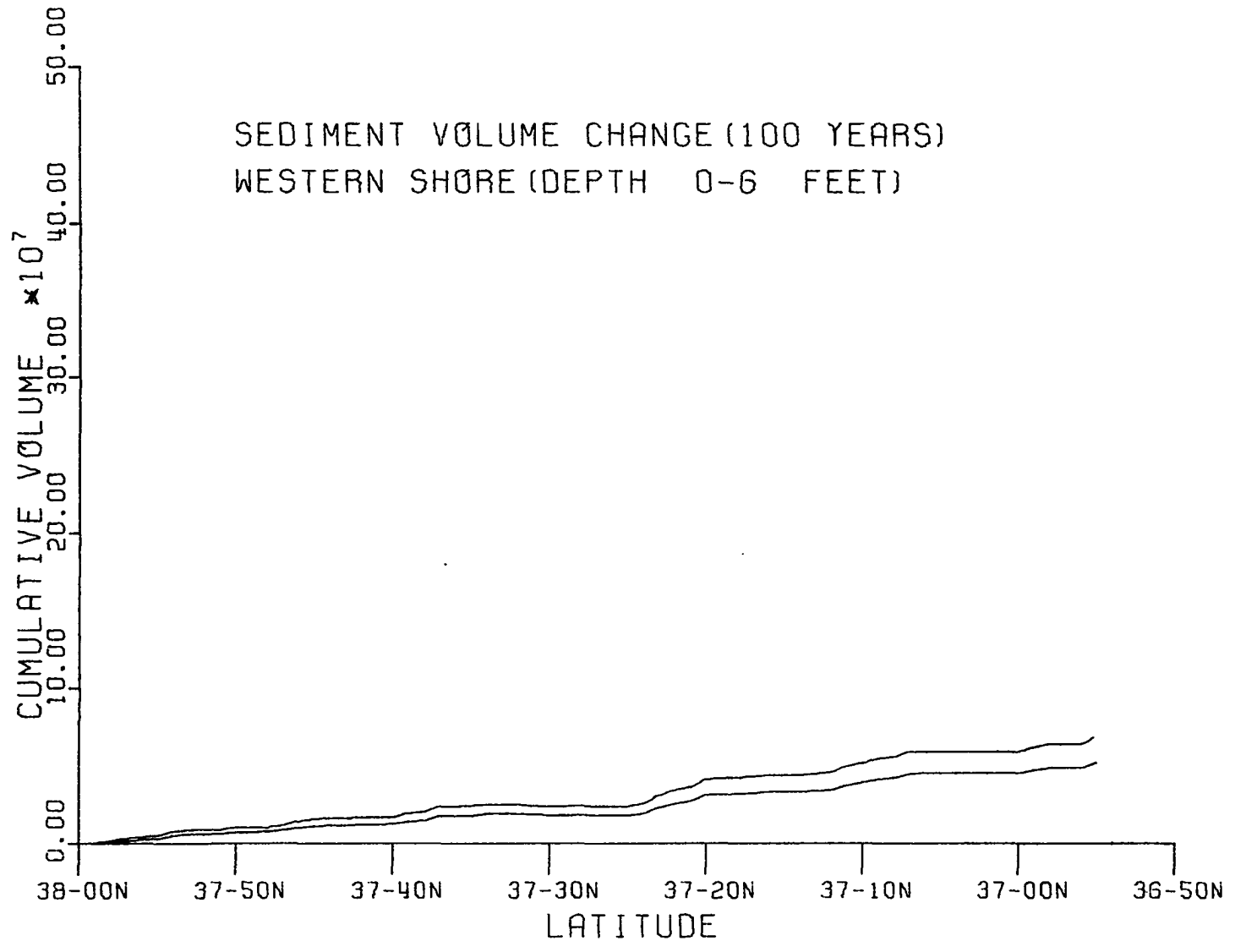
### CUMULATIVE VOLUME PLOTS FOR THE CHESAPEAKE BAY SUBSEQUENTS 38°00' N to 36°50' N

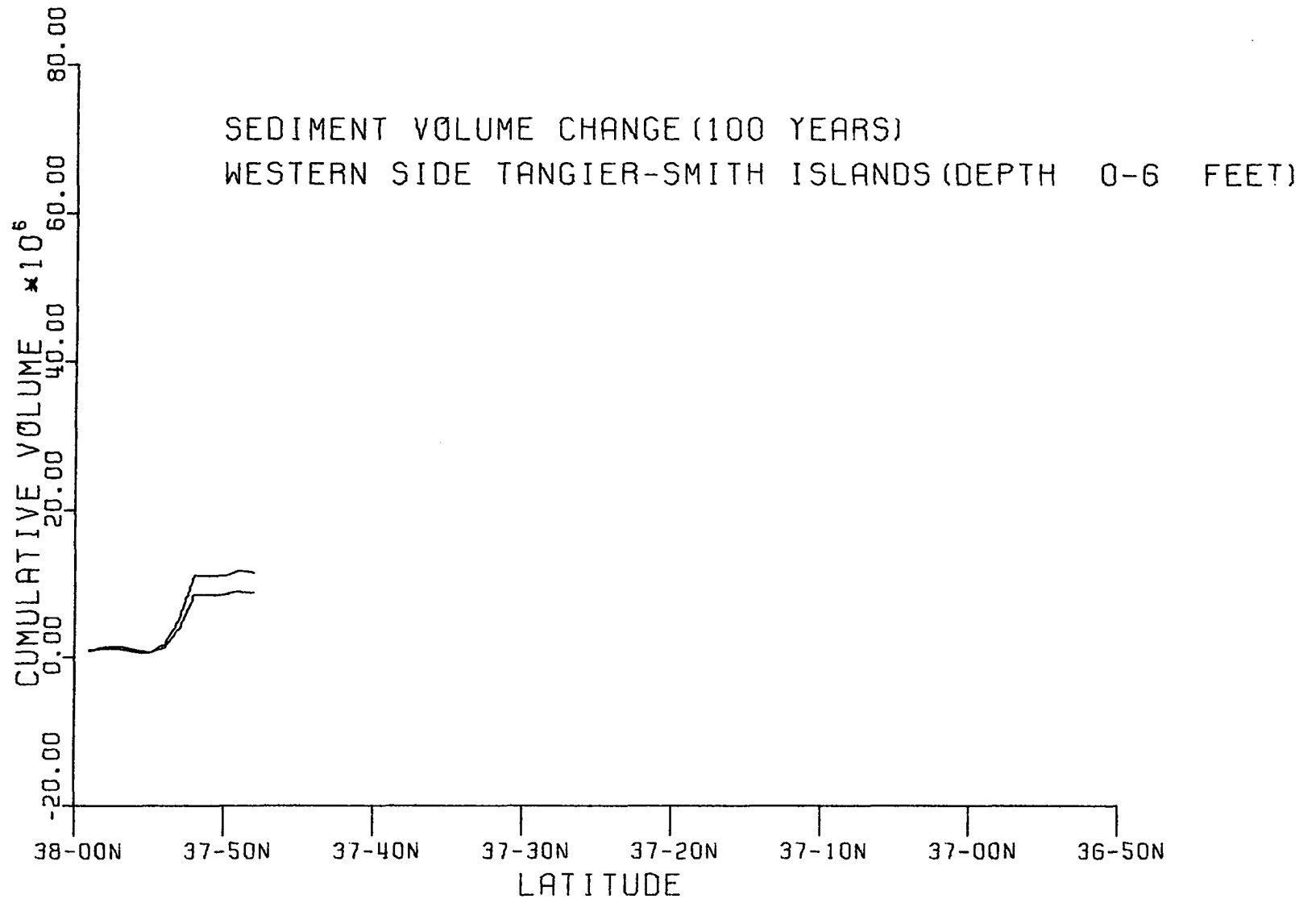
Note of caution: Although the horizontal scale (latitude) remains constant, the vertical scale (cumulative volume) may change from one plot to the next.

Each graph contains two lines. The upper line represents the cumulative volume in cubic meters, while the lower line represents the cumulative volume in cubic yards.

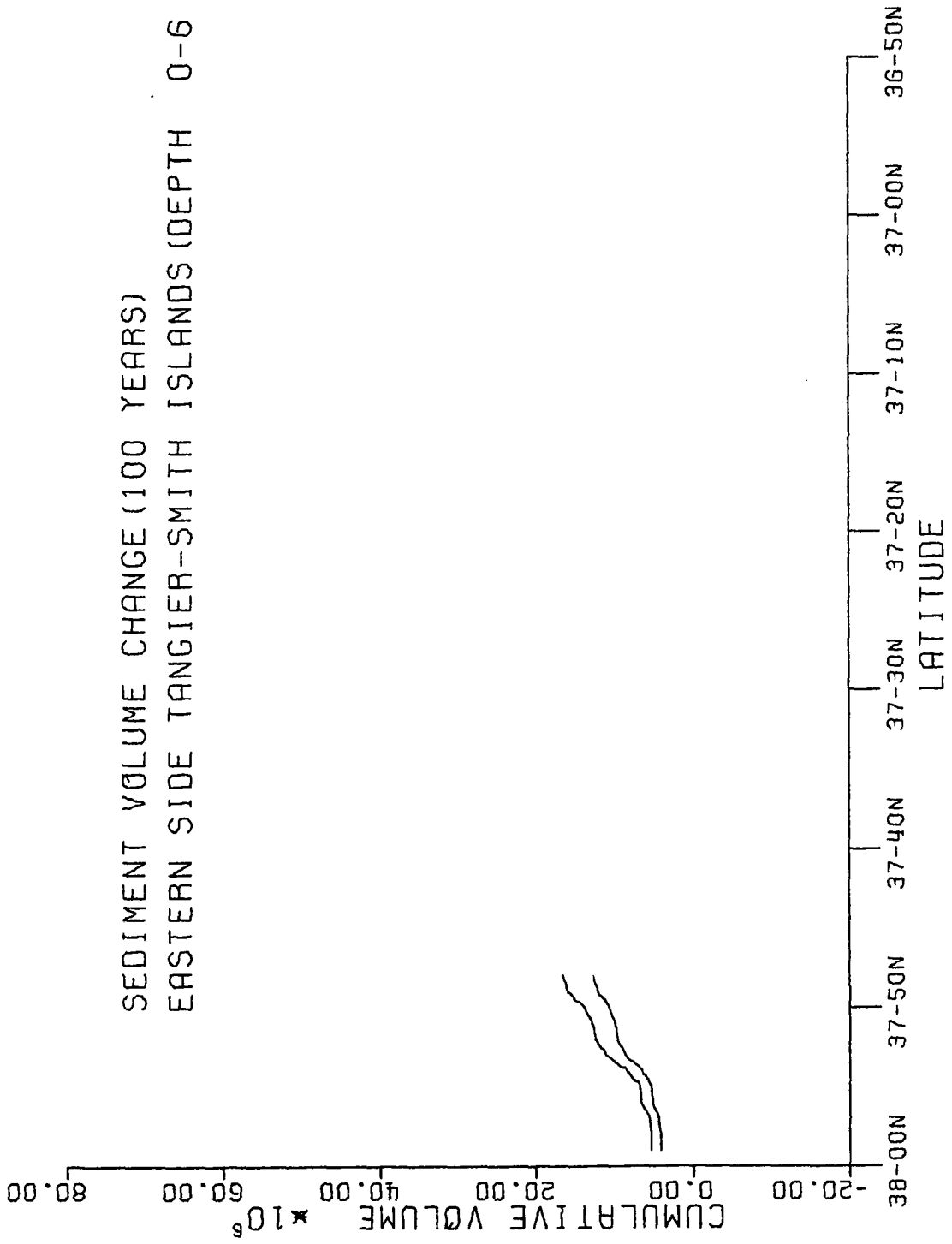
SEDIMENT VOLUME CHANGE (100 YEARS)  
EASTERN SHORE (DEPTH 0-6 FEET)



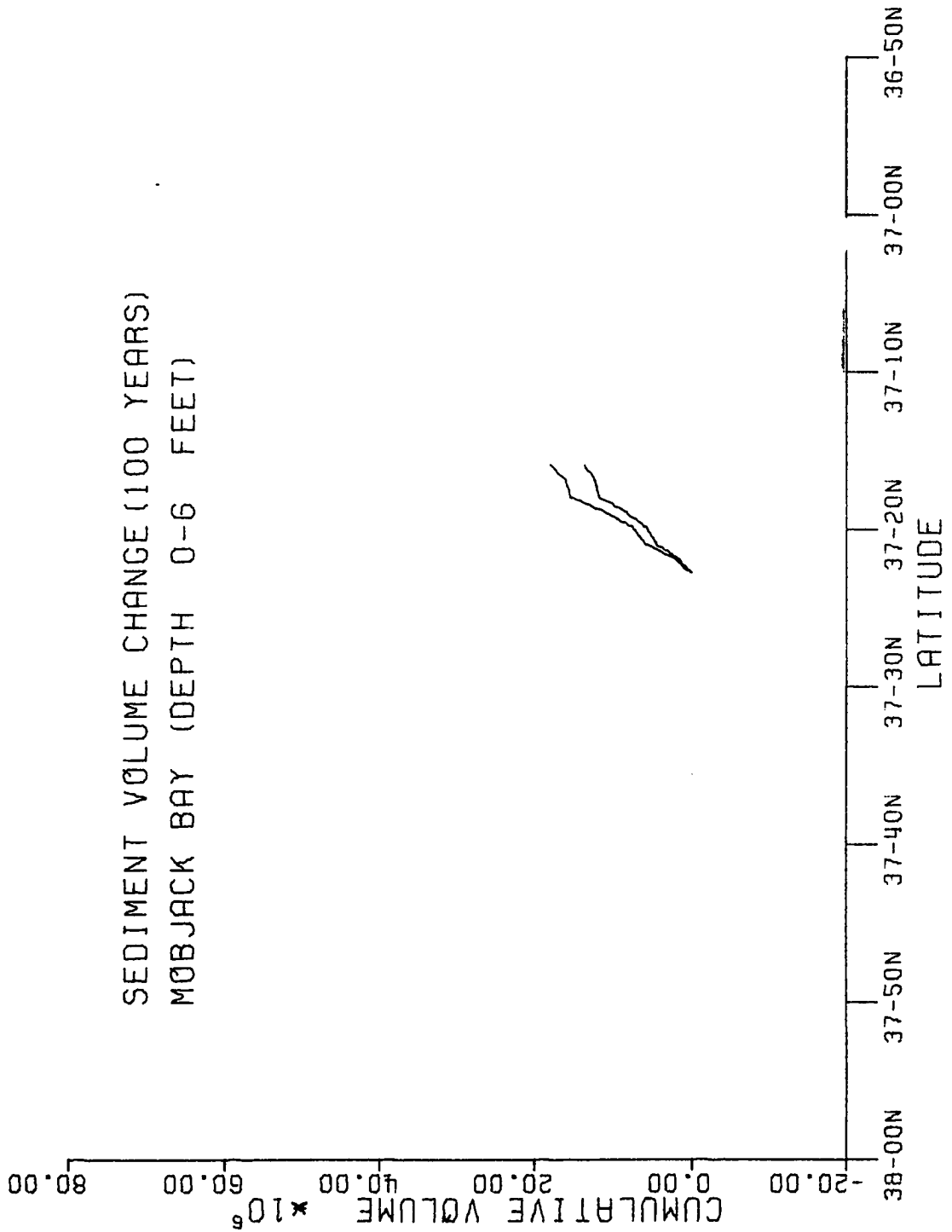


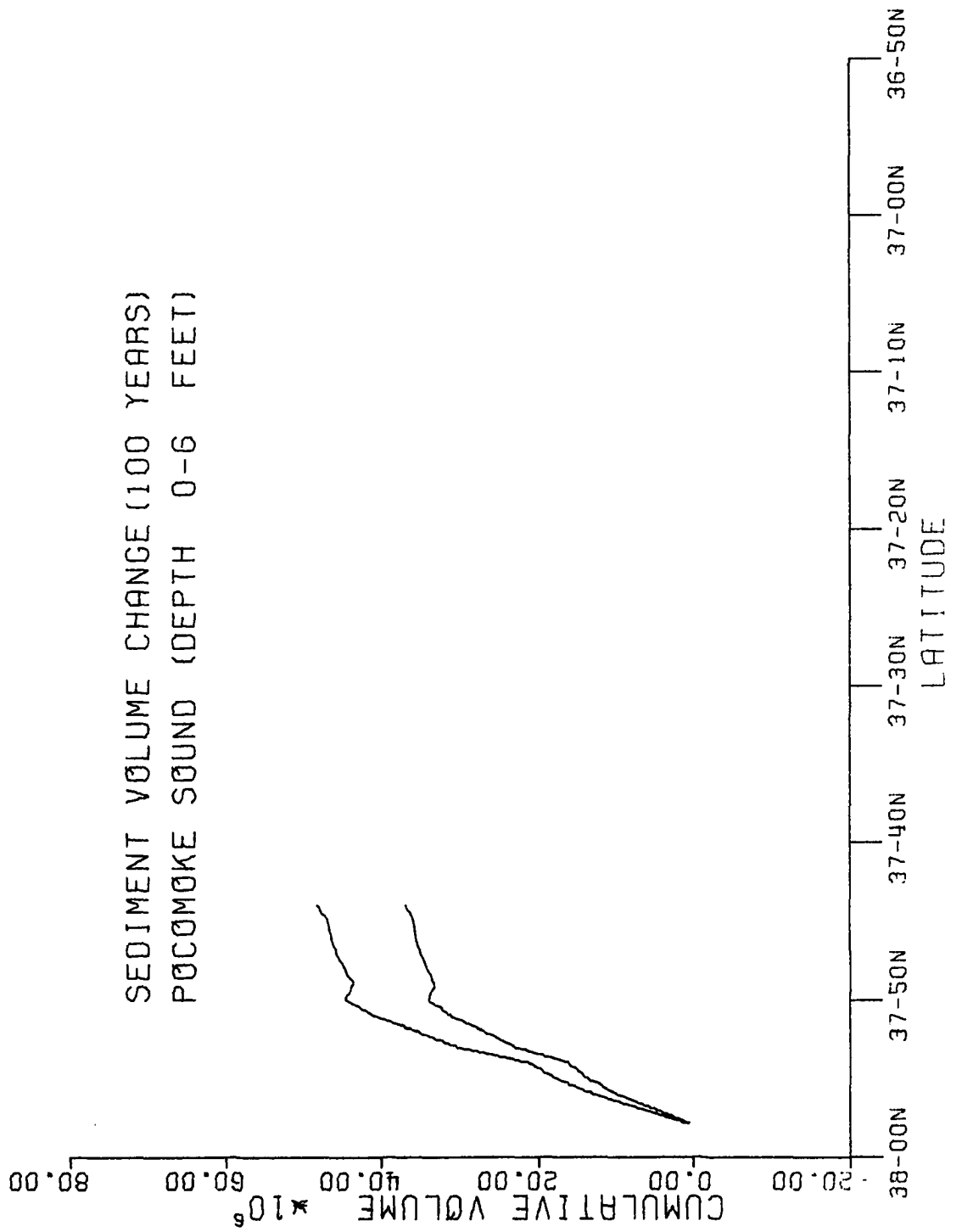


SEDIMENT VOLUME CHANGE (100 YEARS)  
EASTERN SIDE TANGIER-SMITH ISLANDS (DEPTH 0-6 FEET)

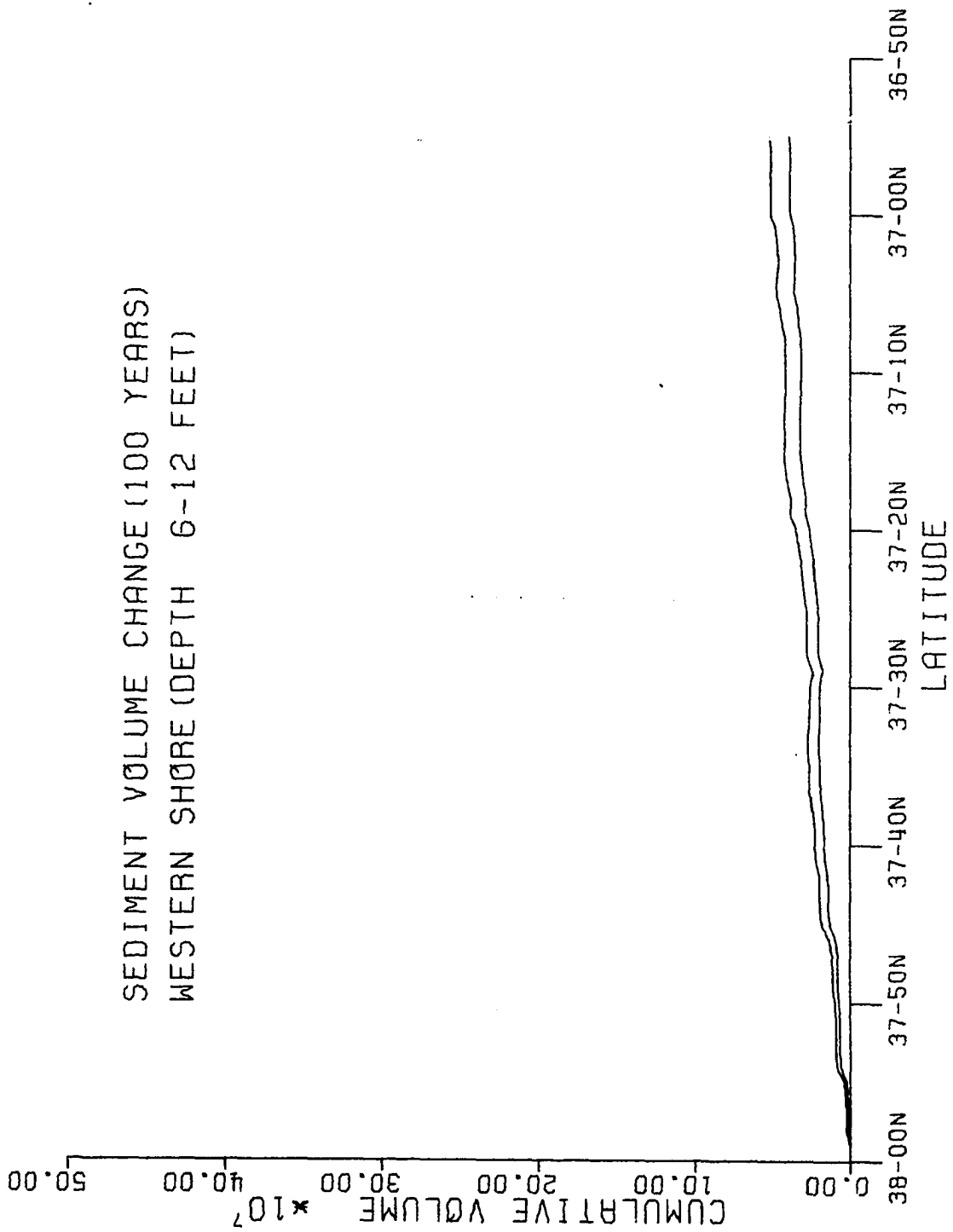


SEDIMENT VOLUME CHANGE (100 YEARS)  
MOBJACK BAY (DEPTH 0-6 FEET)

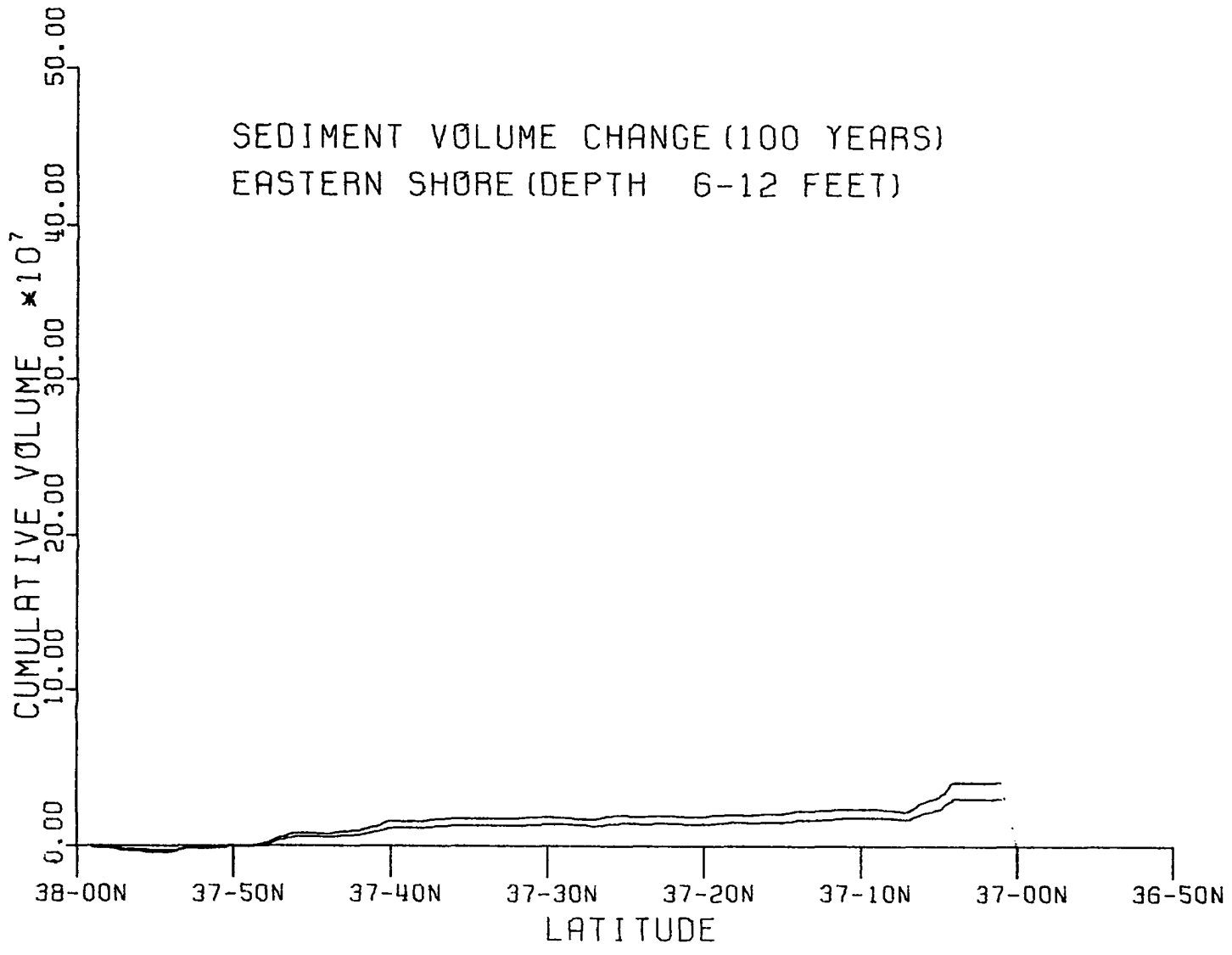




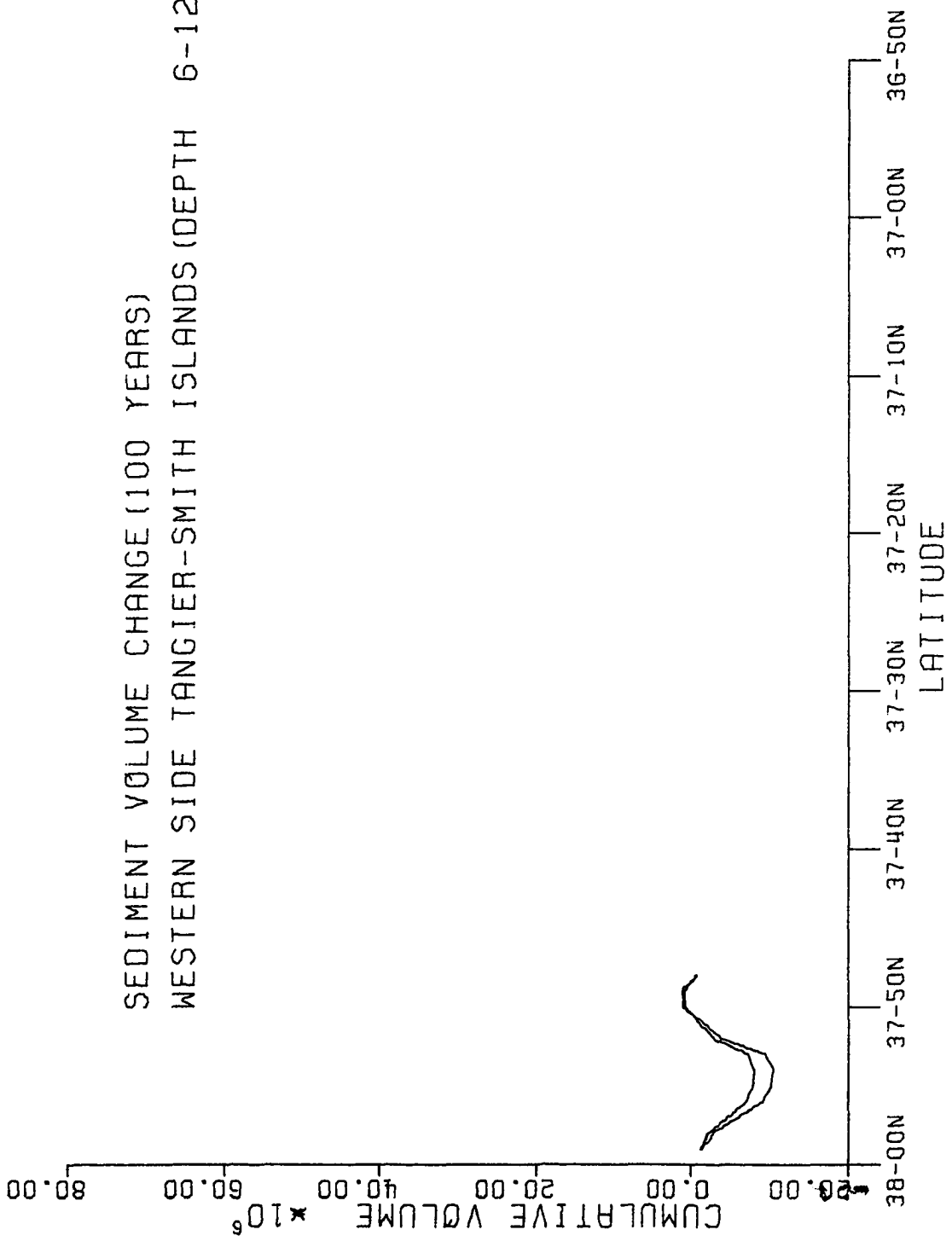
SEDIMENT VOLUME CHANGE (100 YEARS)  
WESTERN SHORE (DEPTH 6-12 FEET)



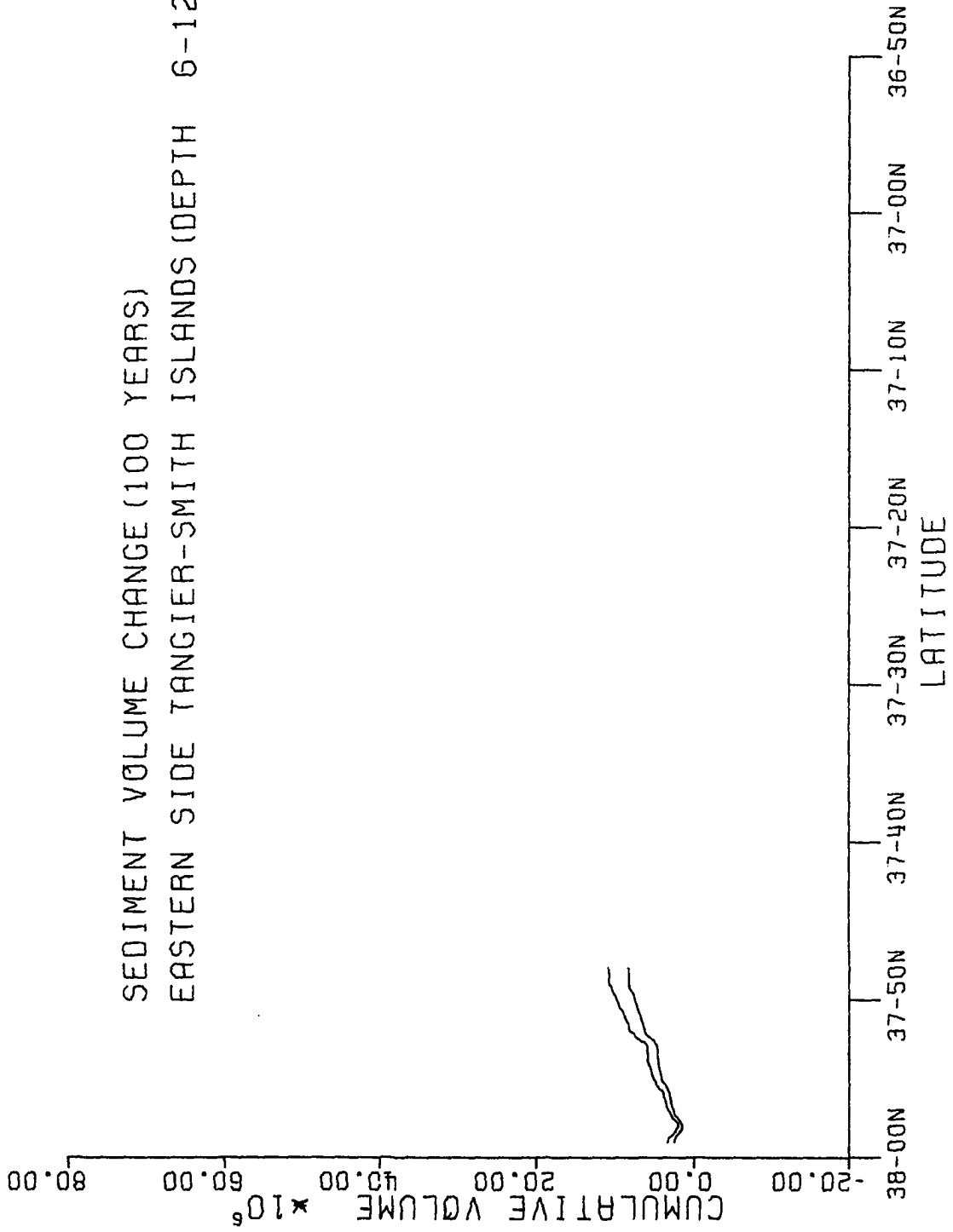


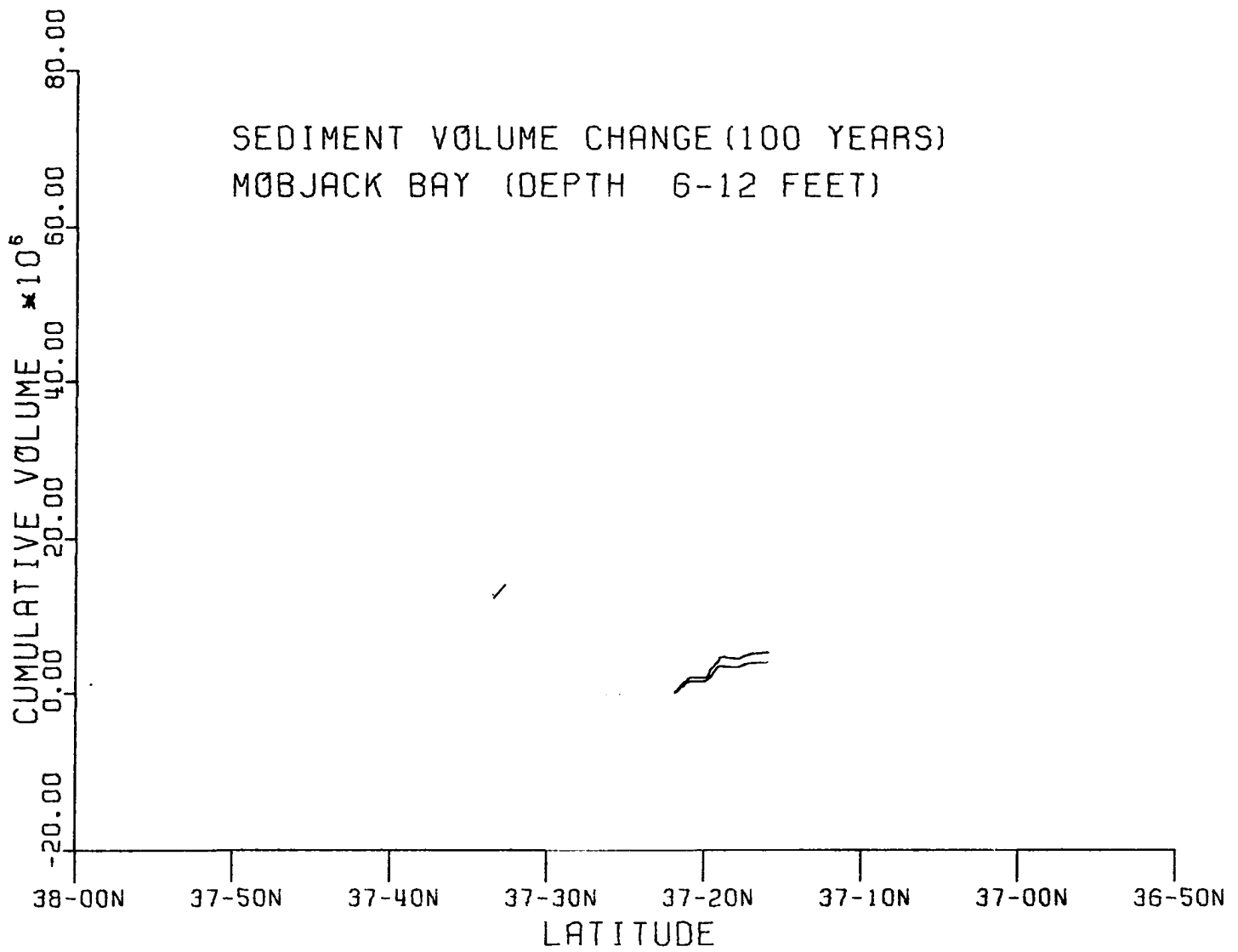


SEDIMENT VOLUME CHANGE (100 YEARS)  
WESTERN SIDE TANGIER-SMITH ISLANDS (DEPTH 6-12 FEET)

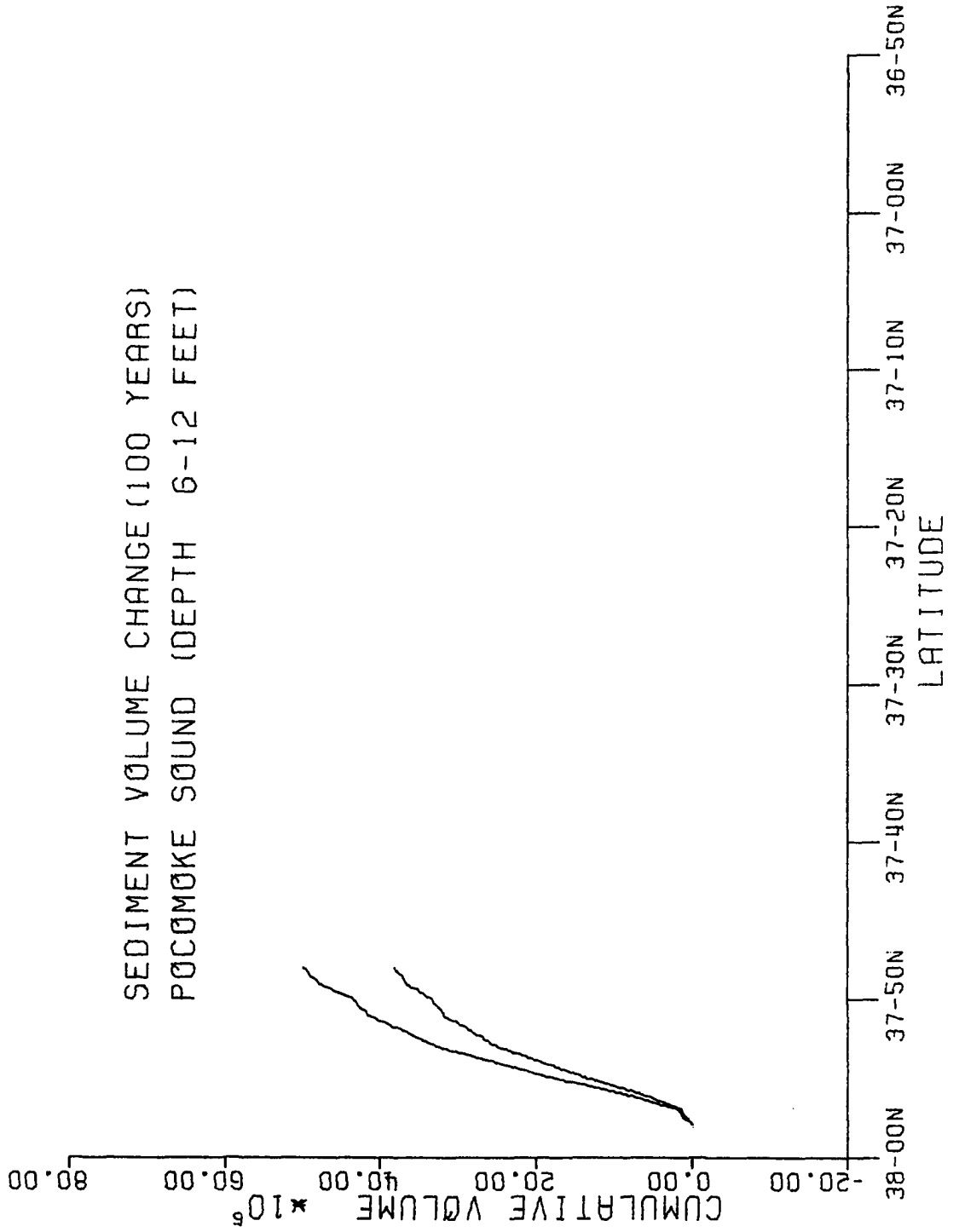


SEDIMENT VOLUME CHANGE (100 YEARS)  
EASTERN SIDE TANGIER-SMITH ISLANDS (DEPTH 6-12 FEET)

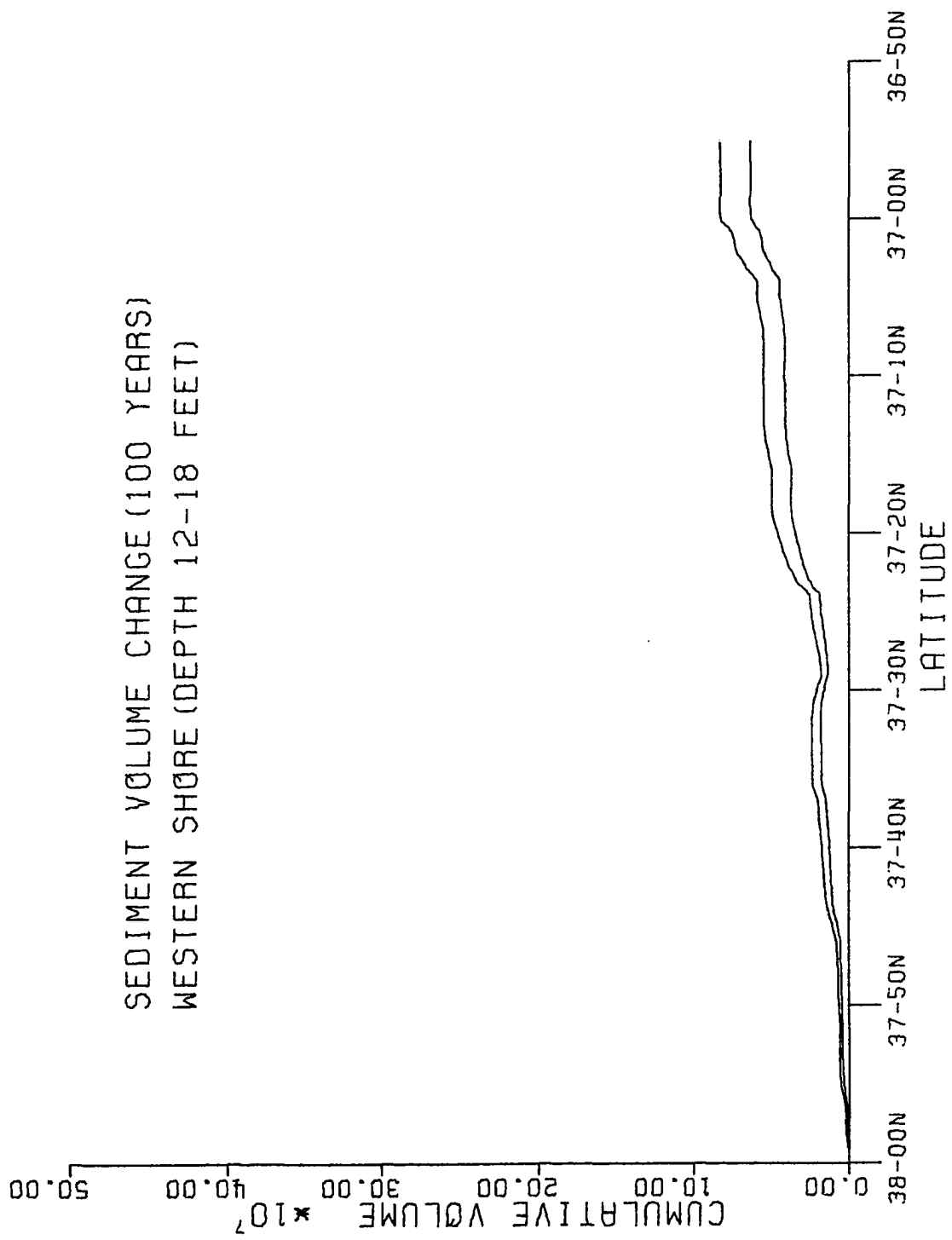


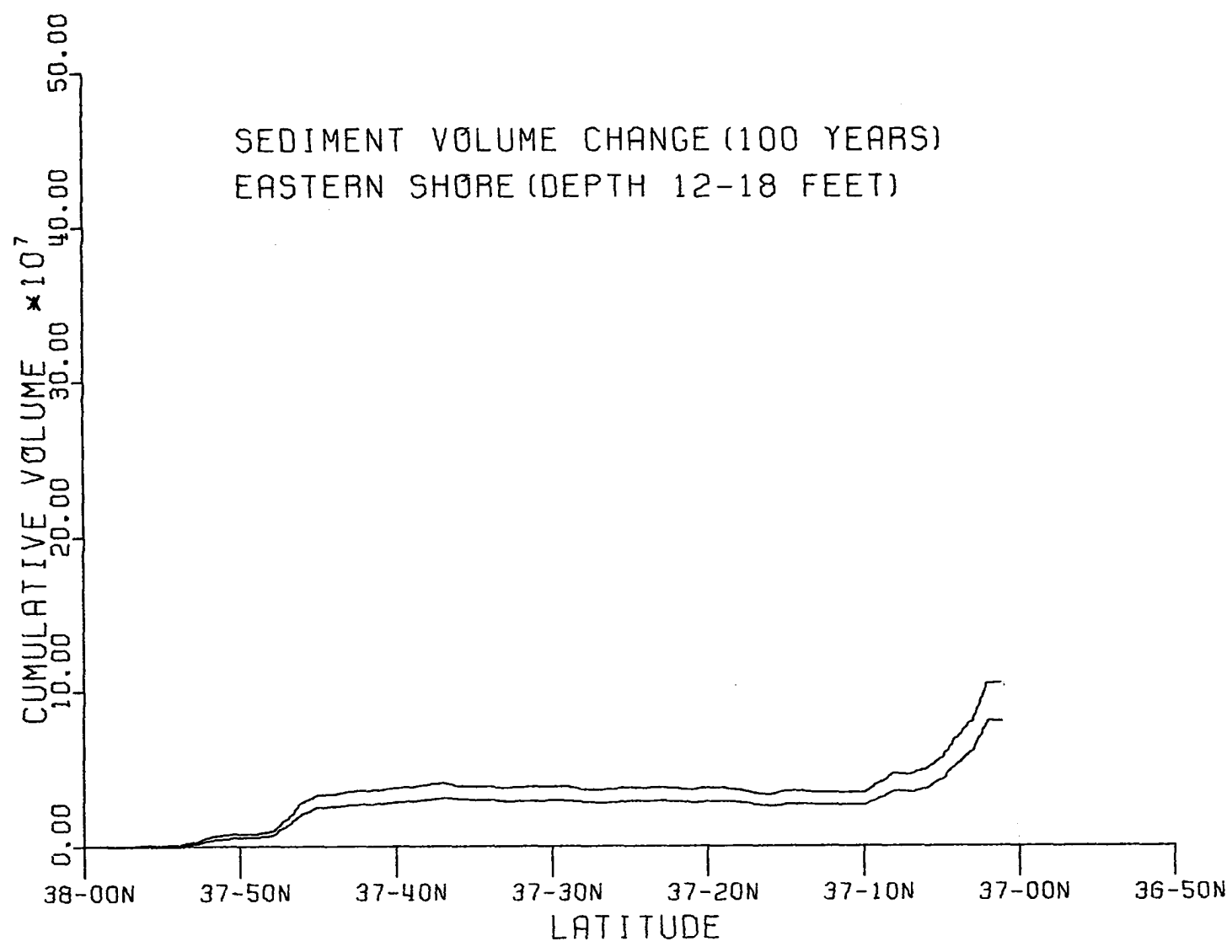


SEDIMENT VOLUME CHANGE (100 YEARS)  
POCCOMUCK SOUND (DEPTH 6-12 FEET)

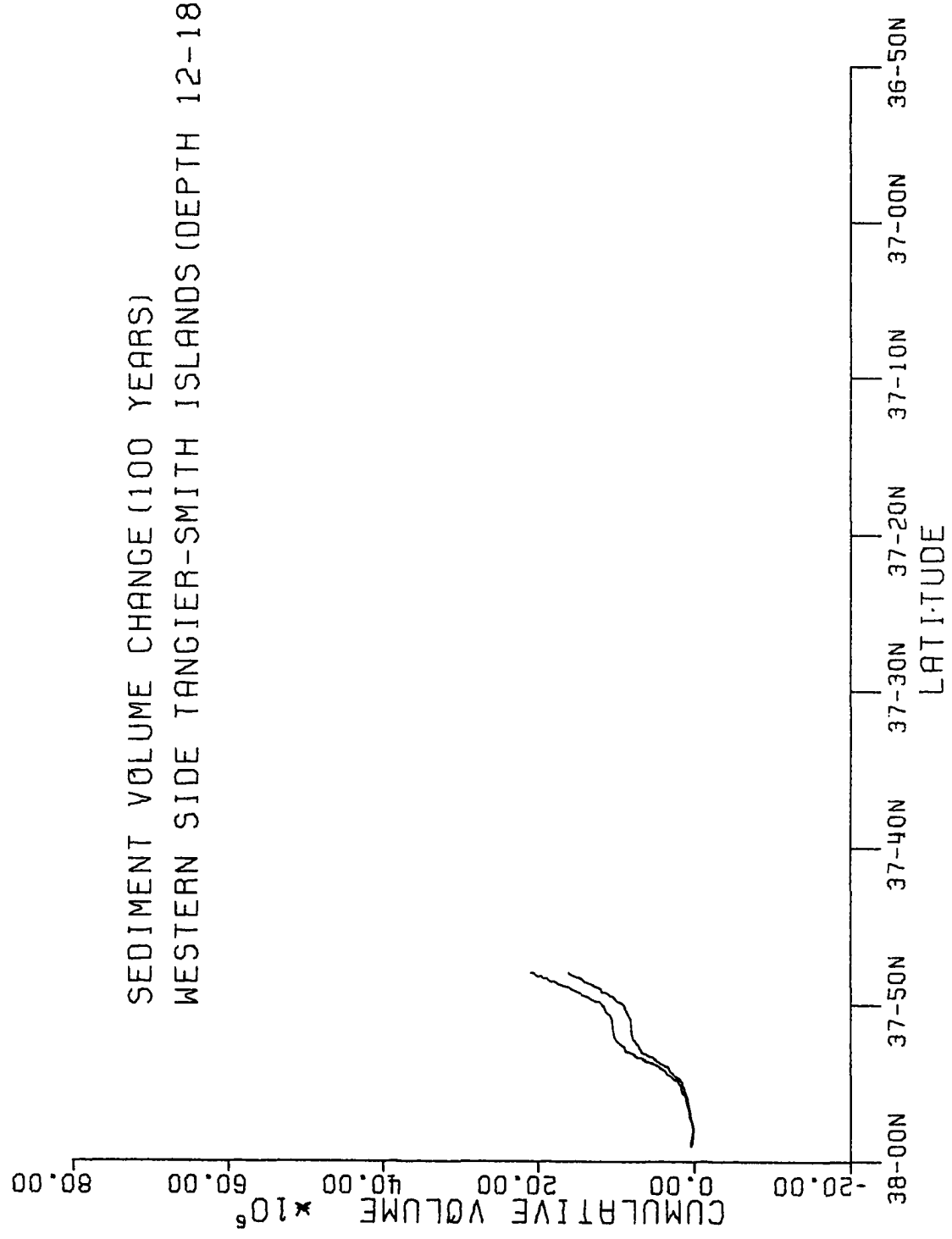


SEDIMENT VOLUME CHANGE (100 YEARS)  
WESTERN SHORE (DEPTH 12-18 FEET)



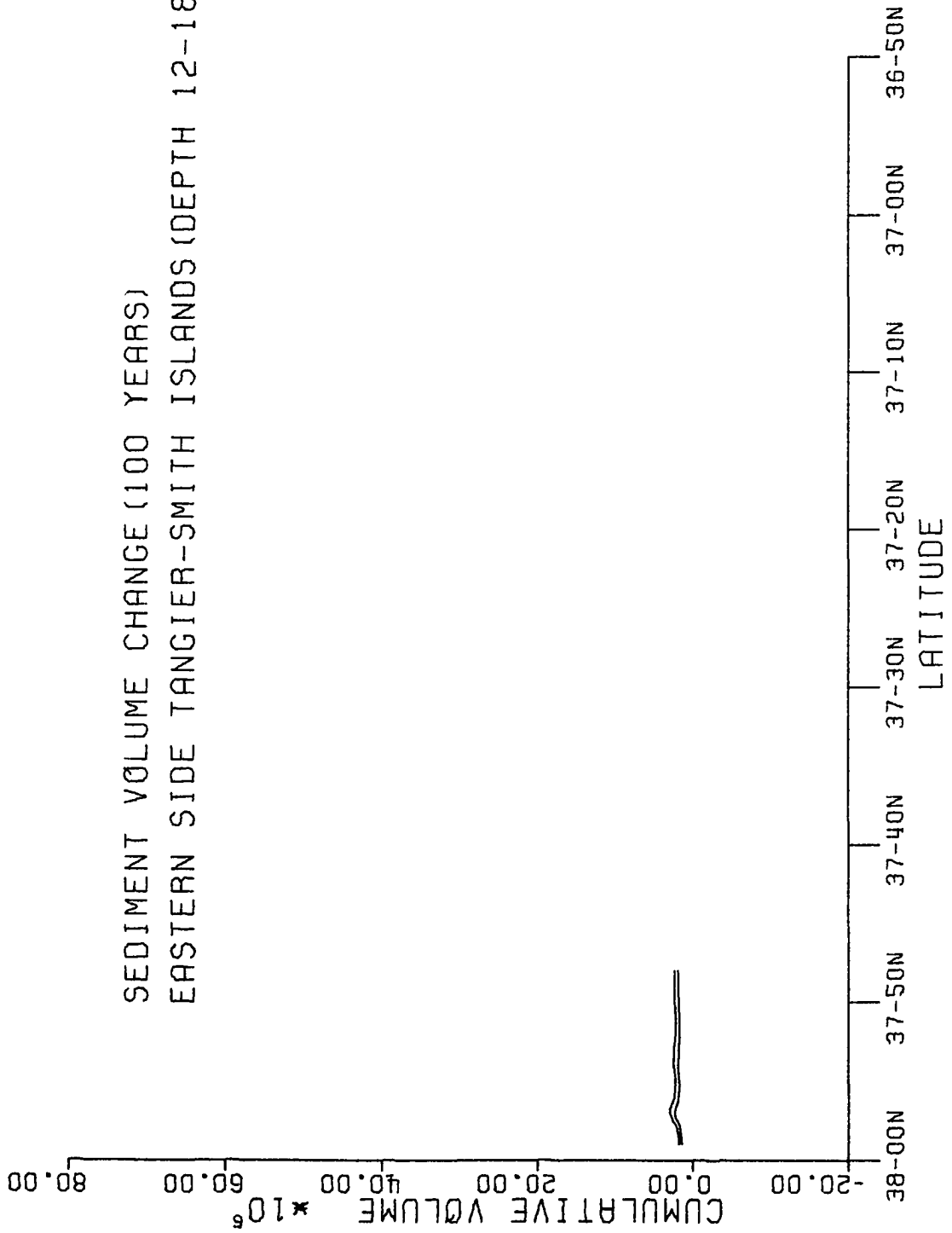


SEDIMENT VOLUME CHANGE (100 YEARS)  
 WESTERN SIDE TANGIER-SMITH ISLANDS (DEPTH 12-18 FEET)

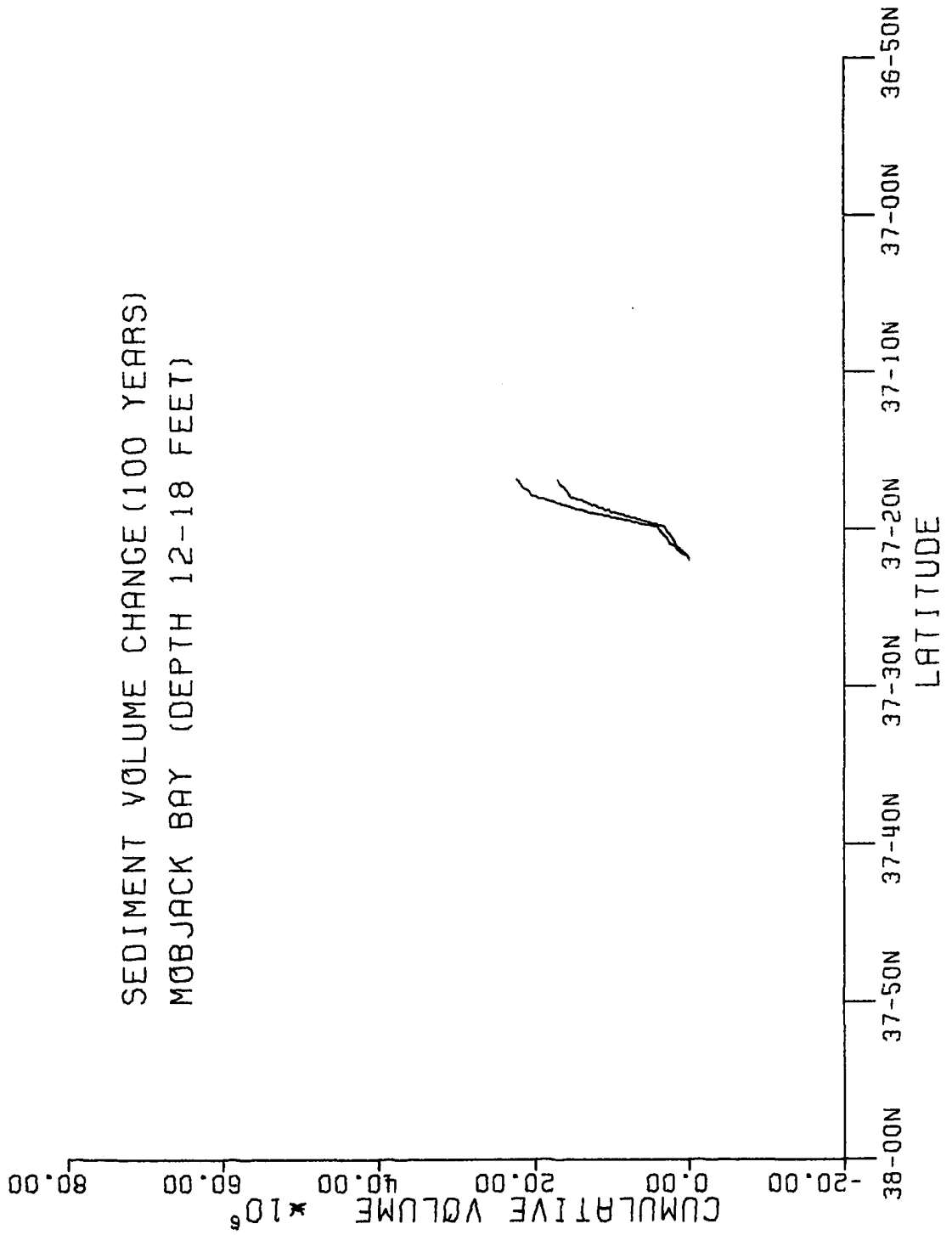




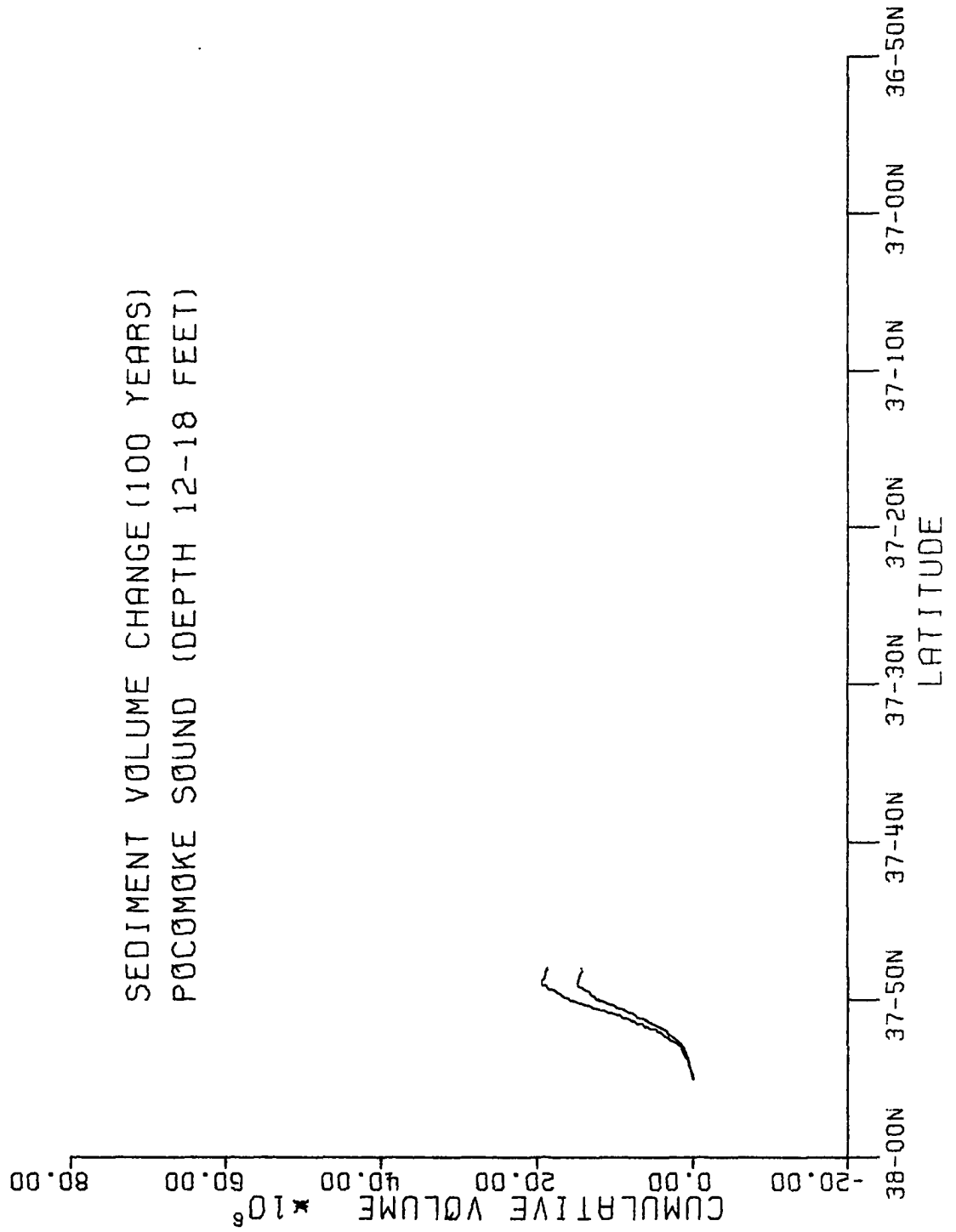
SEDIMENT VOLUME CHANGE (100 YEARS)  
EASTERN SIDE TANGIER-SMITH ISLANDS (DEPTH 12-18 FEET)

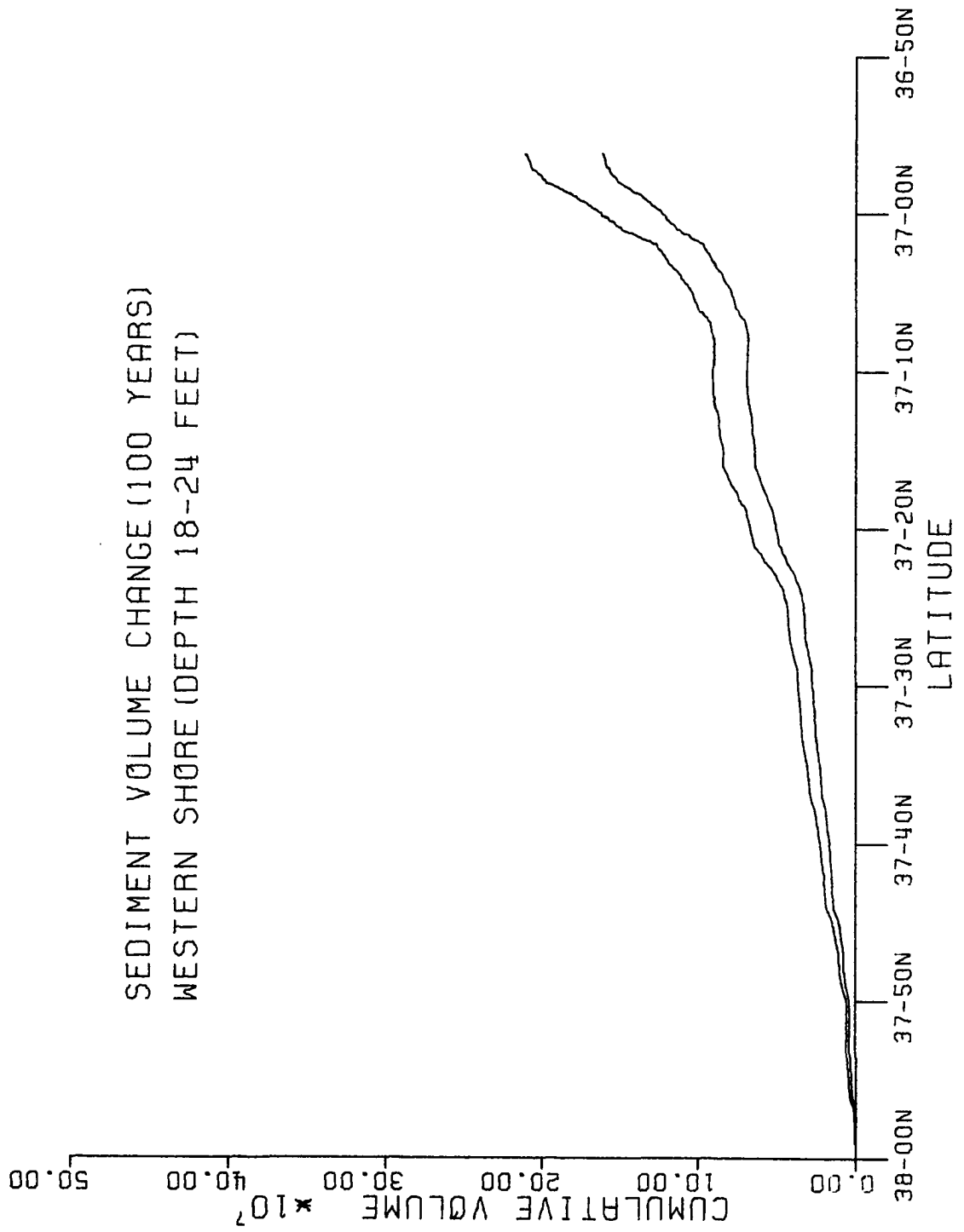


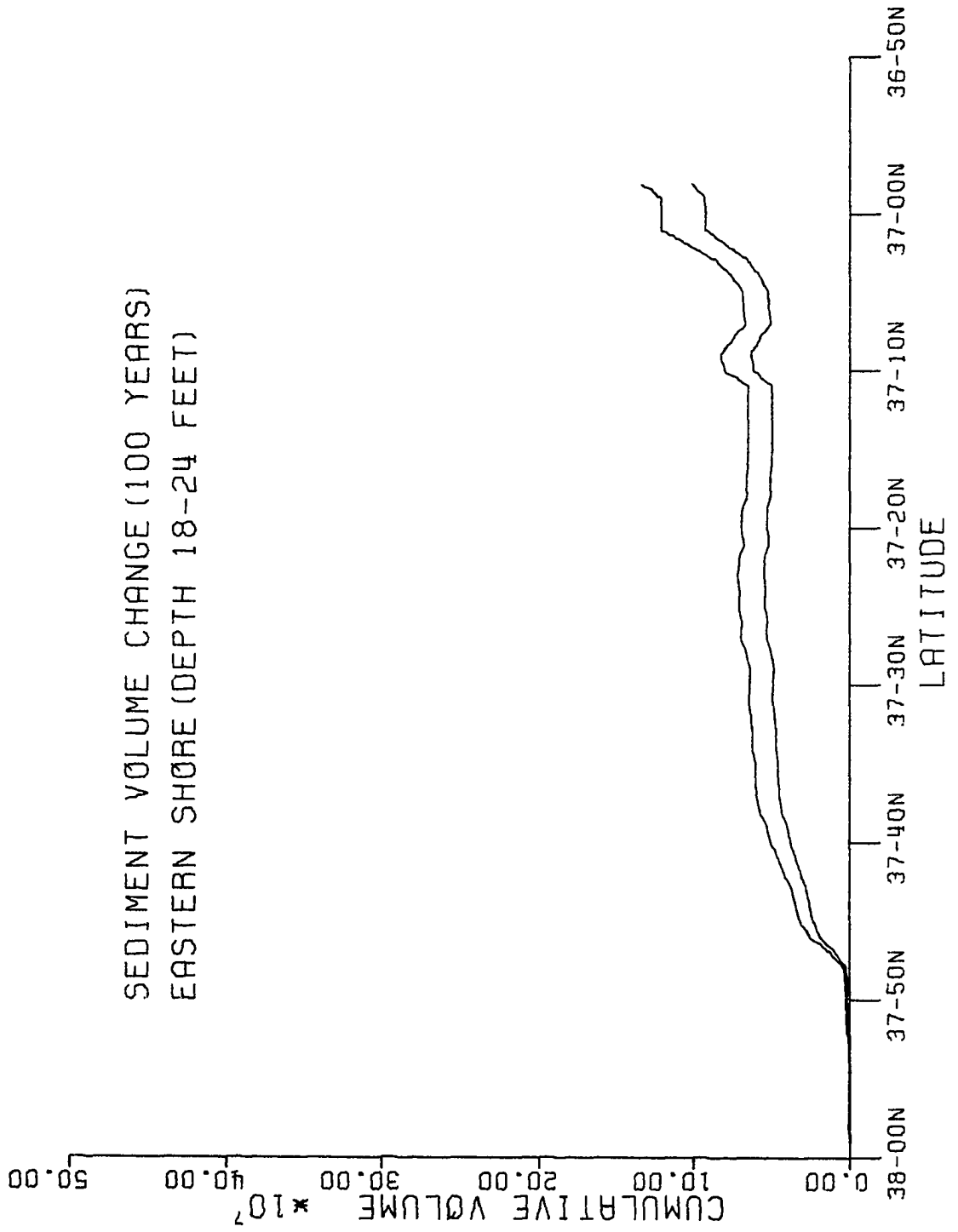
SEDIMENT VOLUME CHANGE (100 YEARS)  
 MØBJACK BAY (DEPTH 12-18 FEET)

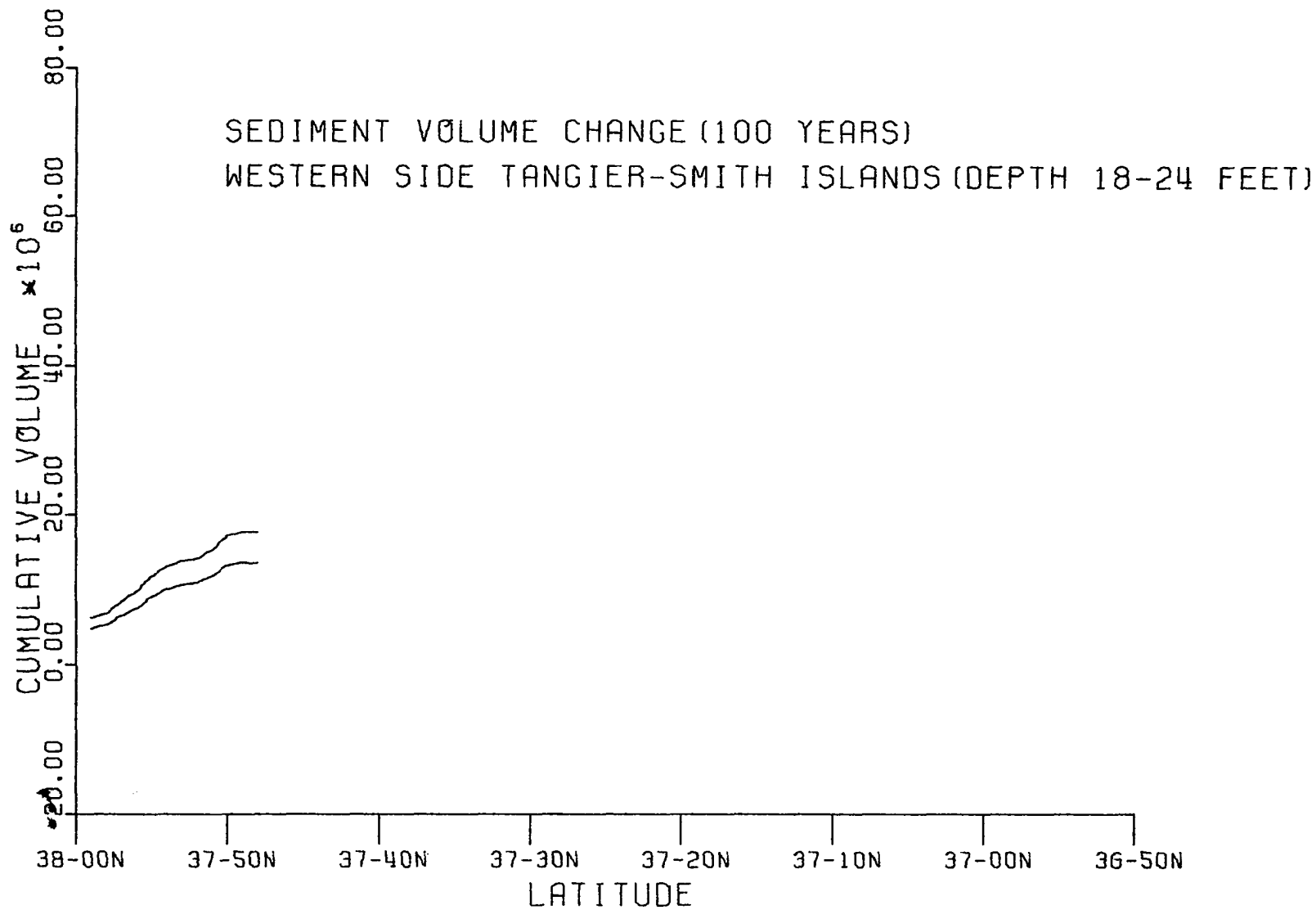


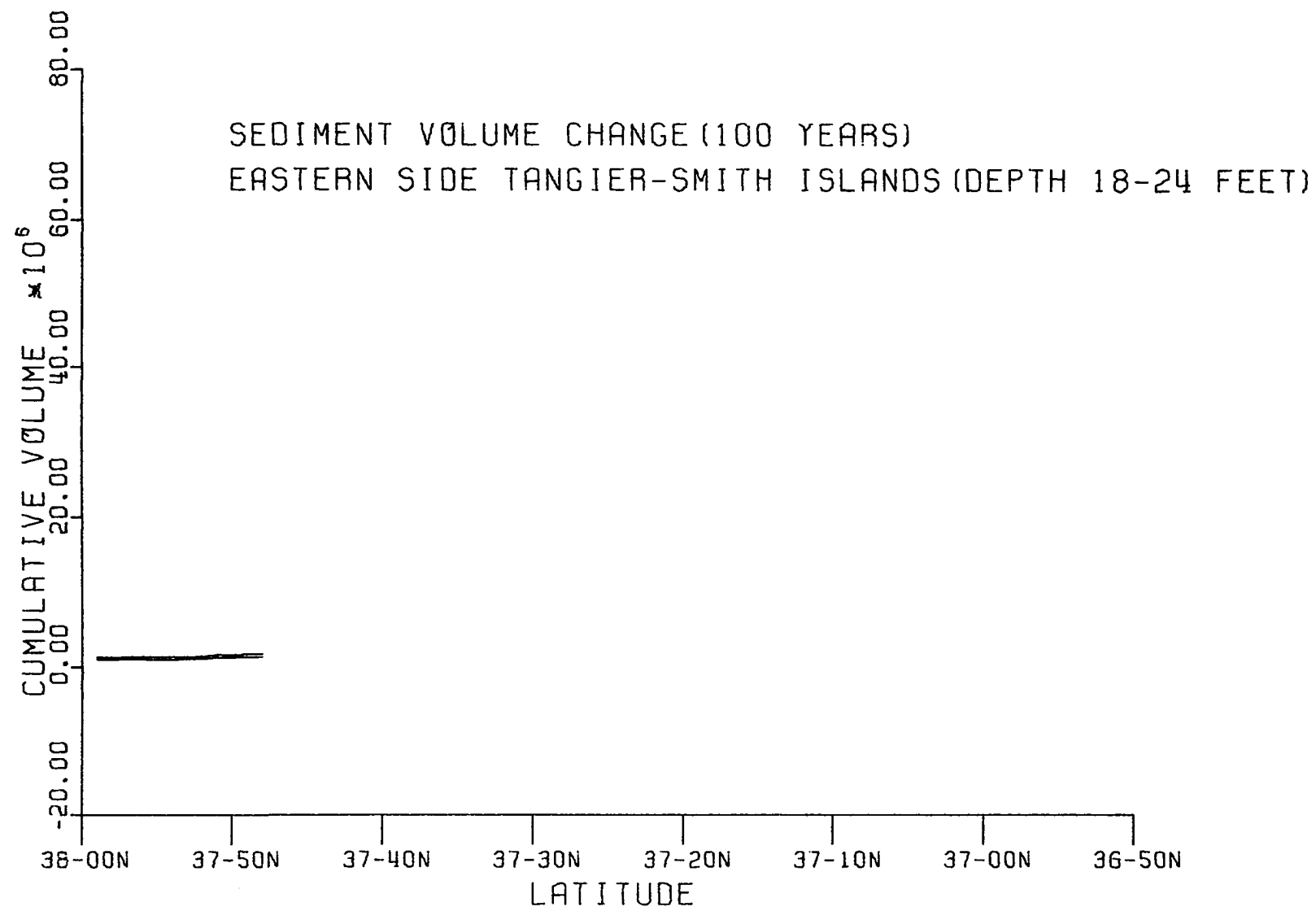
SEDIMENT VOLUME CHANGE (100 YEARS)  
POCUMOCKE SOUND (DEPTH 12-18 FEET)



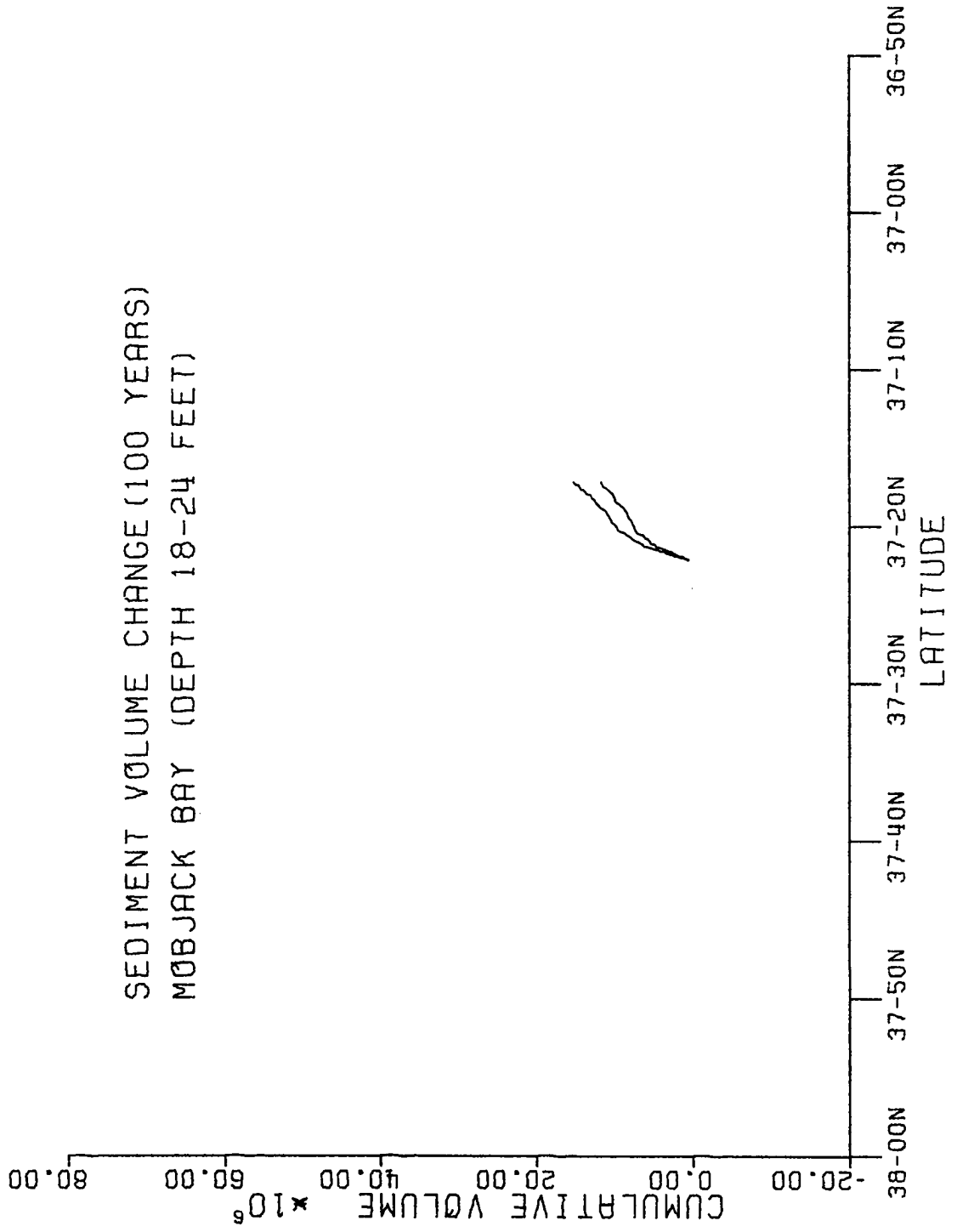




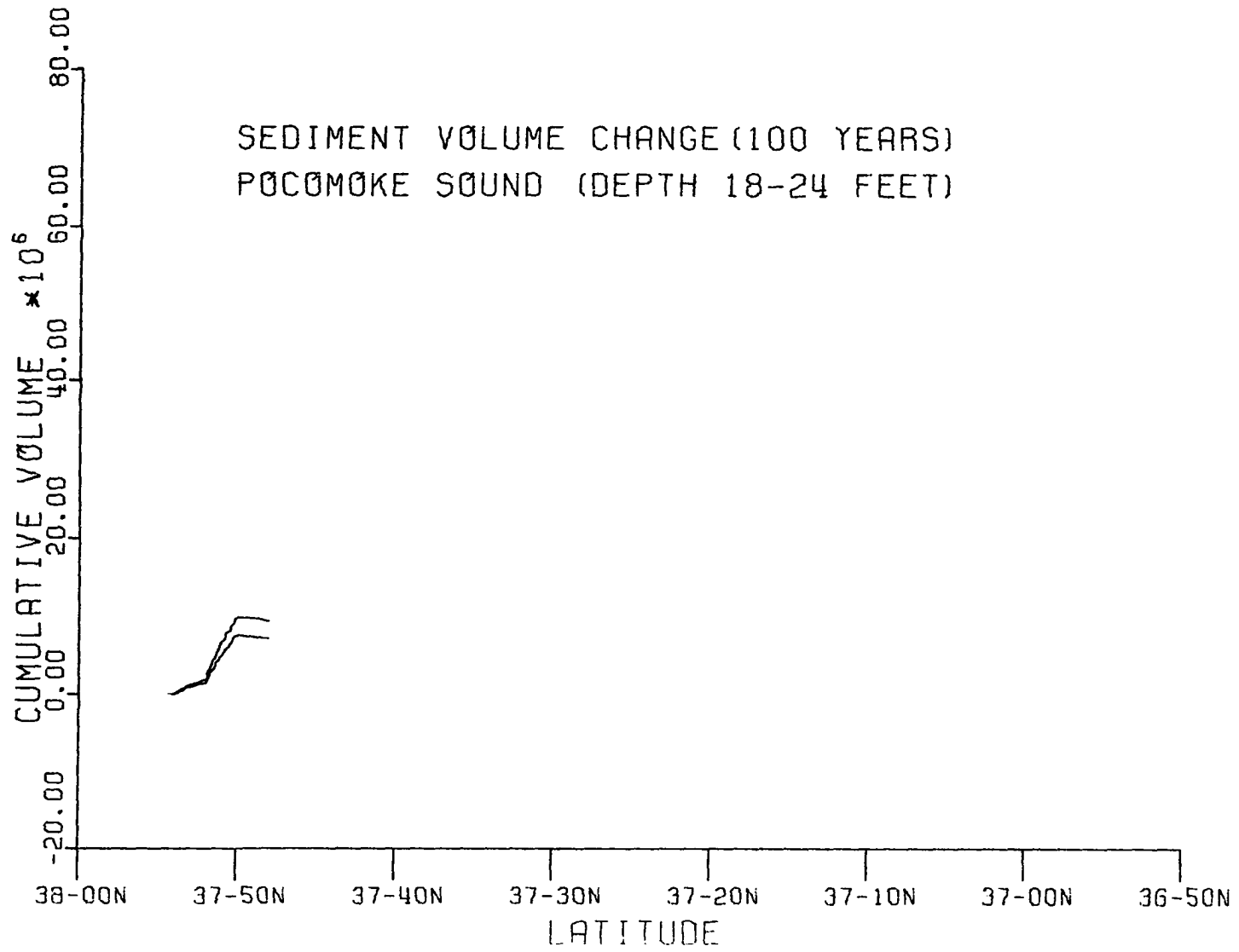


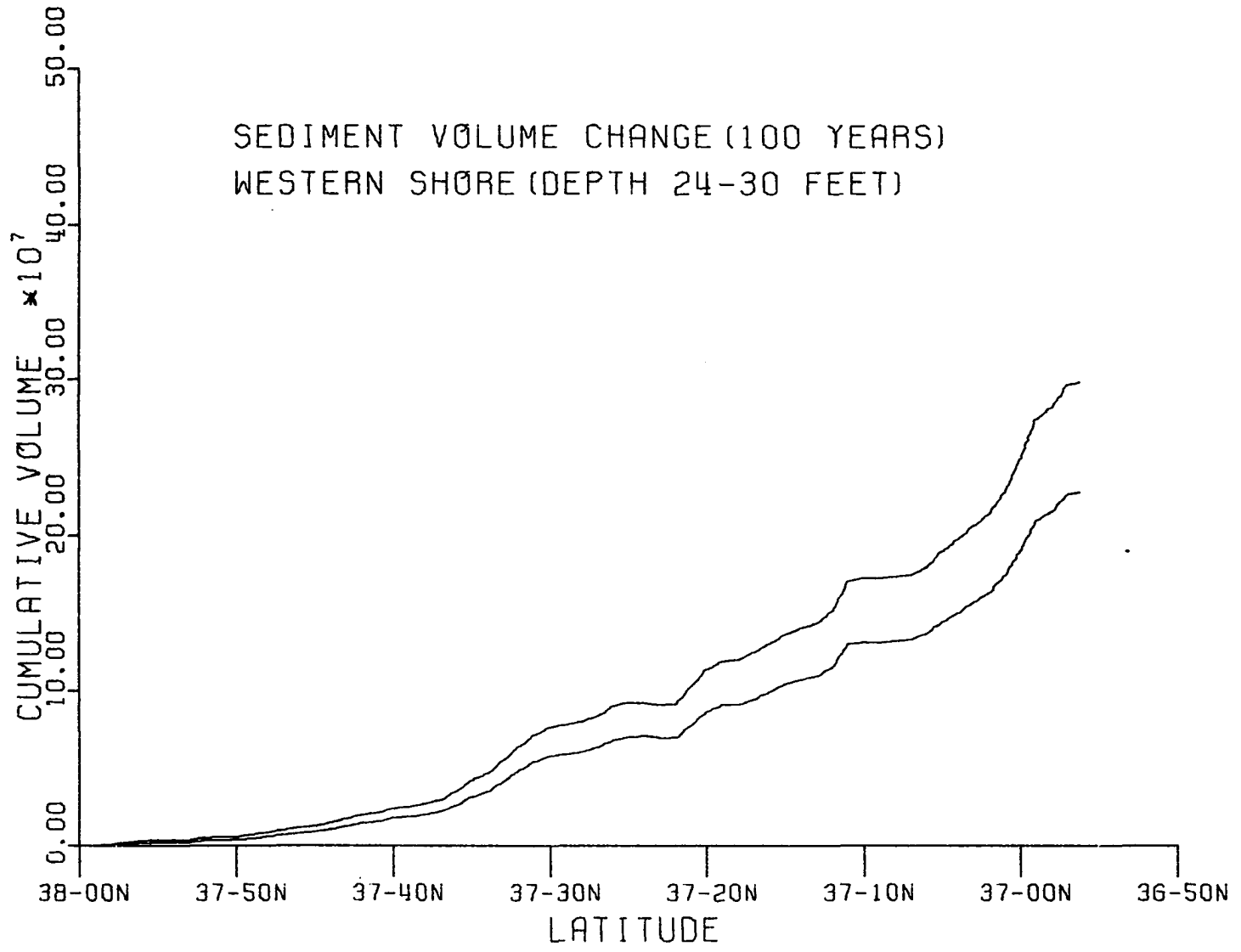


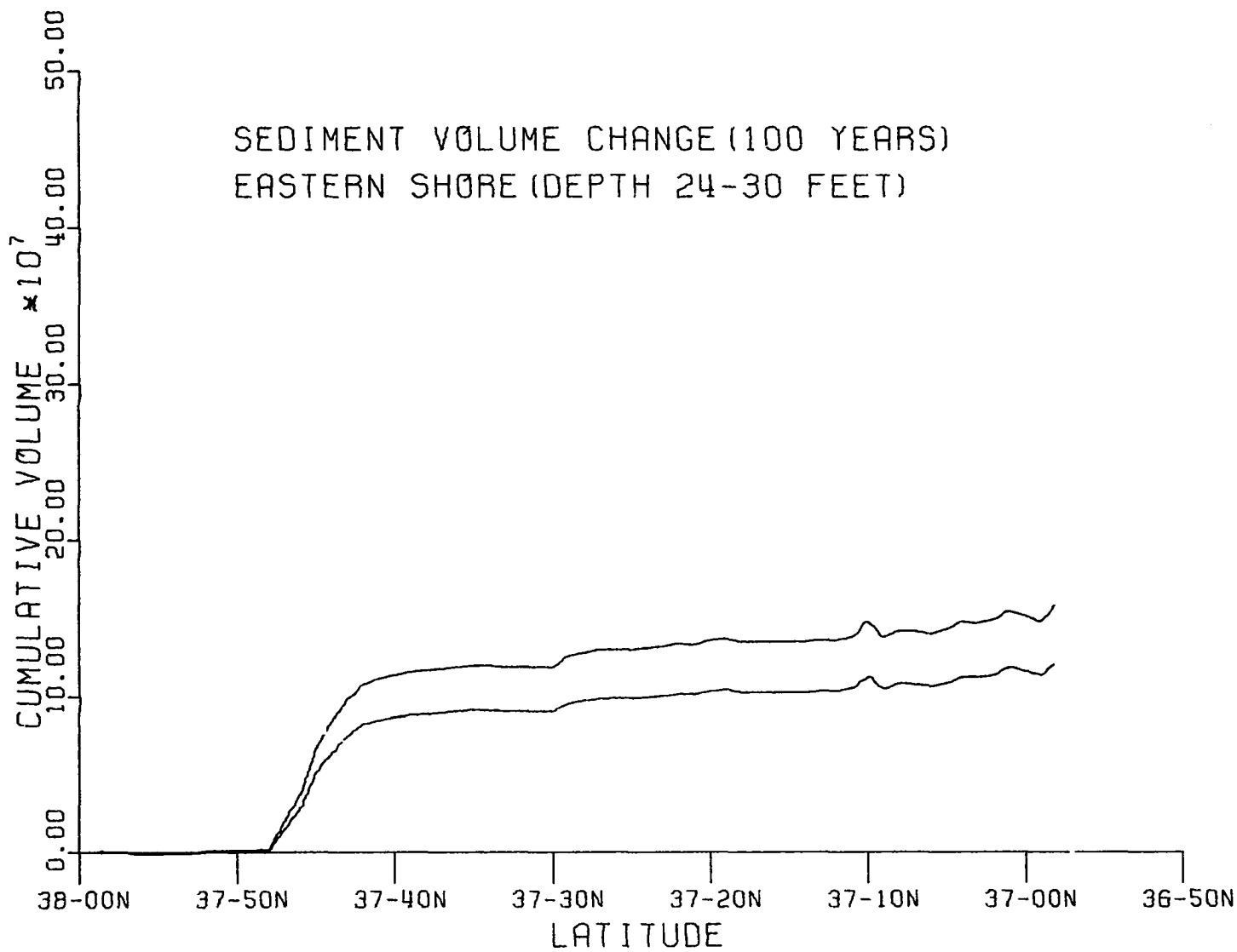
SEDIMENT VOLUME CHANGE (100 YEARS)  
MOBJACK BAY (DEPTH 18-24 FEET)



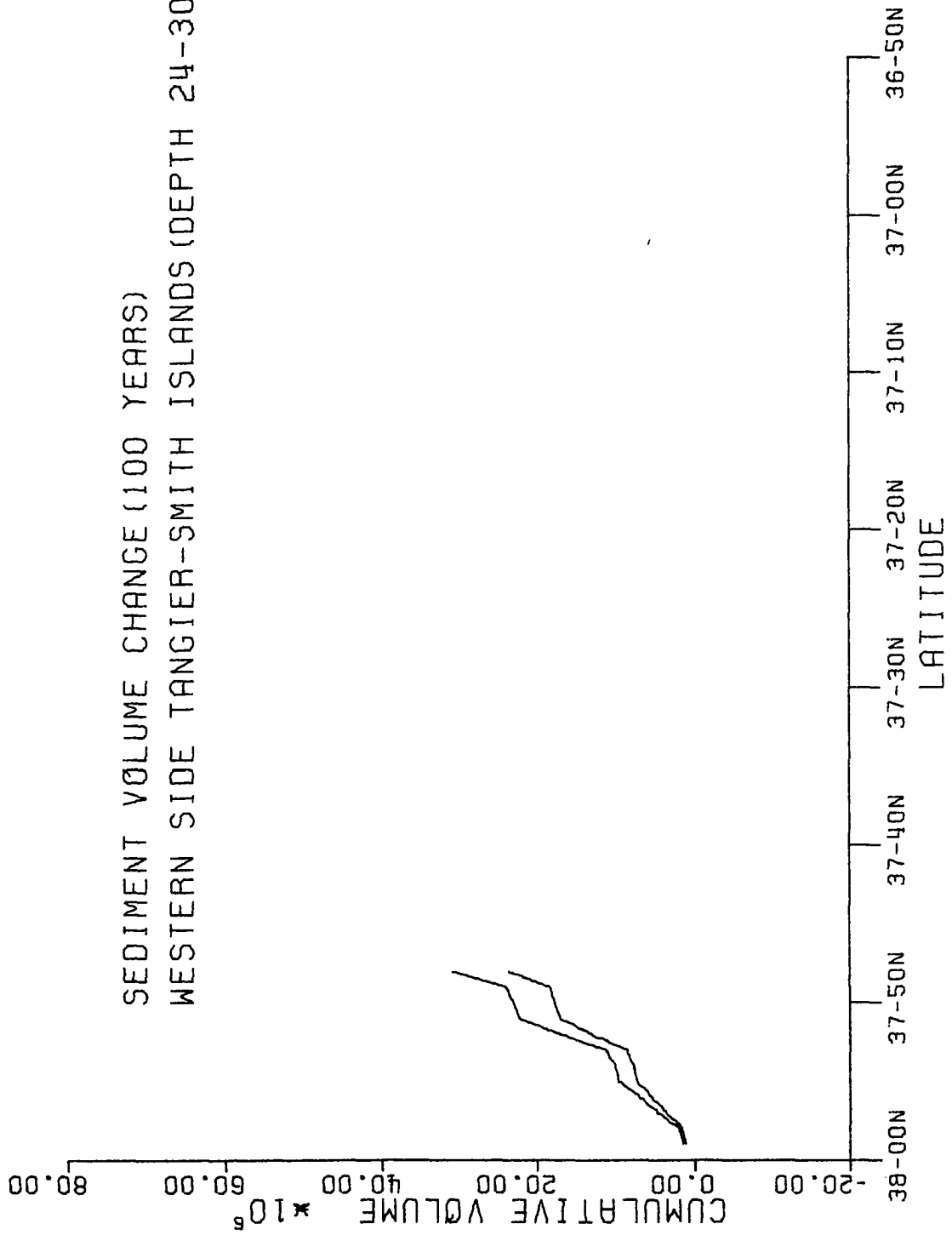


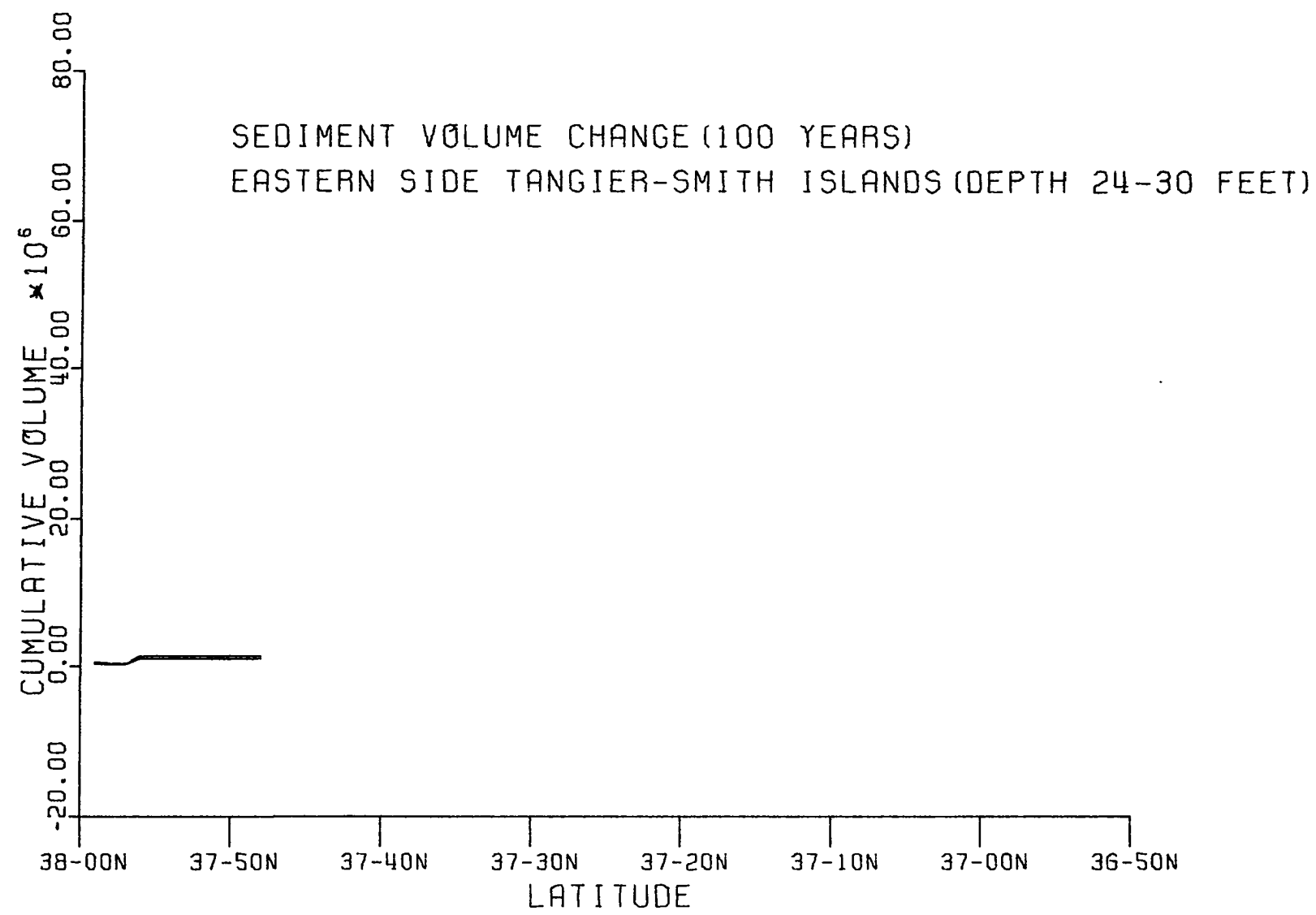




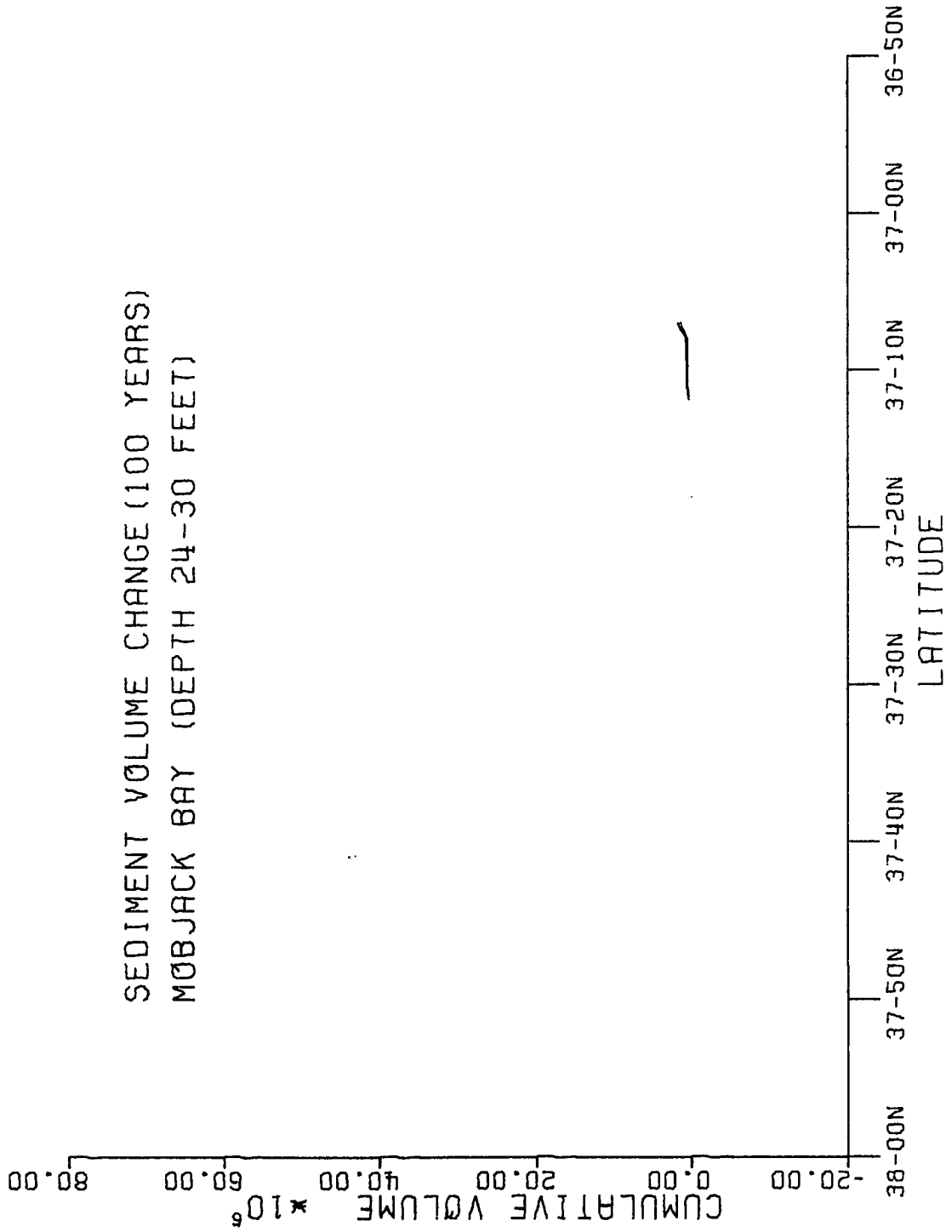


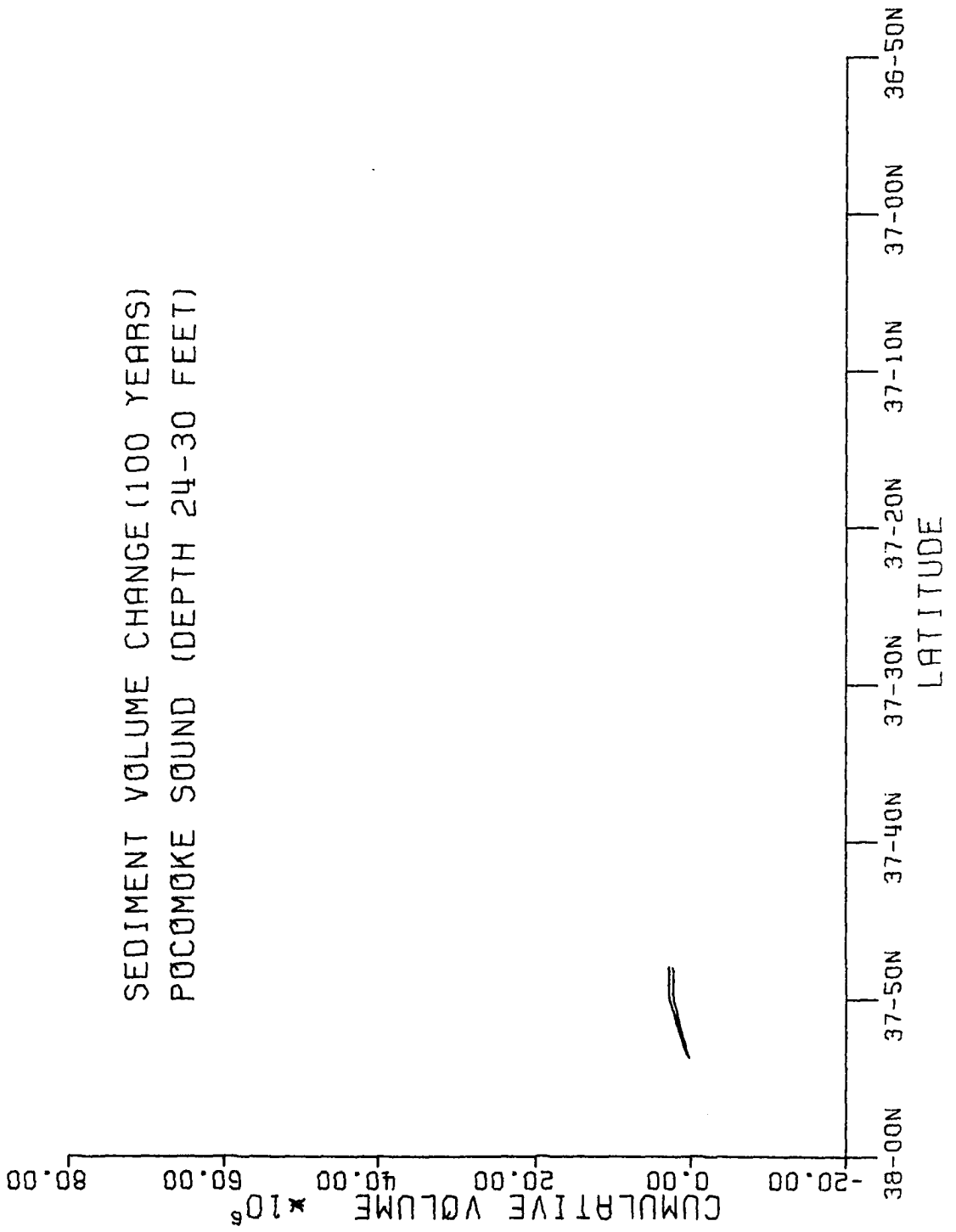
SEDIMENT VOLUME CHANGE (100 YEARS)  
WESTERN SIDE TANGIER-SMITH ISLANDS (DEPTH 24-30 FEET)

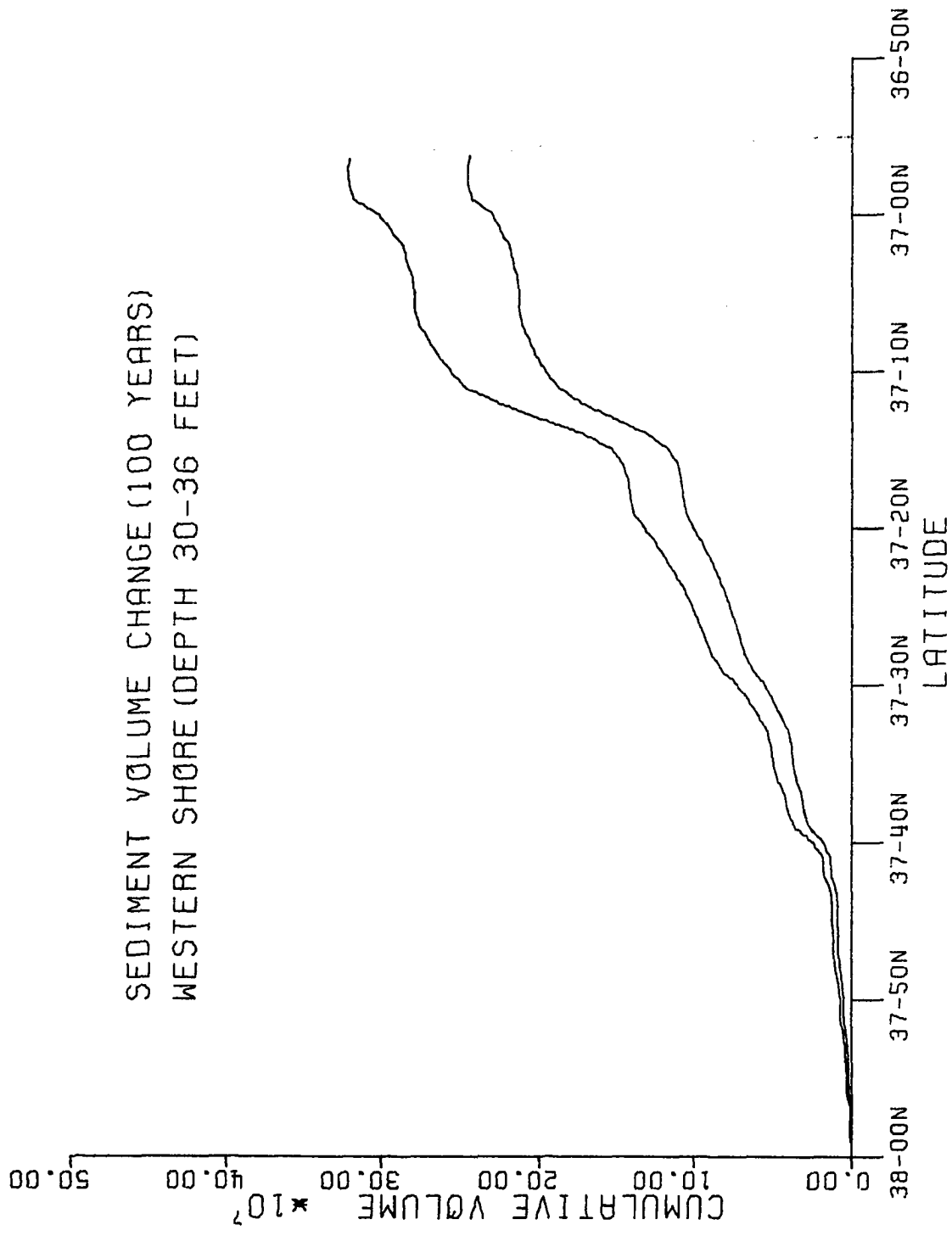




SEDIMENT VOLUME CHANGE (100 YEARS)  
 MOB JACK BAY (DEPTH 24-30 FEET)

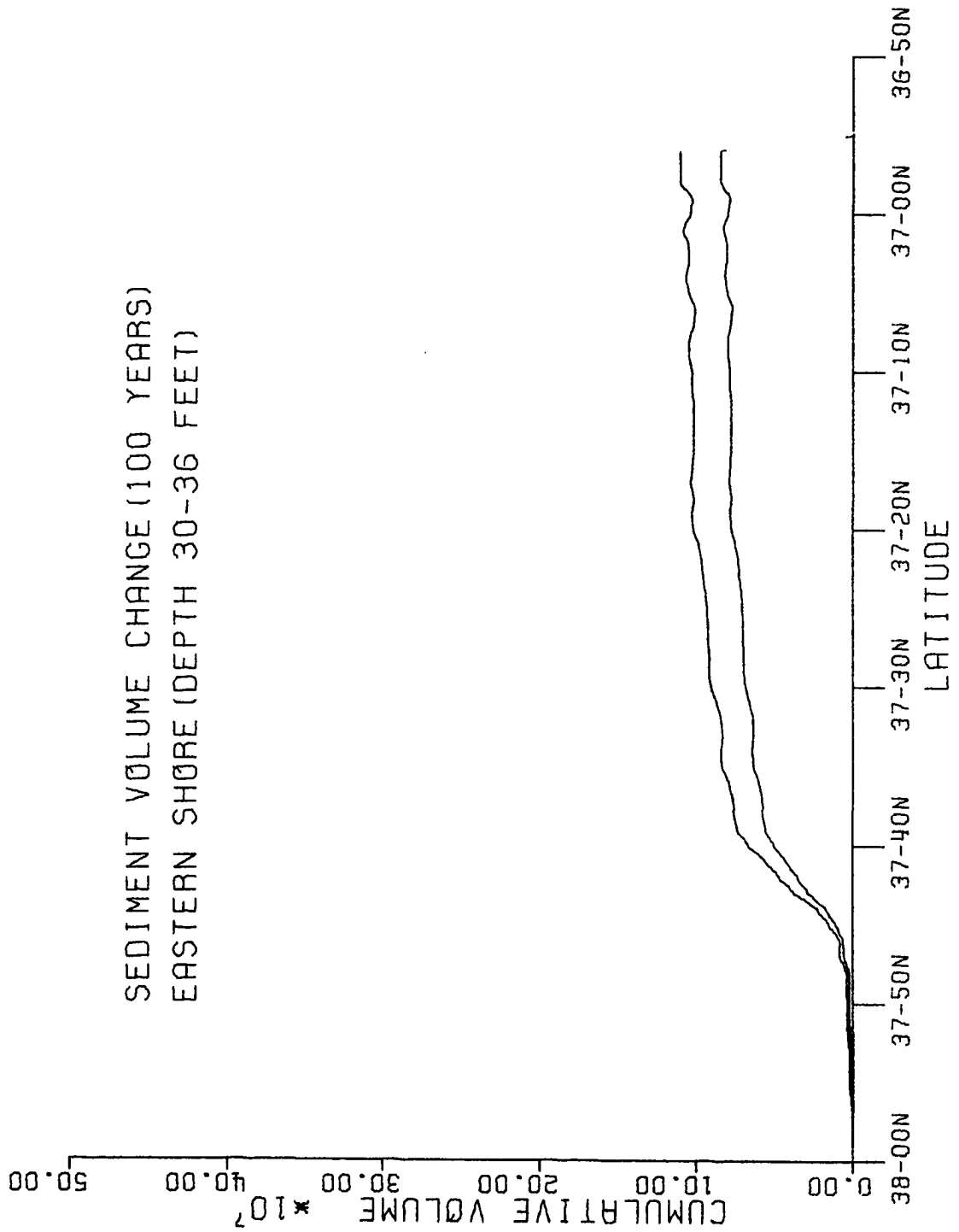




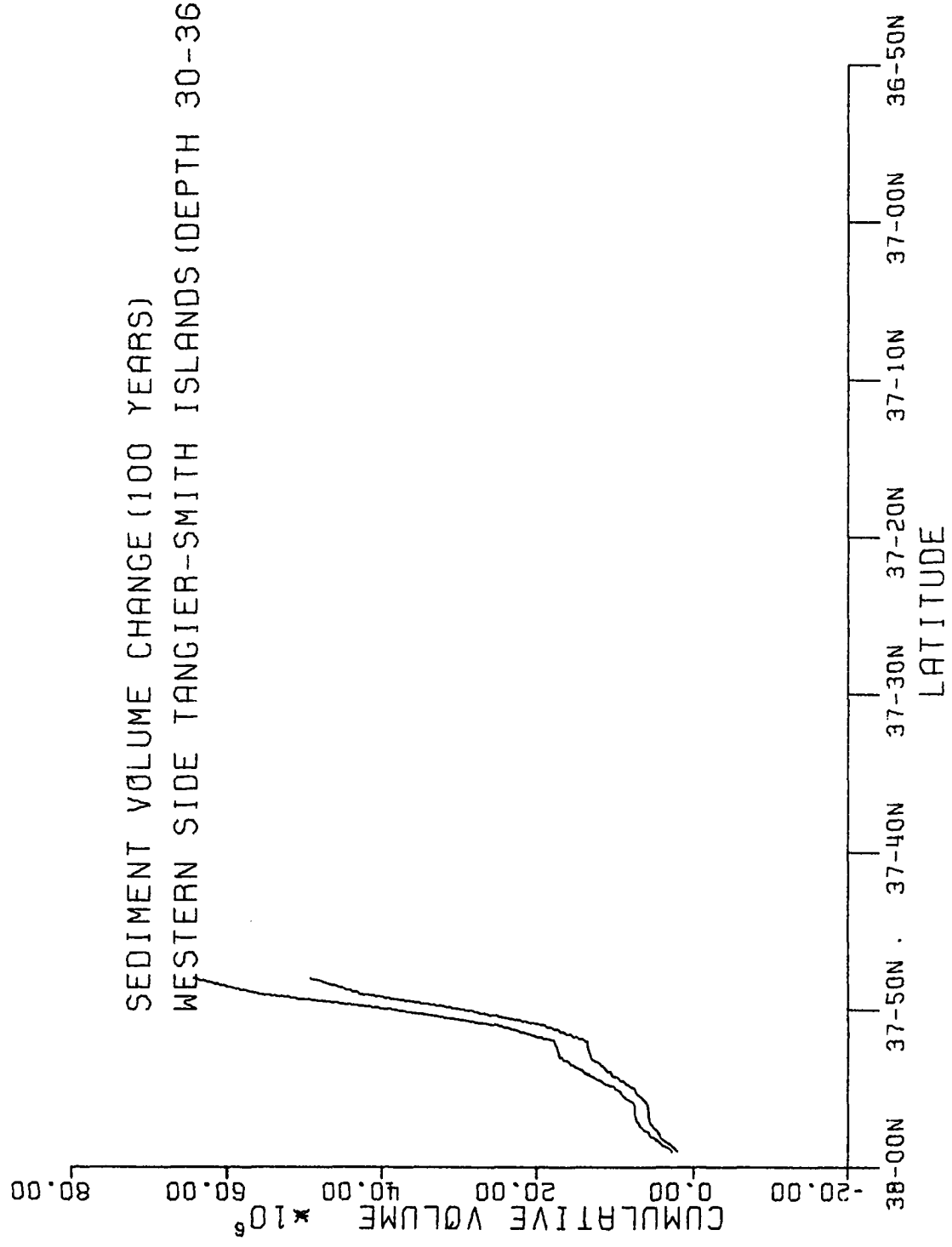


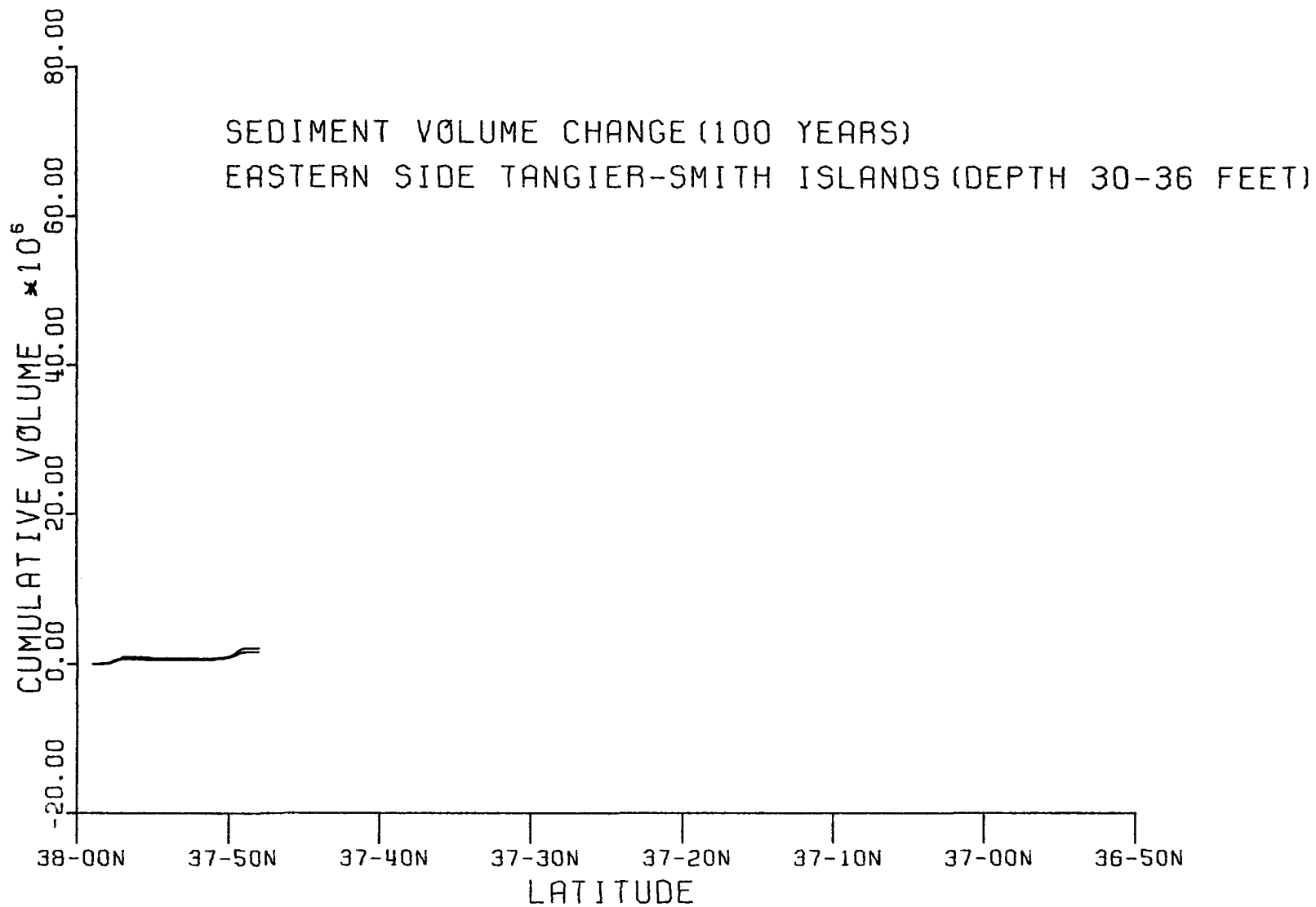


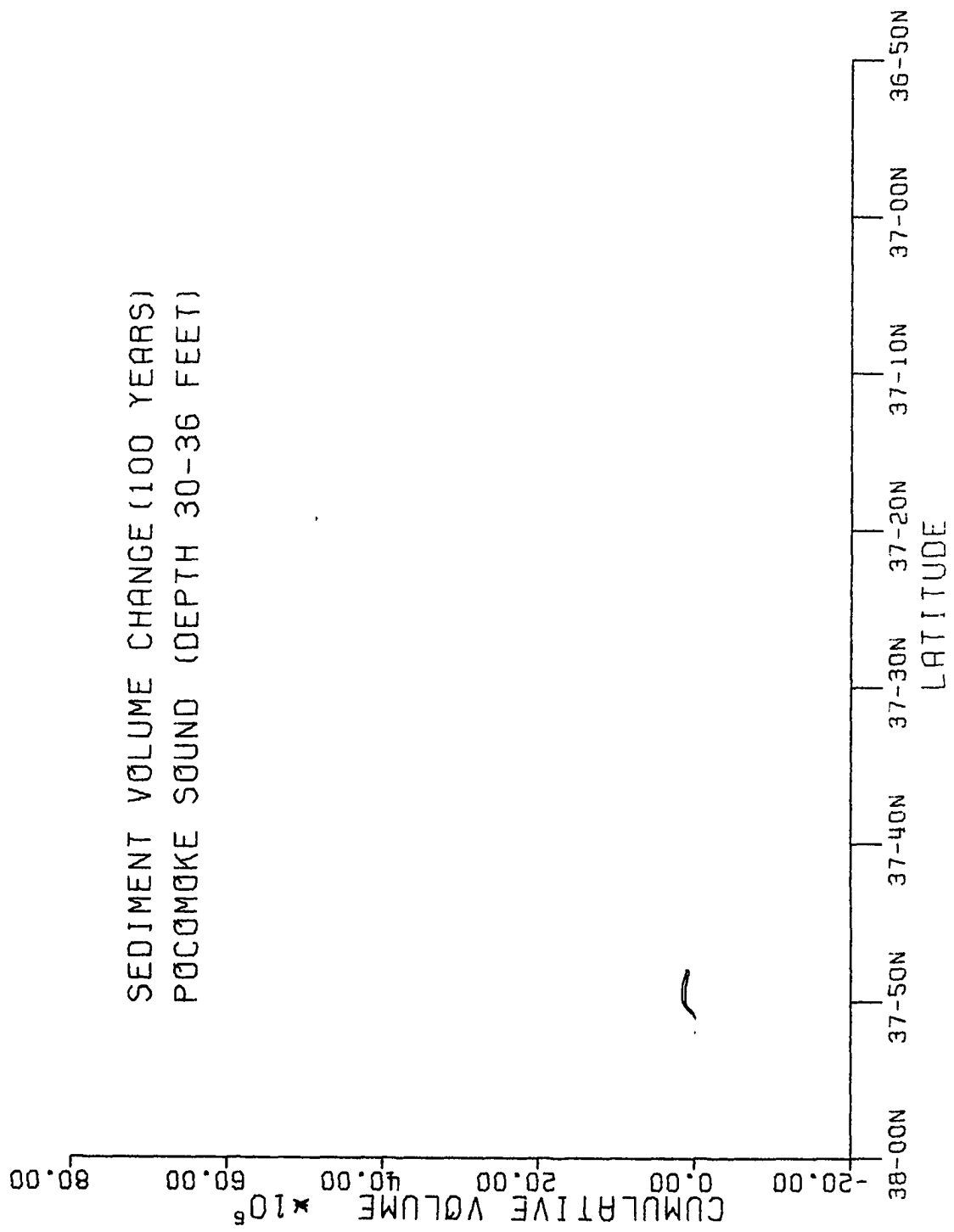
SEDIMENT VOLUME CHANGE (100 YEARS)  
EASTERN SHORE (DEPTH 30-36 FEET)

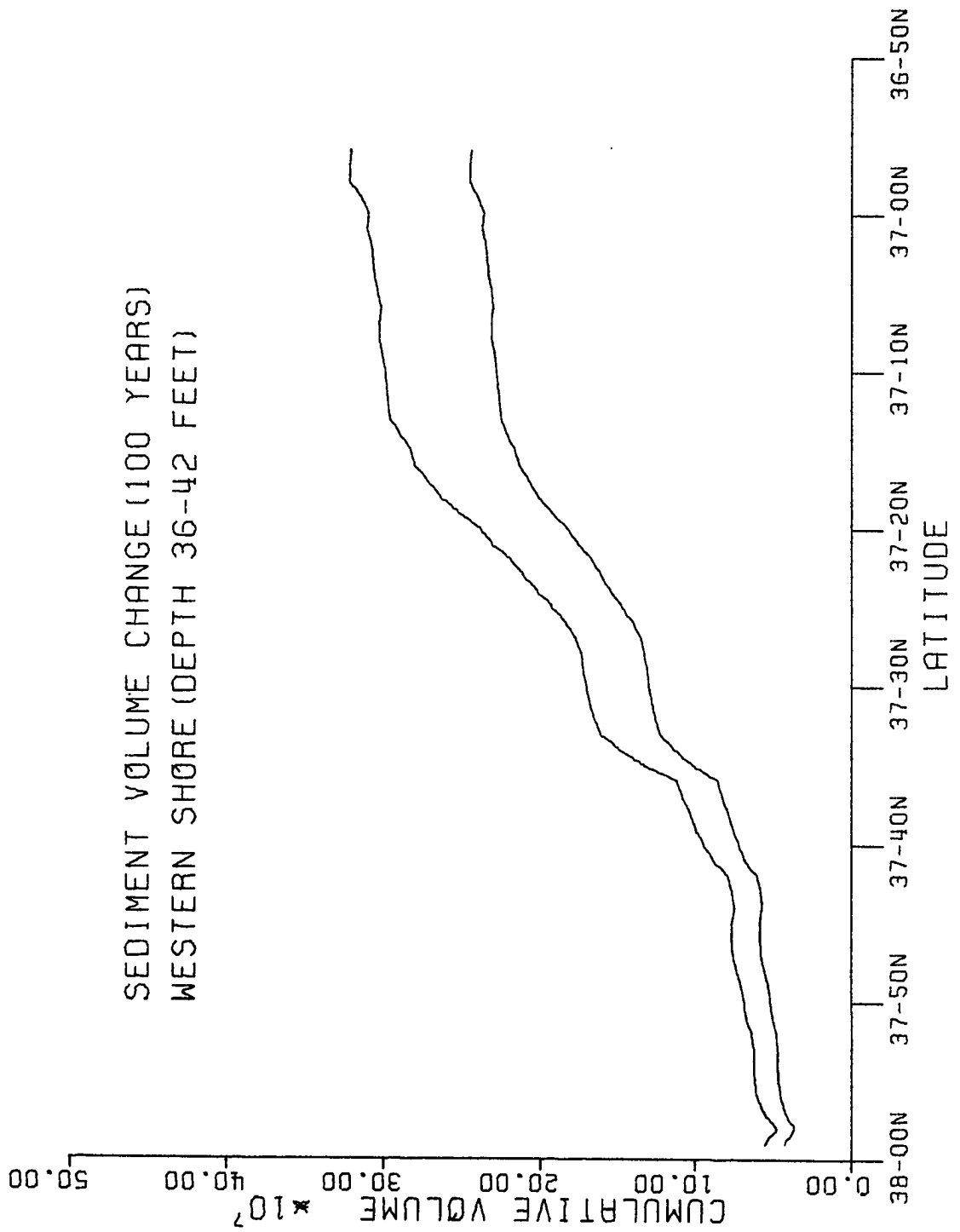


SEDIMENT VOLUME CHANGE (100 YEARS)  
 WESTERN SIDE TANGIER-SMITH ISLANDS (DEPTH 30-36 FEET)

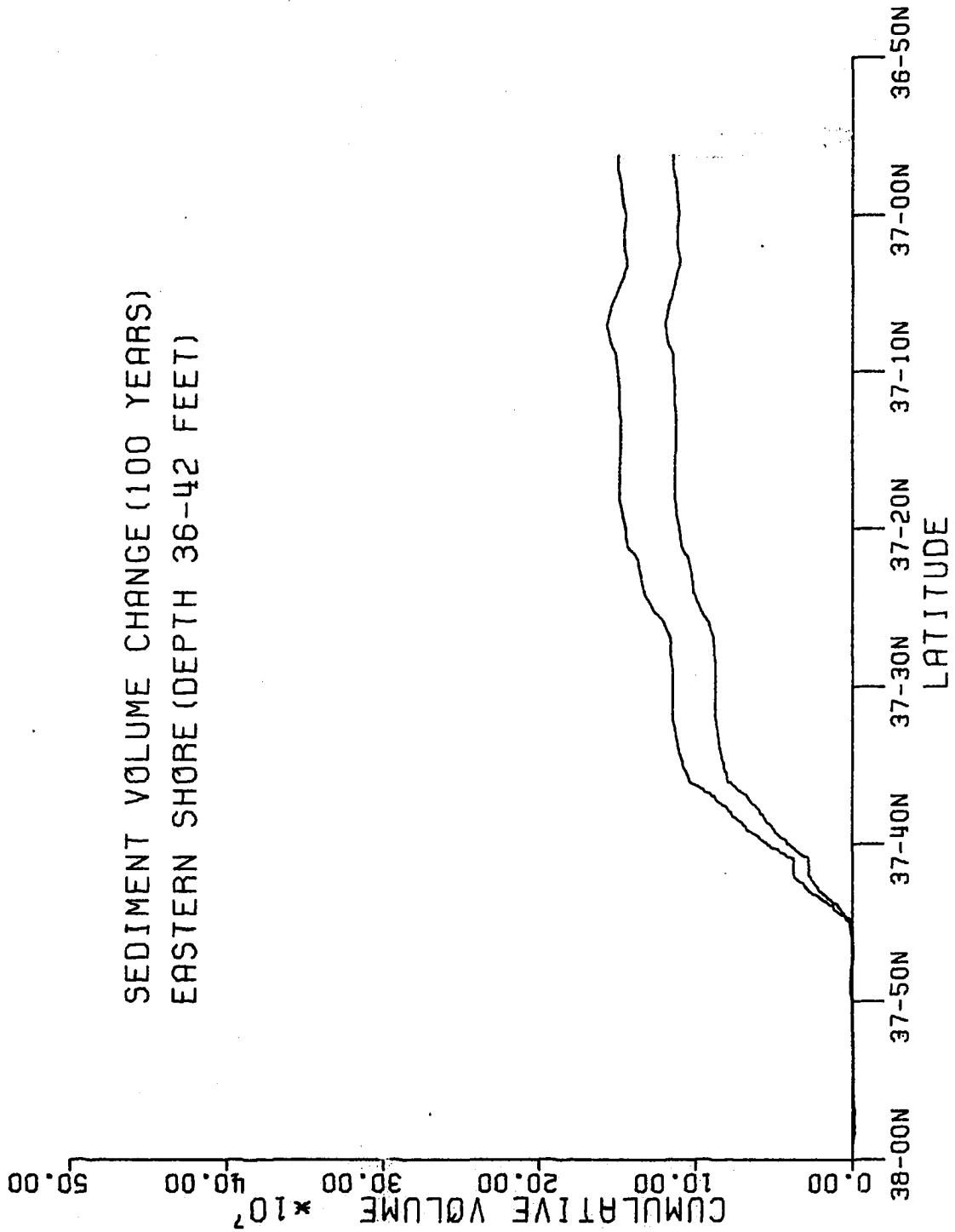




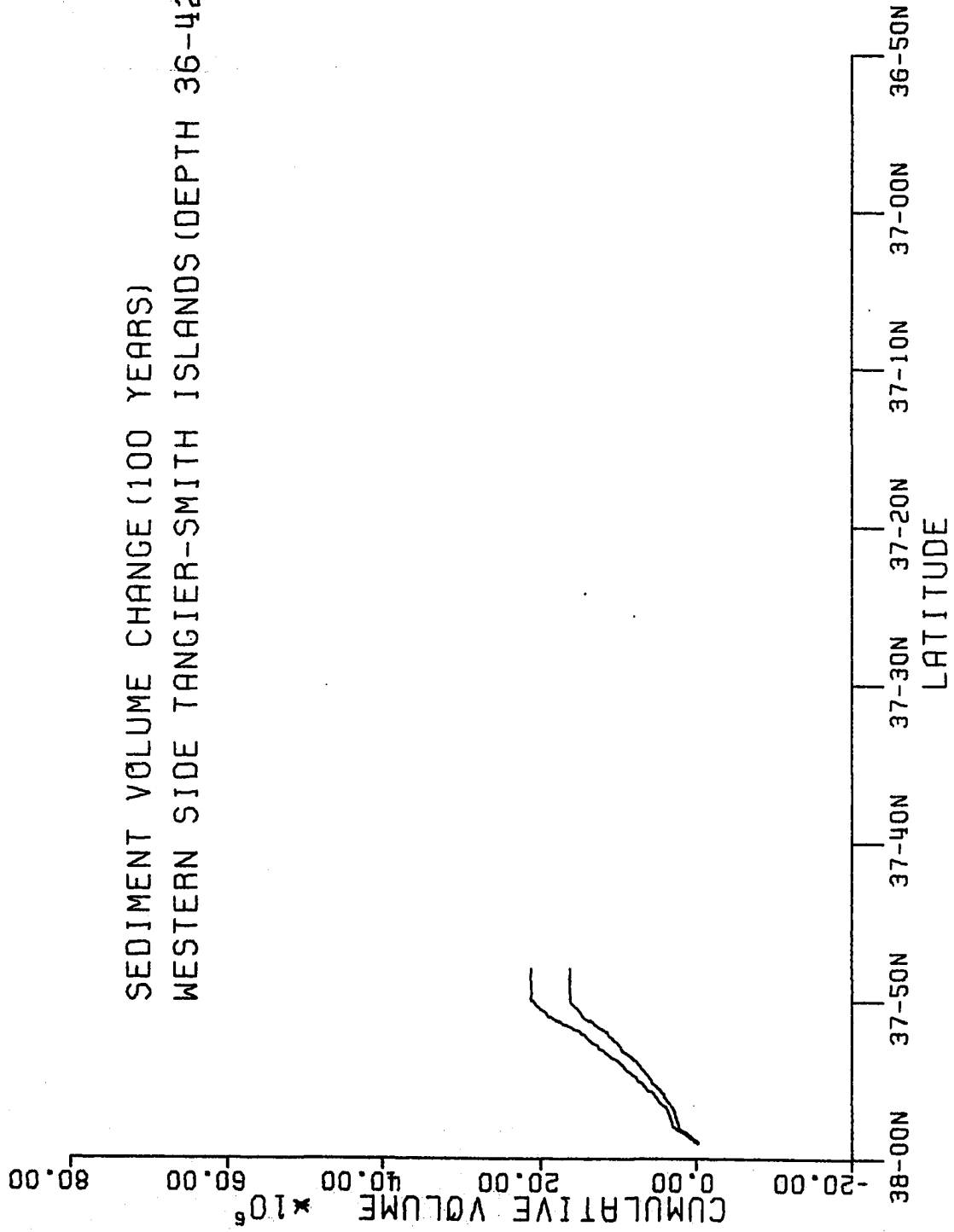


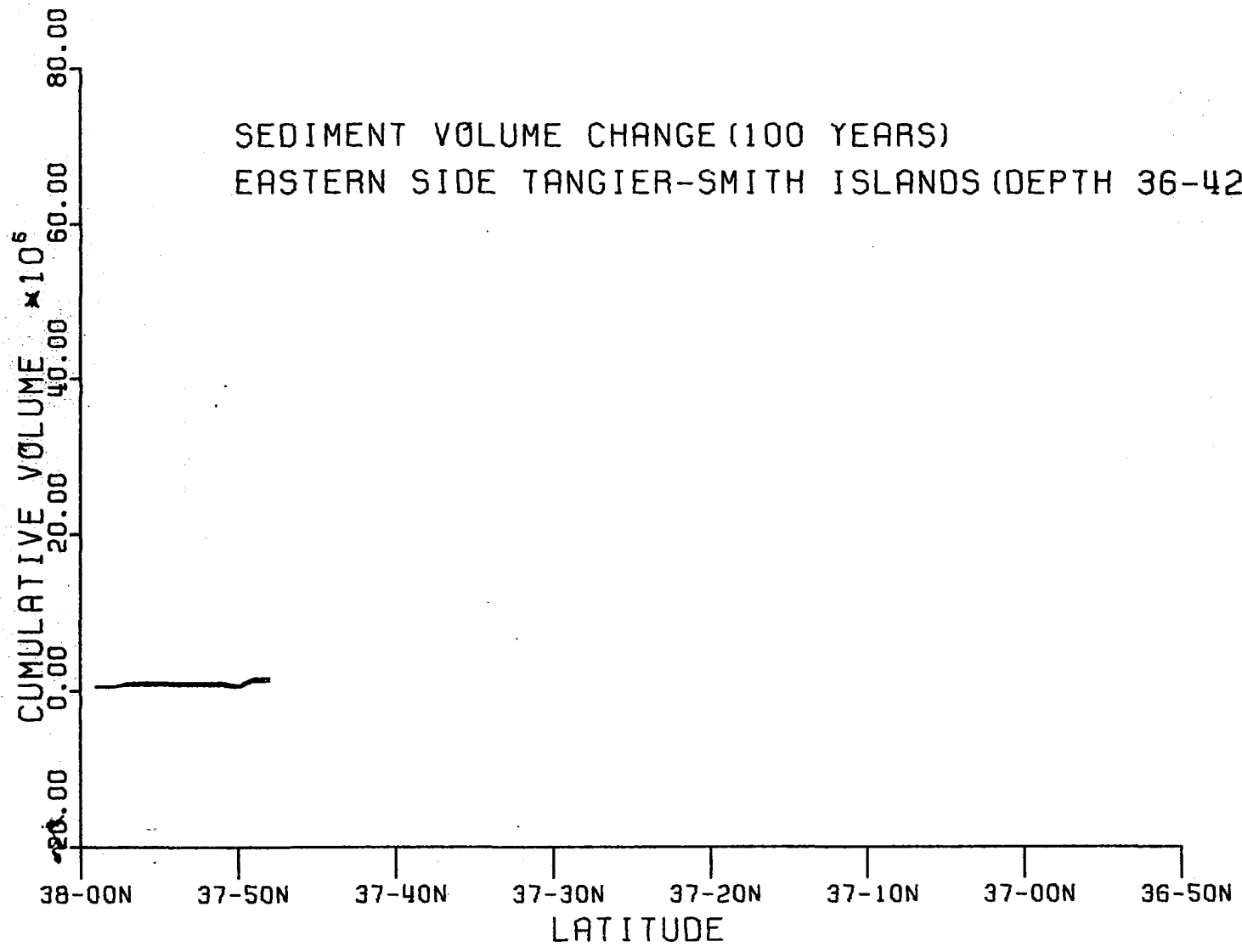


SEDIMENT VOLUME CHANGE (100 YEARS)  
EASTERN SHORE (DEPTH 36-42 FEET)



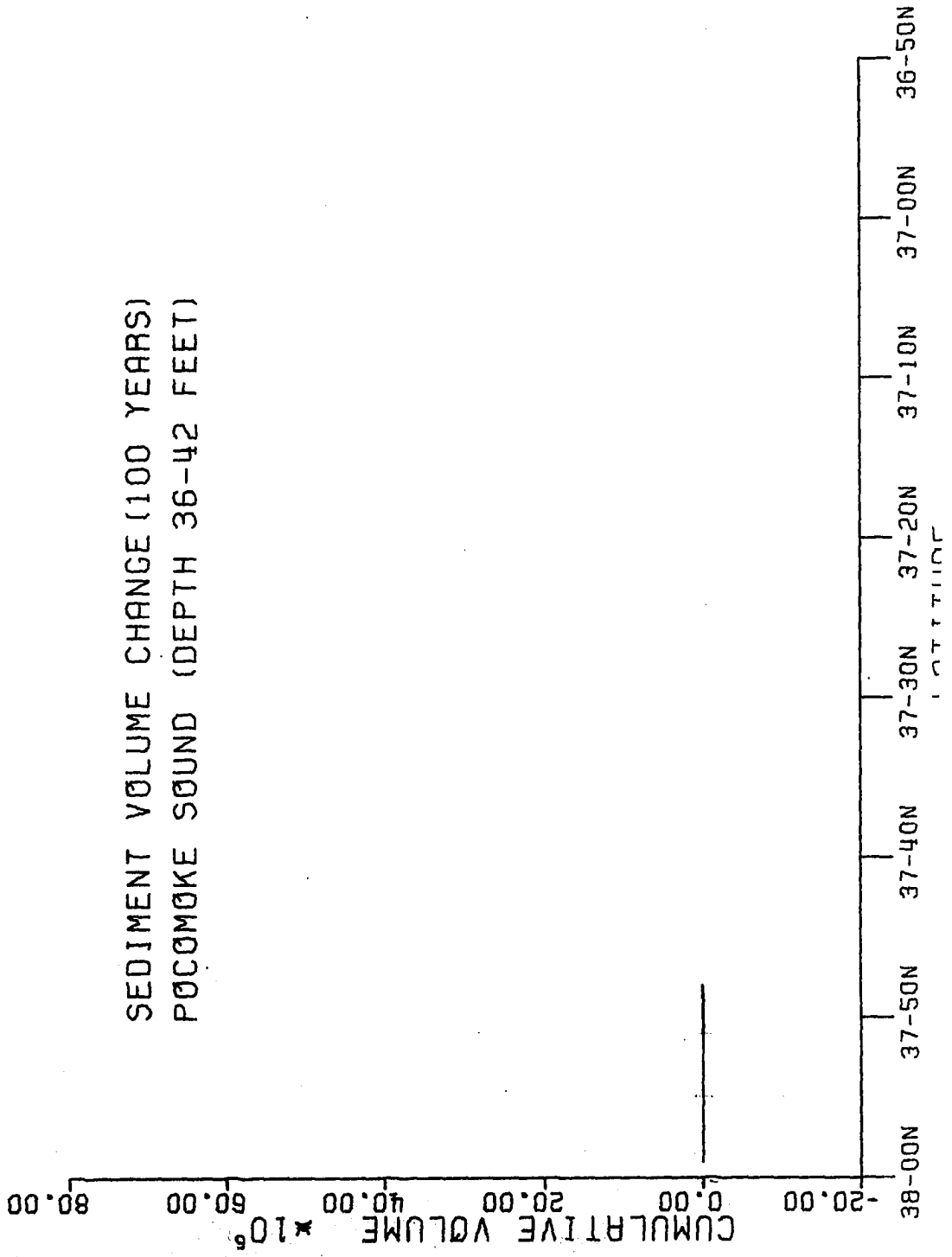
SEDIMENT VOLUME CHANGE (100 YEARS)  
WESTERN SIDE TANGIER-SMITH ISLANDS (DEPTH 36-42 FEET)

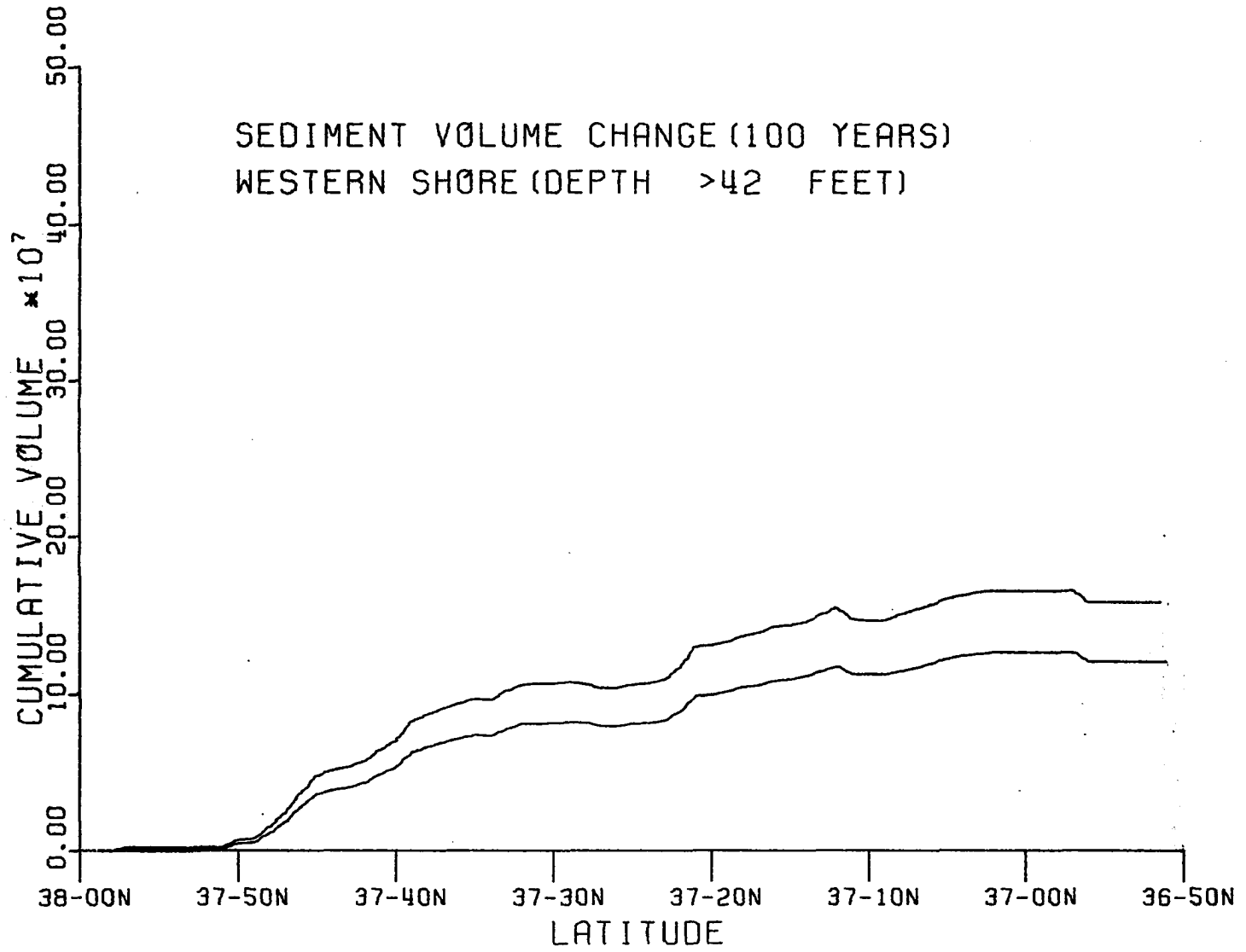




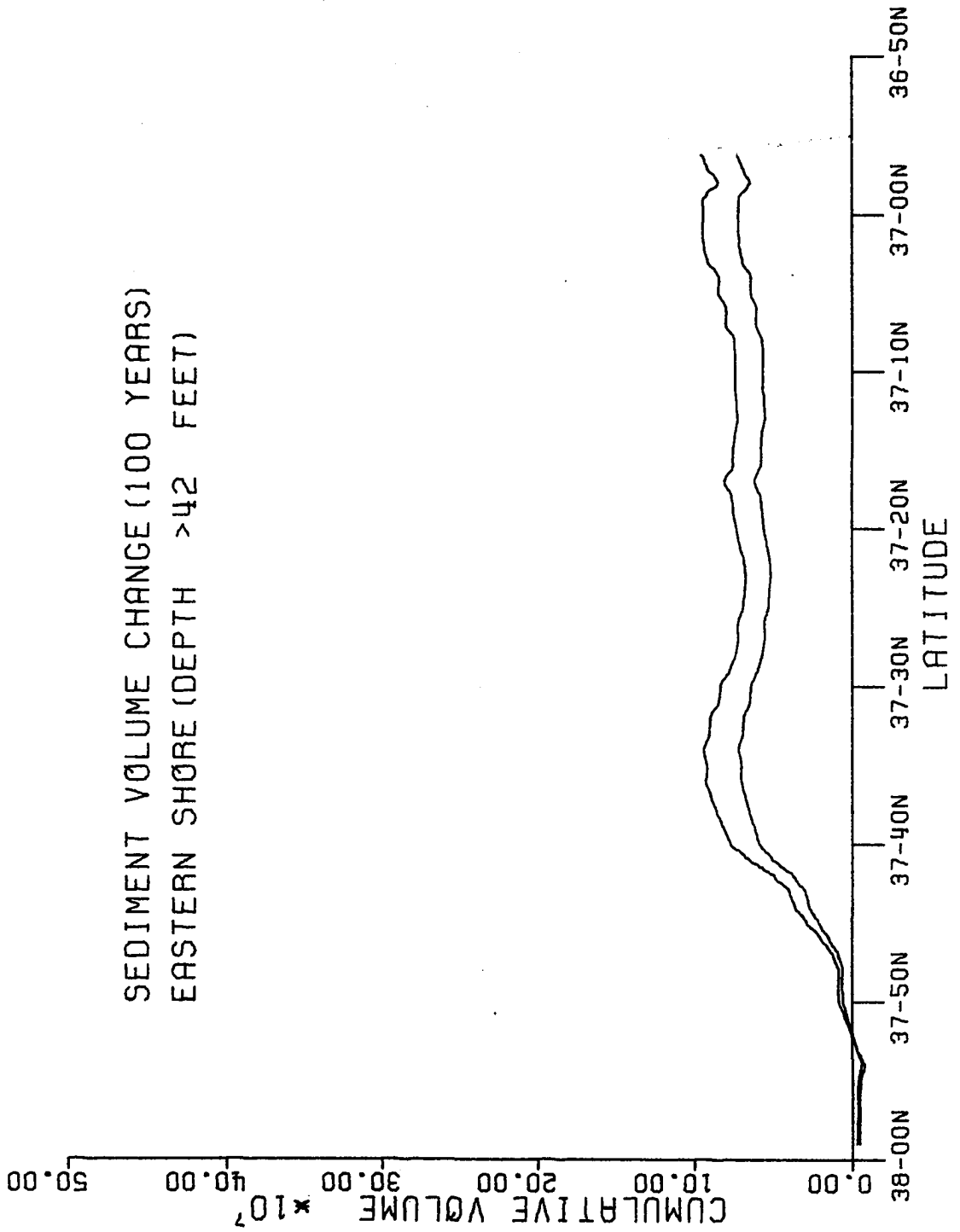


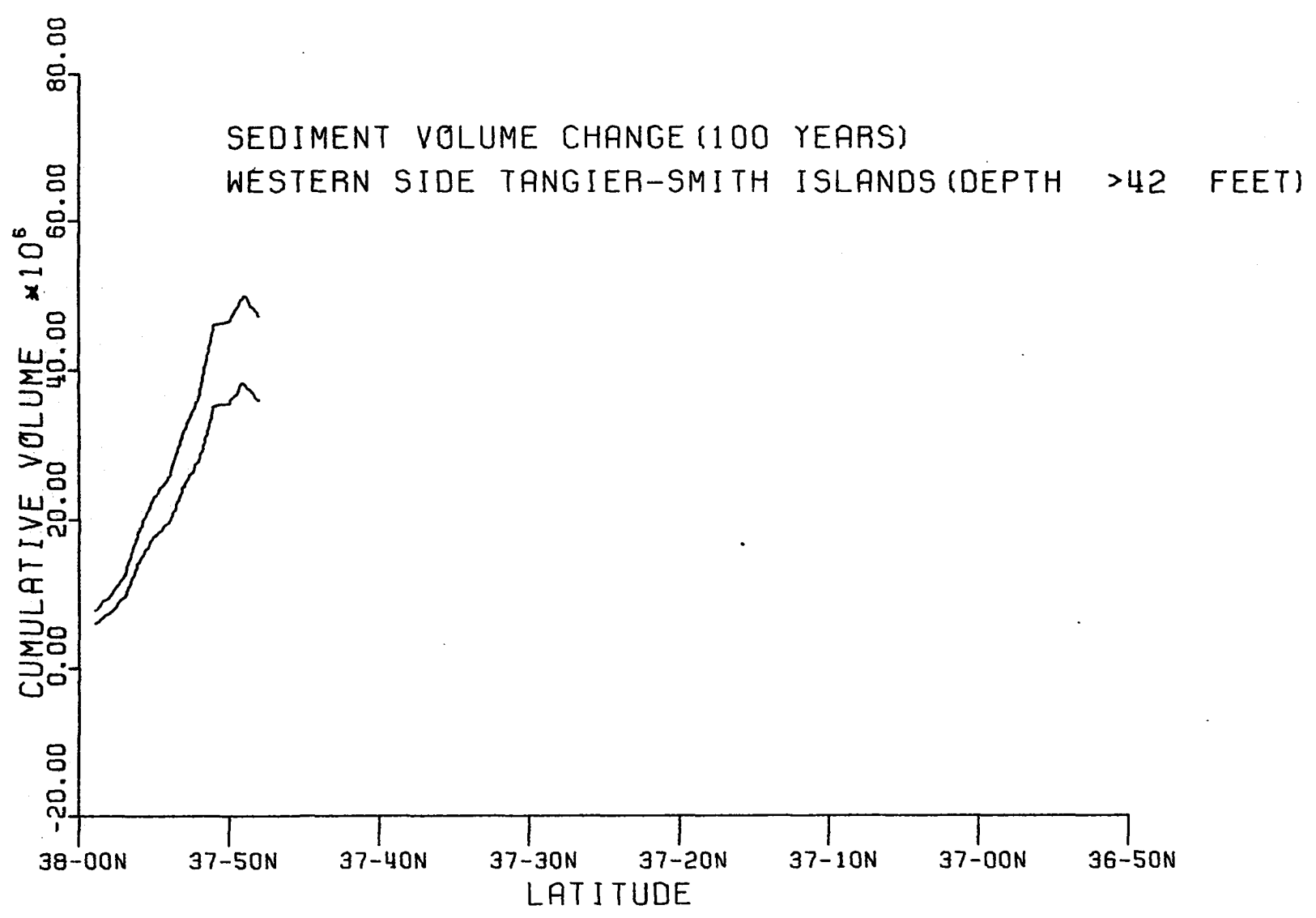
SEDIMENT VOLUME CHANGE (100 YEARS)  
 POCOMOKE SOUND (DEPTH 36-42 FEET)



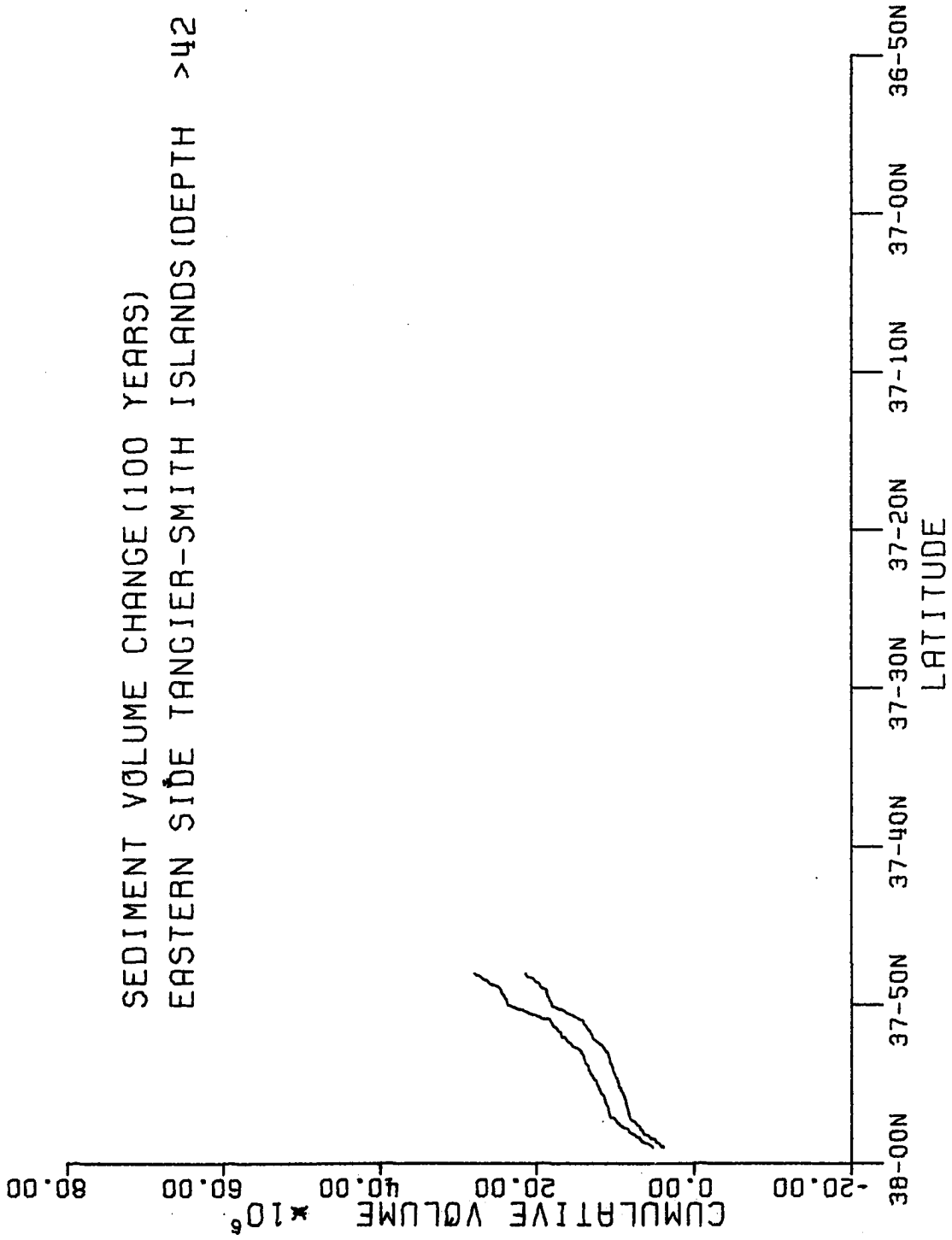


SEDIMENT VOLUME CHANGE (100 YEARS)  
EASTERN SHORE (DEPTH >42 FEET)

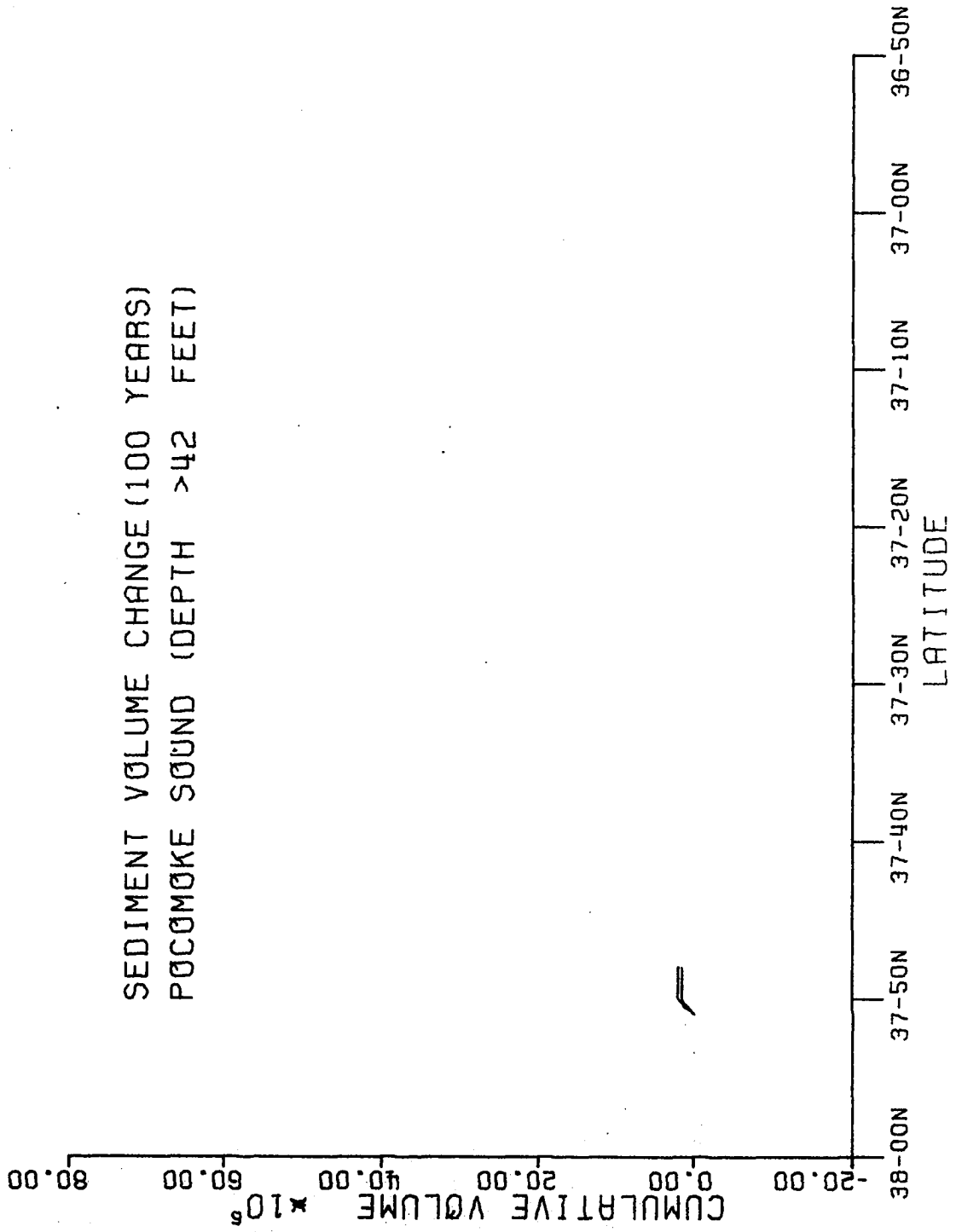




SEDIMENT VOLUME CHANGE (100 YEARS)  
 EASTERN SIDE TANGIER-SMITH ISLANDS (DEPTH >42 FEET)



SEDIMENT VOLUME CHANGE (100 YEARS)  
 ПОСМОТРЕ СЛУНД (DEPTH >42 FEET)



## APPENDIX E

### WEST TO EAST CROSS-SECTIONS FOR EACH 1-MINUTE OF LATITUDE 38°00'N to 36°56'N FOR THE 1850- SERIES AND 1950-SERIES BATHYMETRIC SURVEYS

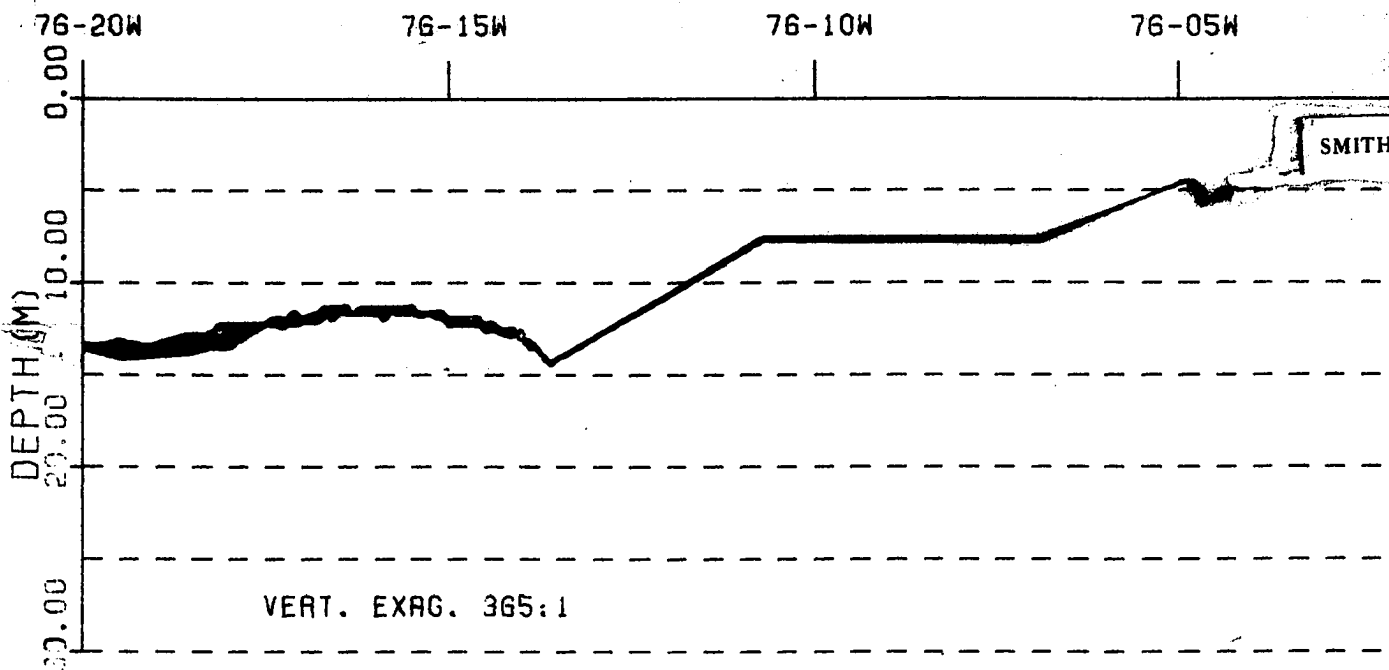
Sedimentation represented by darkened section.

Page E-2 contains a metric to english and a vertical exaggeration scale converter.

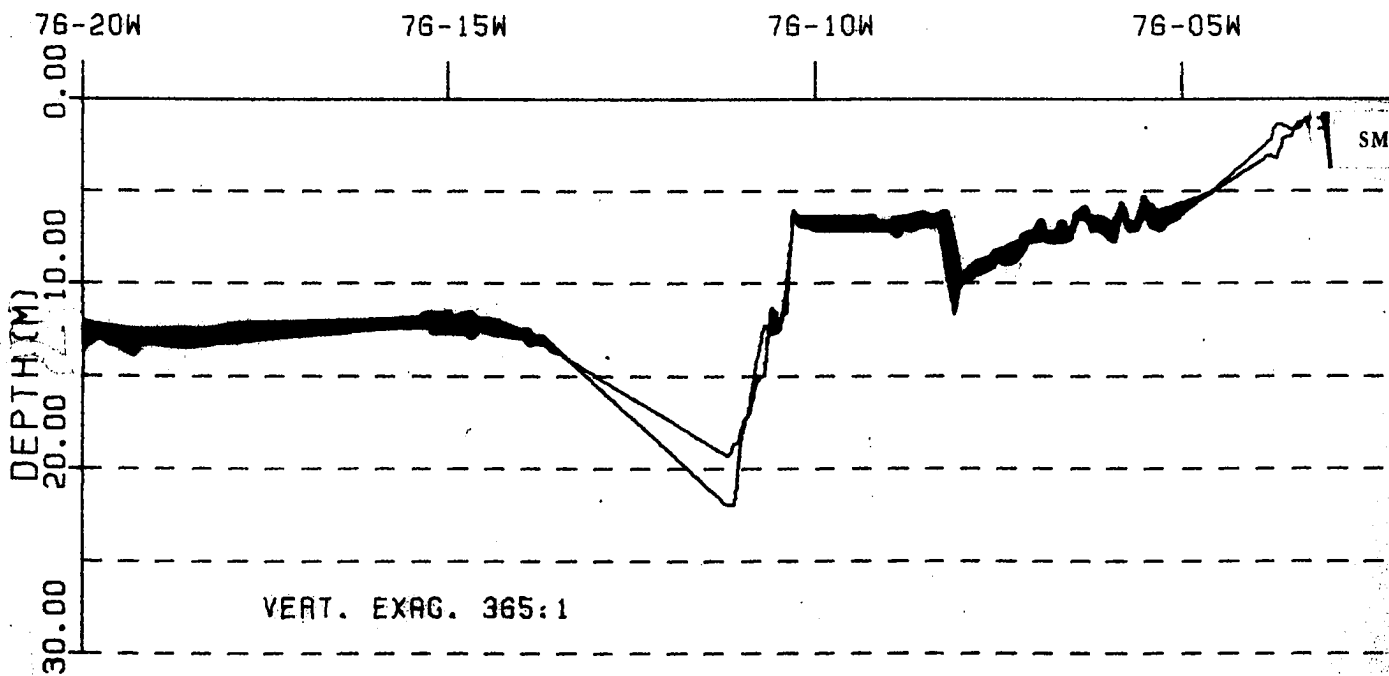
Vertical exaggeration 365:1.

Note of caution: No attempt was made to integrate any section with that to its north or south. Only original survey data points within 3-seconds of latitude were used. This may lead to the rare appearance of what appears to be sedimentation or erosion where in actuality none or just the opposite exists.

Eustatic sea level correction has been applied to all 1850-series data points.

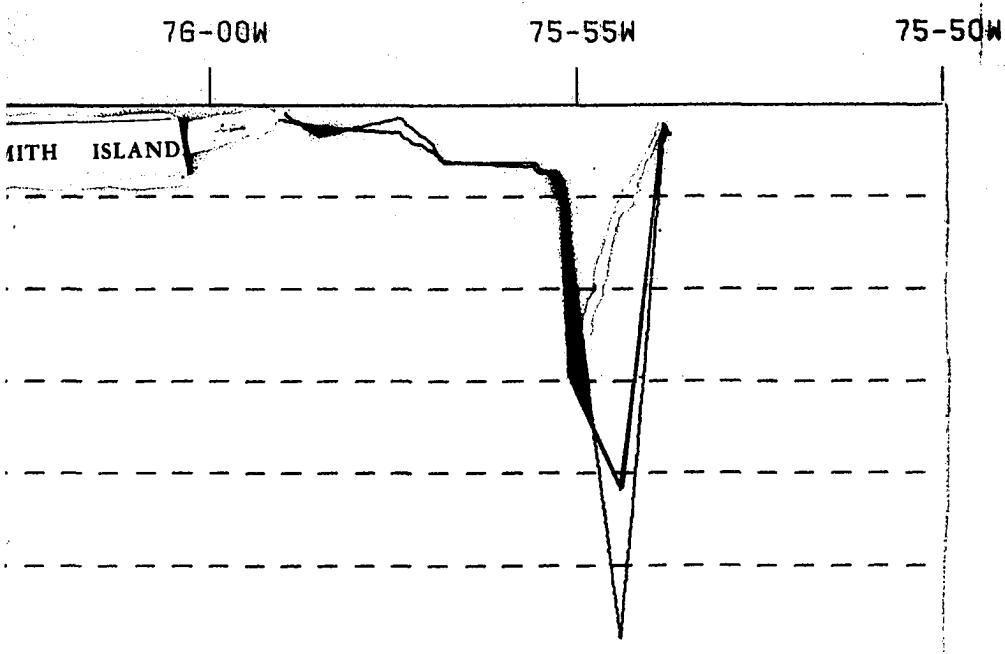


LATITUDE 37°59'N

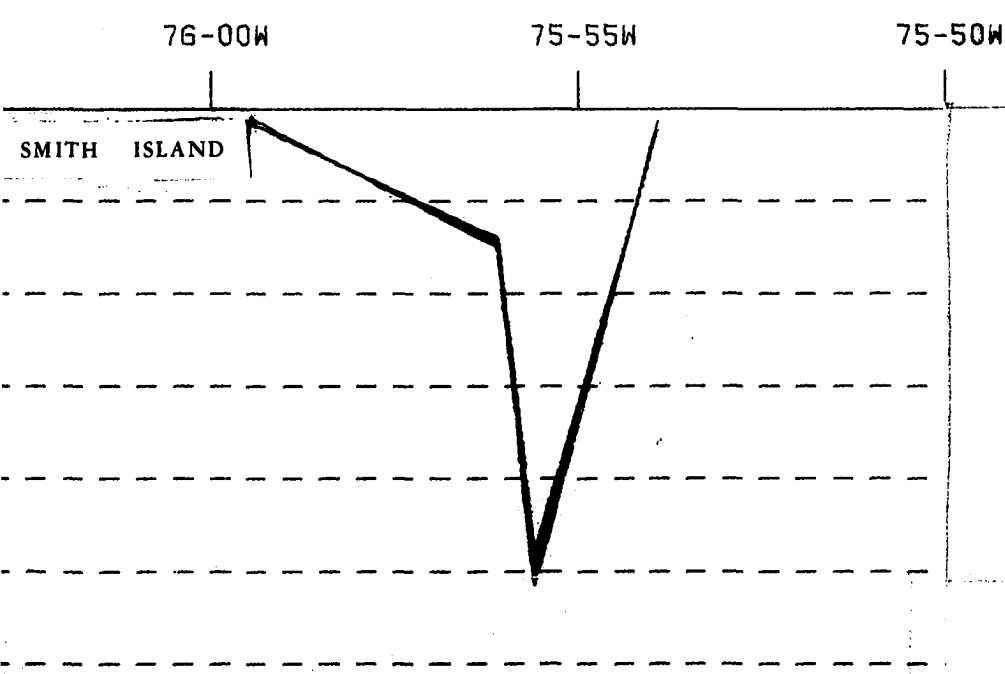








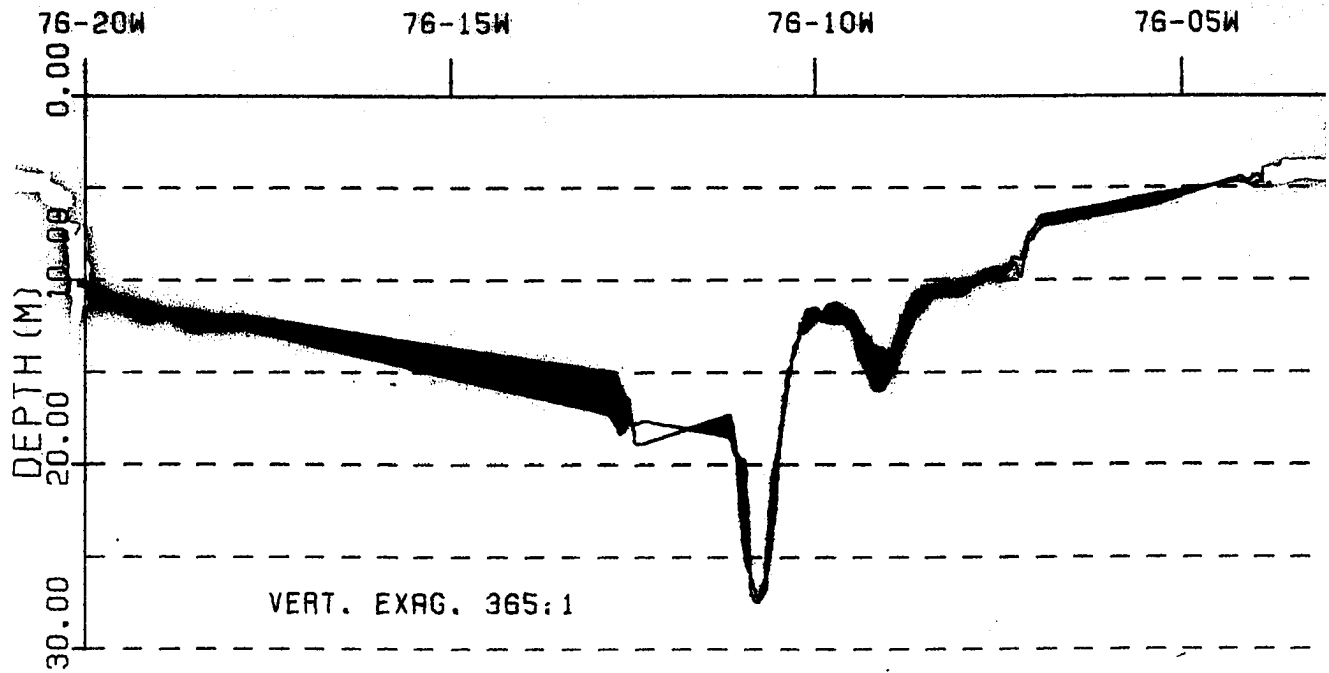
N



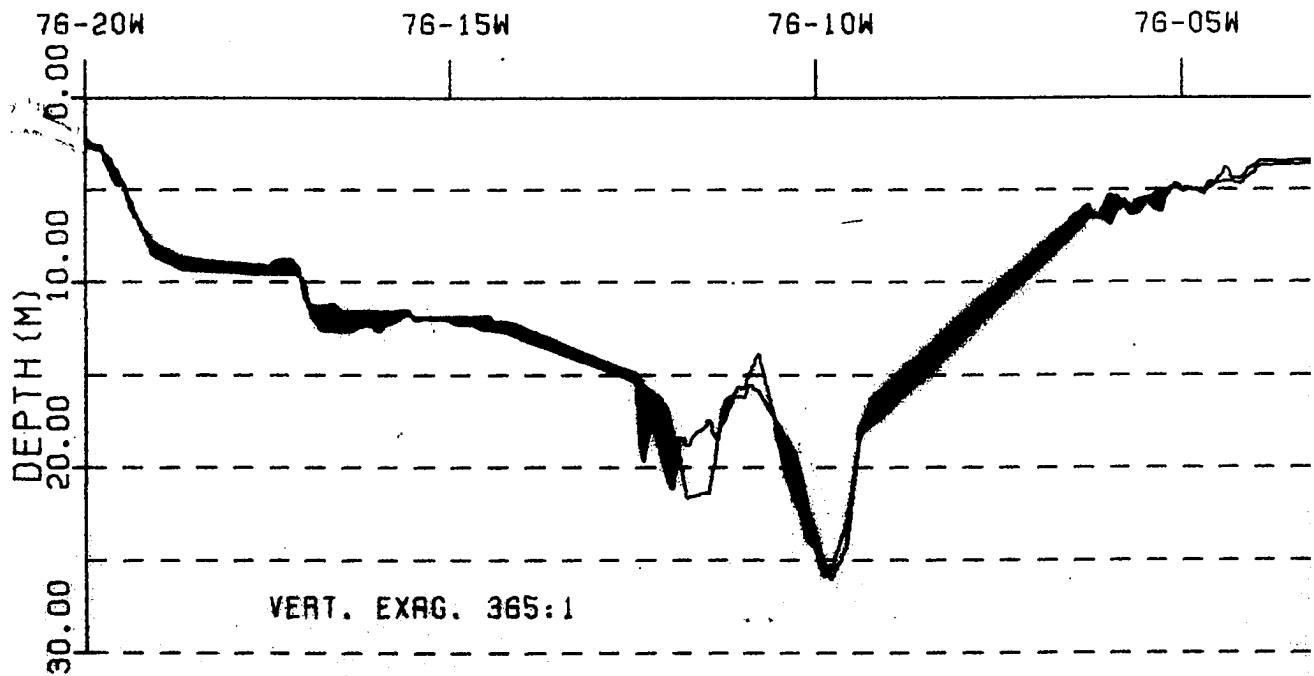
E-1



LATITUDE



LATITUDE





37°58'N

76-00W

75-55W

75-50W

75-45W

SMITH ISLAND

DELMARVA

37°57'N

76-00W

75-55W

75-50W

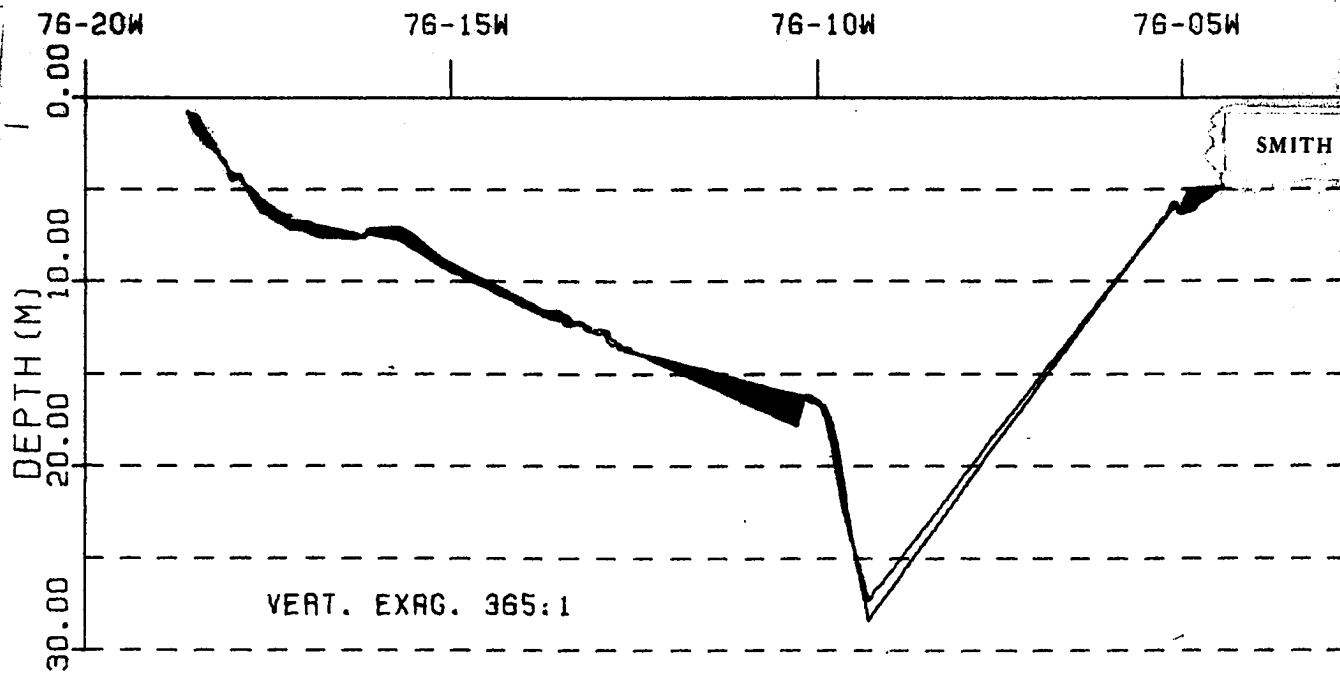
75-45W

SMITH ISLAND

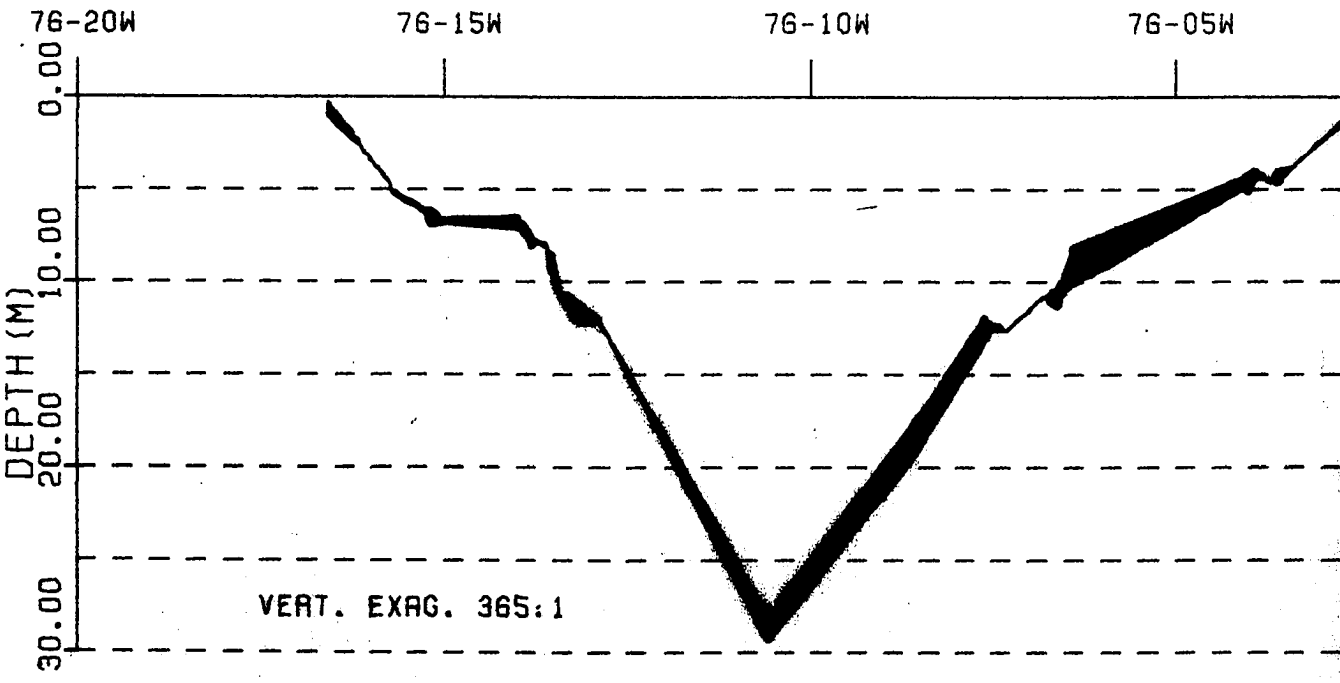
DELMARVA



LATITUDE



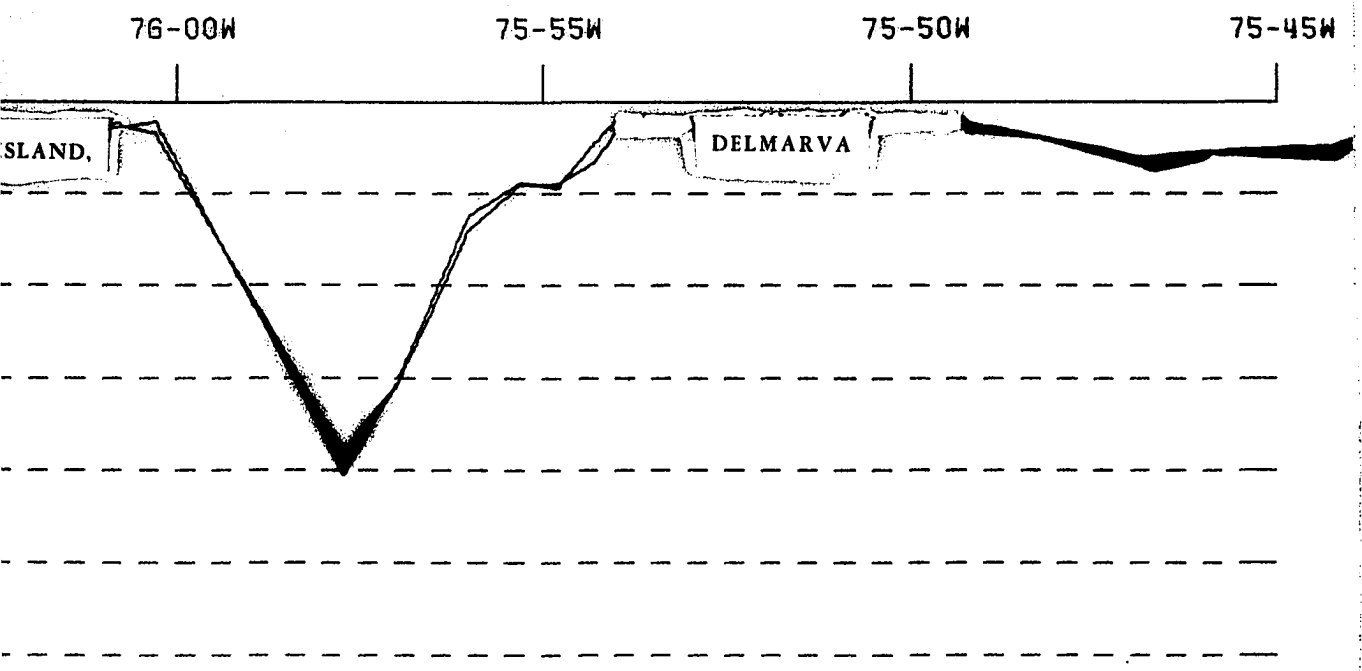
LATITUDE



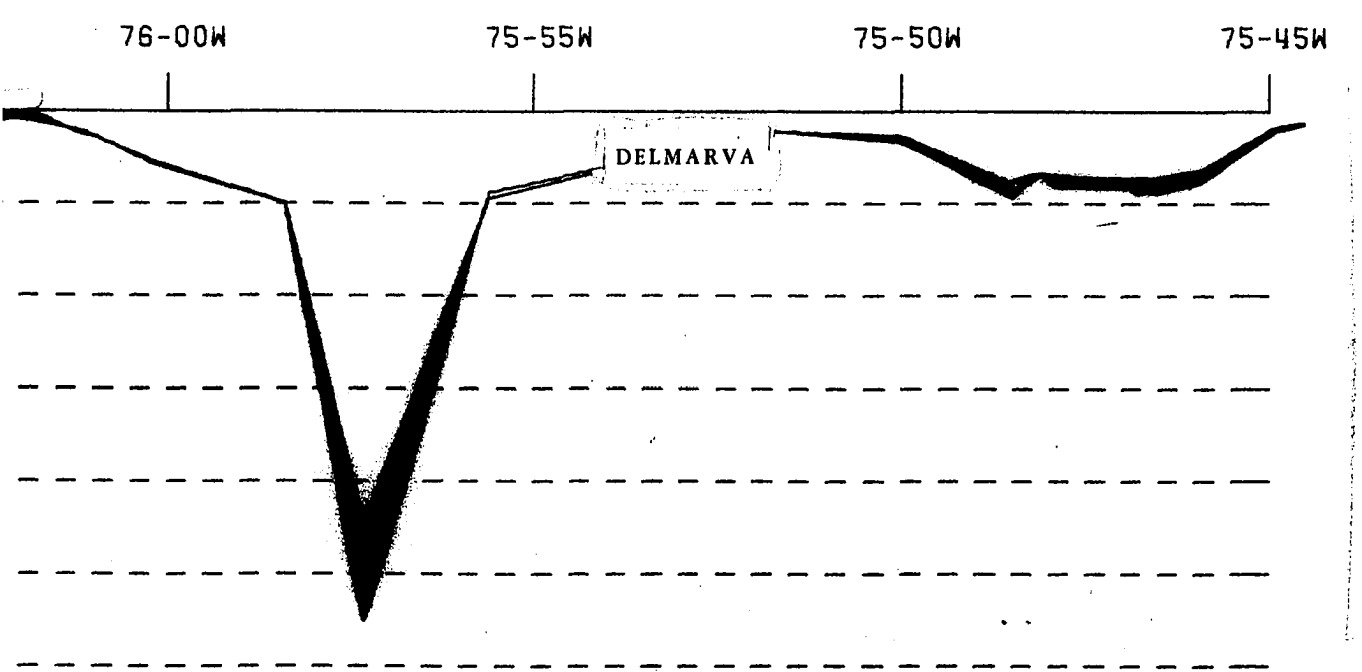




E 37°56'N



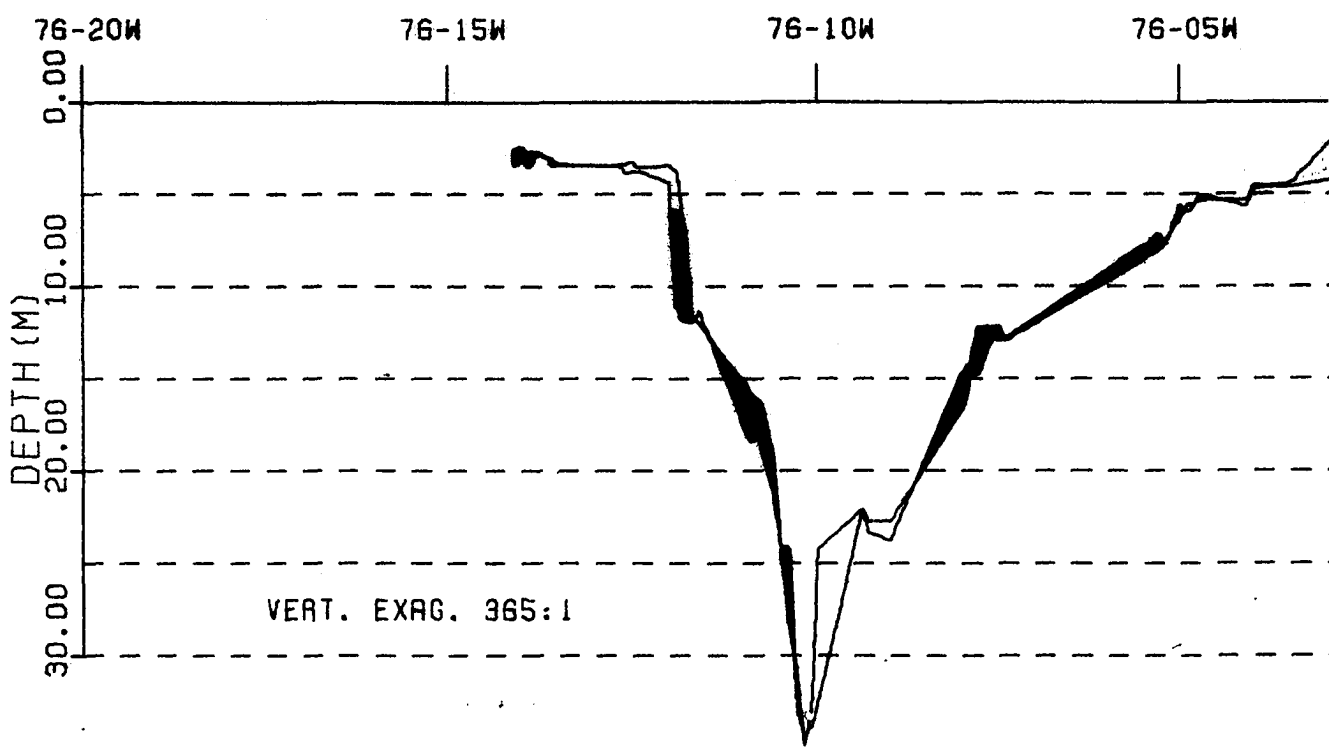
37°55'N



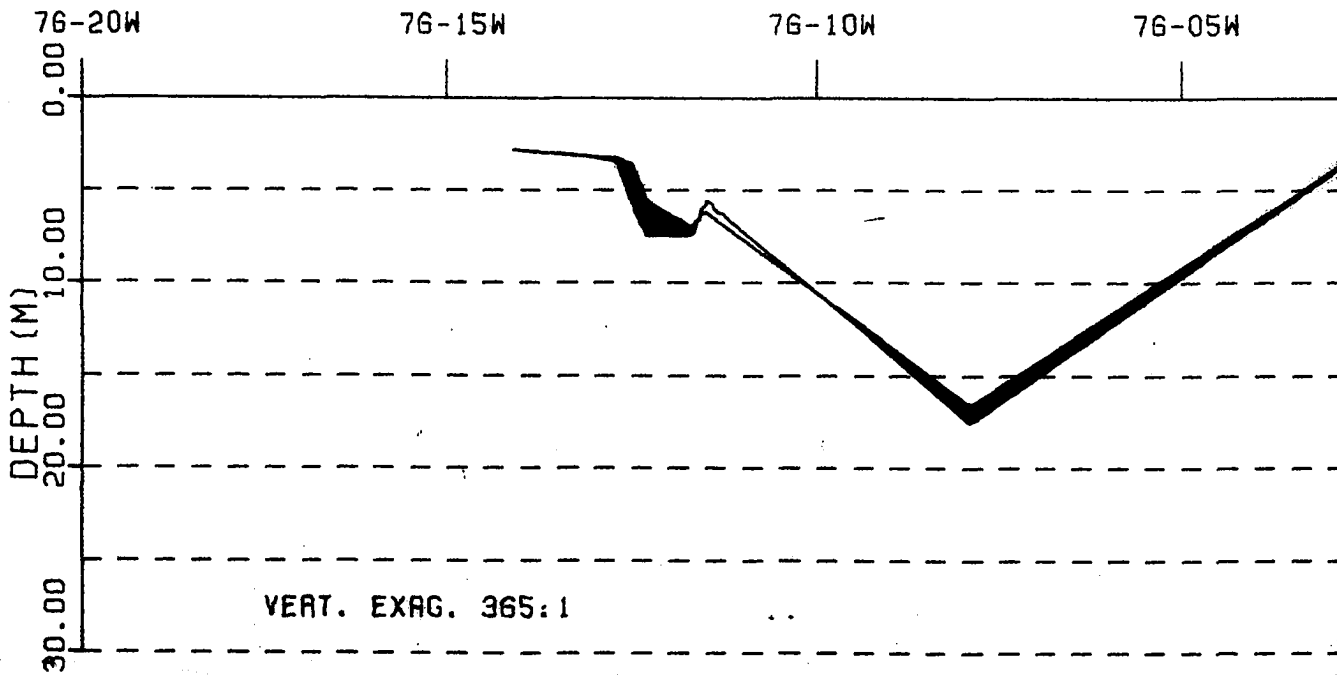
E-3



LATITU

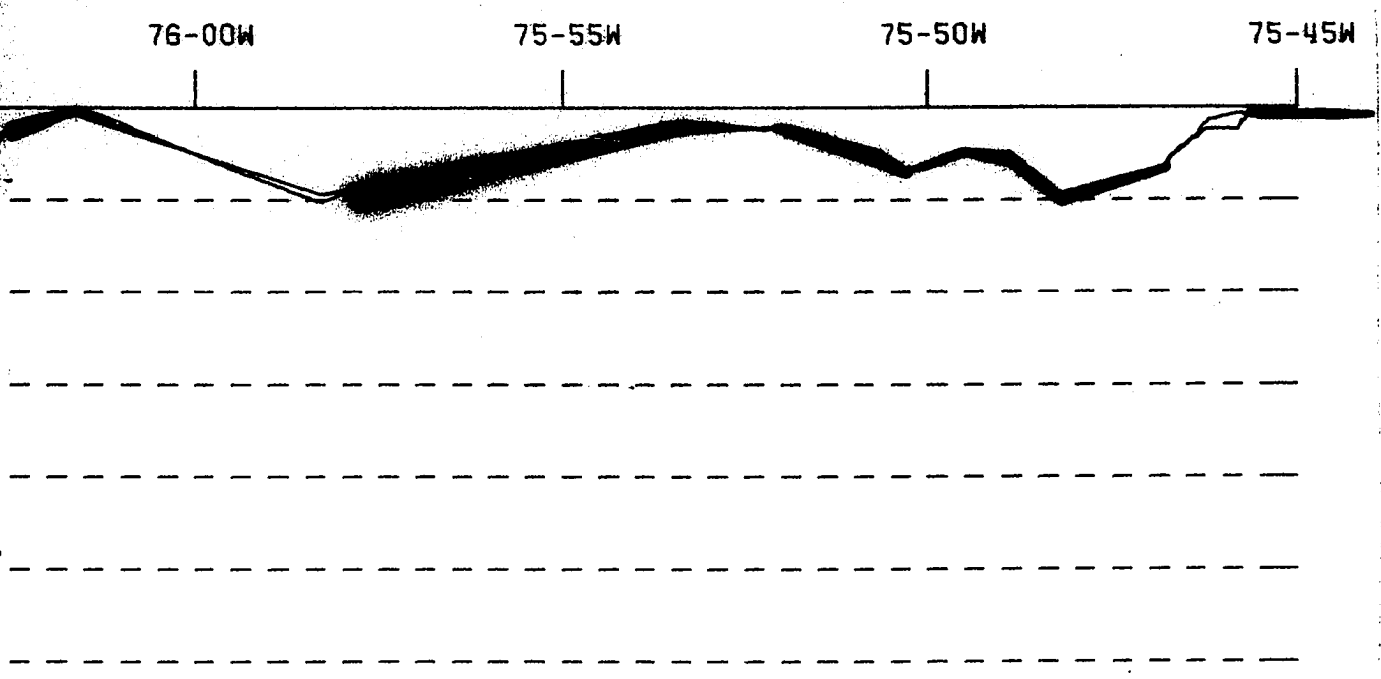


LATITUD

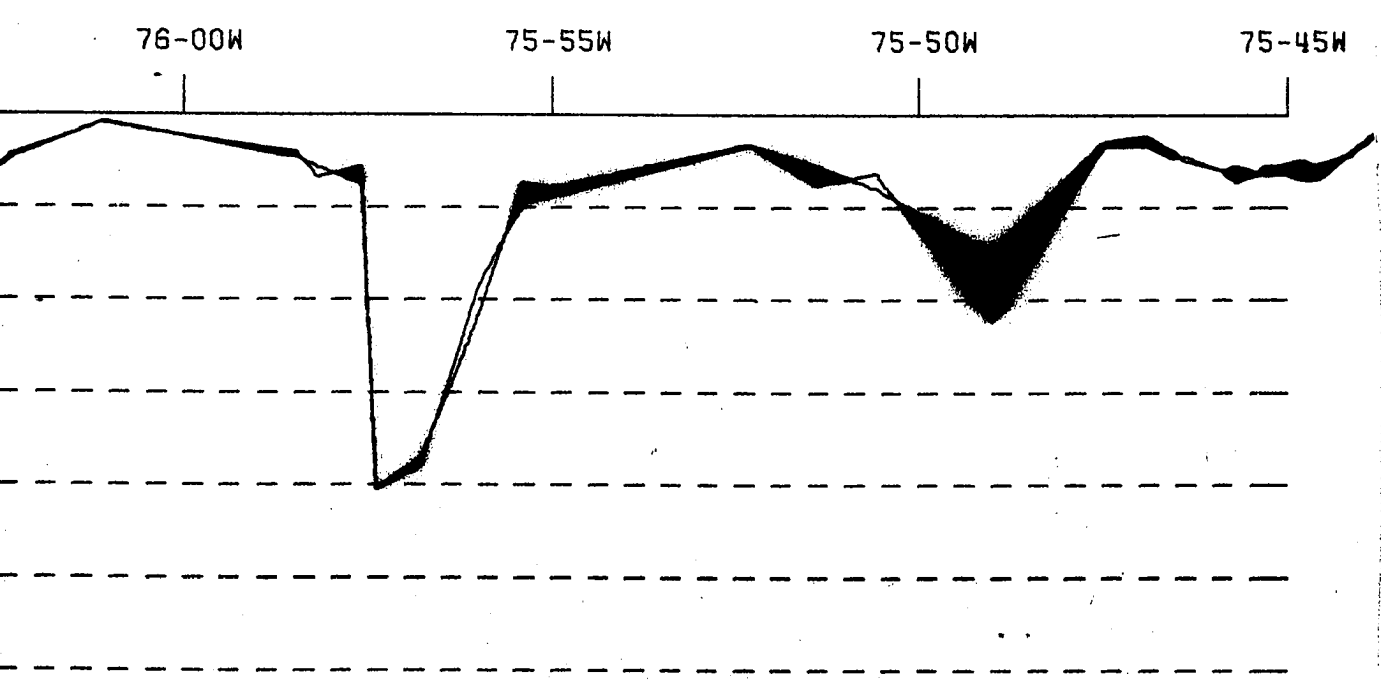




DE 37°54'N

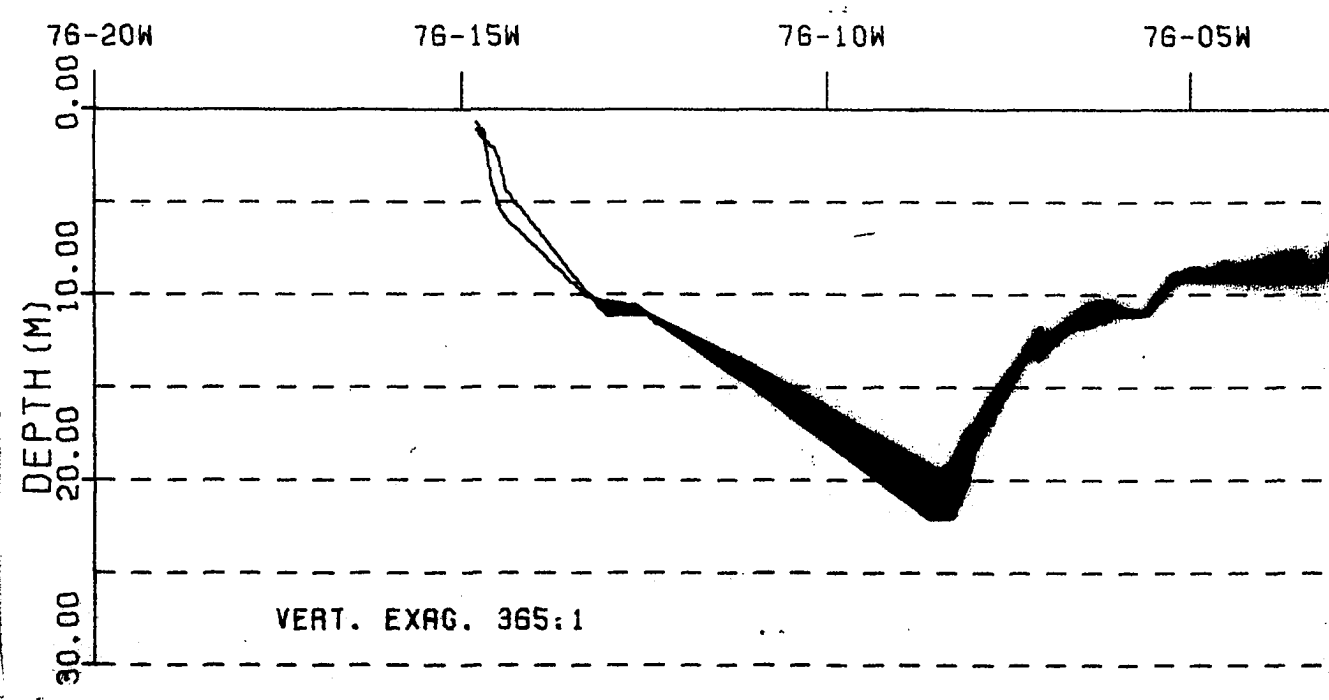
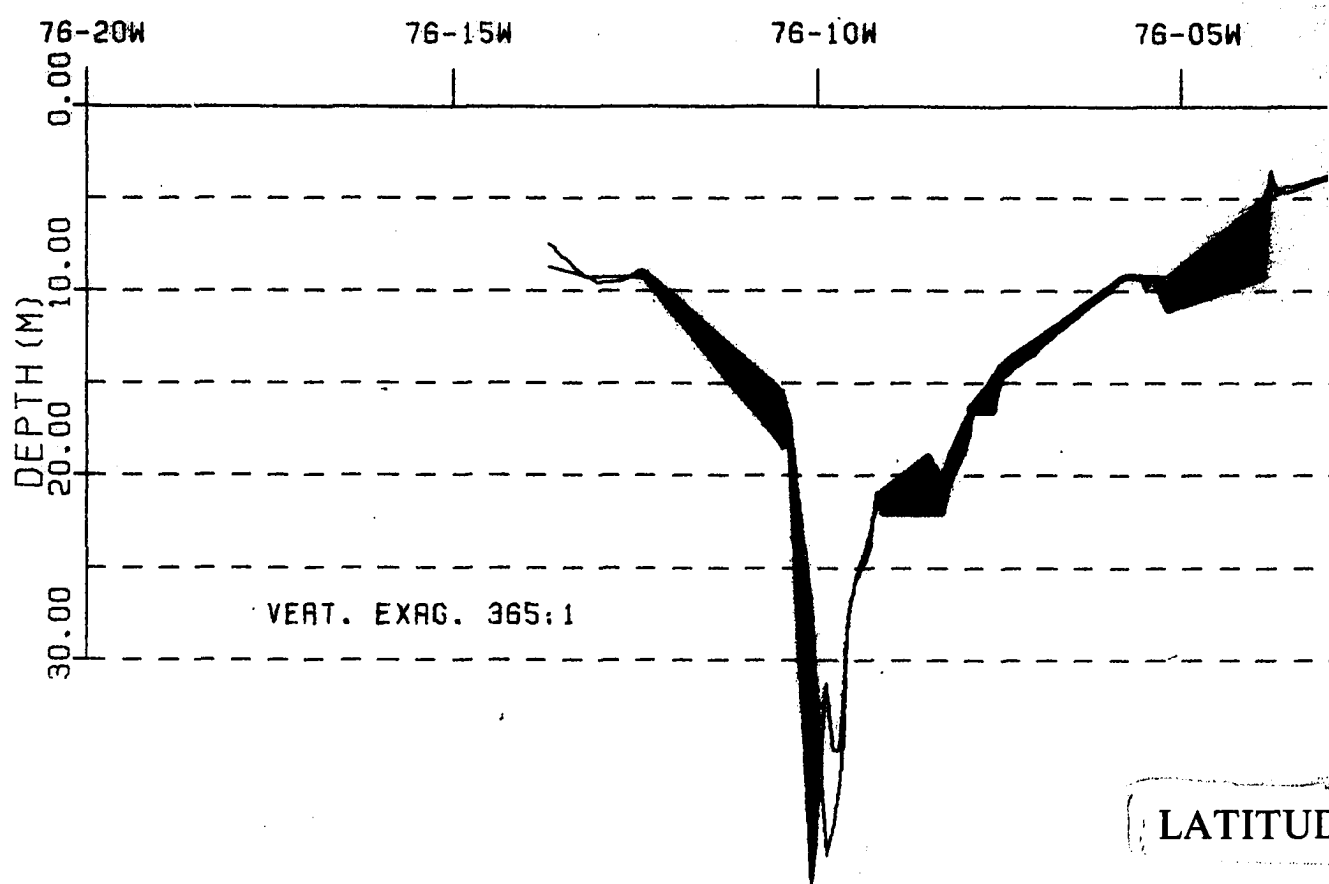


37°53'N





LATITUDE







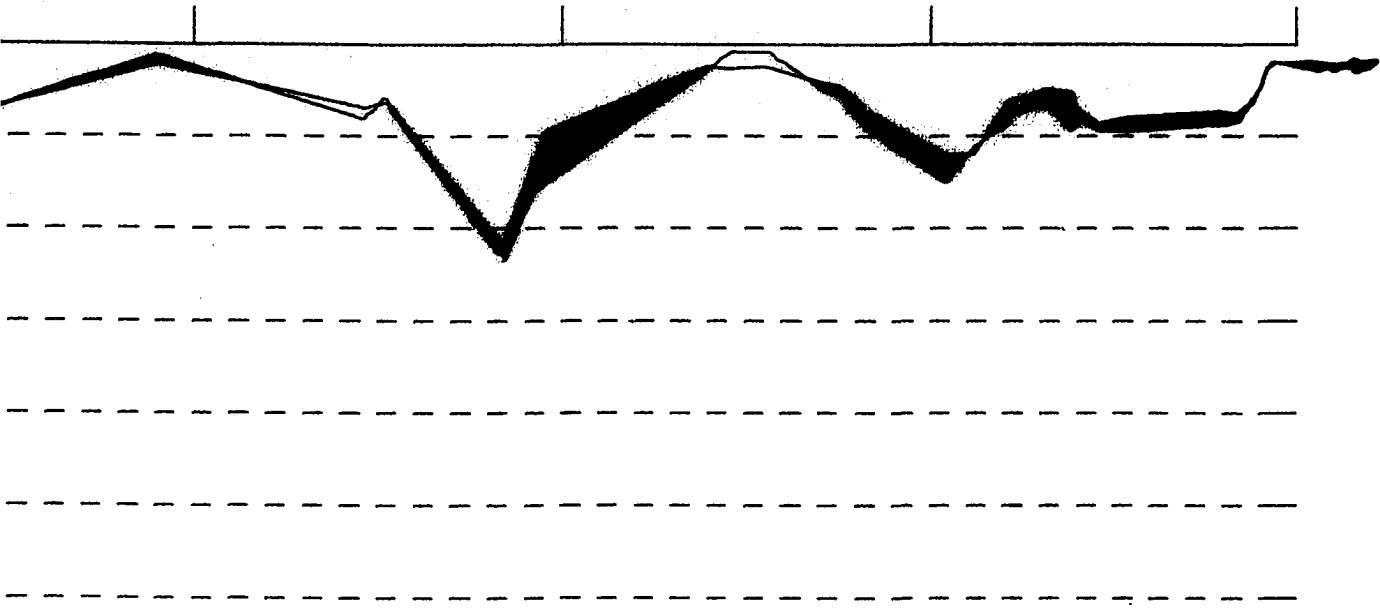
37°52'N

76-00W

75-55W

75-50W

75-45W



37°51'N

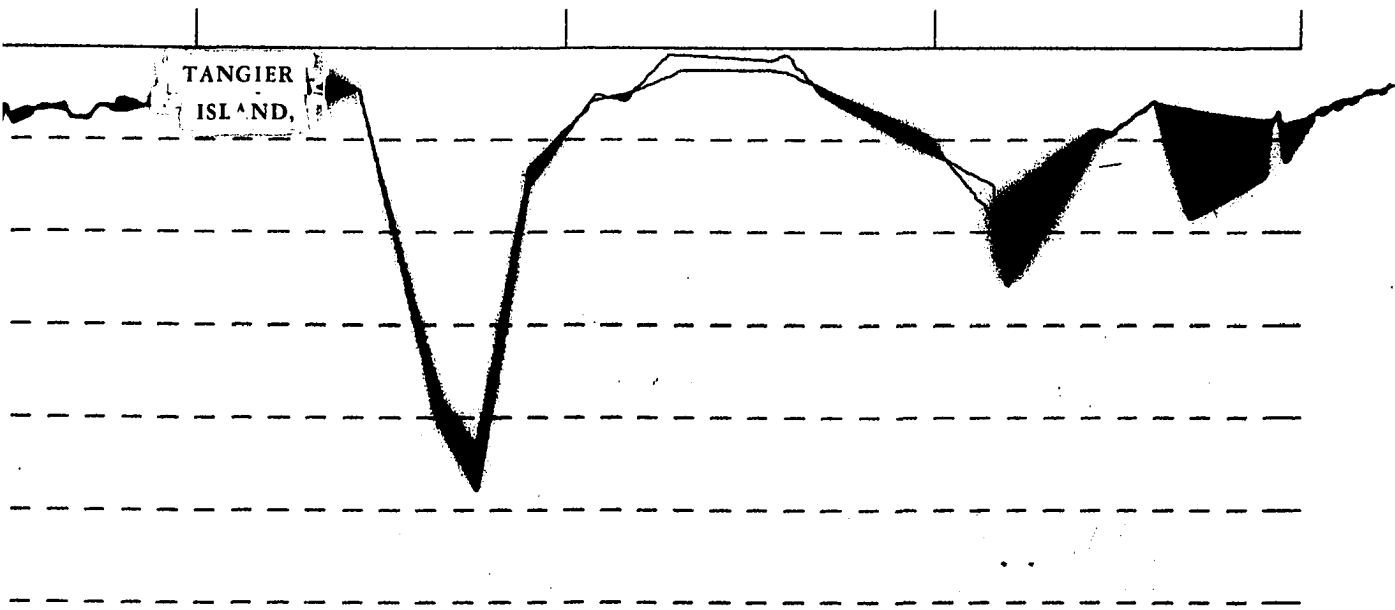
76-00W

75-55W

75-50W

75-45W

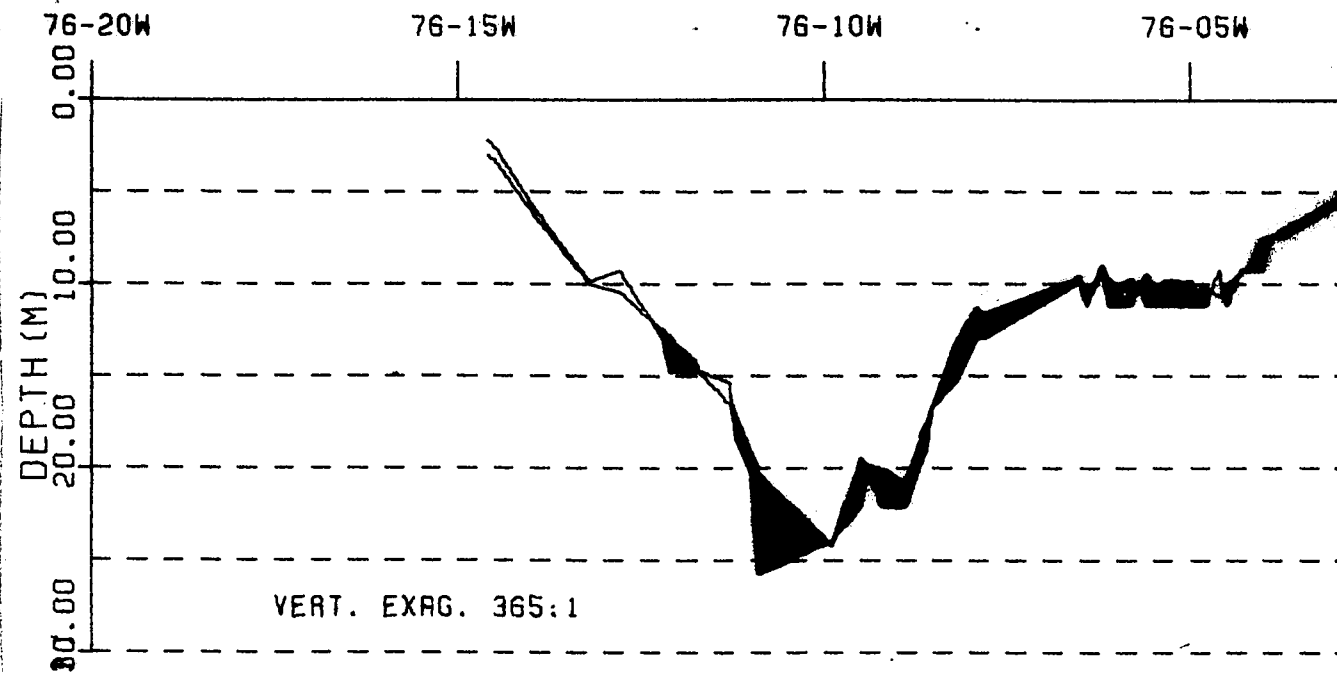
TANGIER ISLAND.



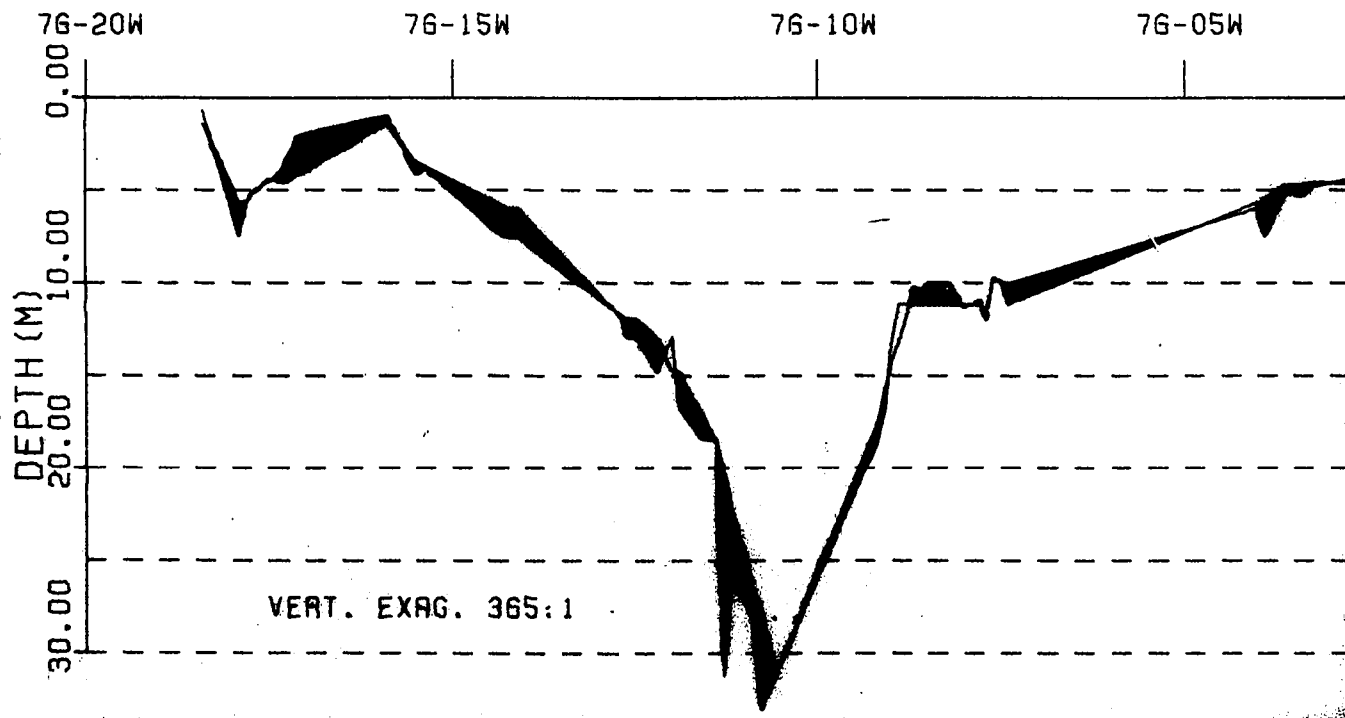
E-5



LATITUDE

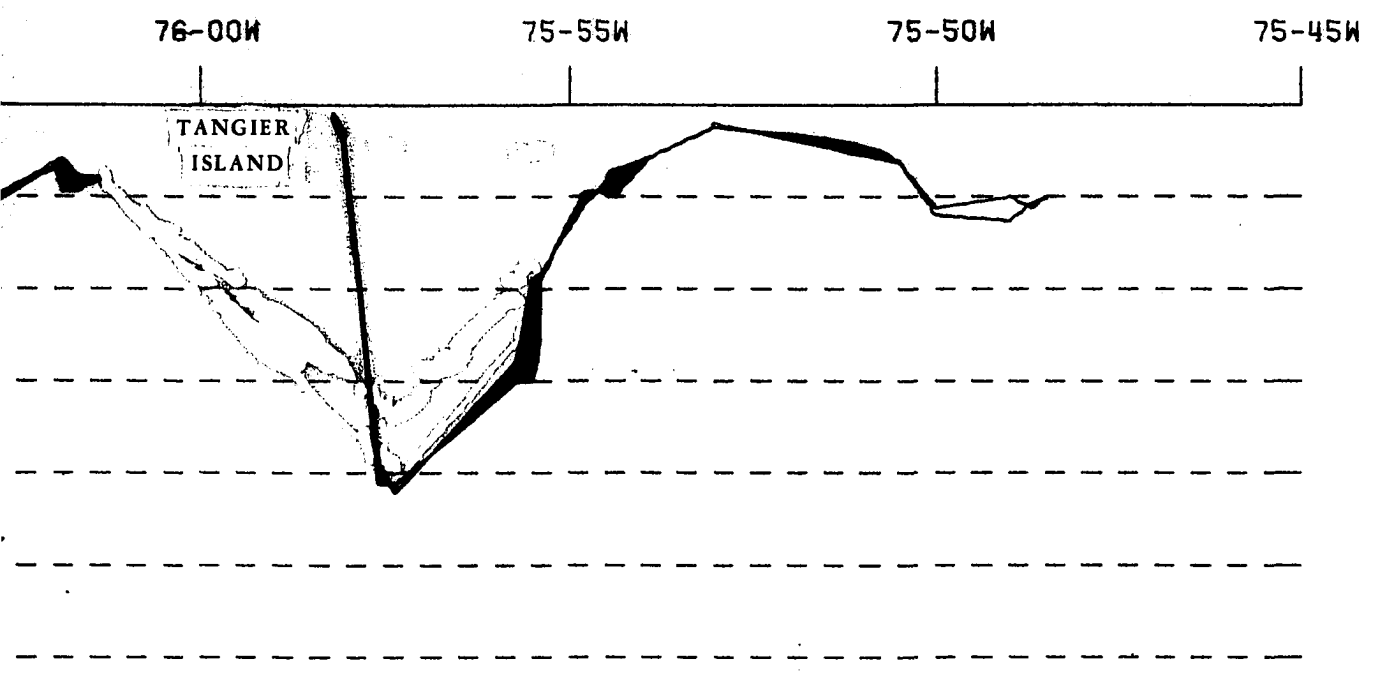


LATITUDE

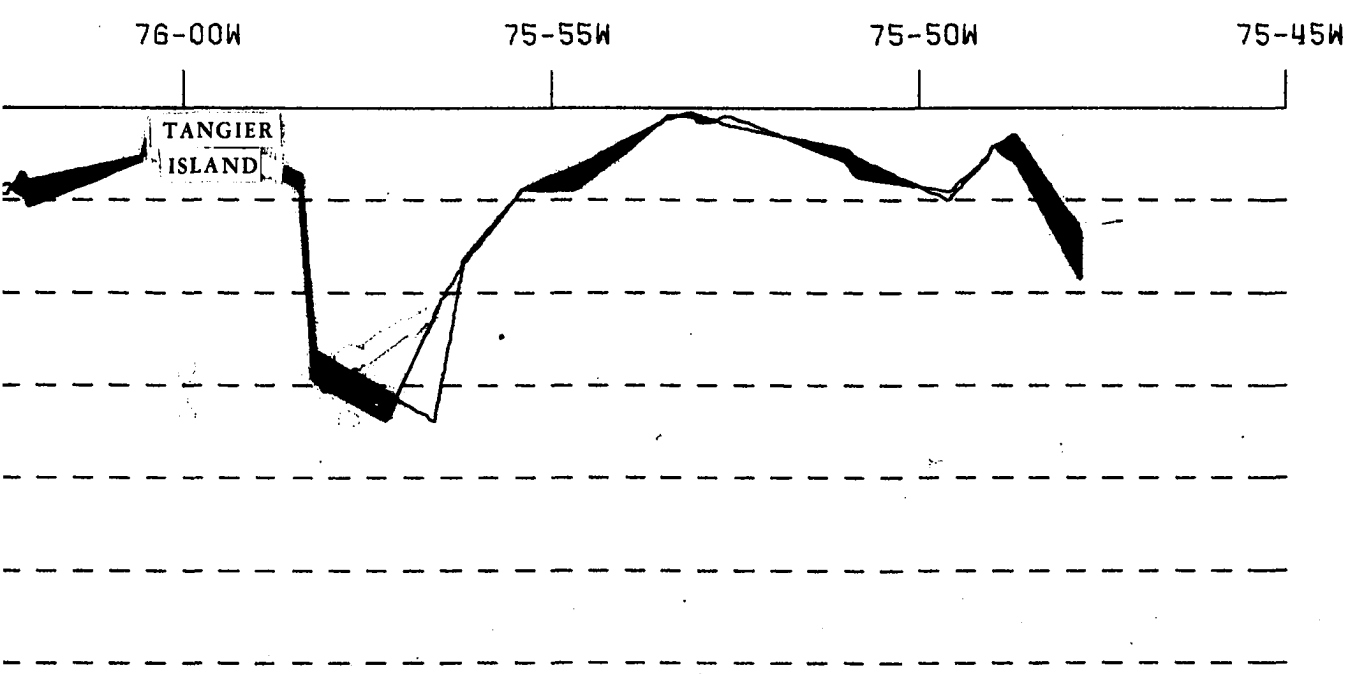




E 37°50'N

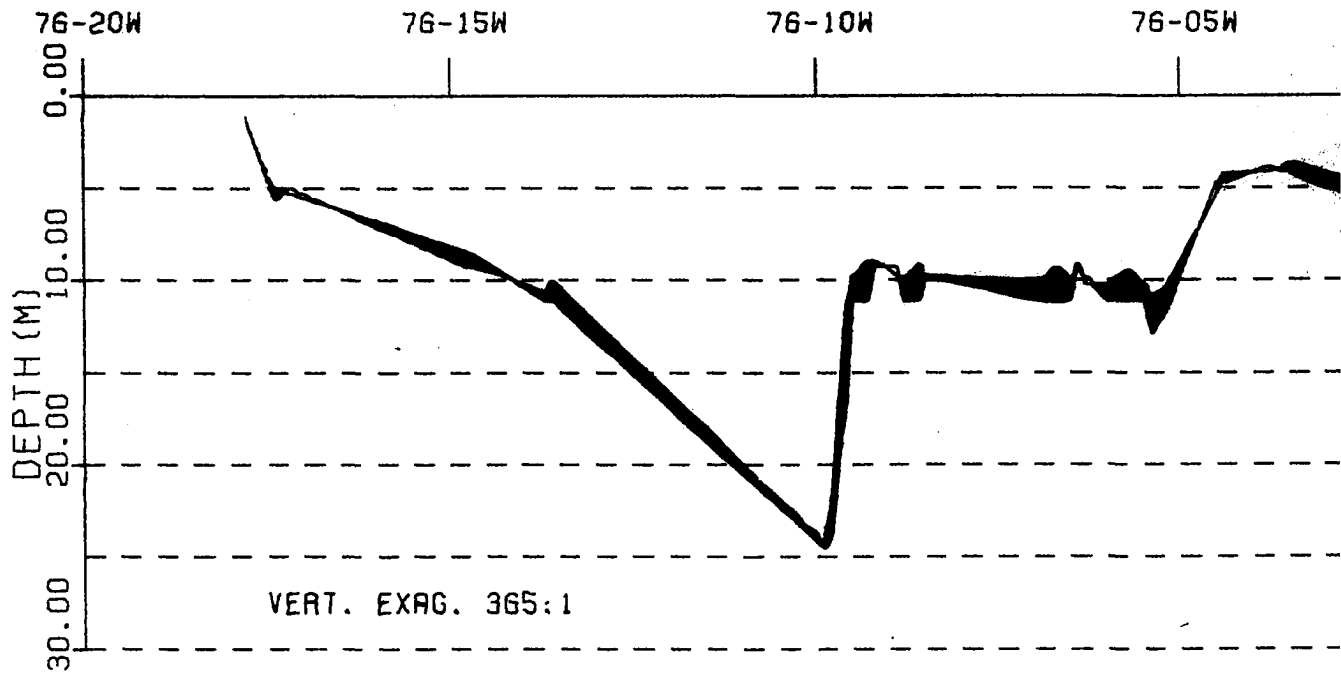


37°49'N

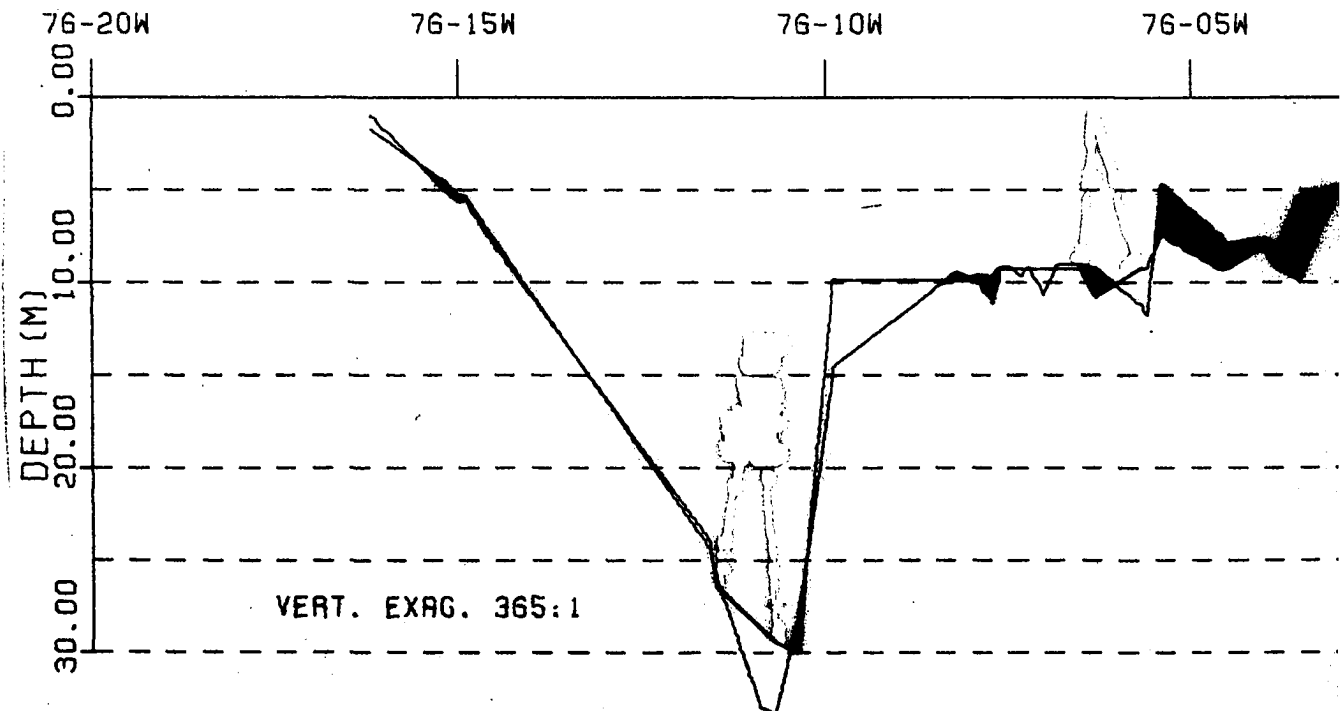




LATITUDE



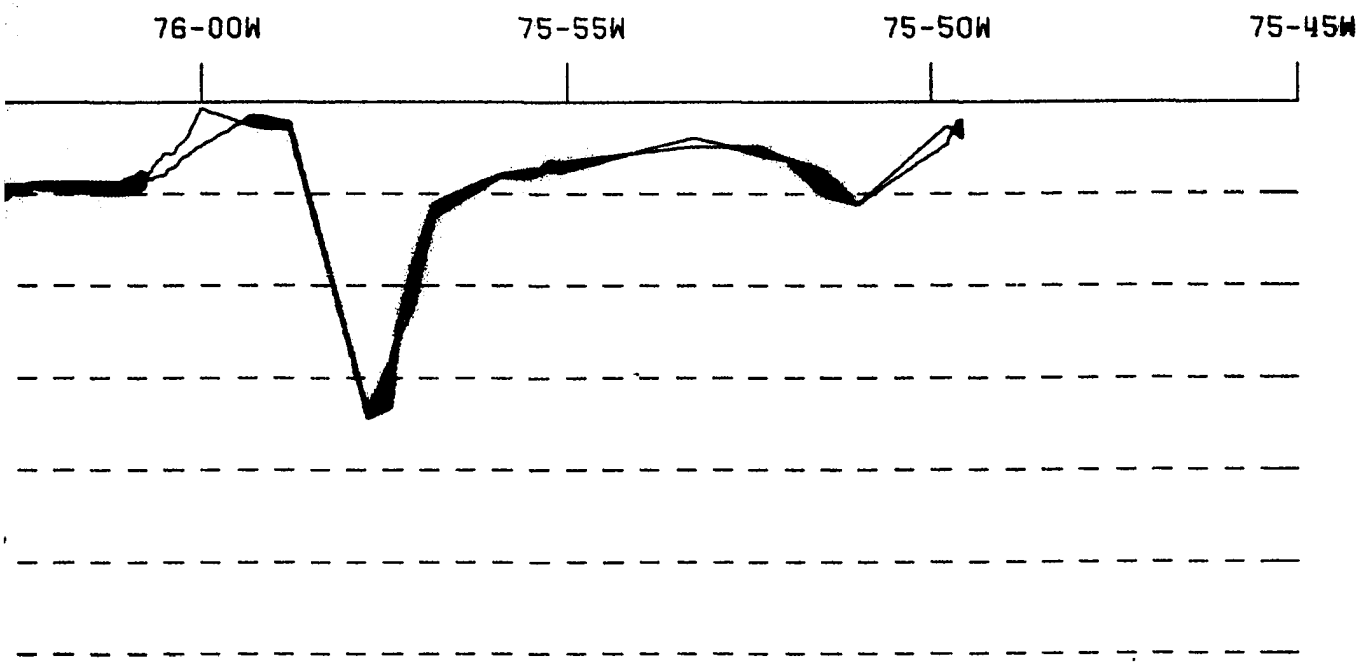
LATITUDE



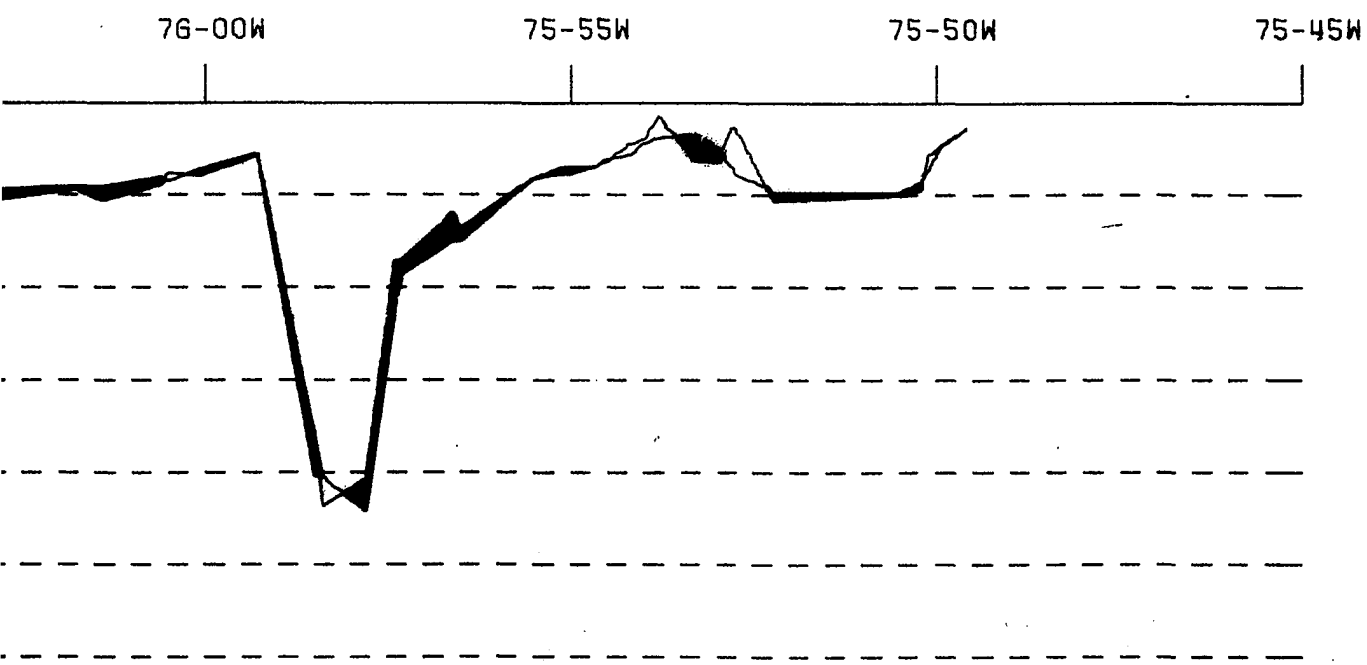




E 37°48'N



E 37°47'N

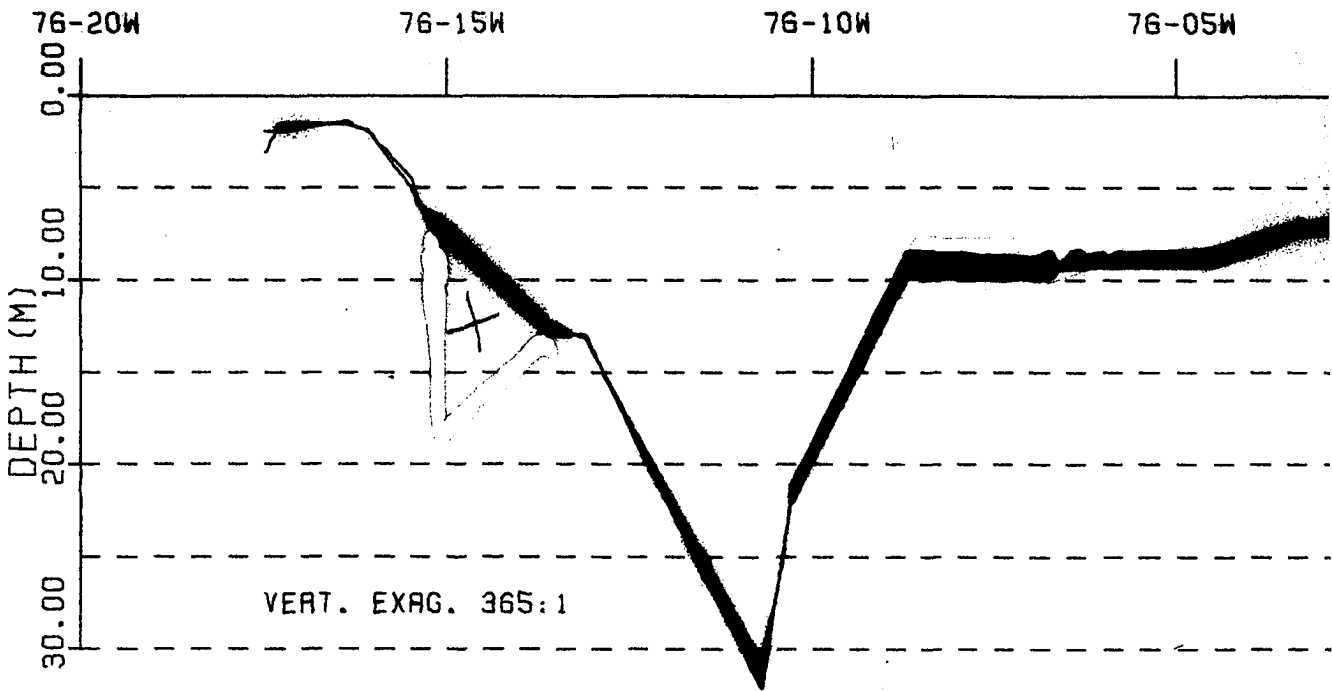


E-7

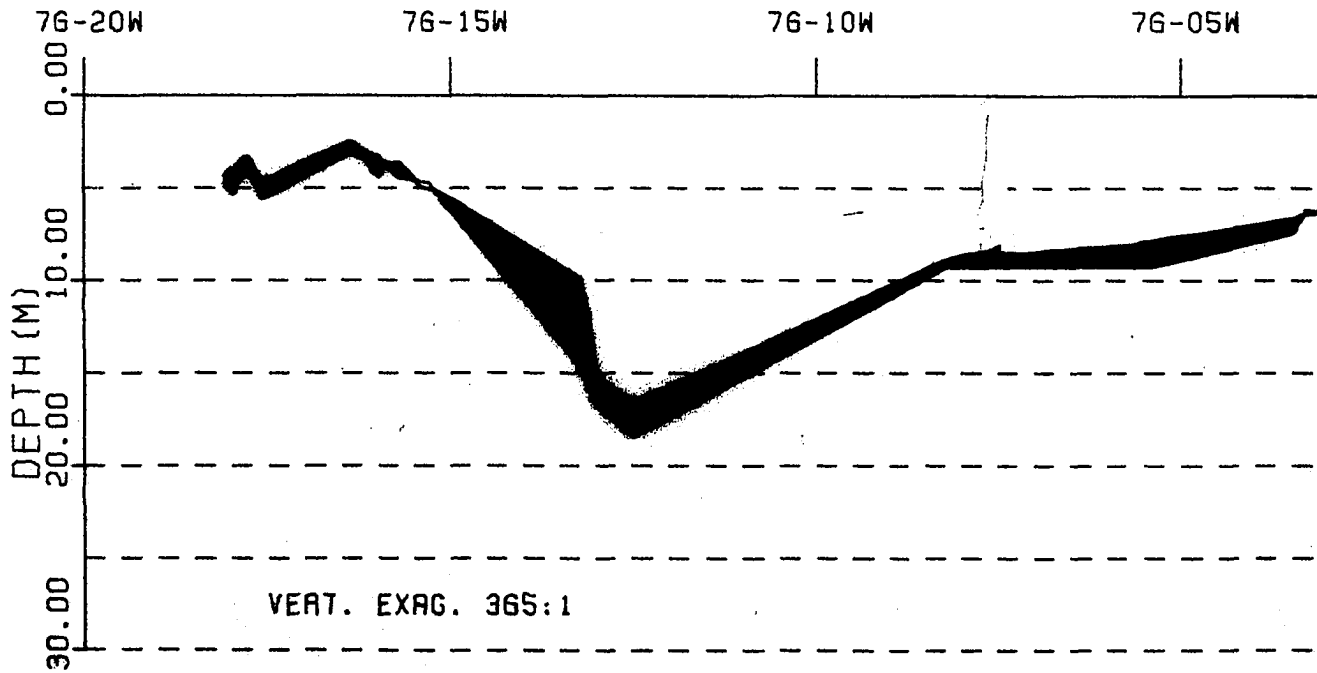
2-7



LATITUDE



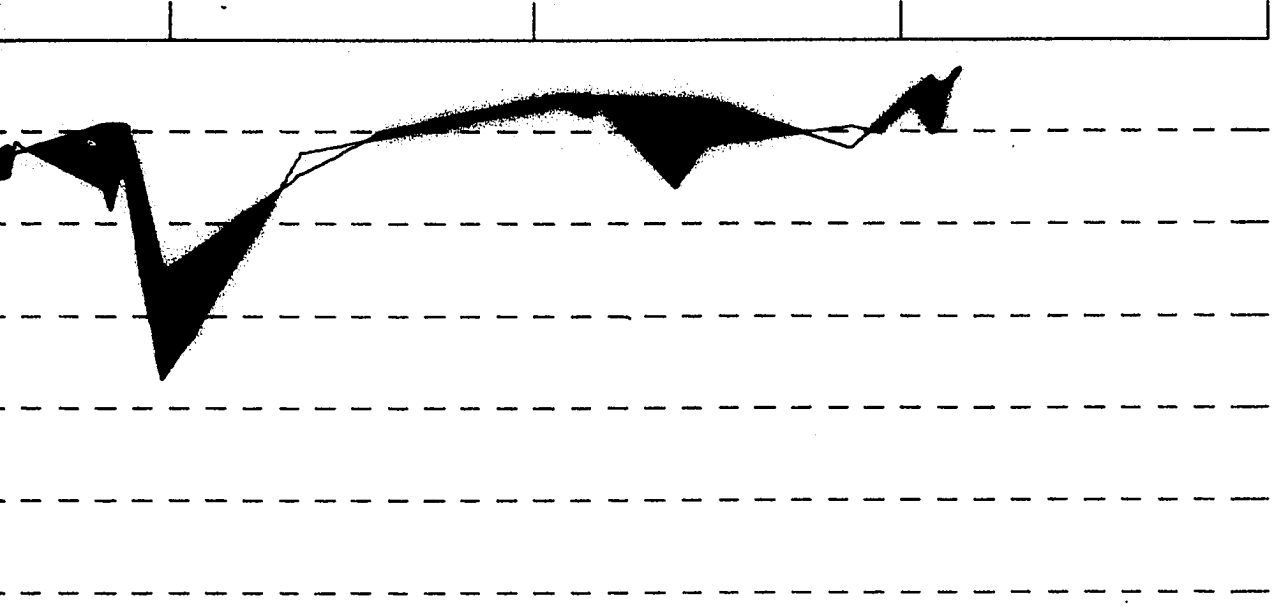
LATITUDE





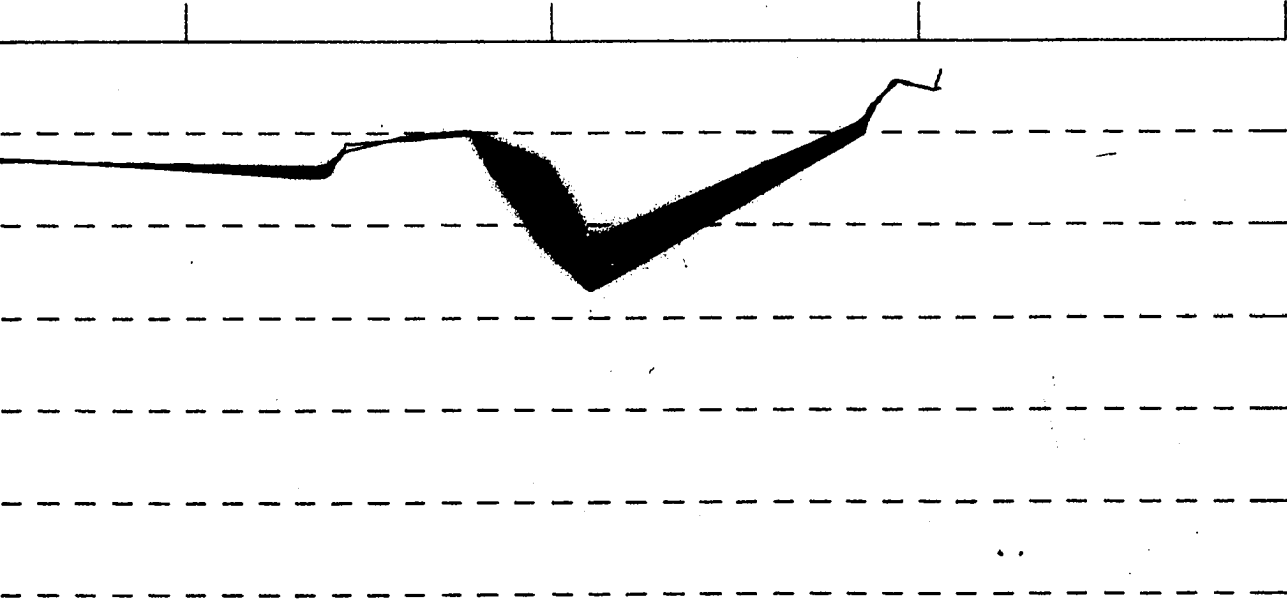
37°46'N

76-00W                      75-55W                      75-50W                      75-45W



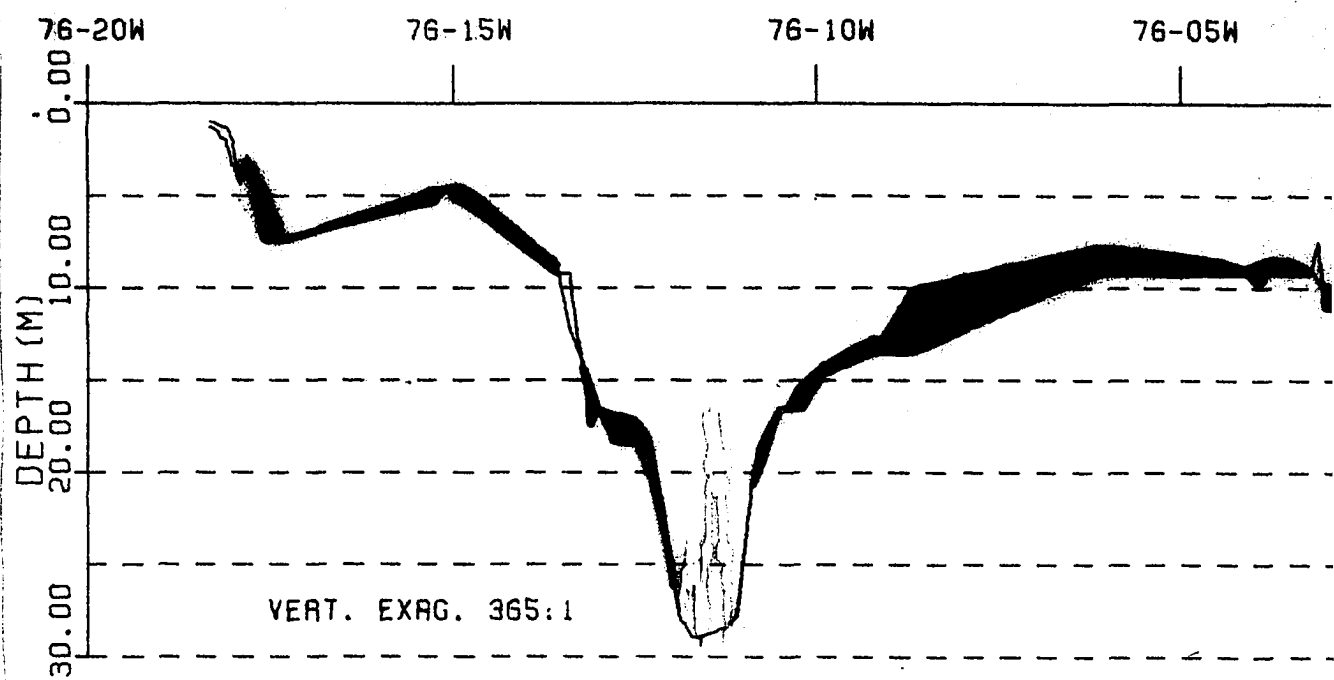
37°45'N

76-00W                      75-55W                      75-50W                      75-45W

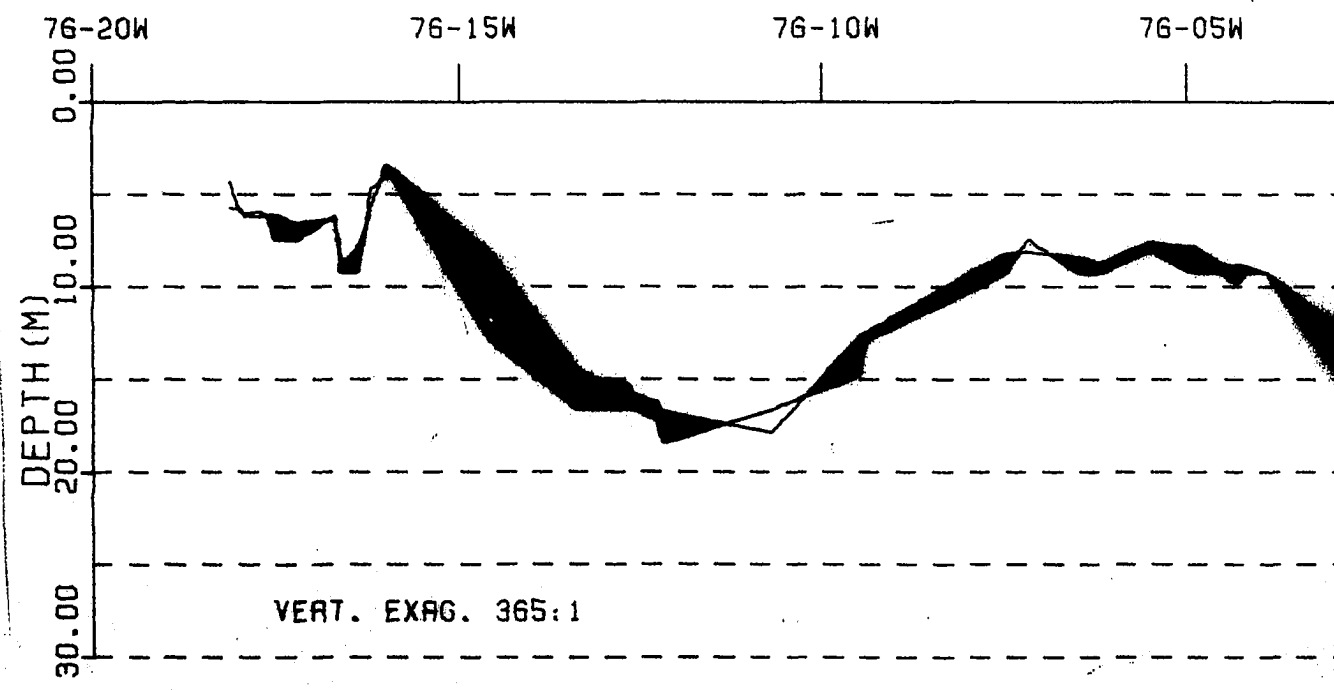




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LATITU







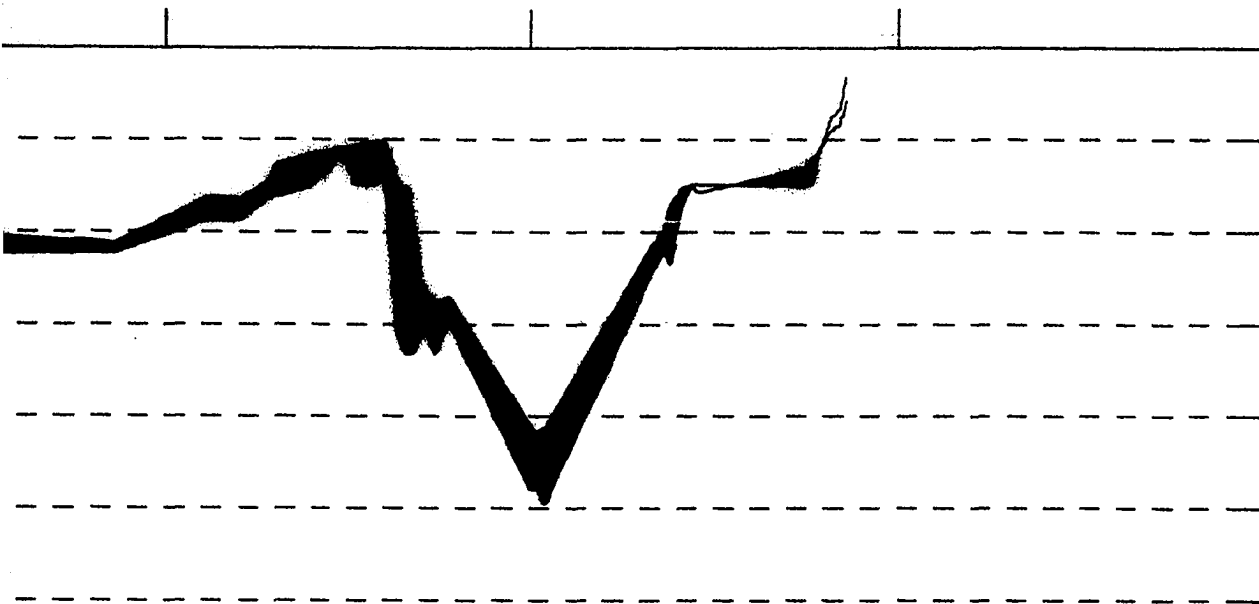
37°44'N

76-00W

75-55W

75-50W

75-45W



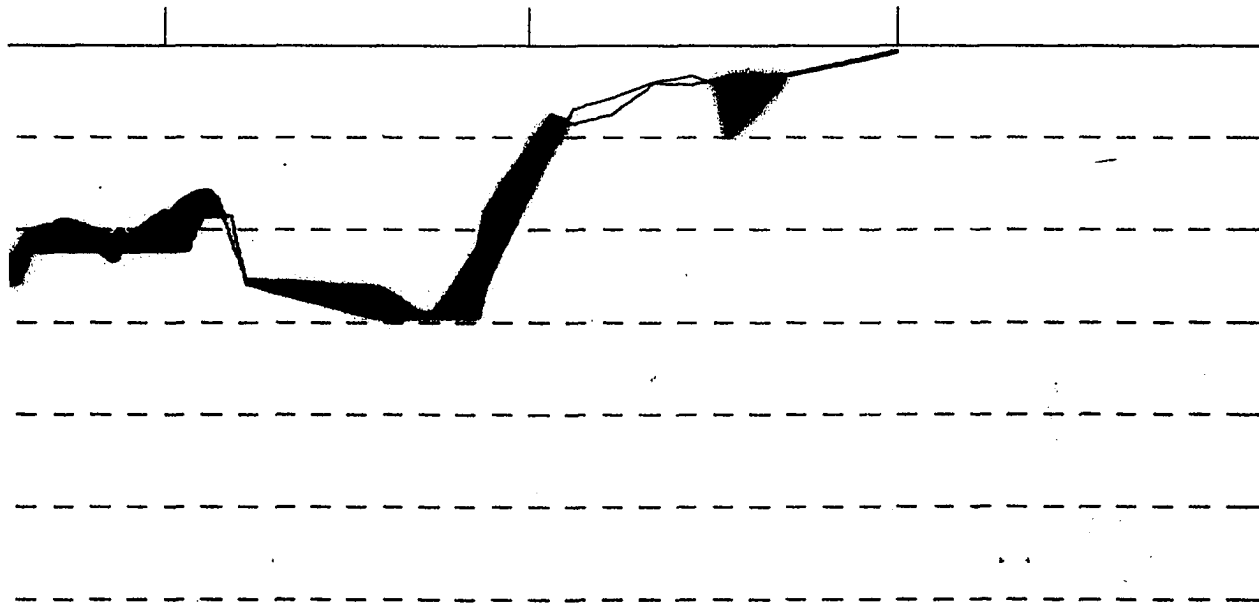
37°43'N

76-00W

75-55W

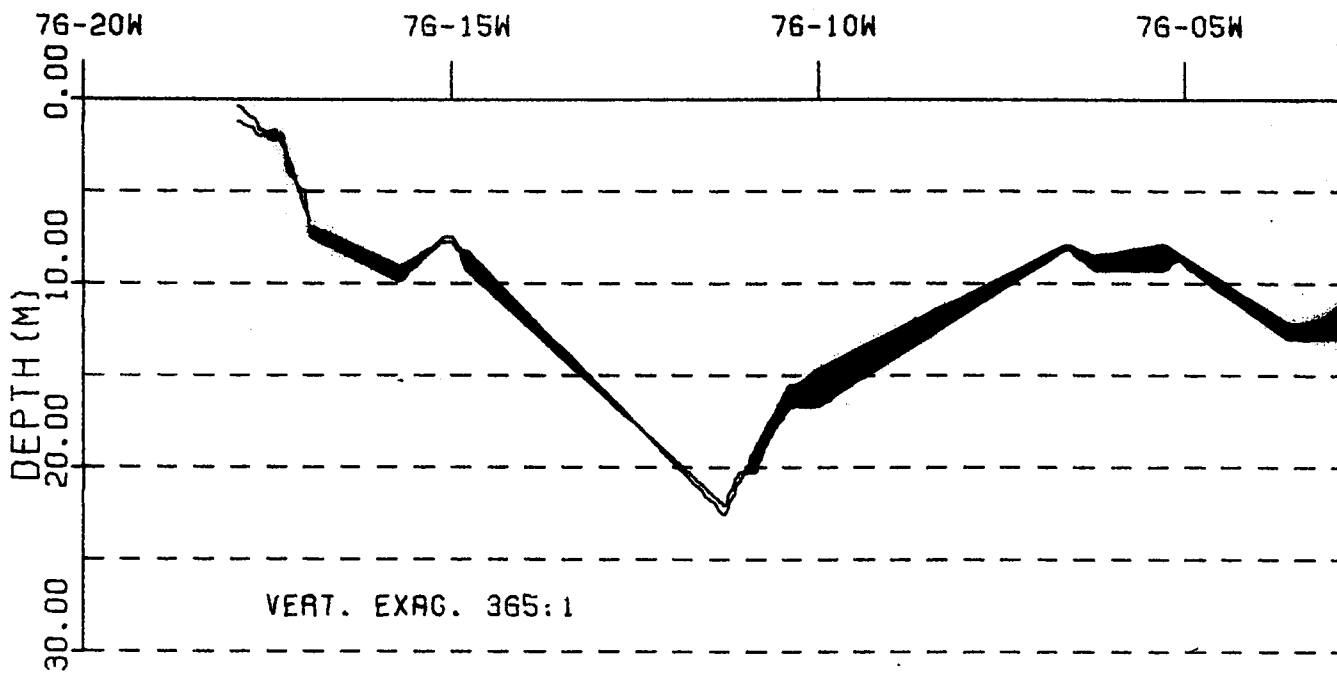
75-50W

75-45W

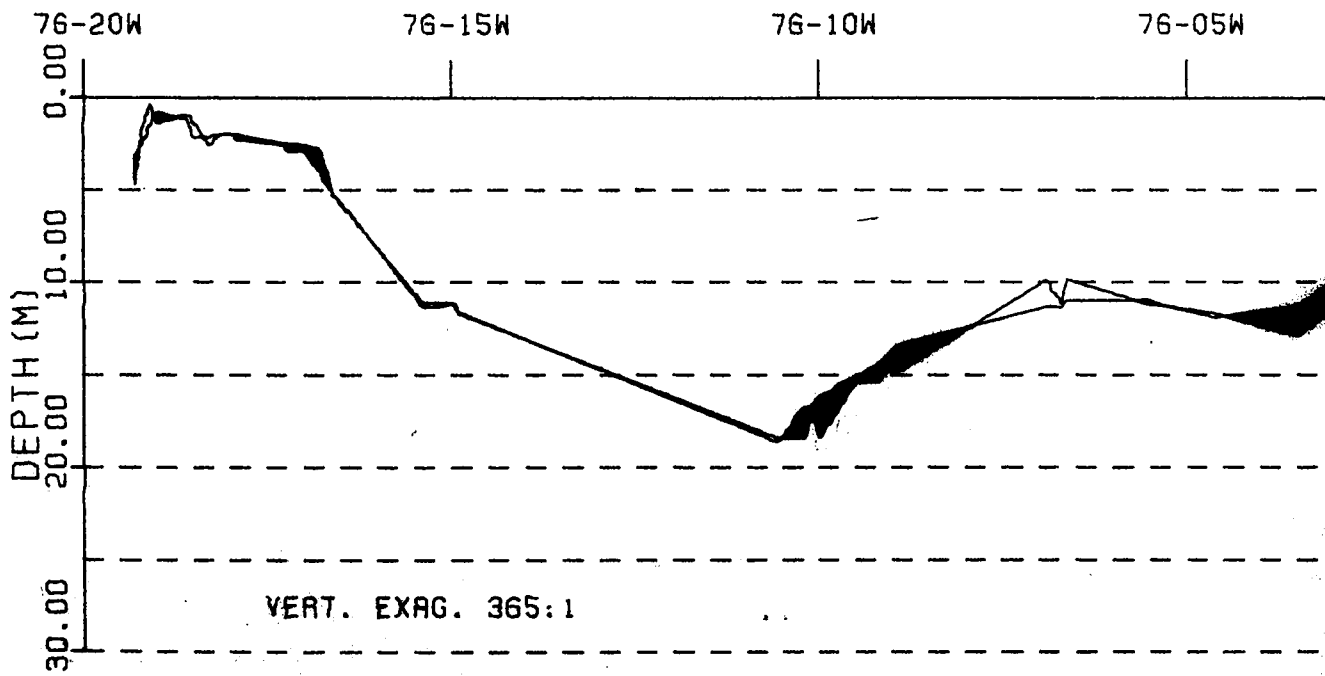




LATITUDE



LATITUDE





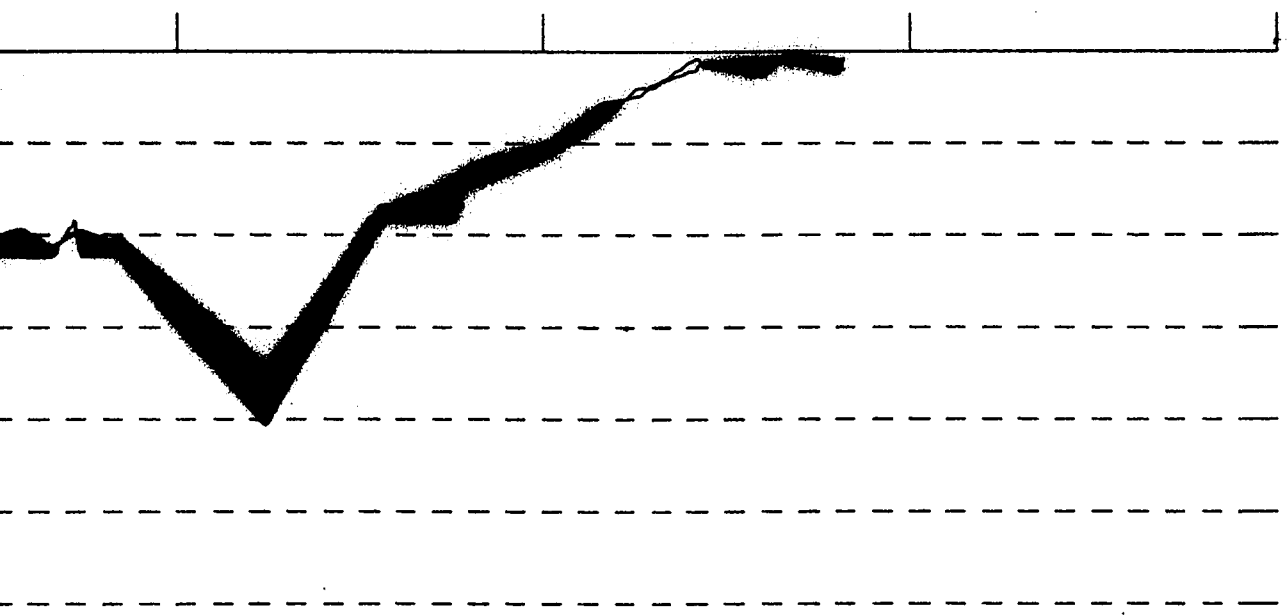
37°42'N

76-00W

75-55W

75-50W

75-45W



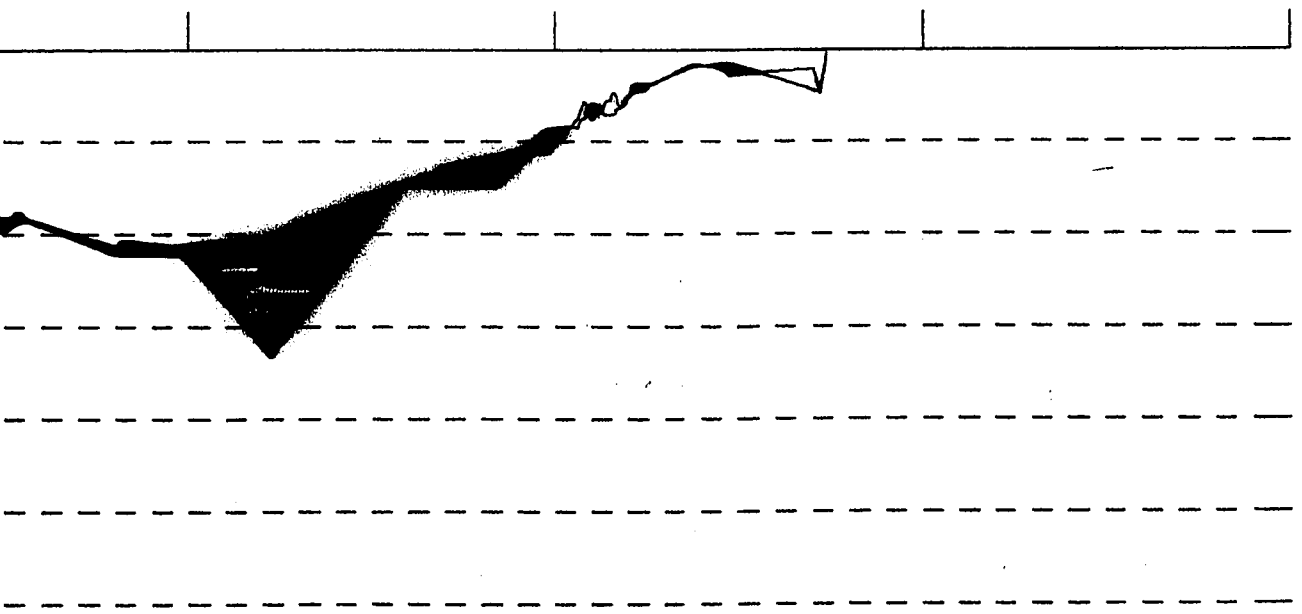
37°41'N

76-00W

75-55W

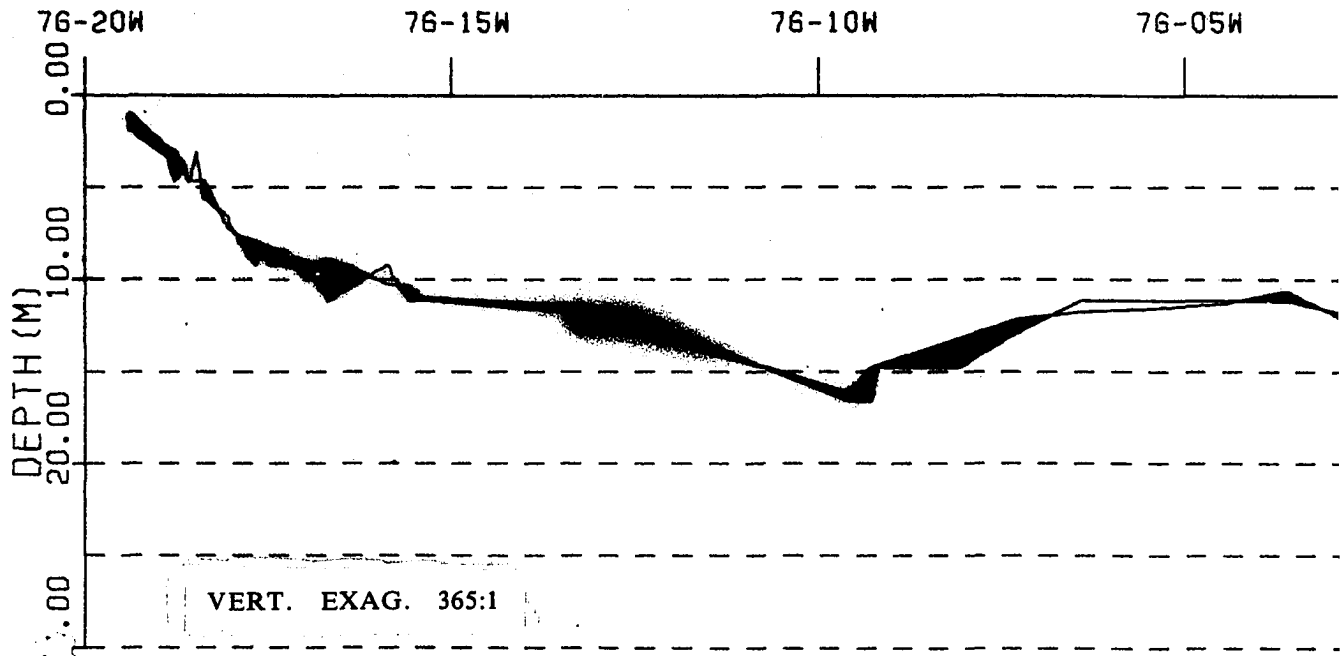
75-50W

75-45W

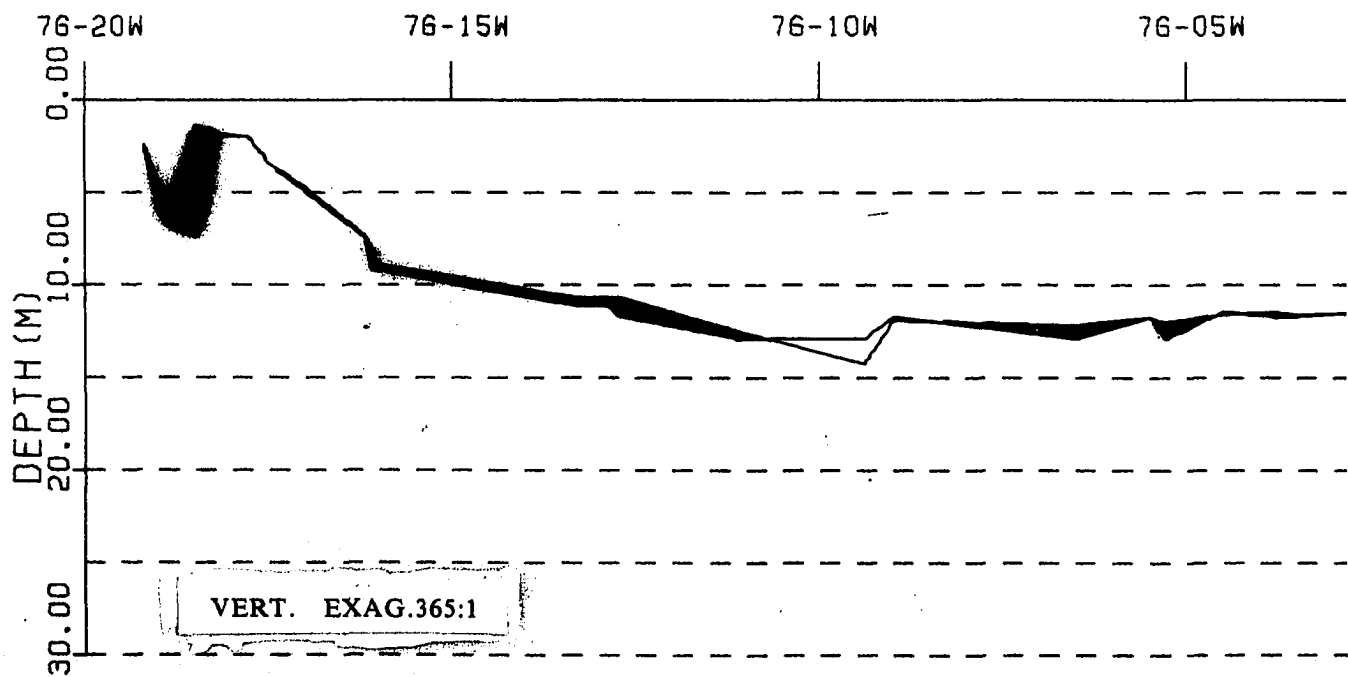




LATITUDE 37°40'



LATITUDE 37°39'N





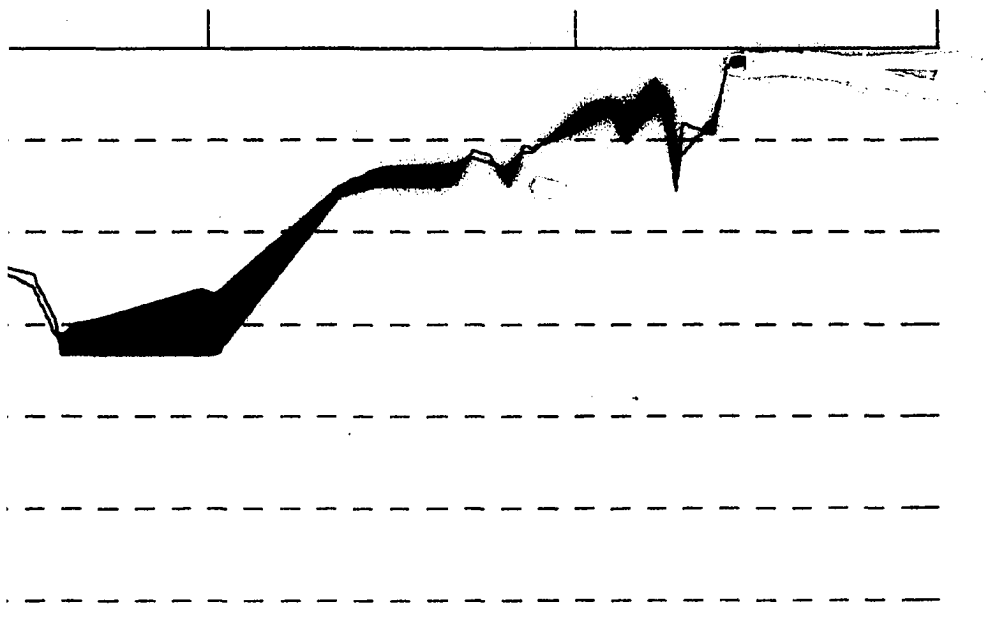


N

76-00W

75-55W

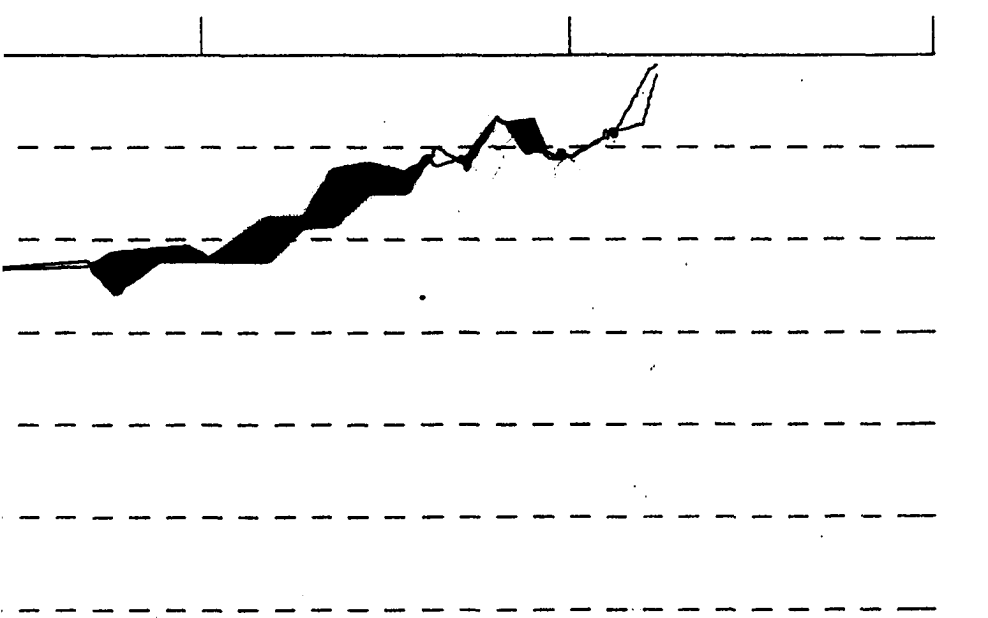
75-50W



76-00W

75-55W

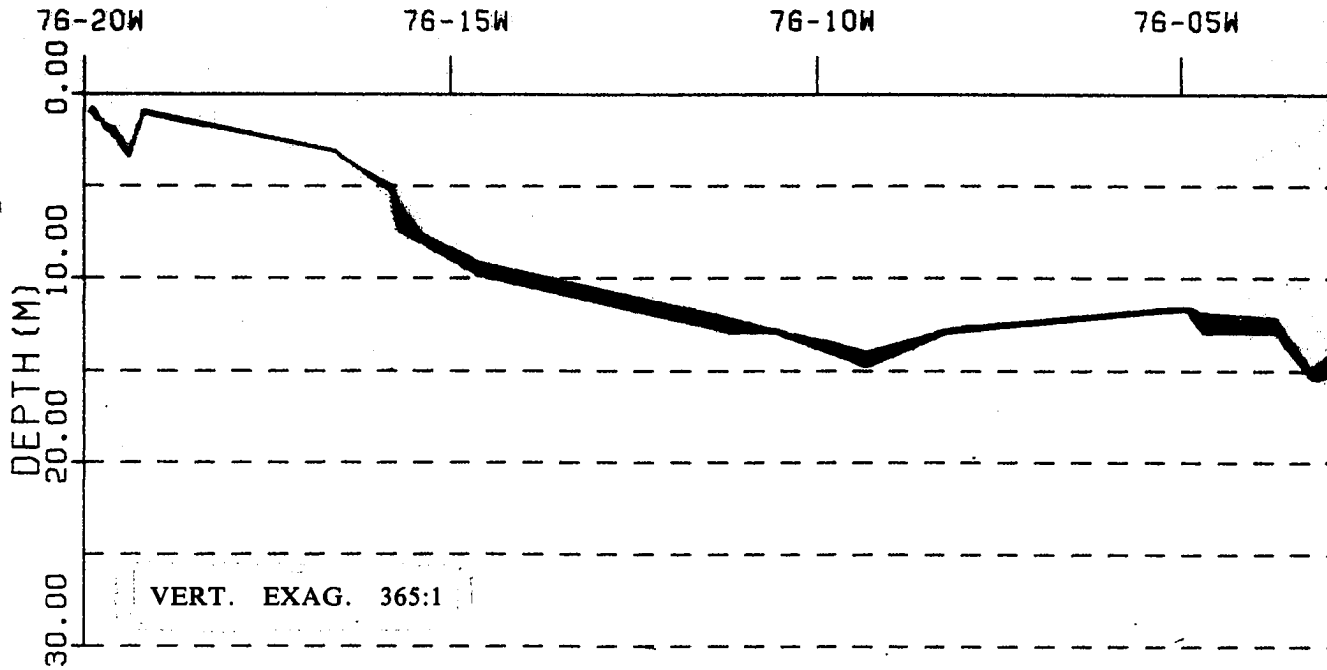
75-50W



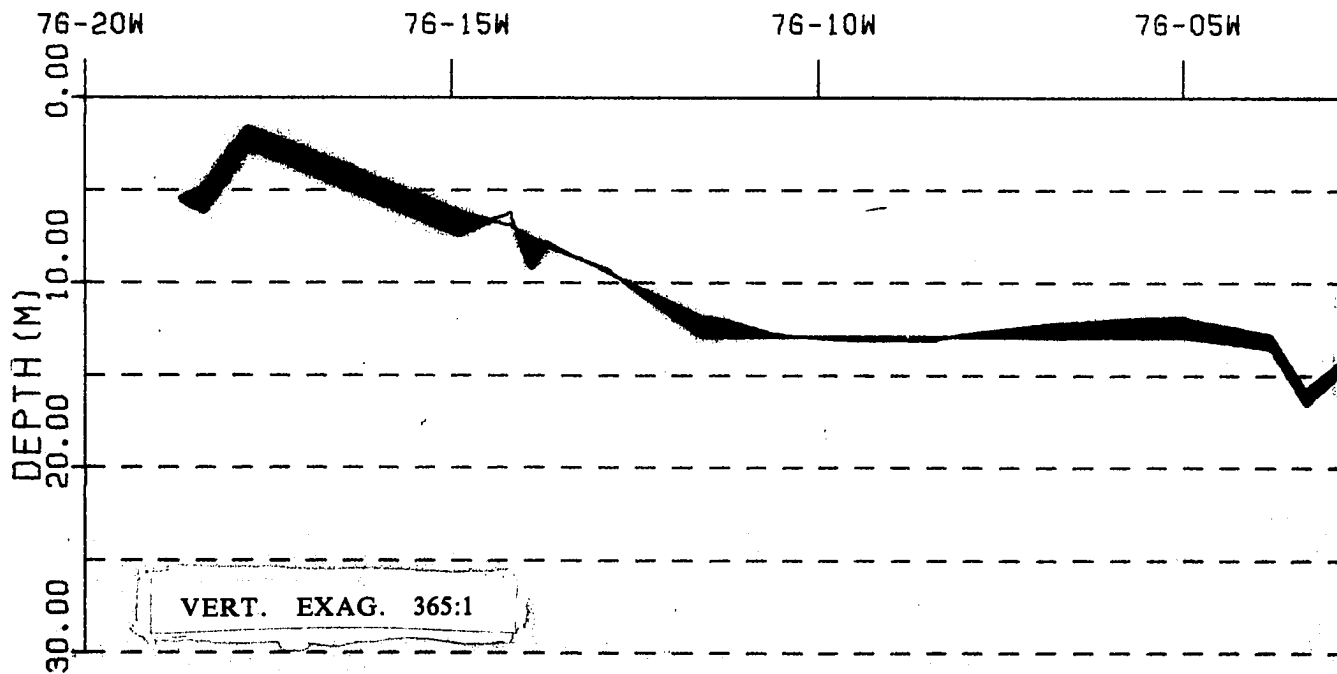
E-11



LATITUDE 37°38'N



LATITUDE 37°37'N



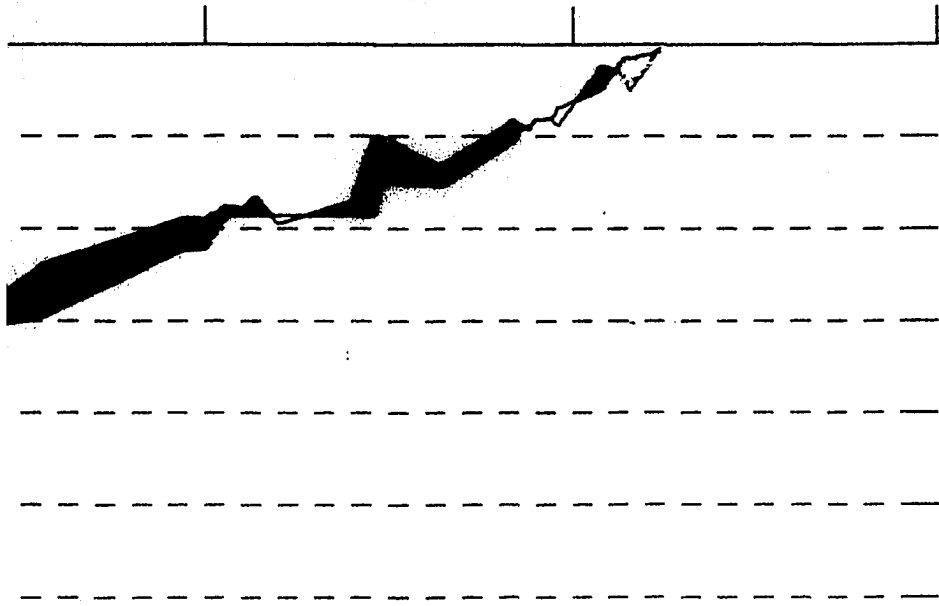


35

76-00W

75-55W

75-50W

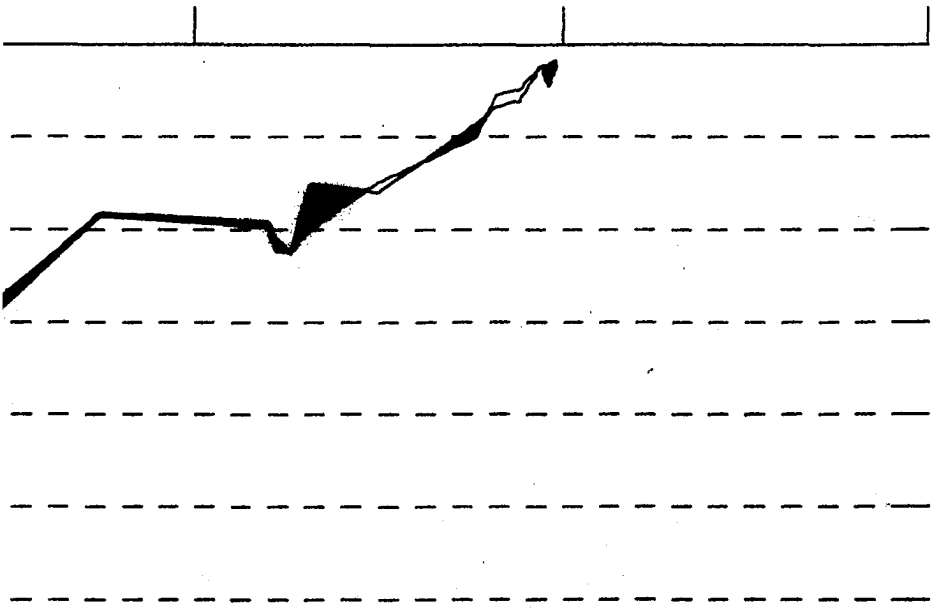


N

76-00W

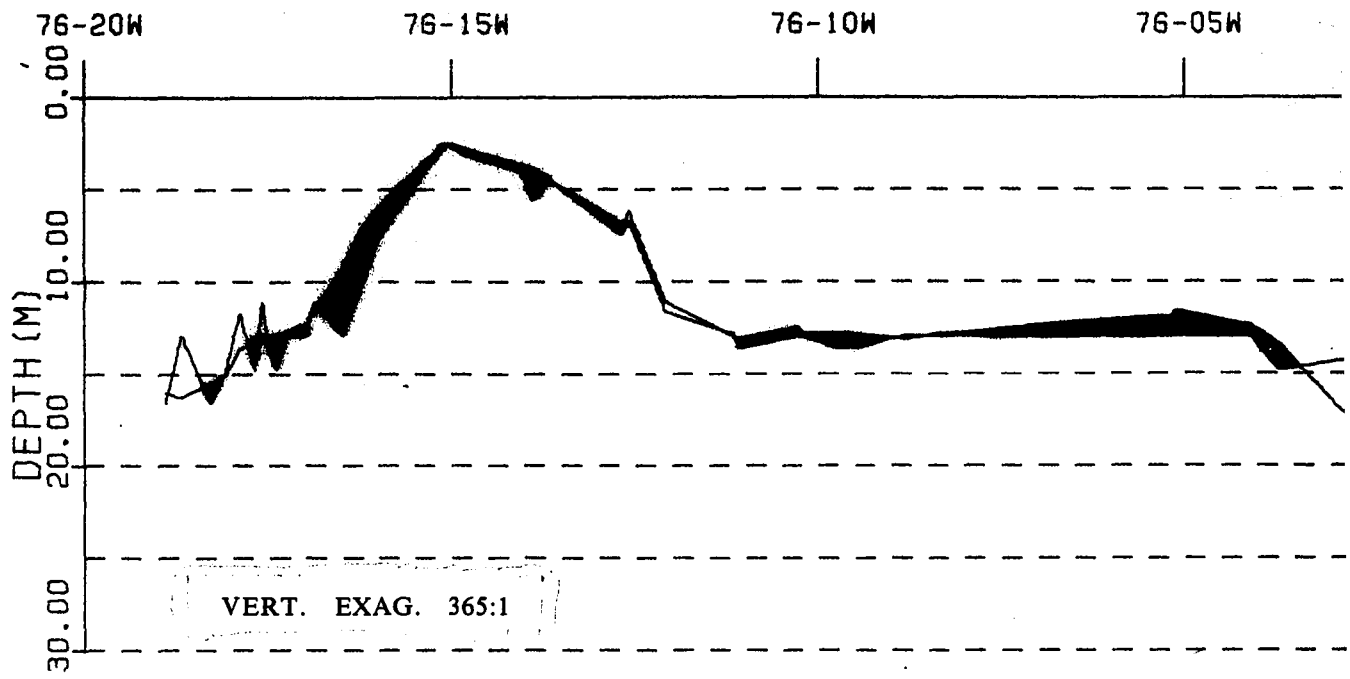
75-55W

75-50W

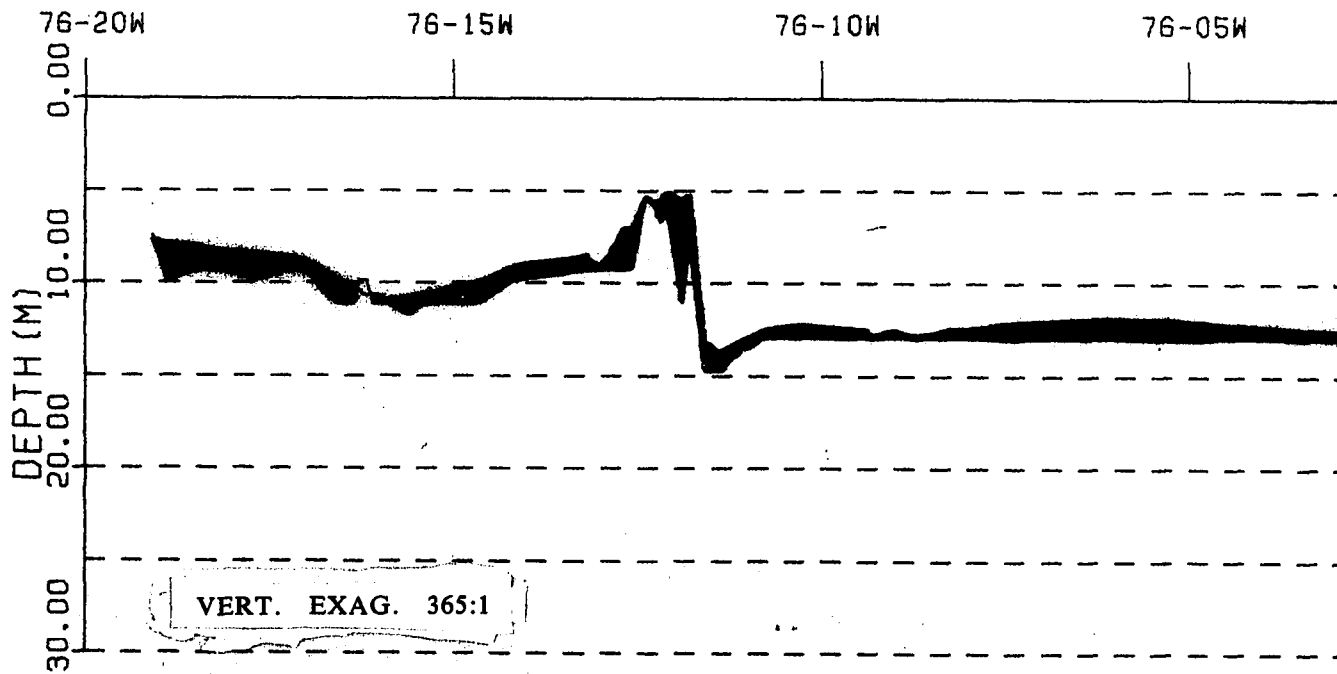




LATITUDE 37°30'



LATITUDE 37°30'





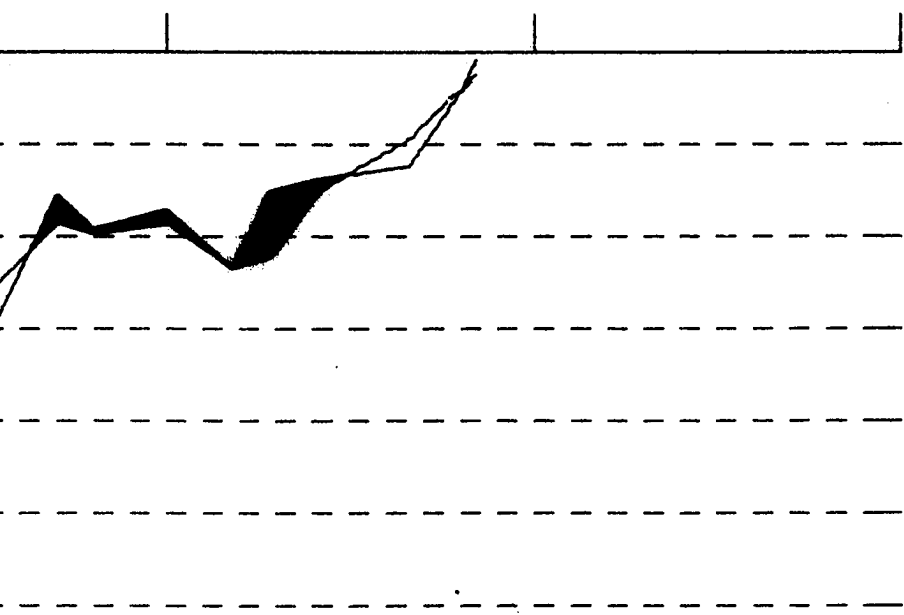


N

76-00W

75-55W

75-50W

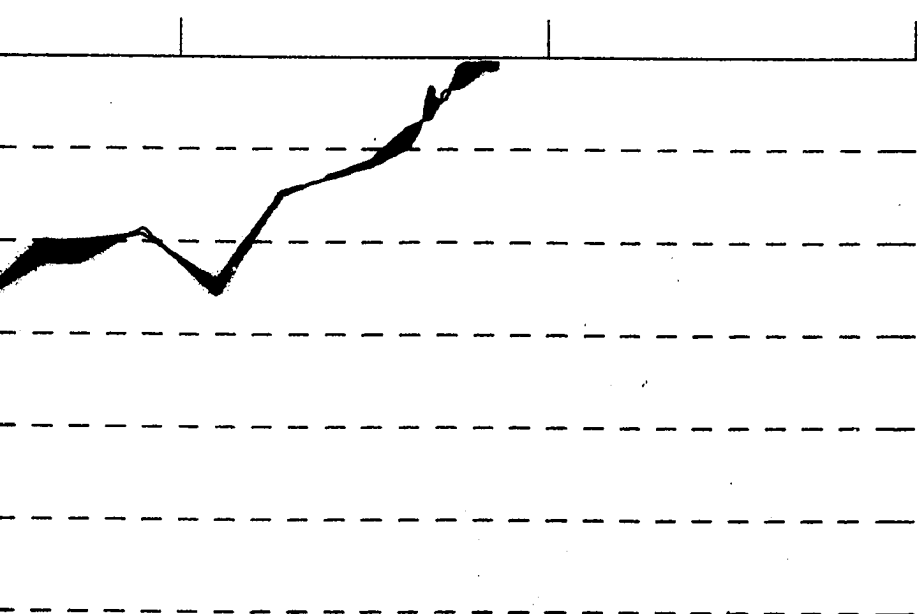


N

76-00W

75-55W

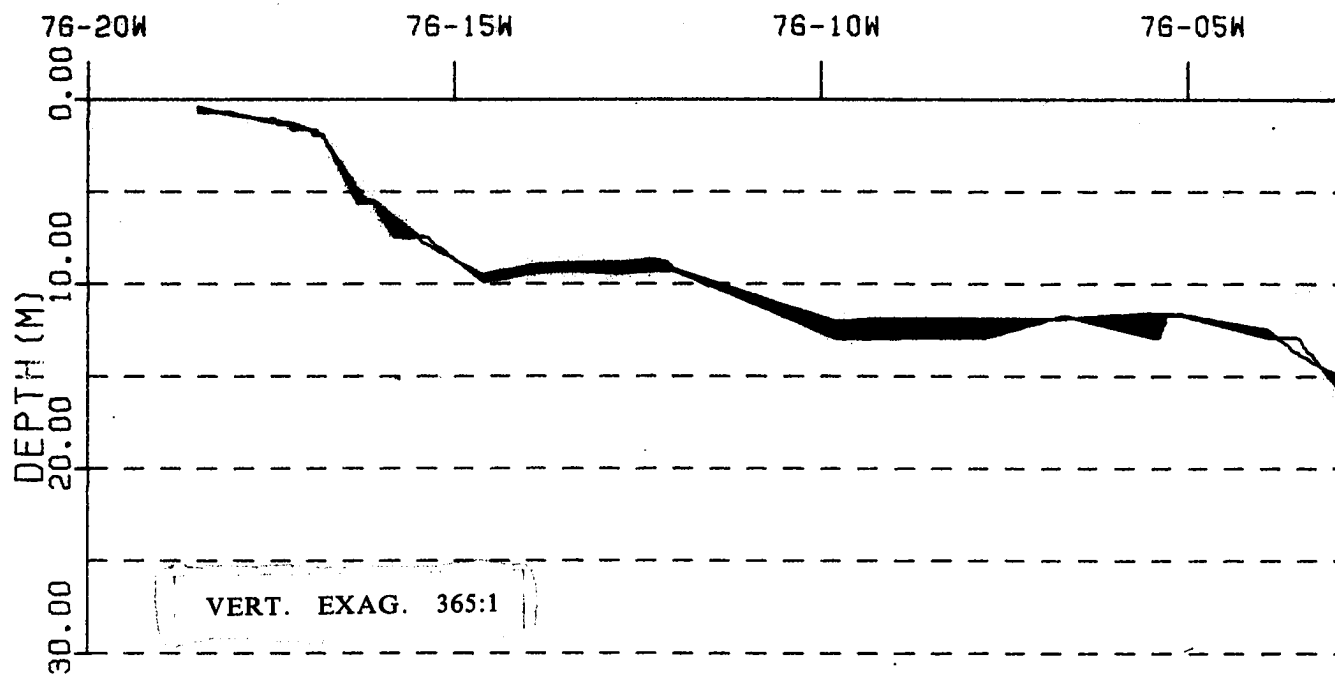
75-50W



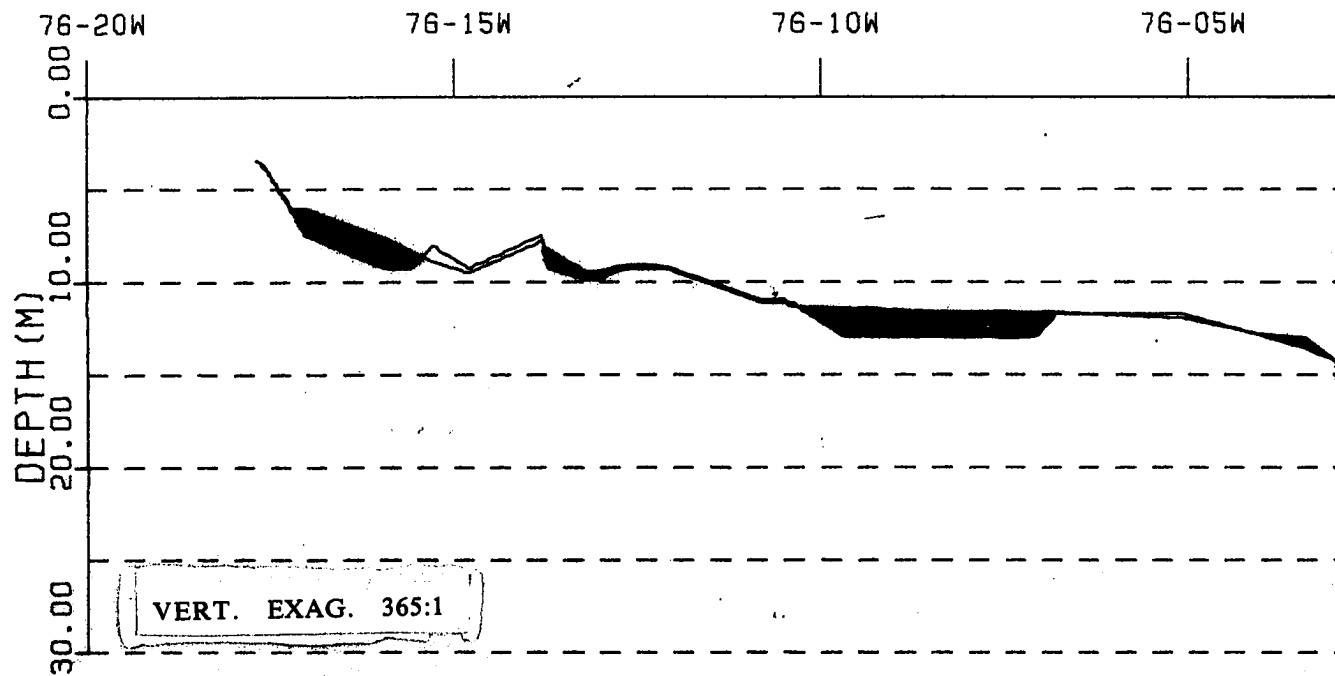
E-13



LATITUDE 37°34'N



LATITUDE 37°33'N

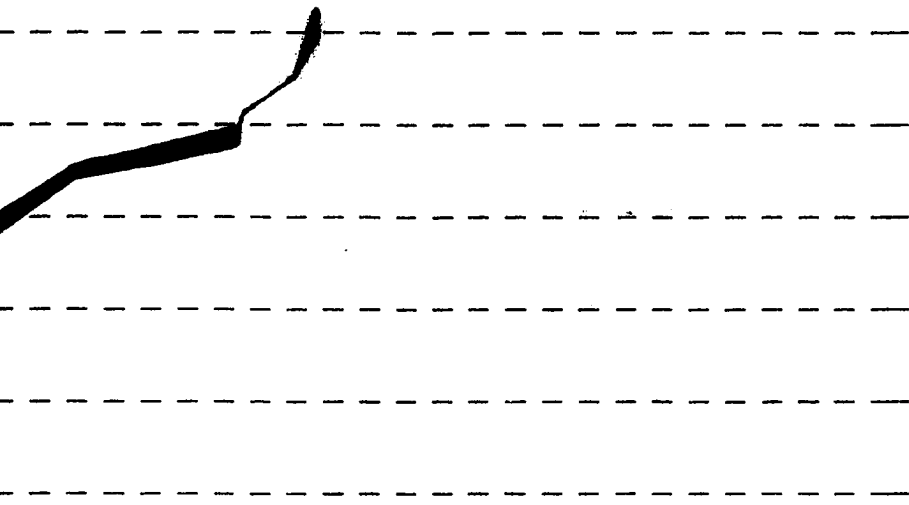




76-00W

75-55W

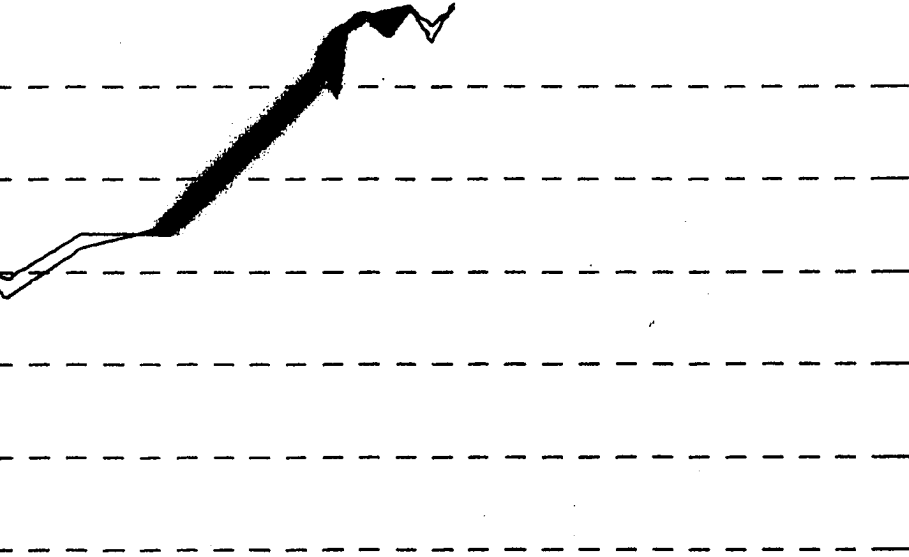
75-50W



76-00W

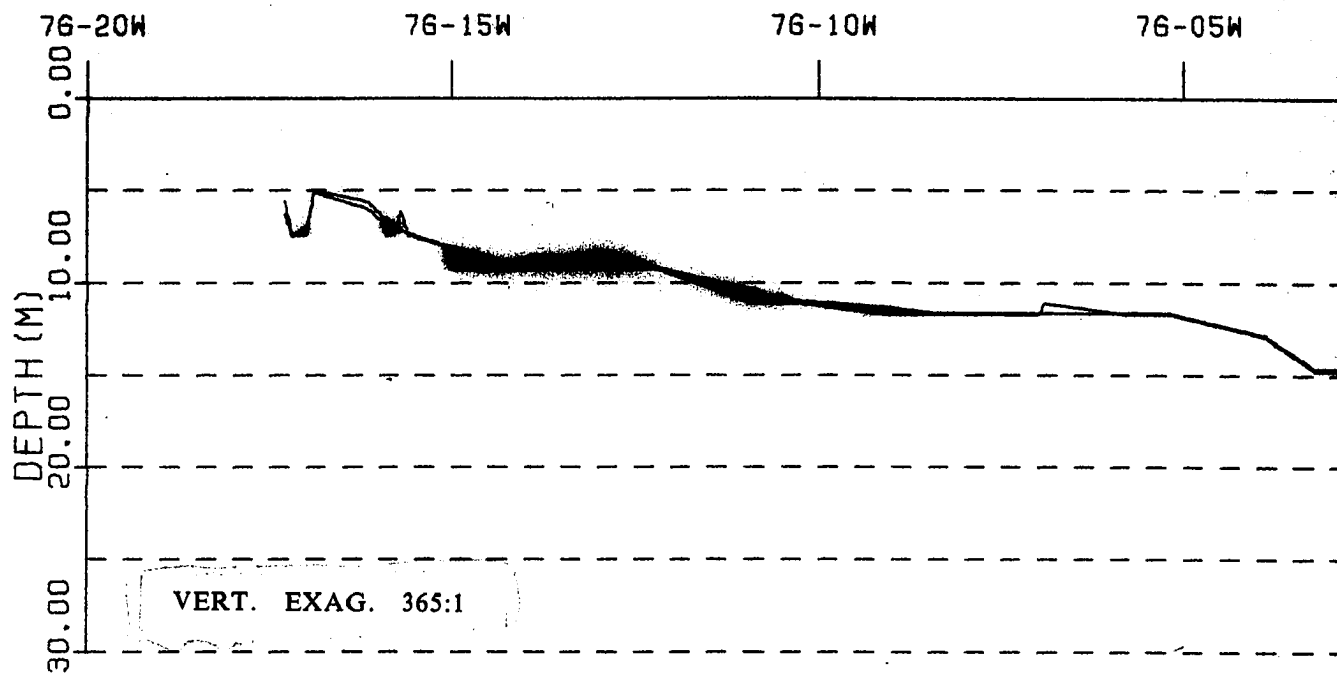
75-55W

75-50W

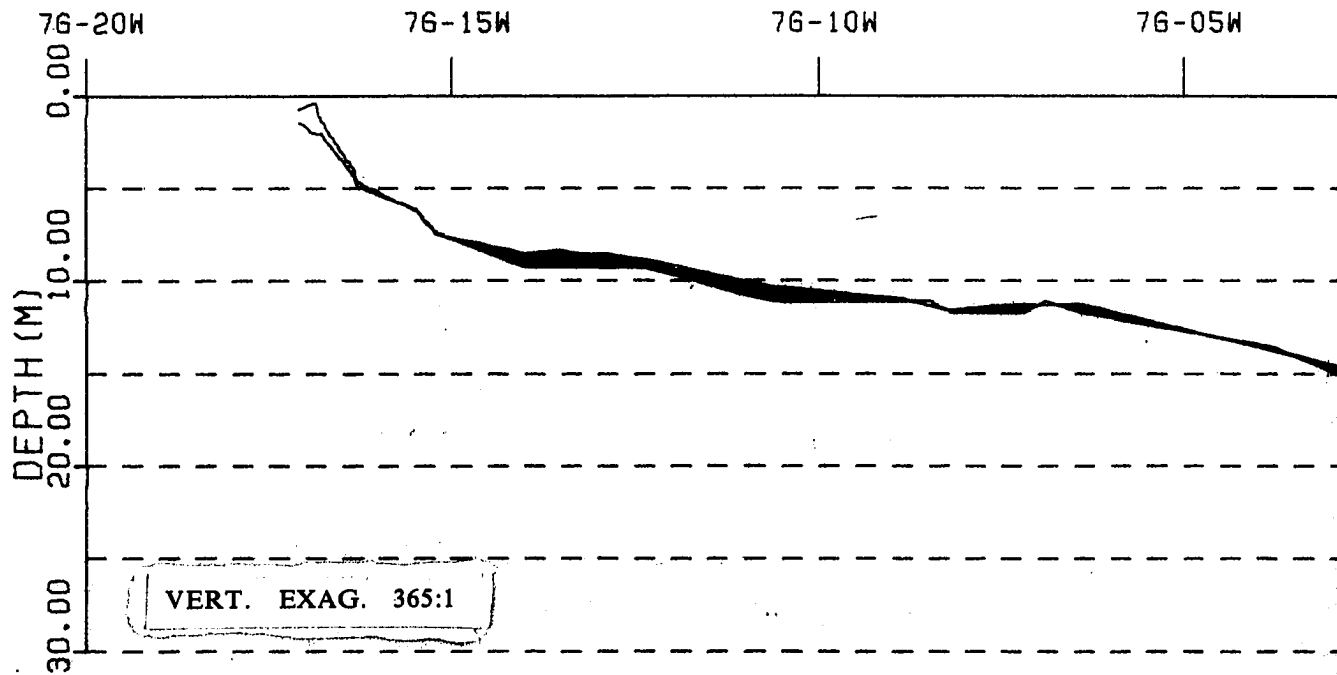




LATITUDE 37°3



LATITUDE 37°3





2

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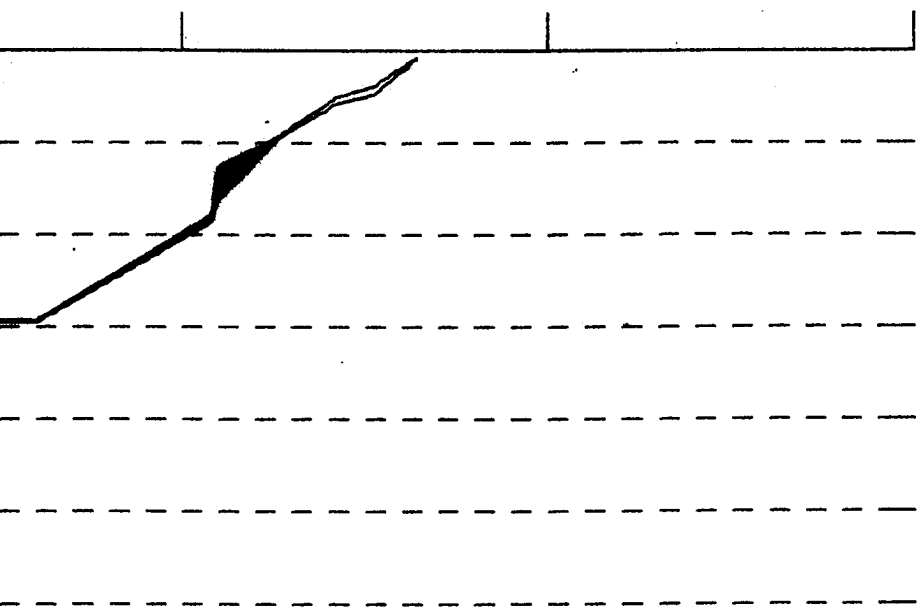
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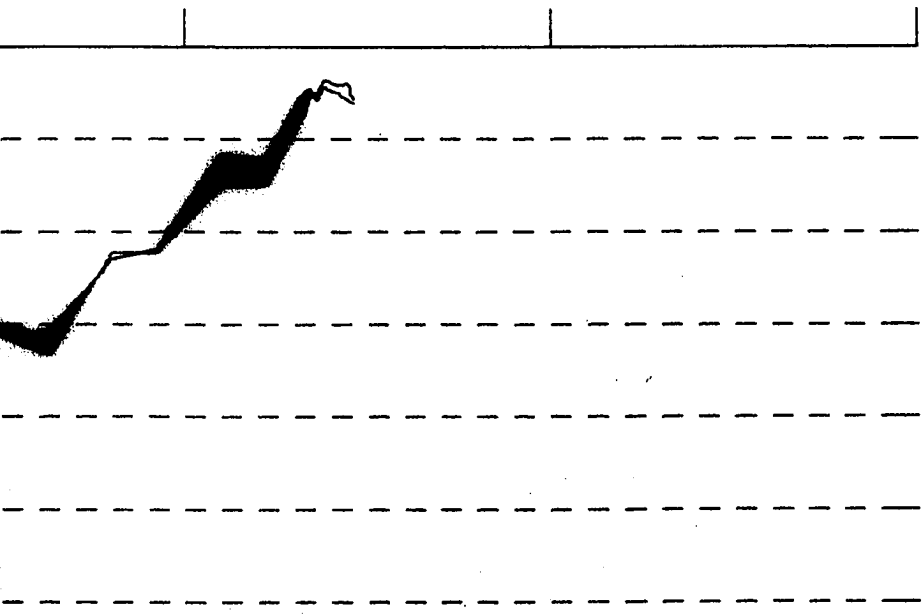
N

76-00W                      75-55W                      75-50W



N

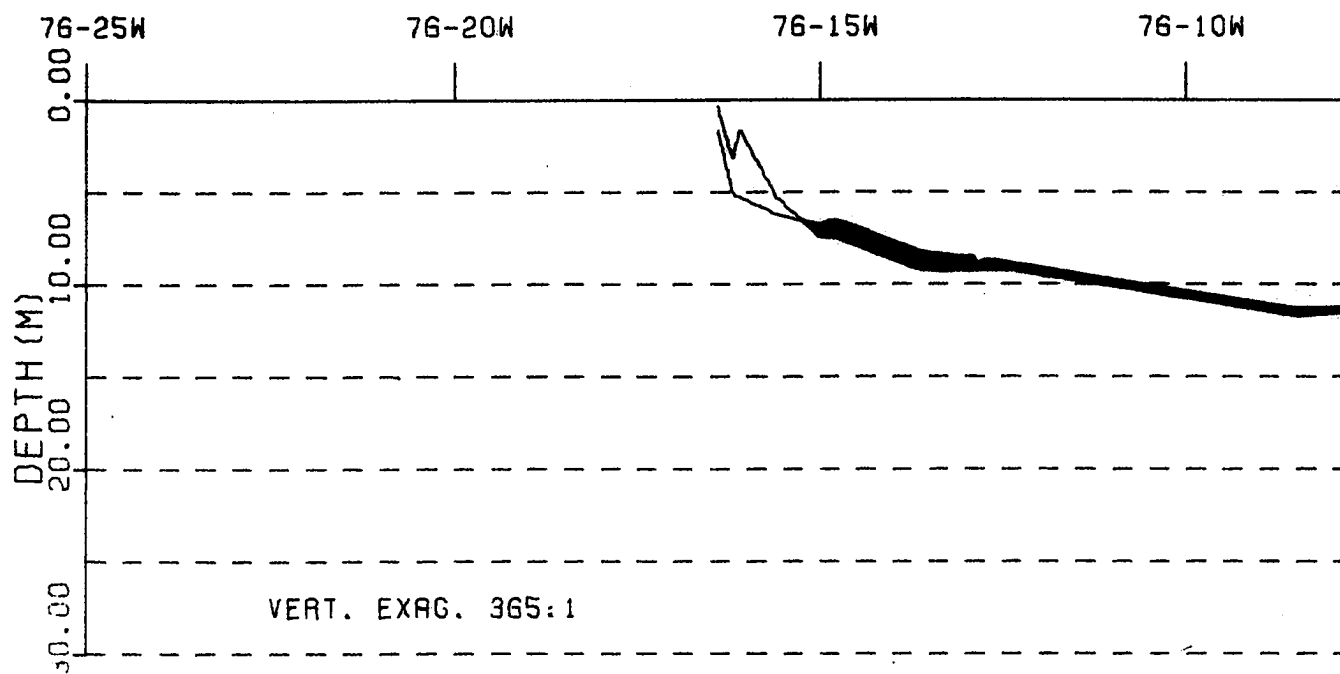
76-00W                      75-55W                      75-50W



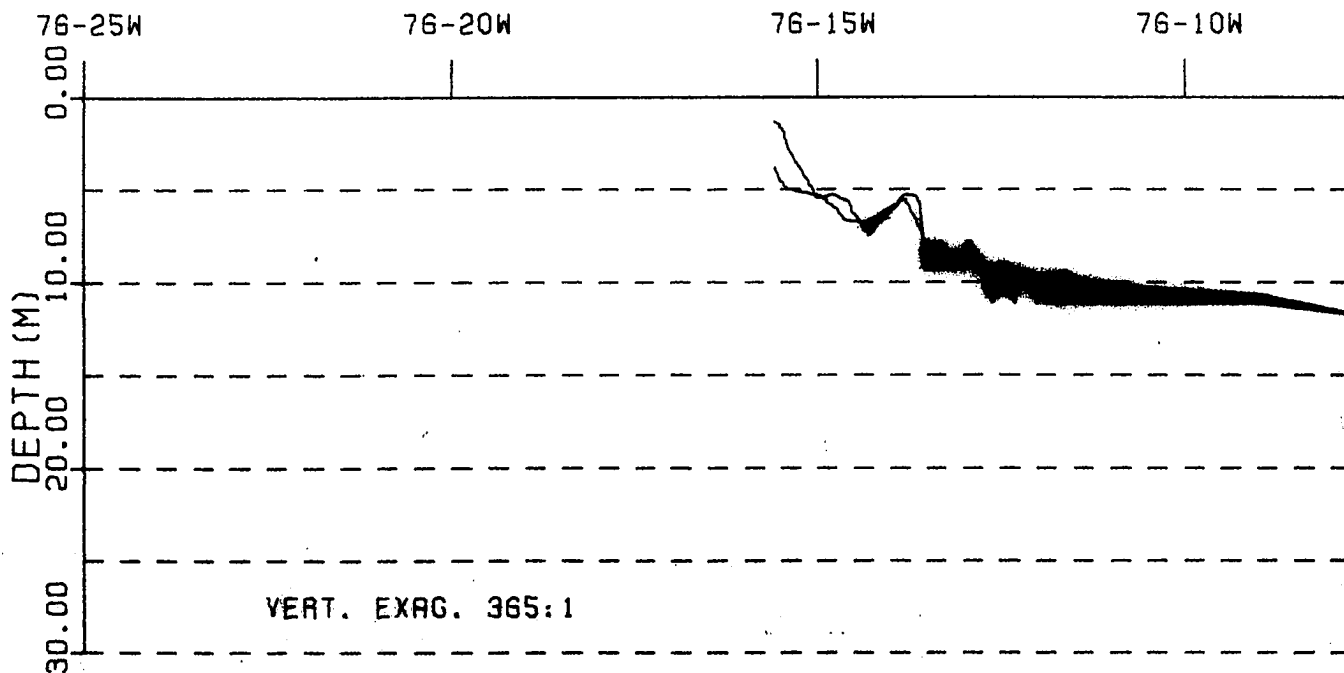
E-15



LATITUDE 37°30'



LATITUDE 37°29'



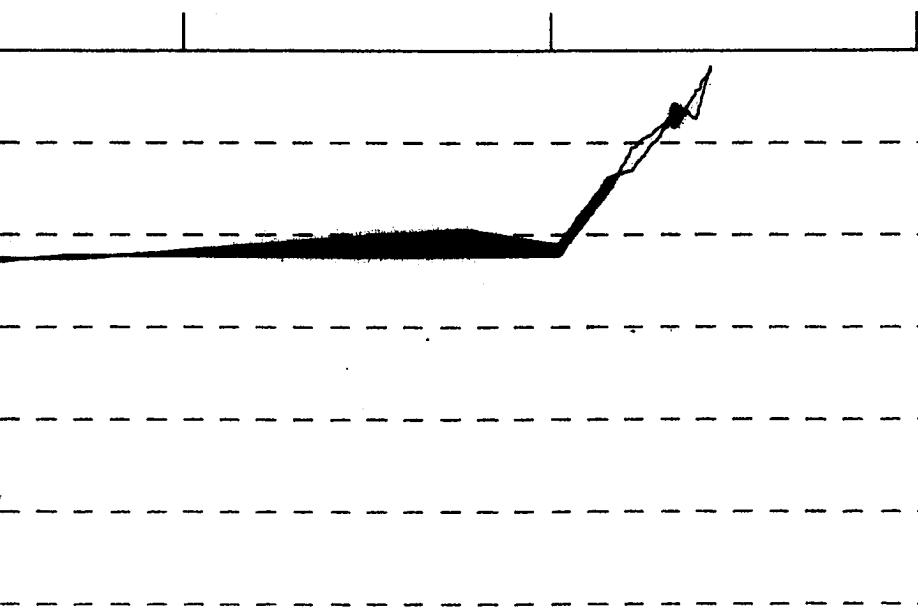


N

76-05W

76-00W

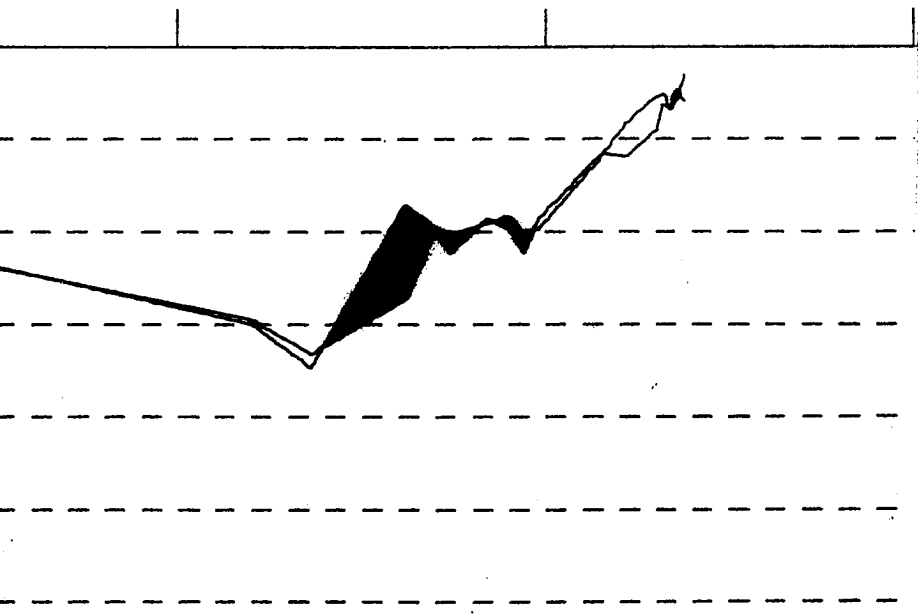
75-55W



76-05W

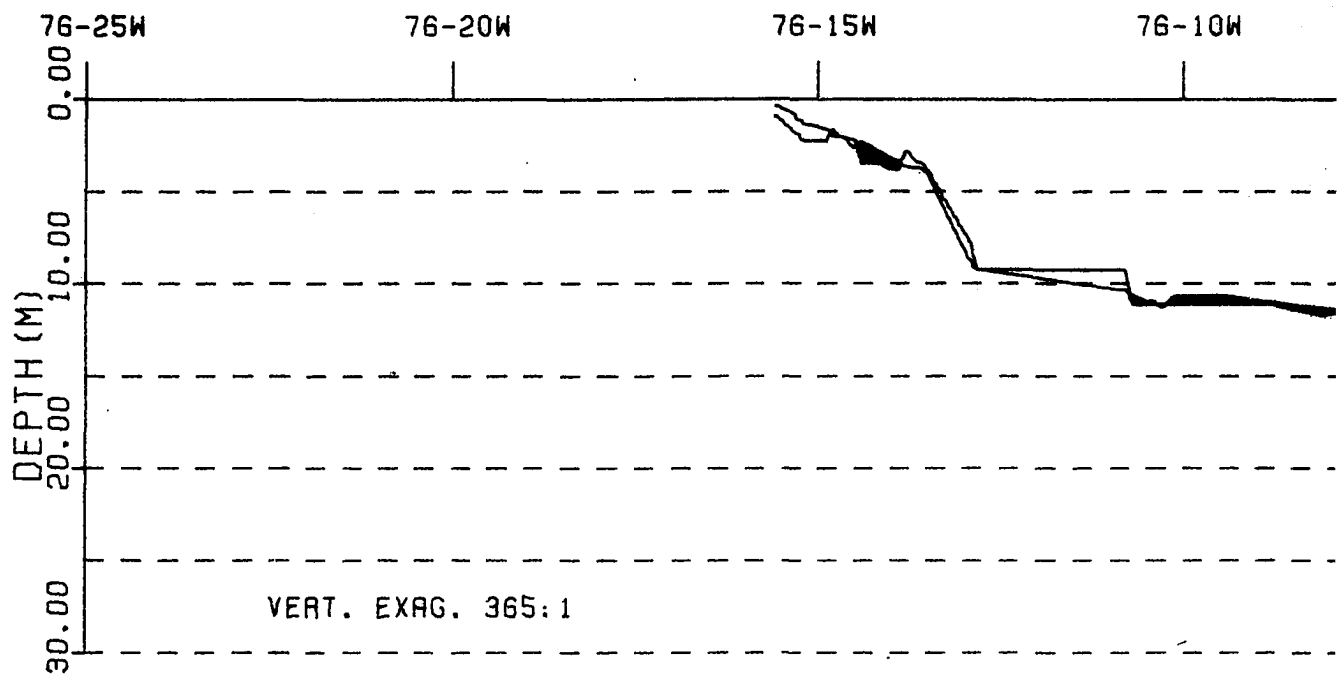
76-00W

75-55W

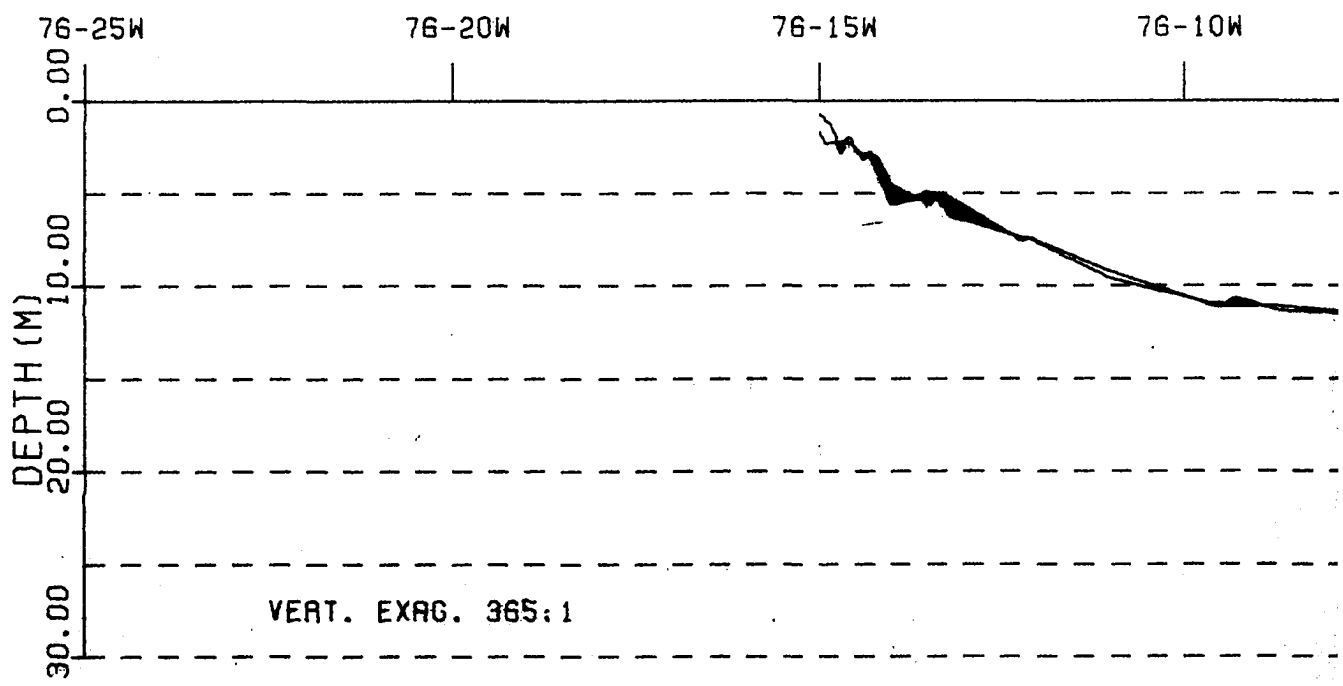




LATITUDE 37°2



LATITUDE 37°27





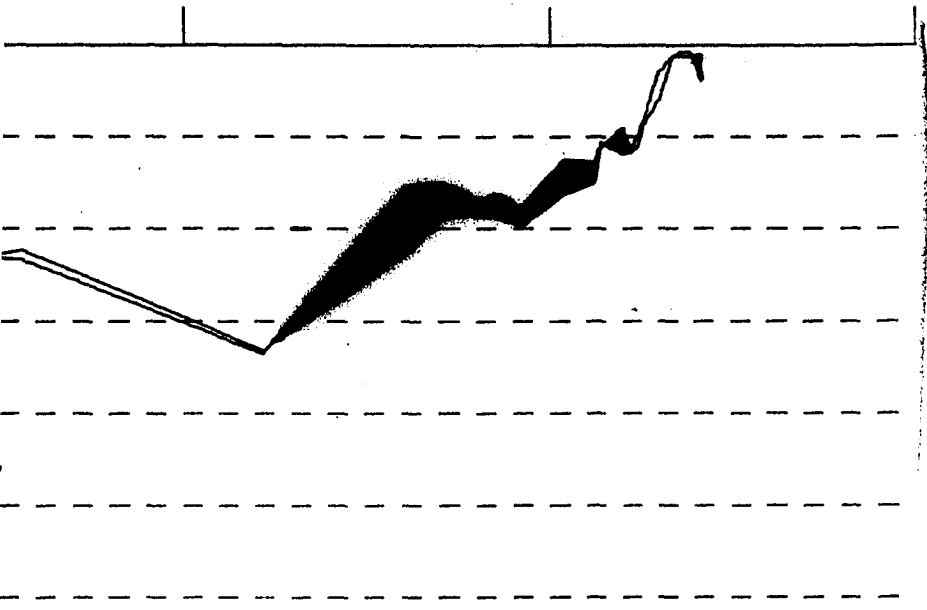


N

76-05W

76-00W

75-55W

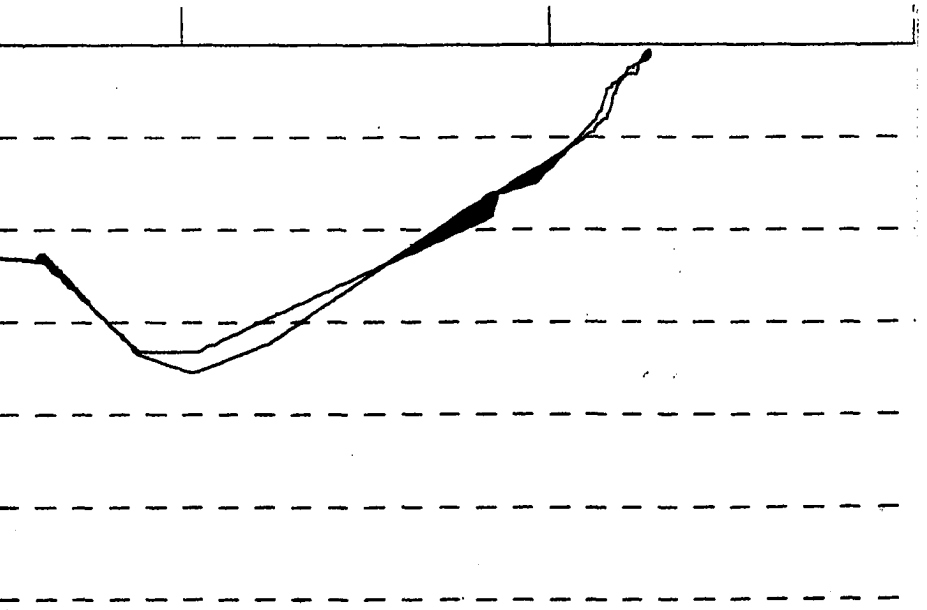


N

76-05W

76-00W

75-55W

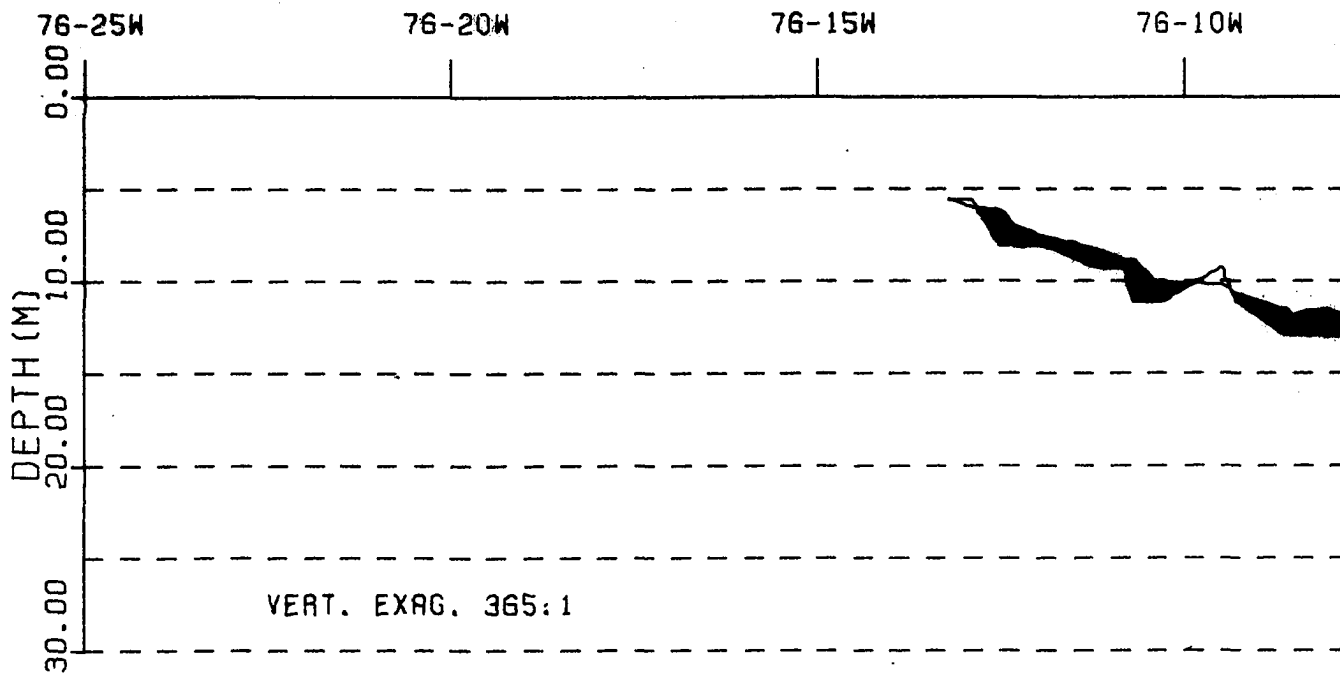


E-17

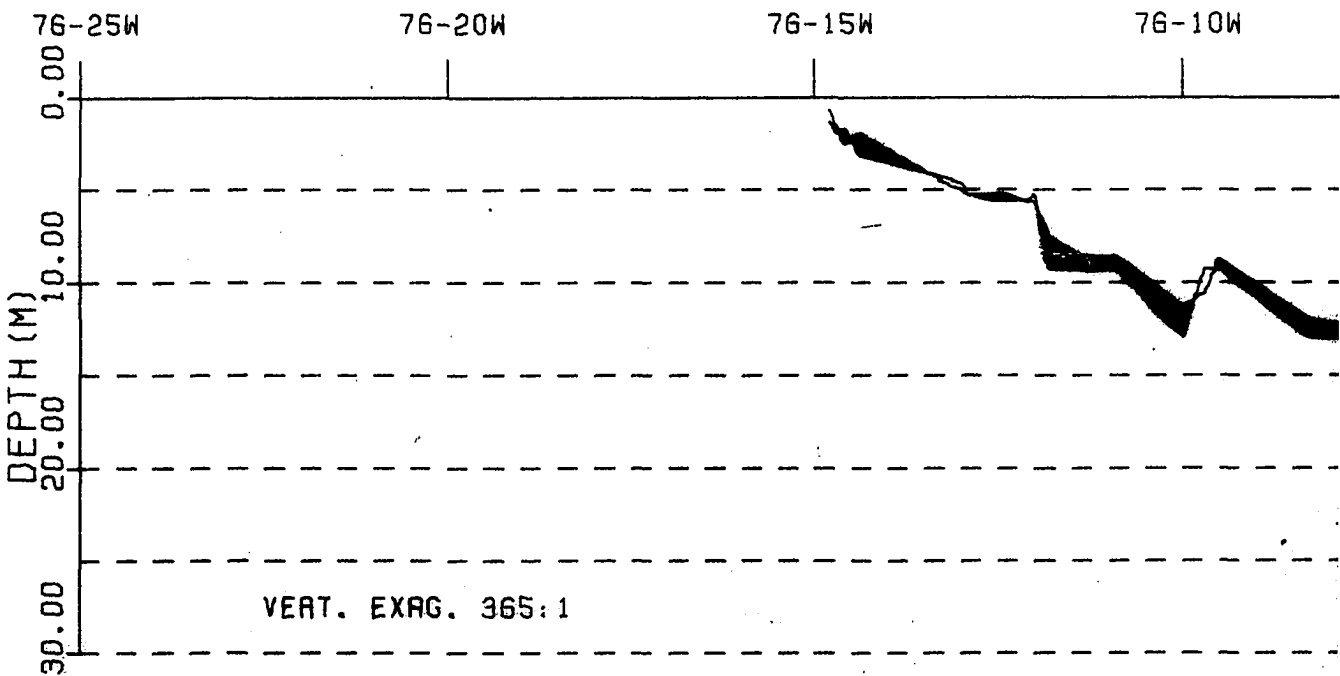
d-2



LATITUDE 37°26'

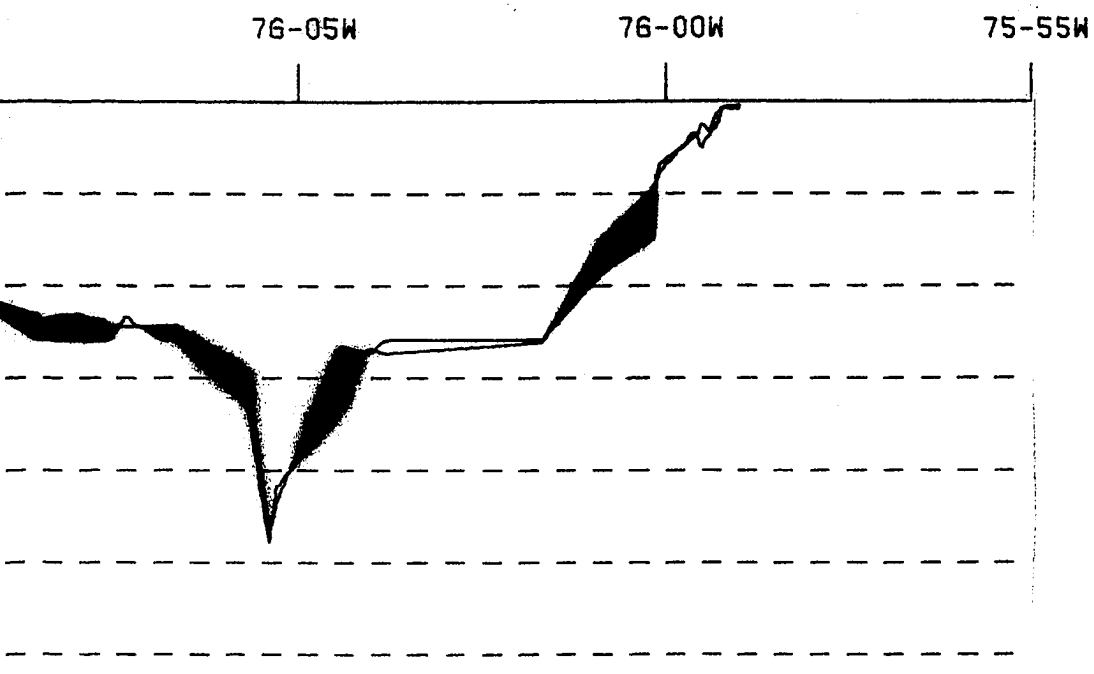


LATITUDE 37°2

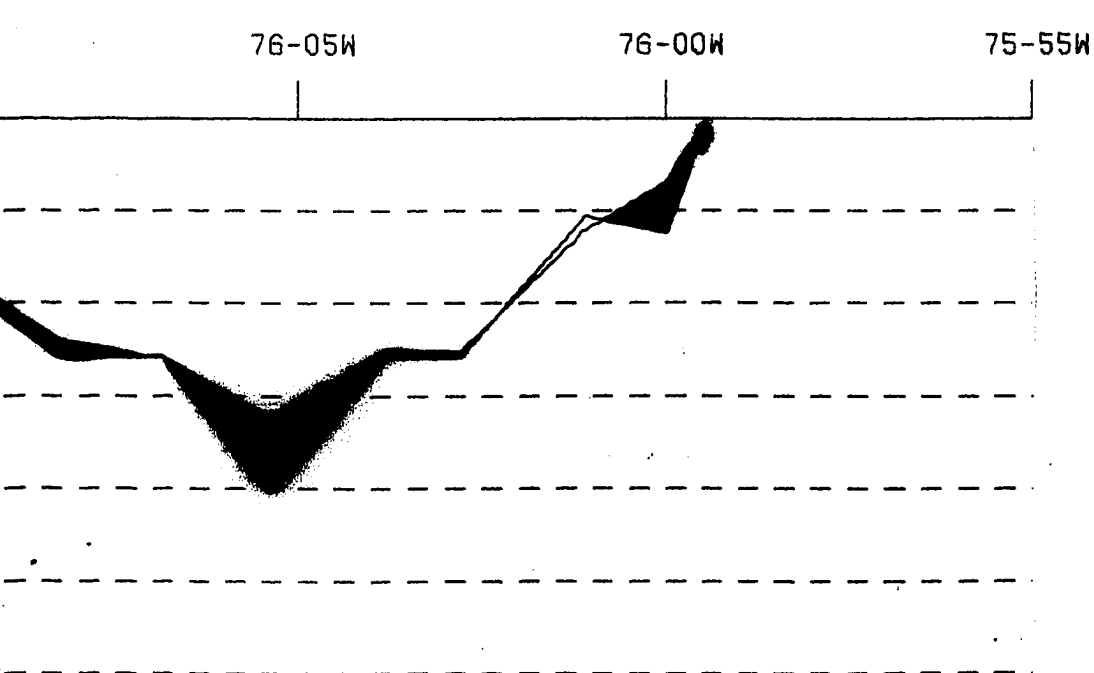




37°26'N

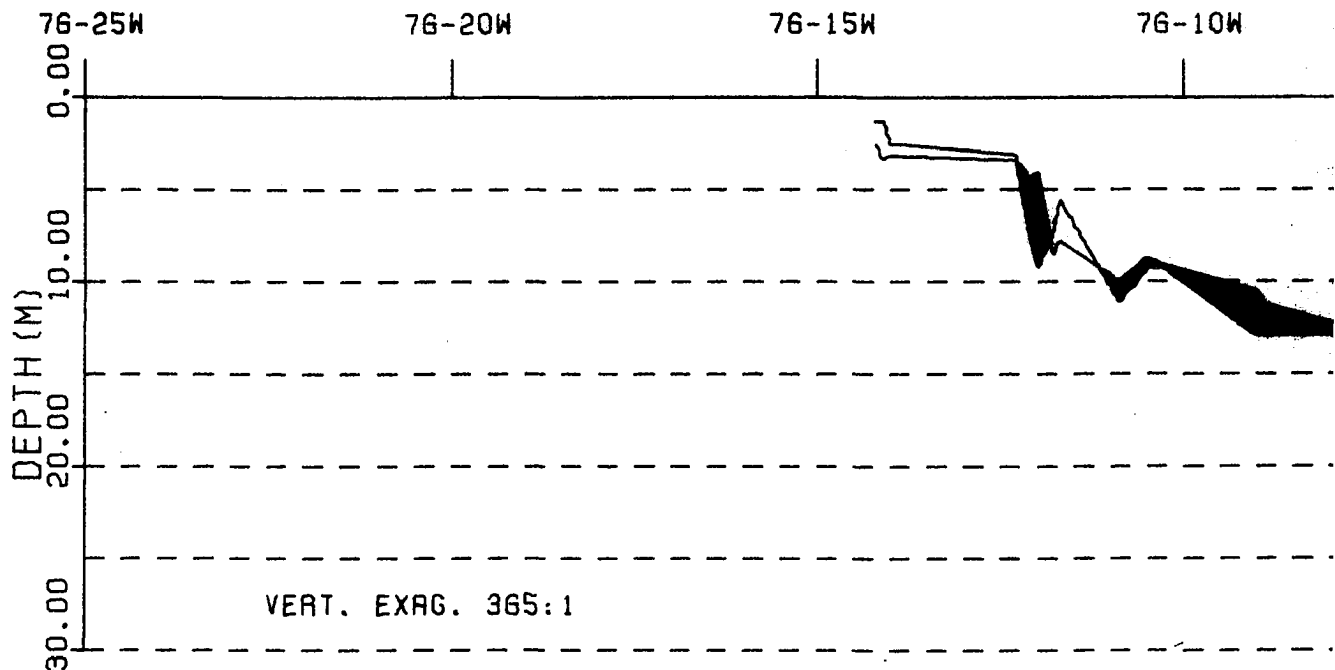


37°25'N

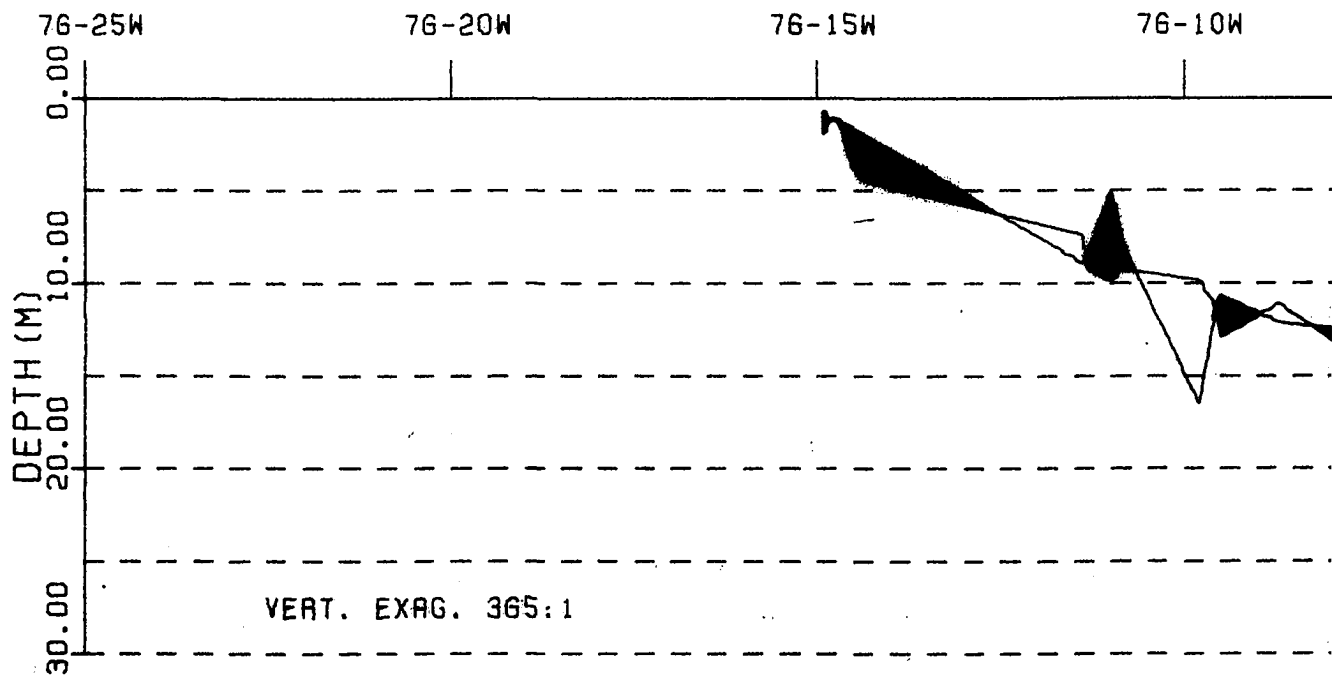




LATITUDE 37°24



LATITUDE 37°23





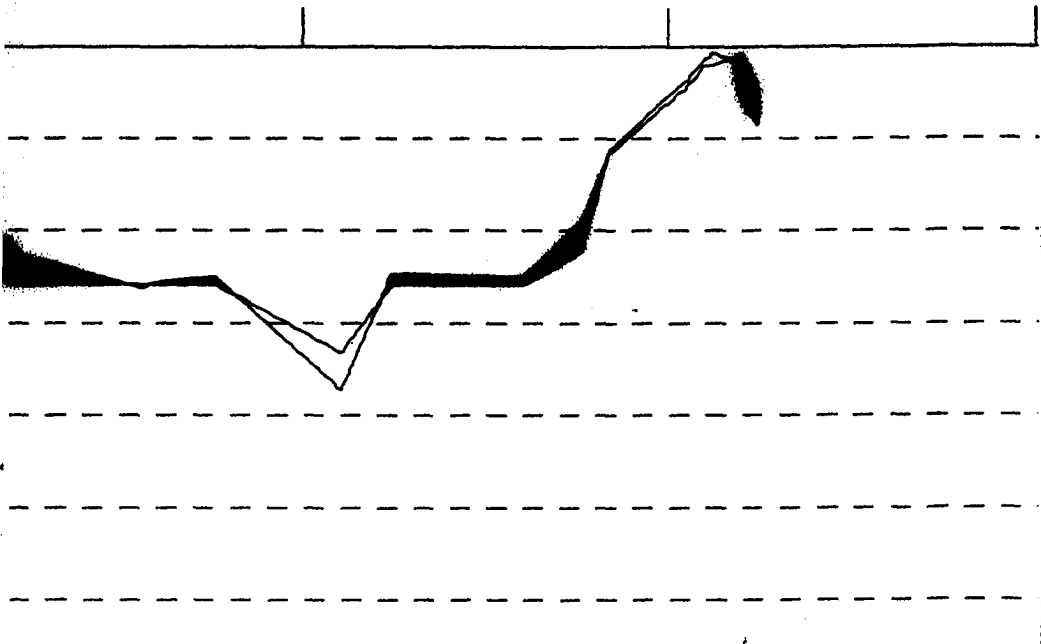


37°24'N

76-05W

76-00W

75-55W

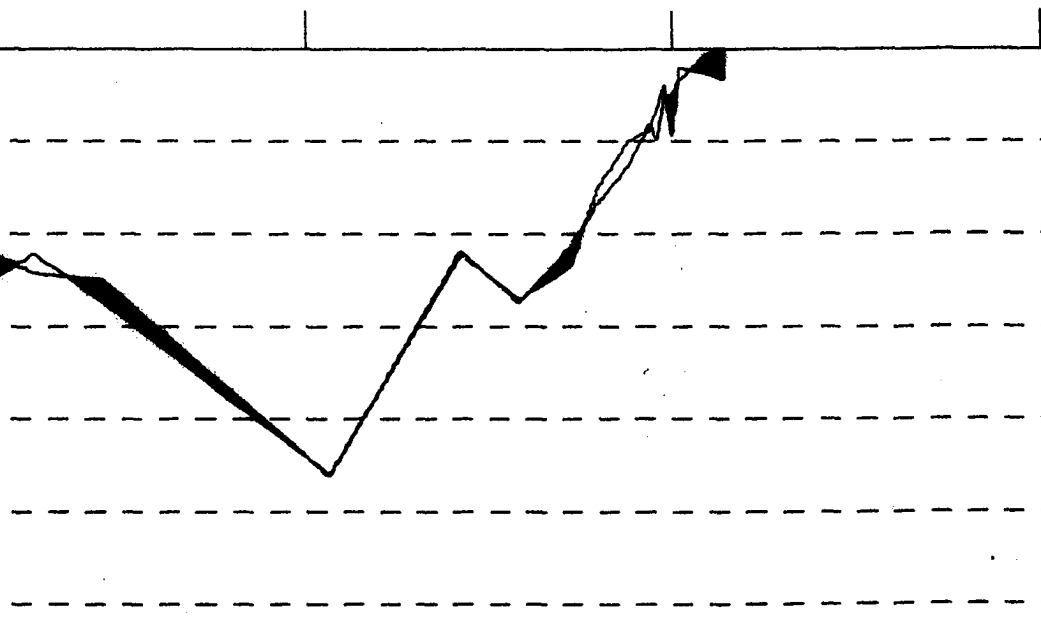


37°23'N

76-05W

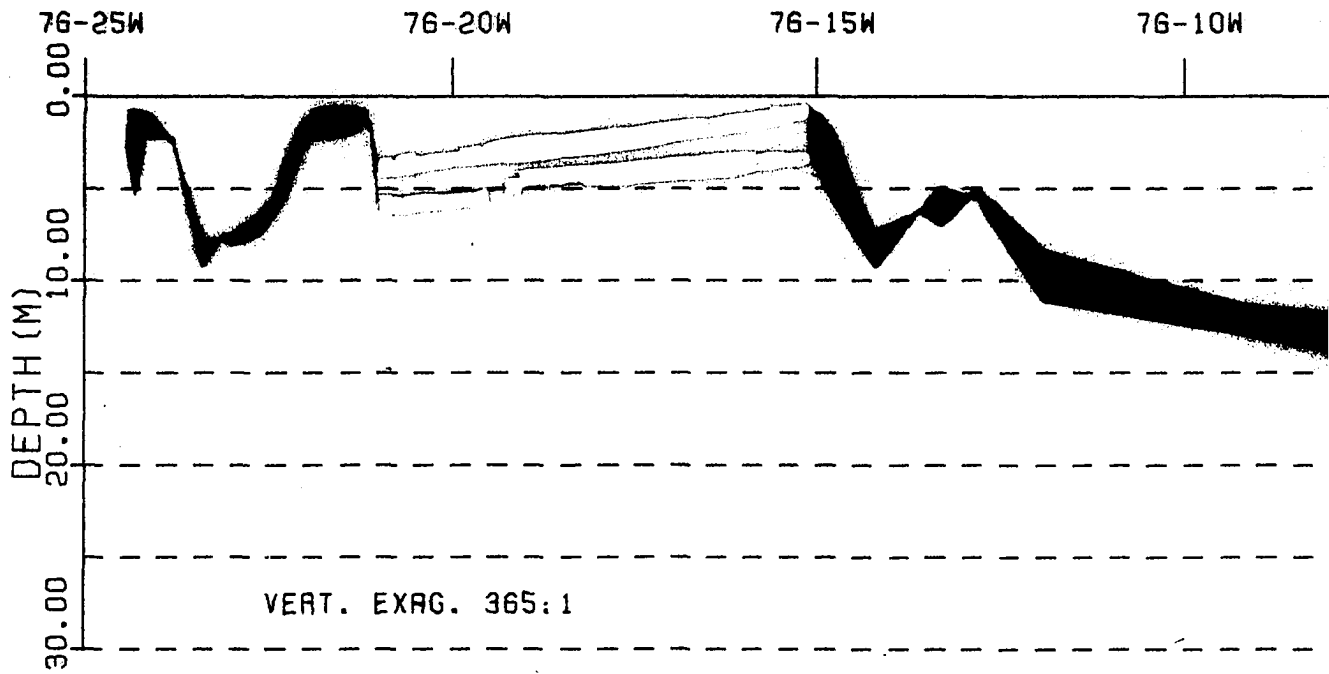
76-00W

75-55W

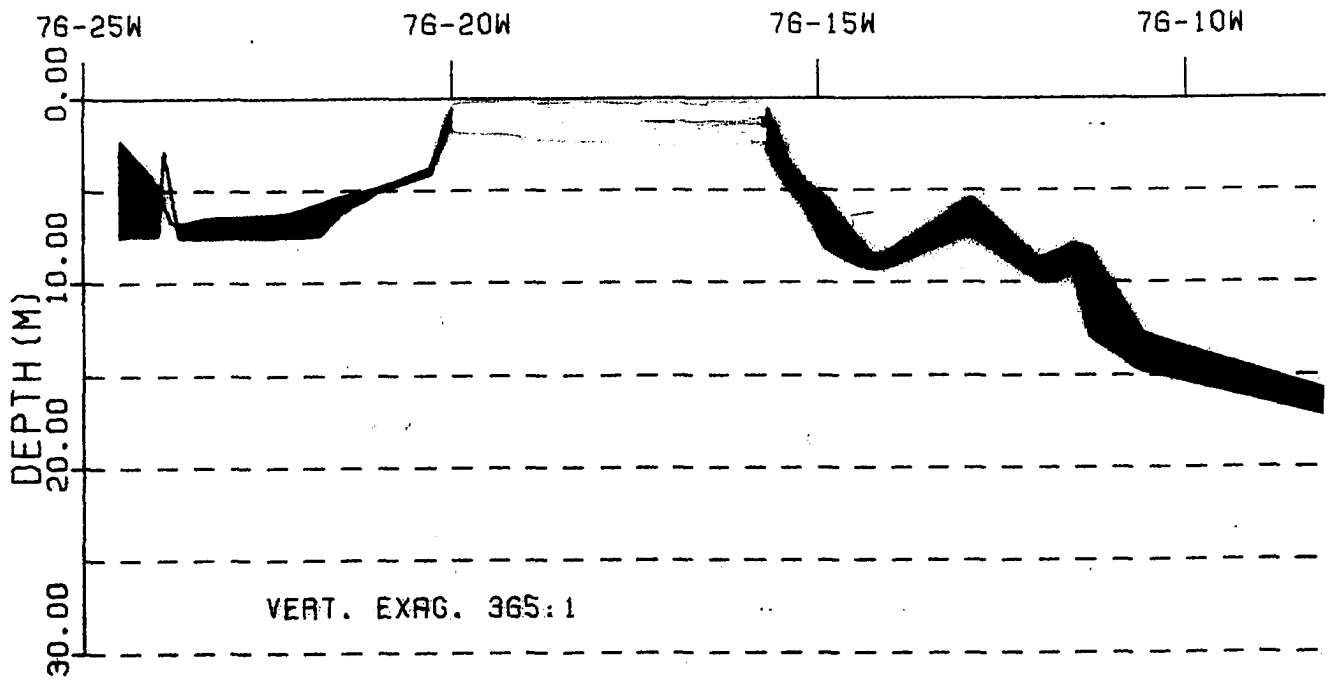




LATITUDE 37



LATITUDE 37°2





37°22'N

76-05W

76-00W

75-55W

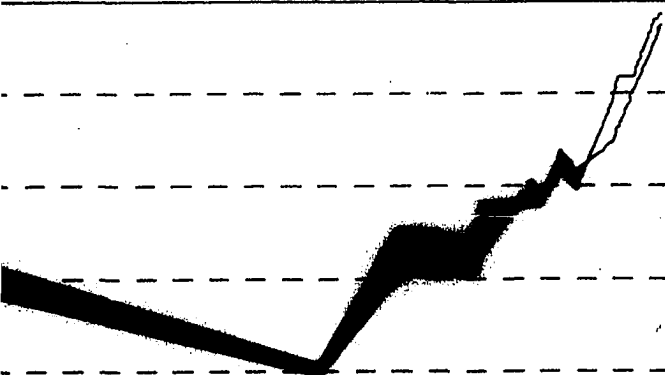


37°21'N

76-05W

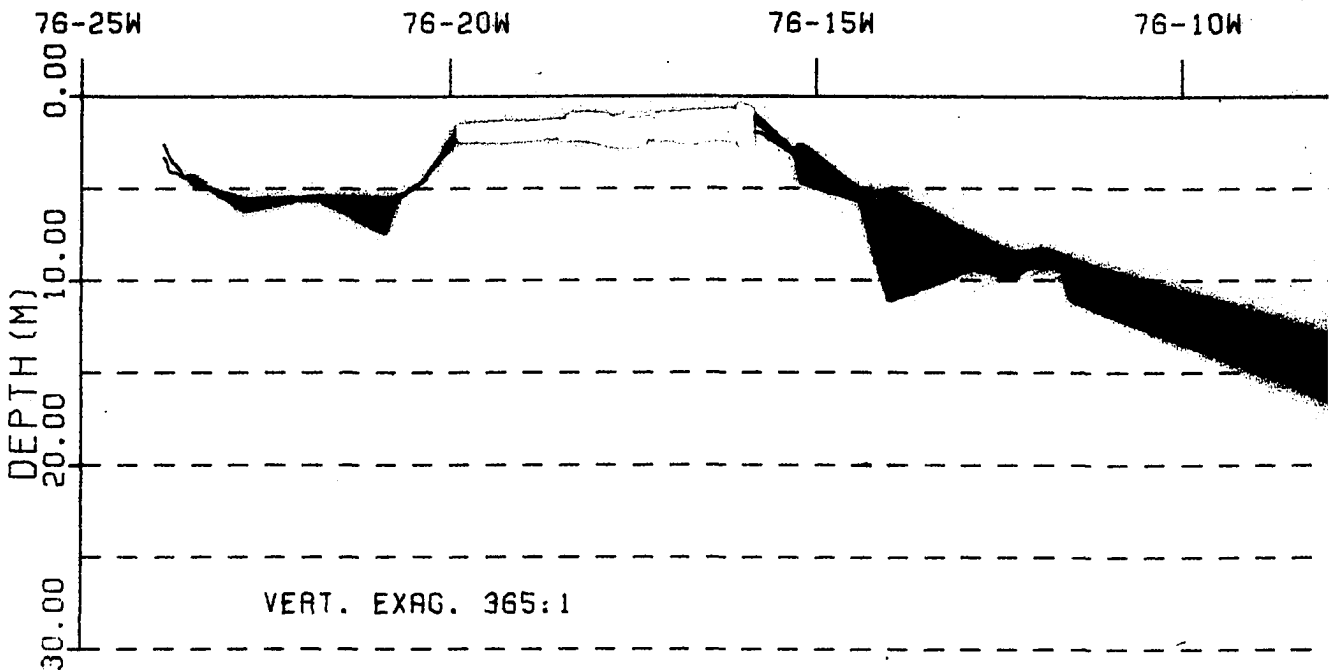
76-00W

75-55W

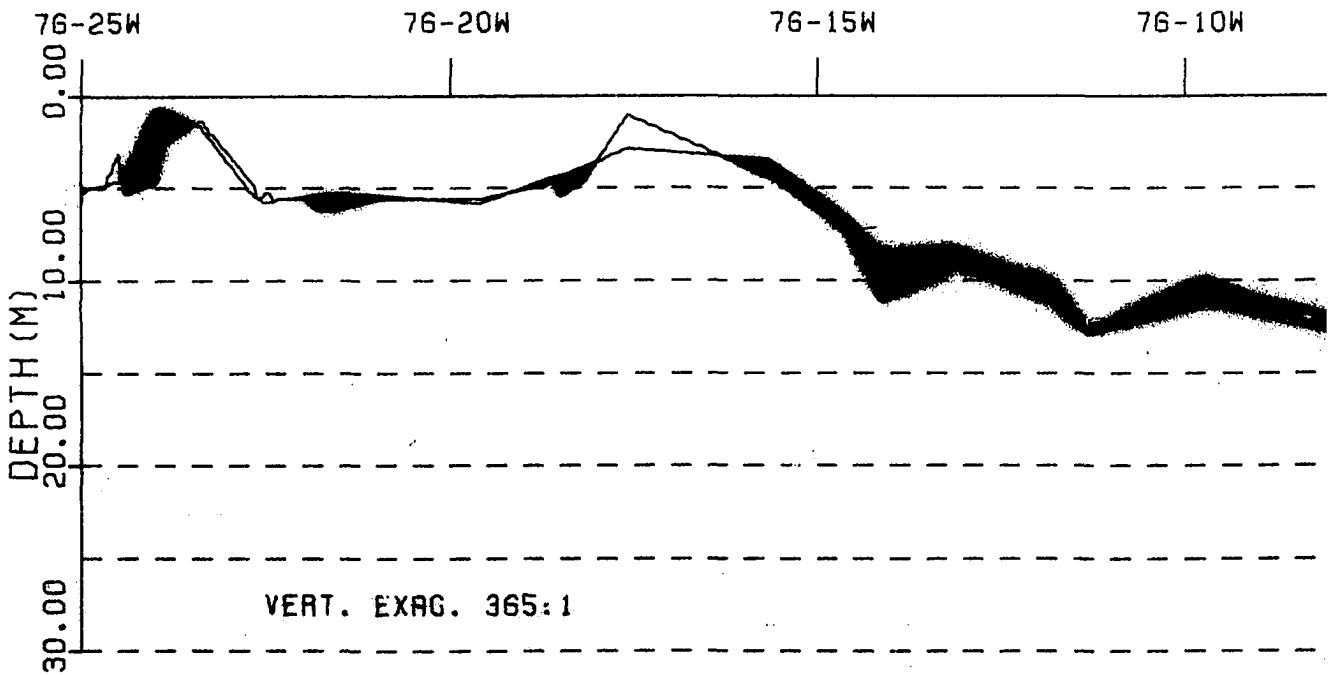




LATITUDE 37°



LATITUDE 37°





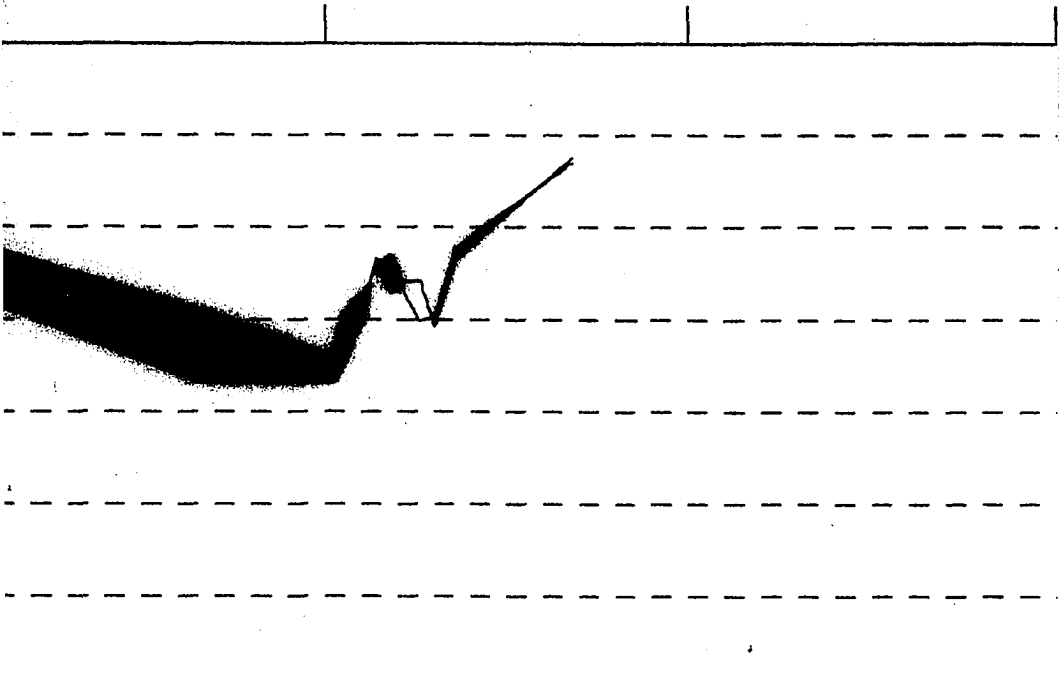


37°20'N

76-05W

76-00W

75-55W

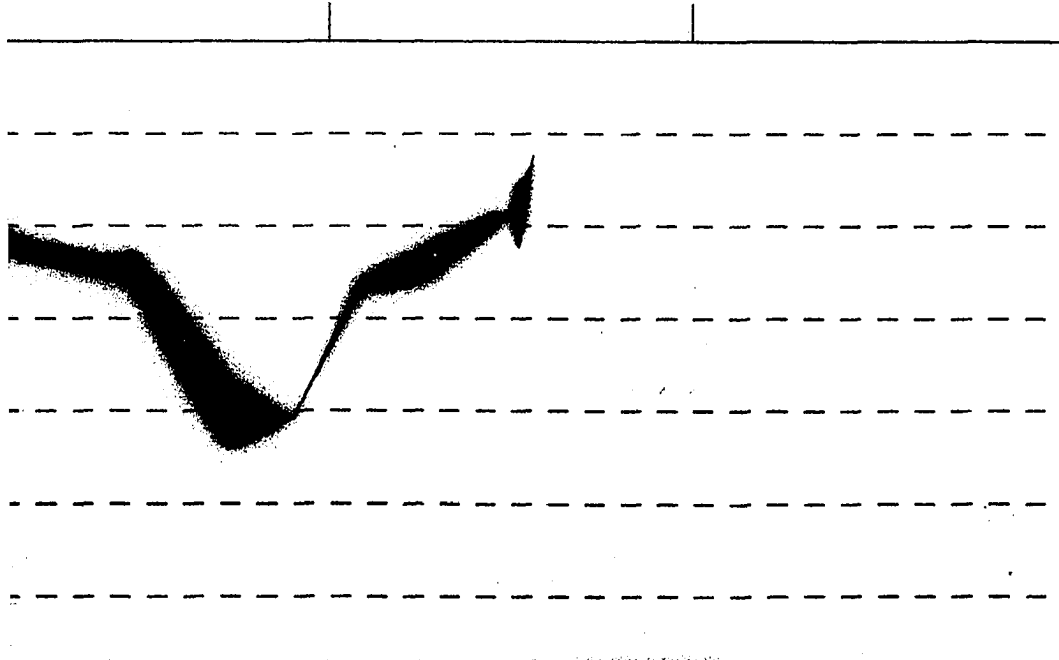


37°19'N

76-05W

76-00W

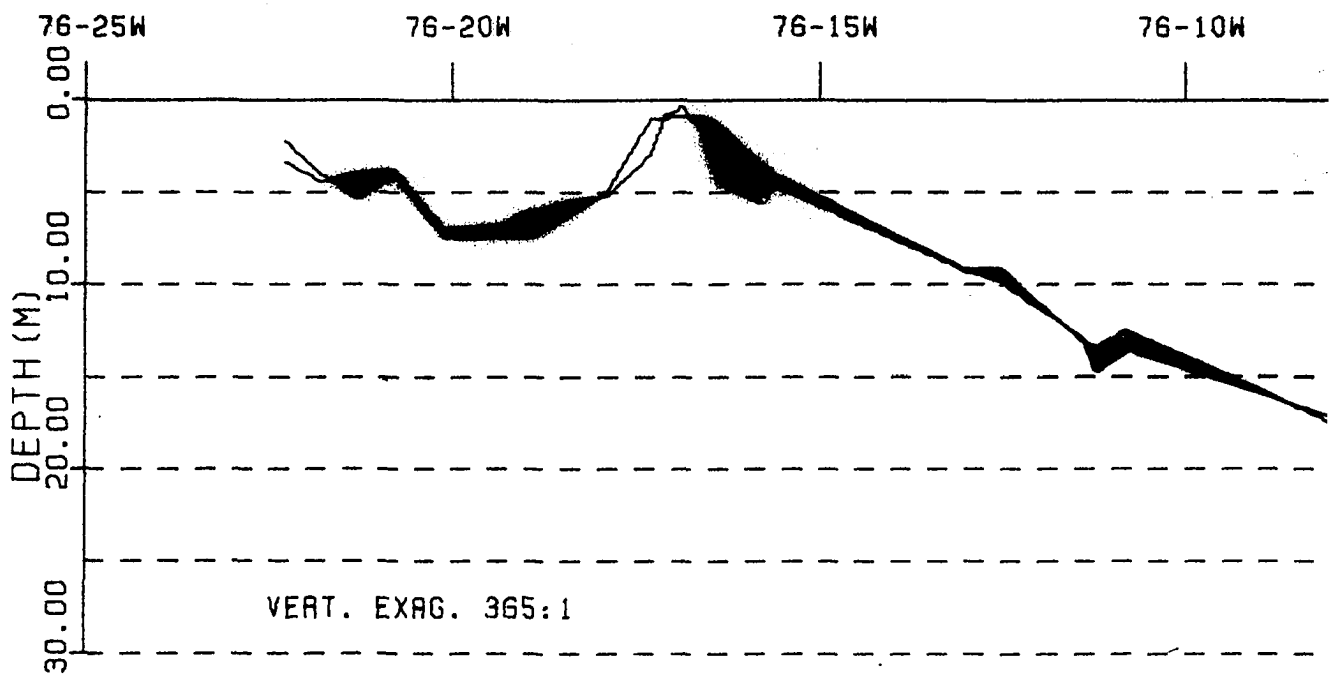
75-55W



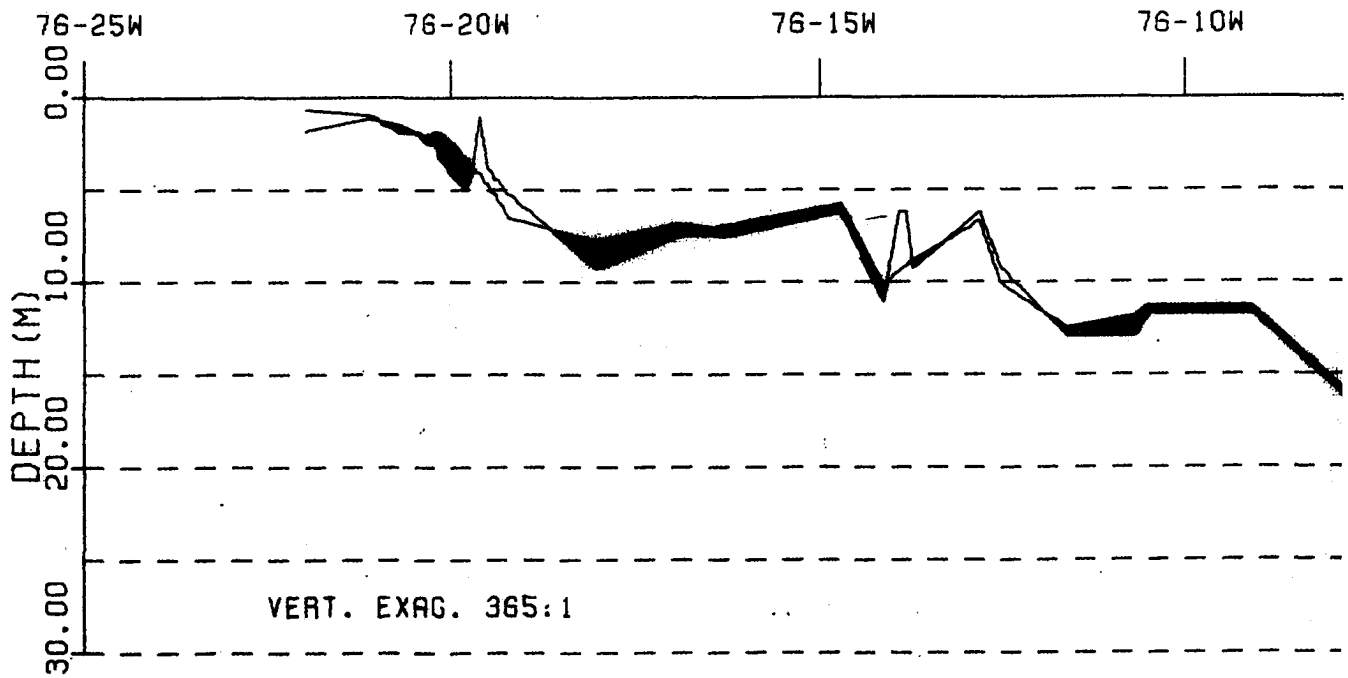
E-21



LATITUDE 37°1



LATITUDE 37°17



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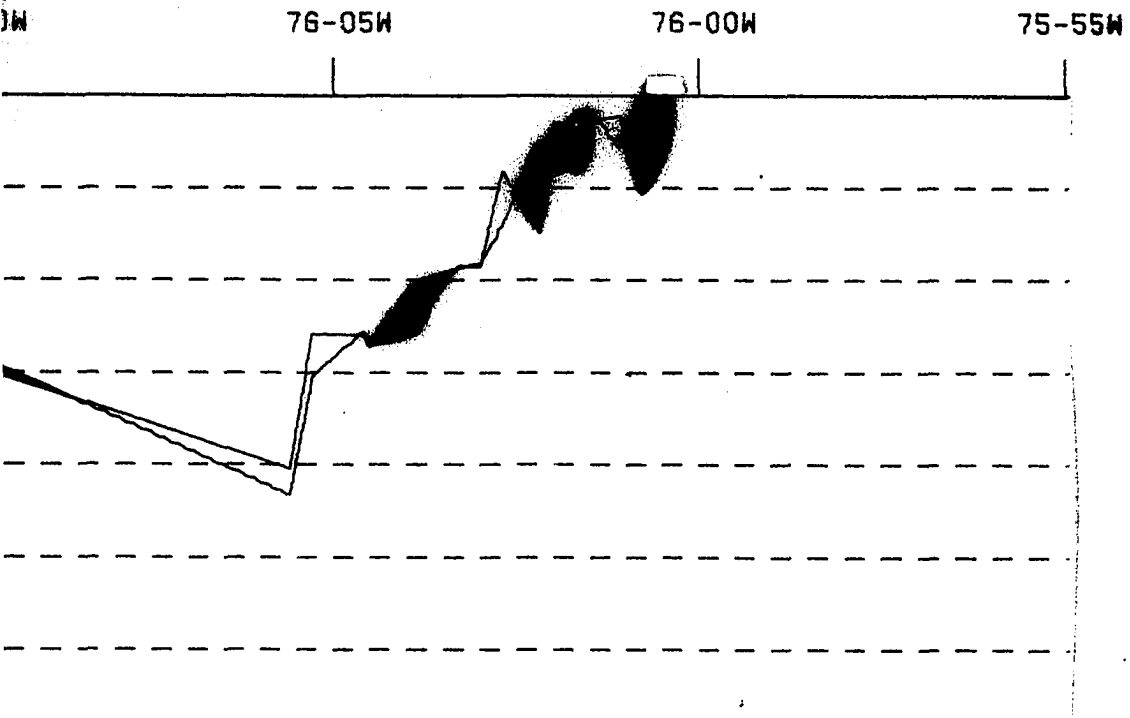
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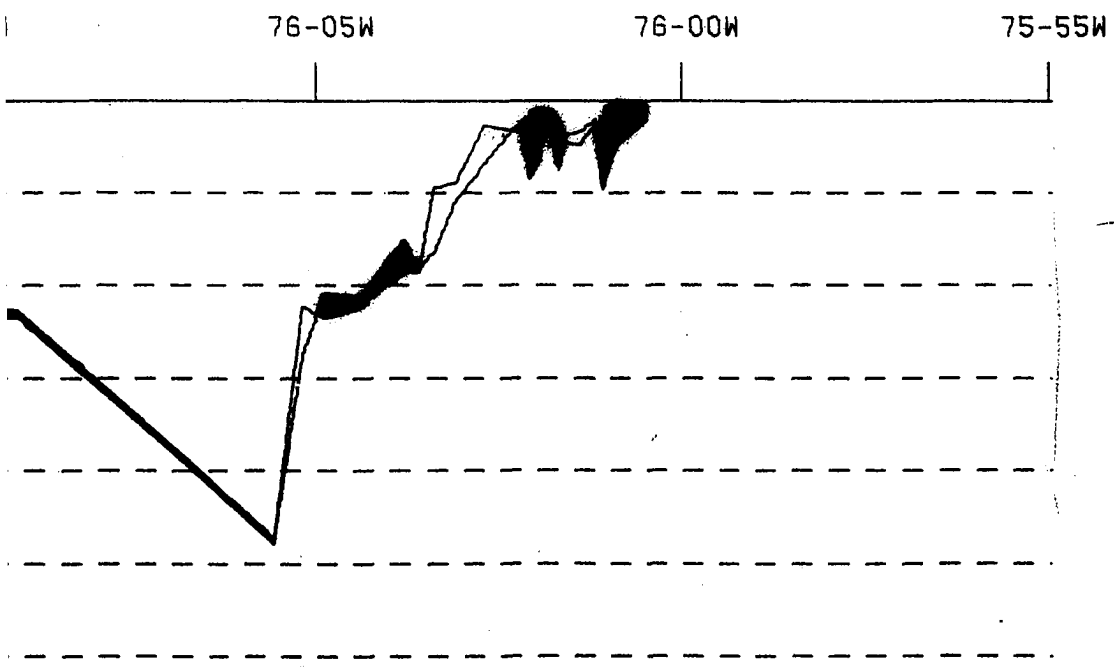
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37°18'N

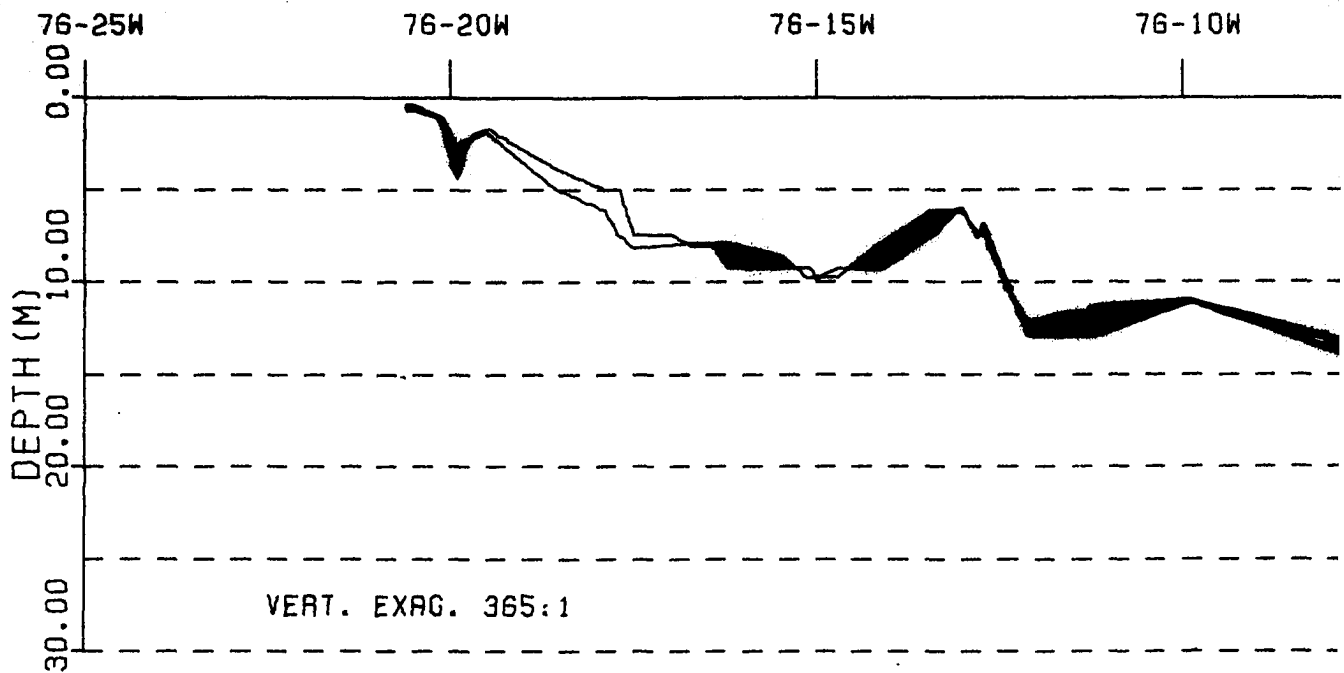


37°17'N

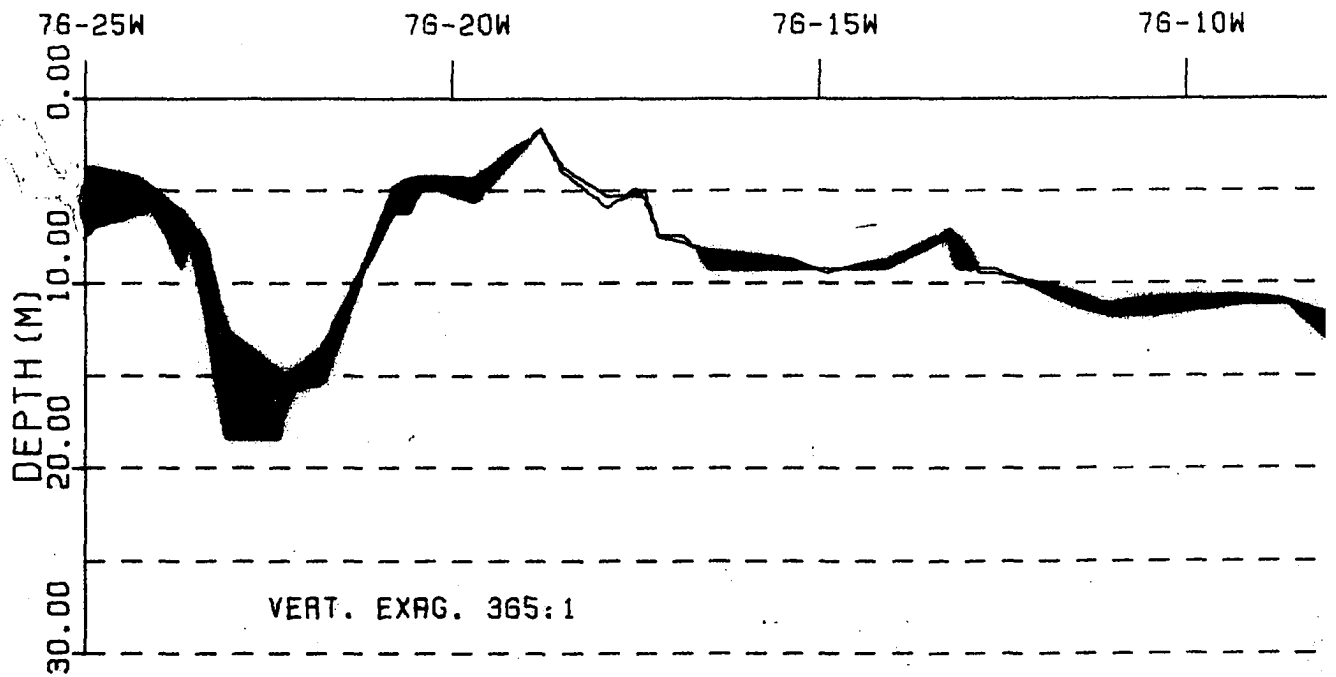




LATITUDE 37°10'



LATITUDE 37°10'





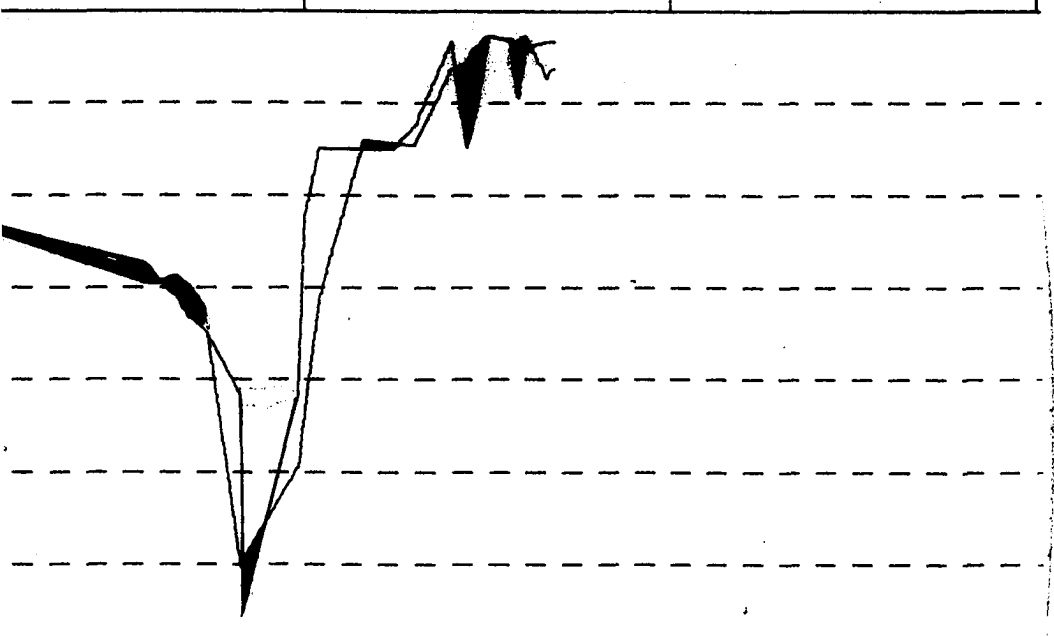
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37°16'N

76-05W

76-00W

75-55W



37°15'N

76-05W

76-00W

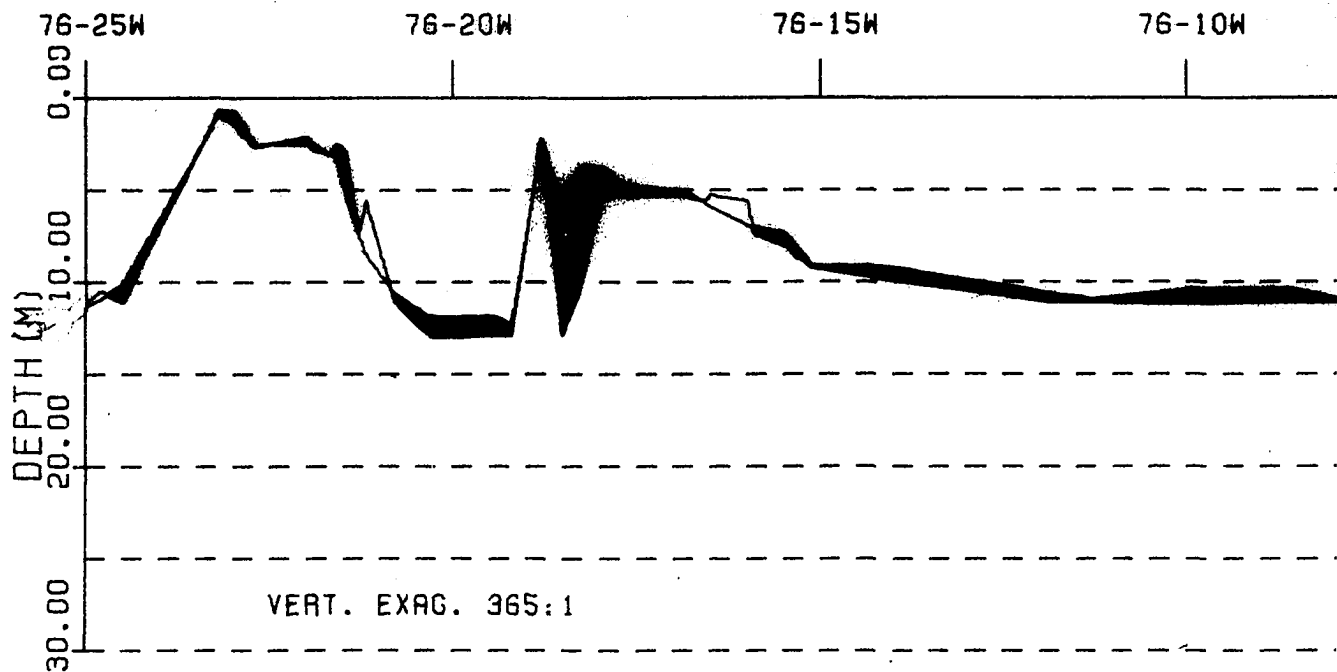
75-55W



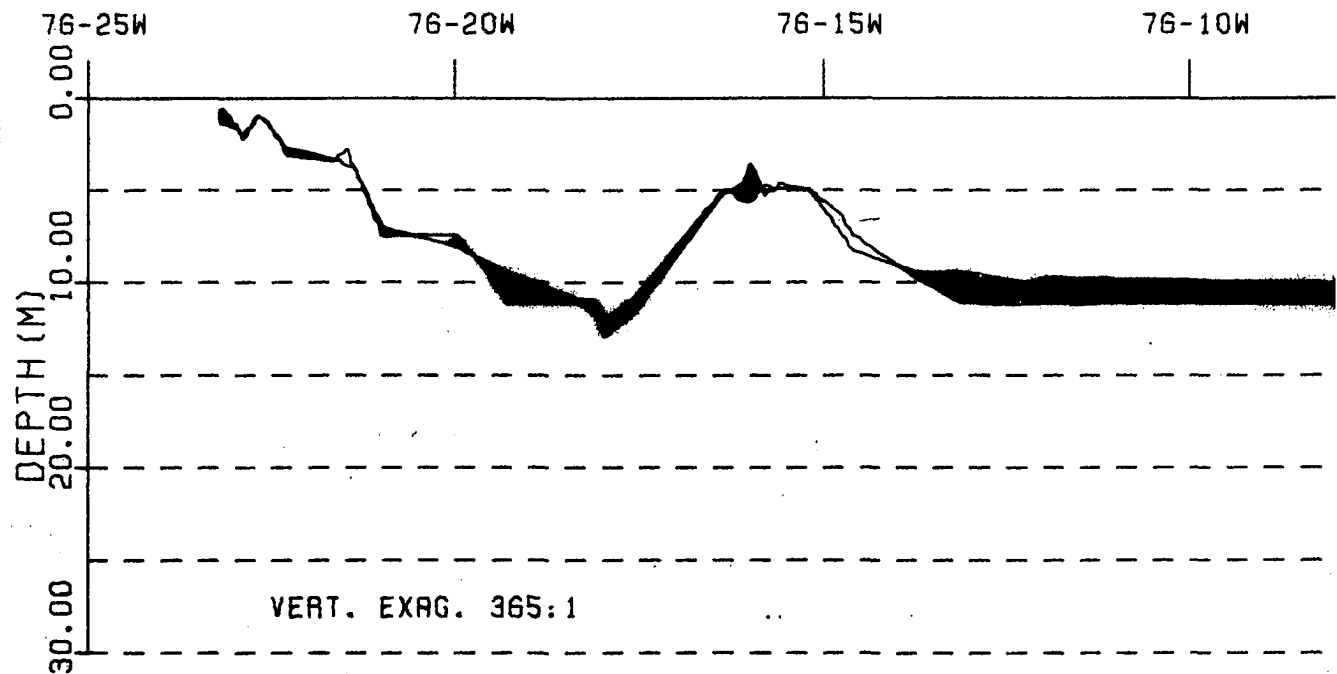
E-23



LATITUDE 37°1



LATITUDE 37°13



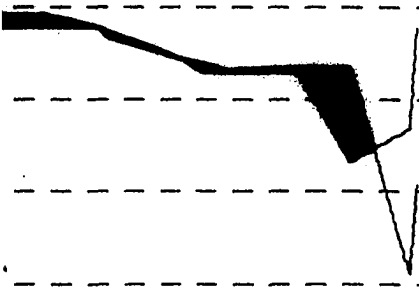


37°14'N

76-05W

76-00W

75-55W

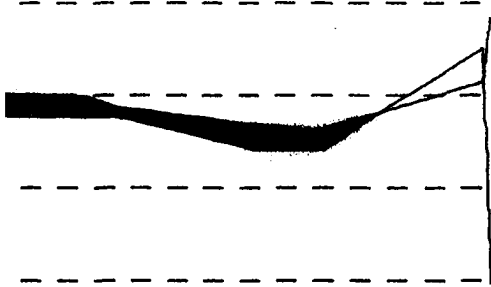


37°13'N

76-05W

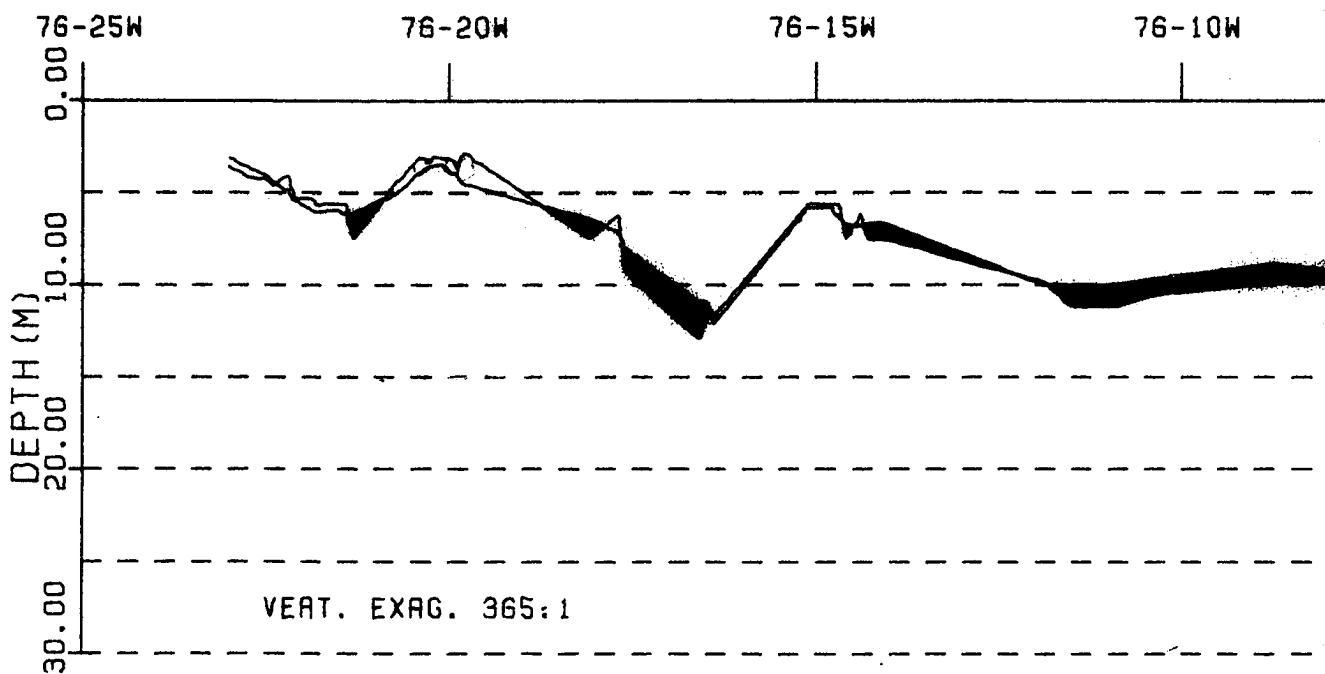
76-00W

75-55W

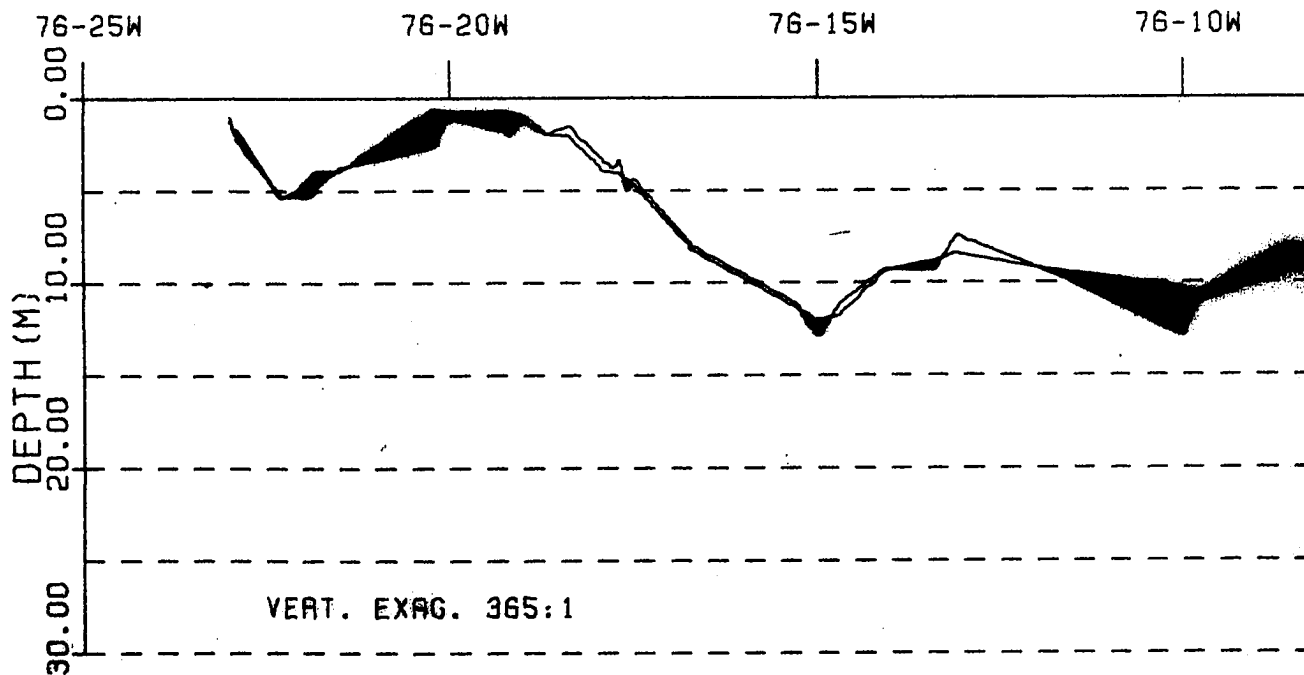




LATITUDE 37°12'



LATITUDE 37°11'





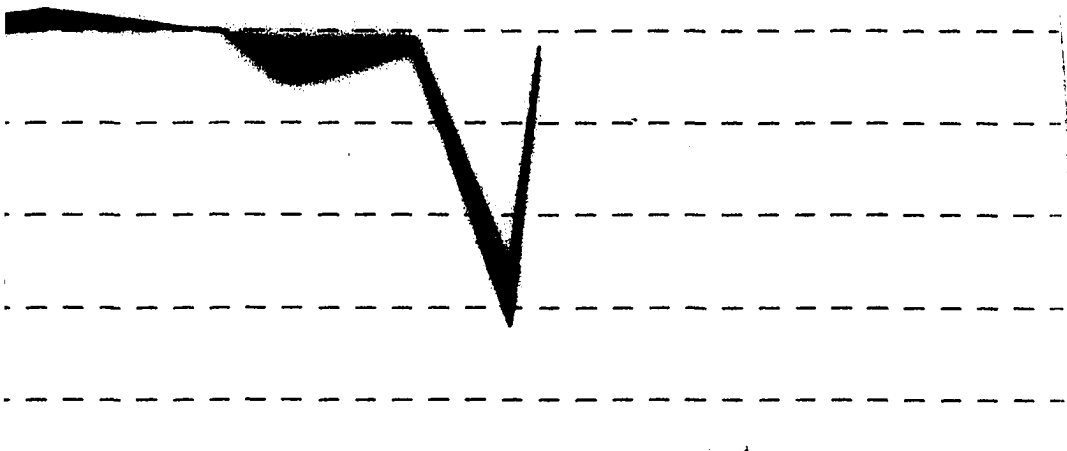


37°12'N

76-05W

76-00W

75-55W



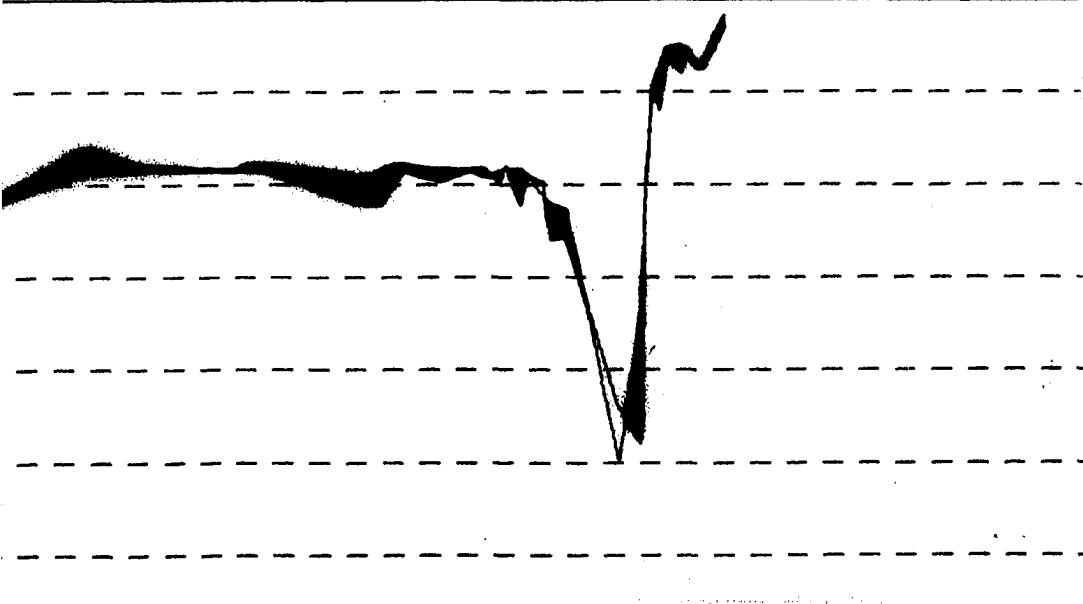
37°11'N

OW

76-05W

76-00W

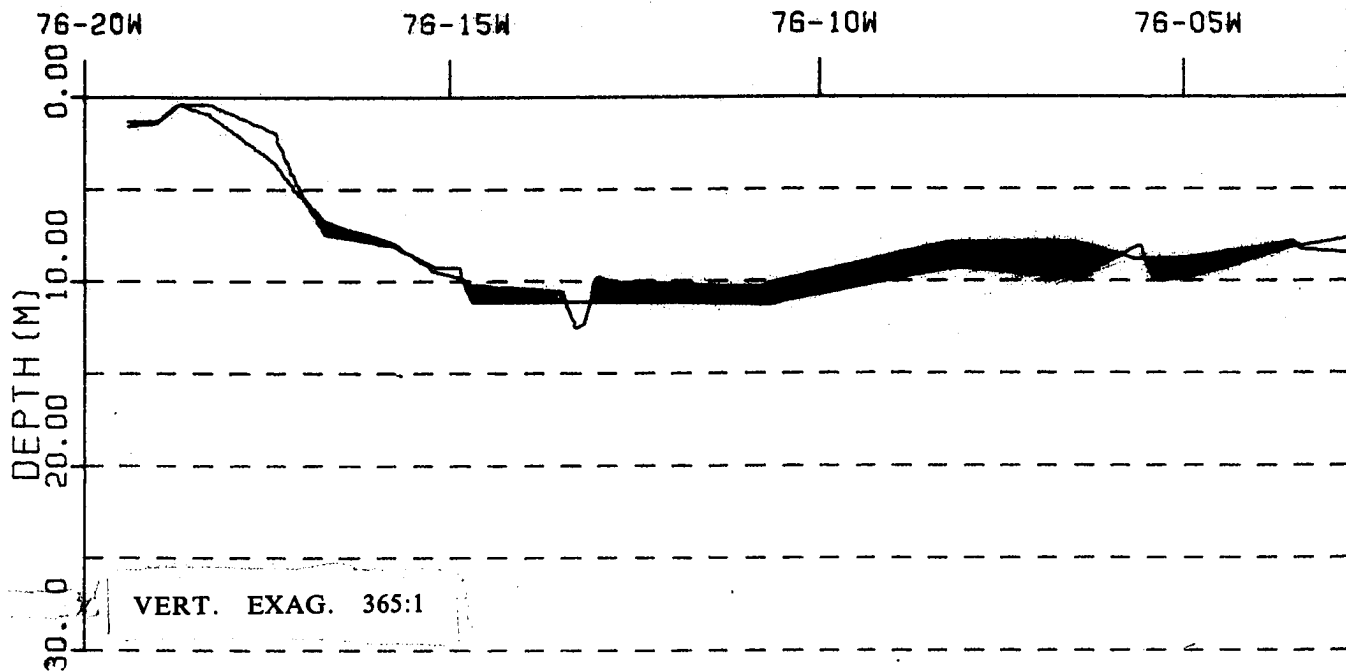
75-55W



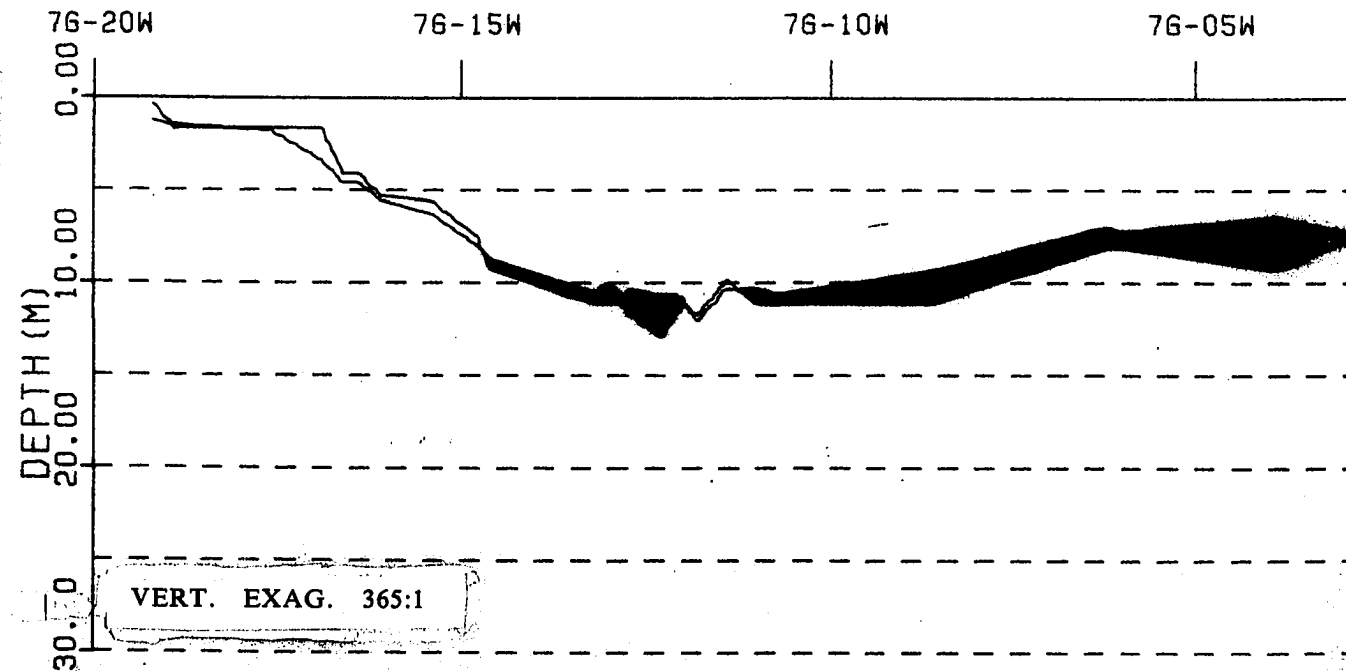
E-25



LATITUDE 37°10'



LATITUDE 37°00'



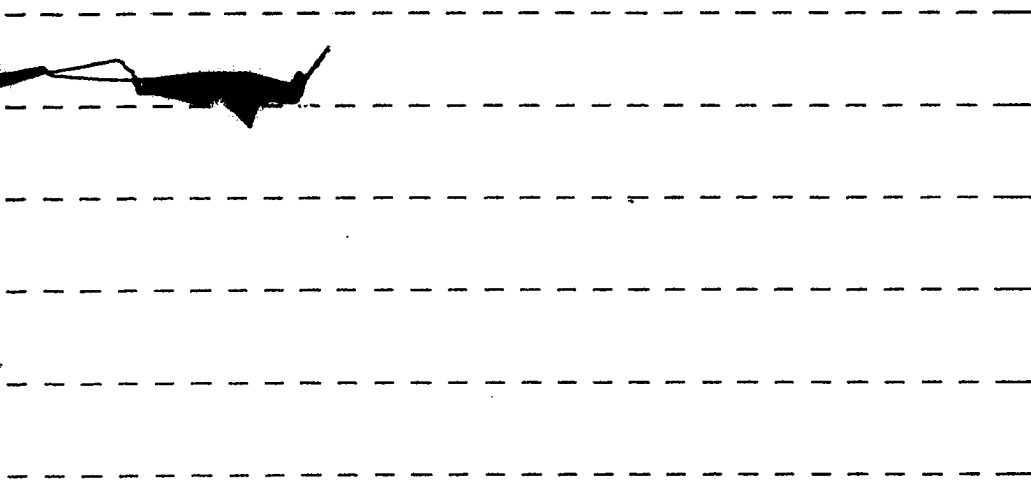


37°10'N

76-00W

75-55W

75-50W

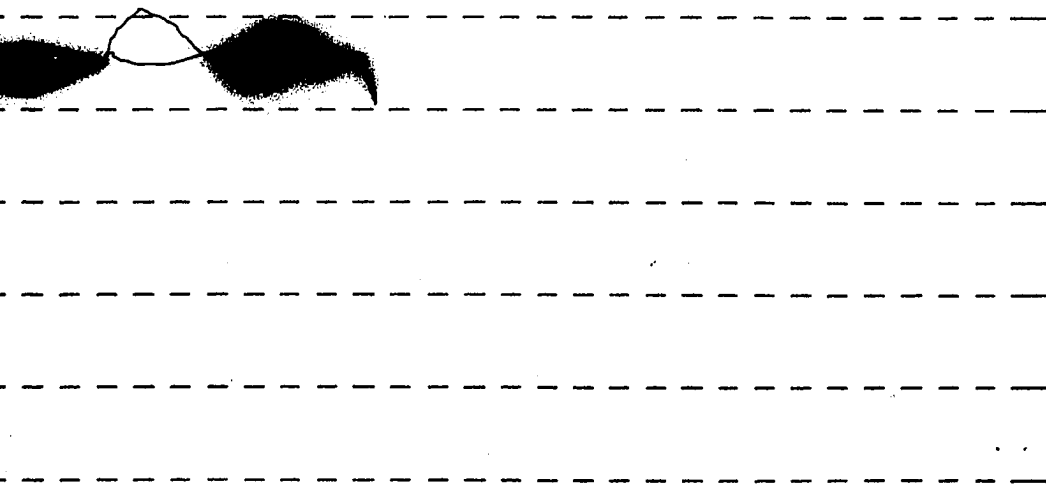


37°09'N

76-00W

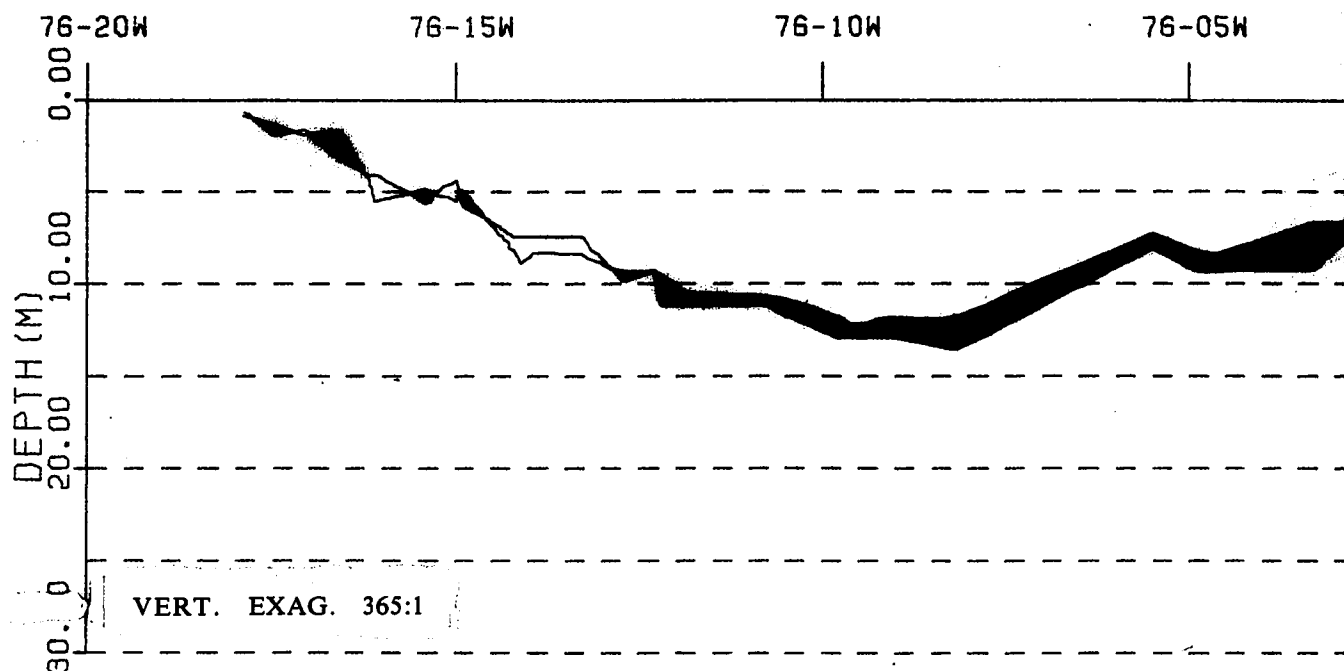
75-55W

75-50W

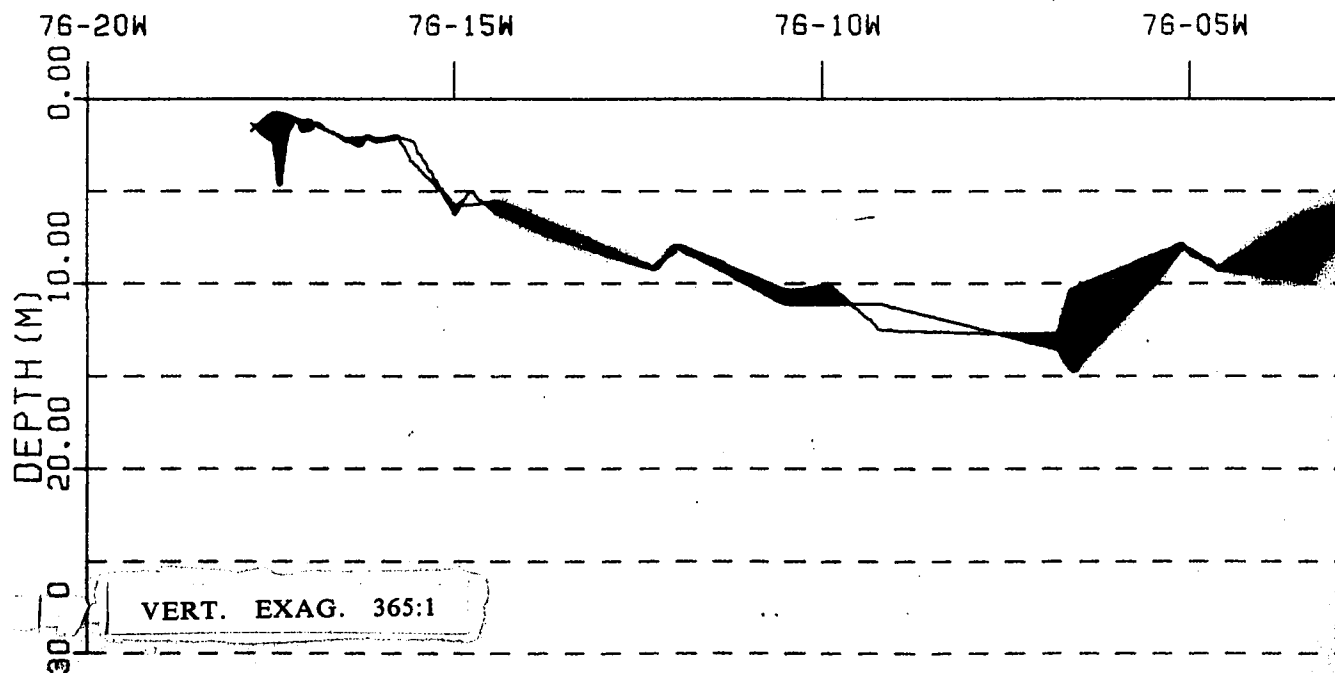




LATITUDE 37°08'



LATITUDE 37°07'



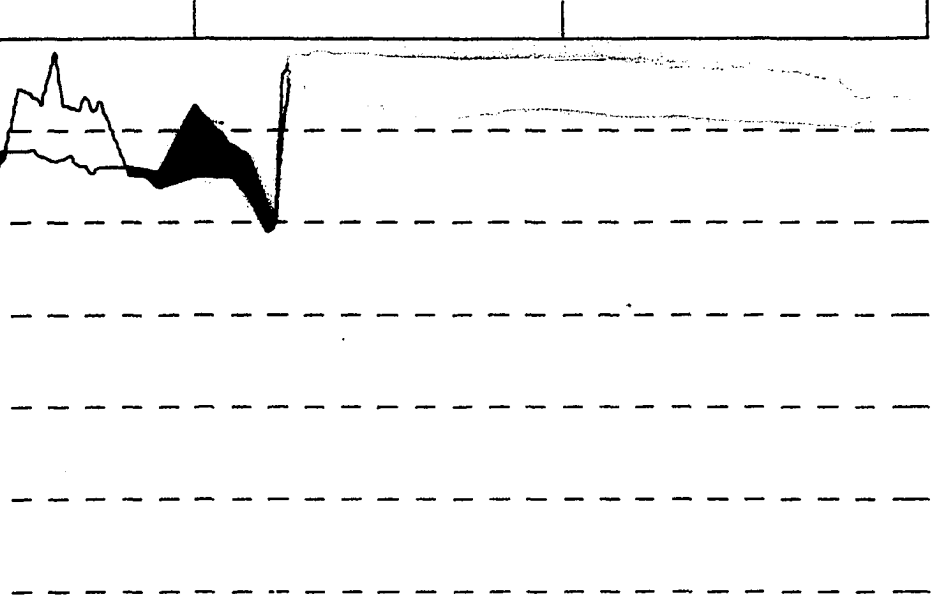




76-00W

75-55W

75-50W

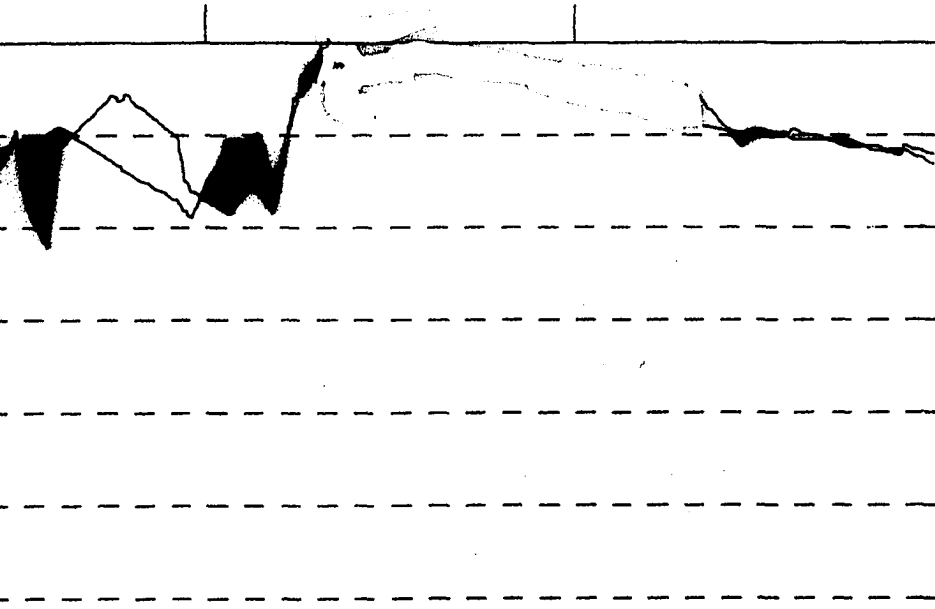


N

76-00W

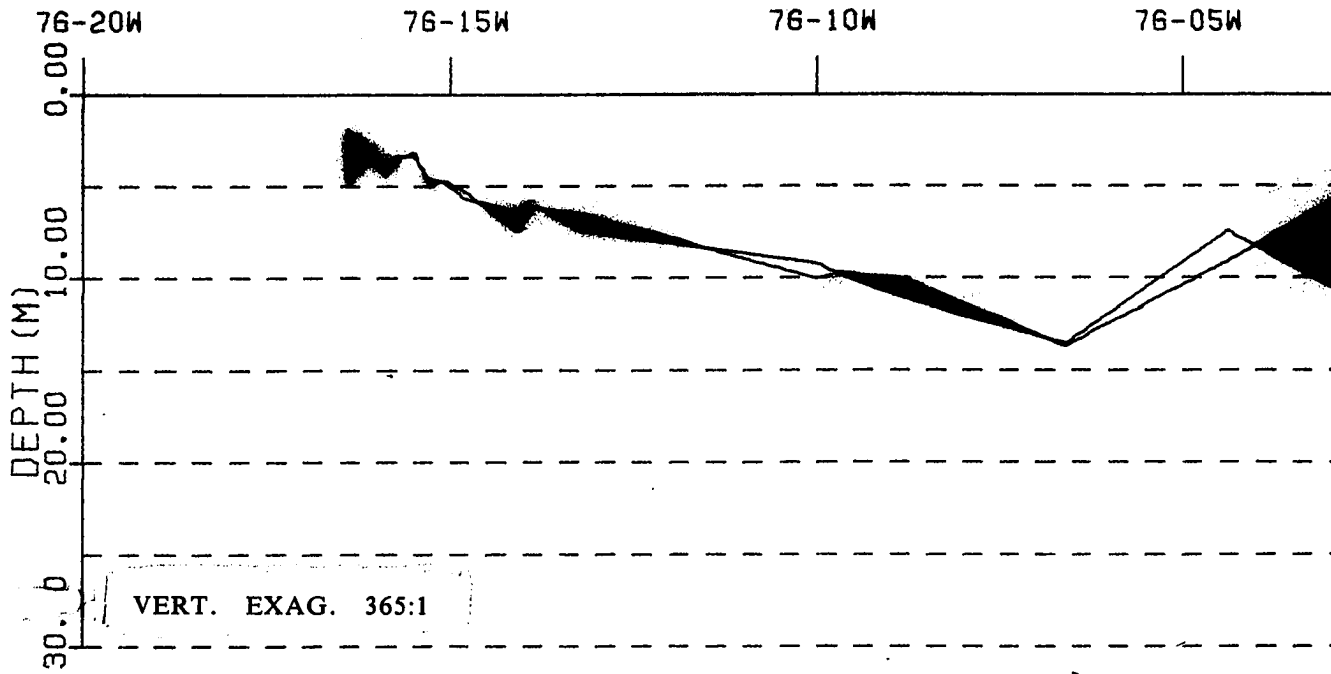
75-55W

75-50W

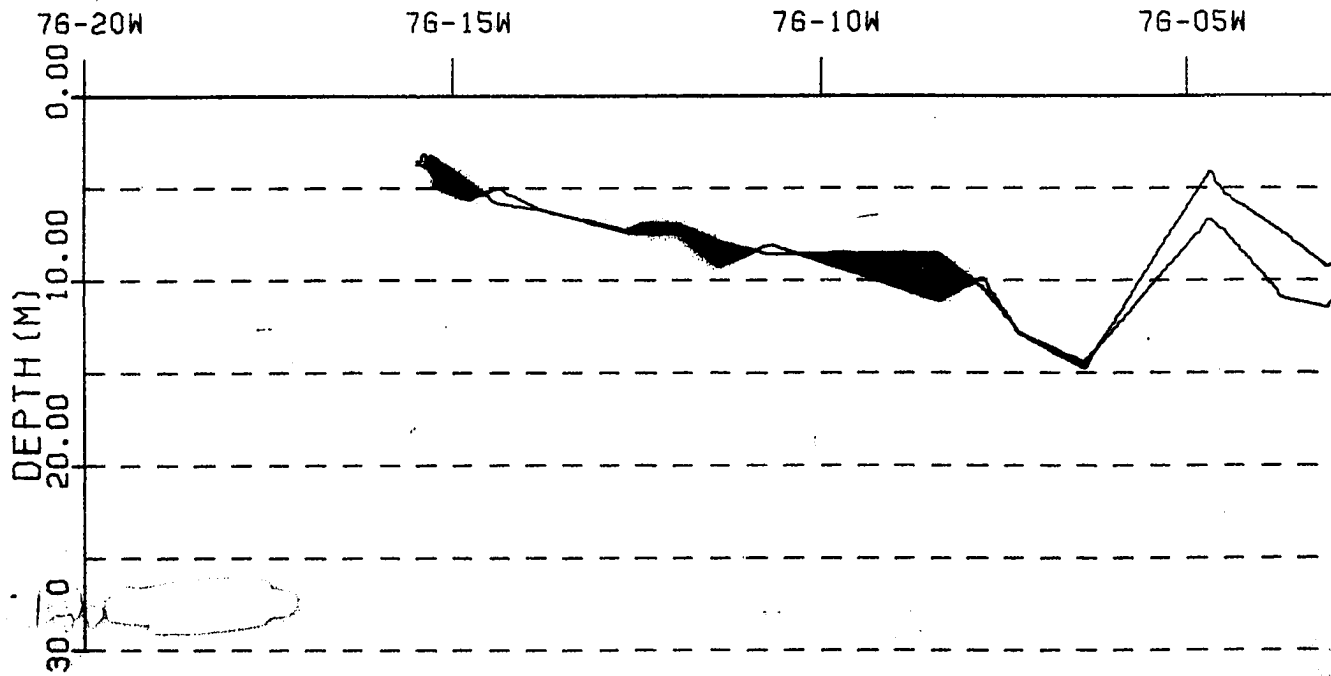




LATITUDE 37°00'

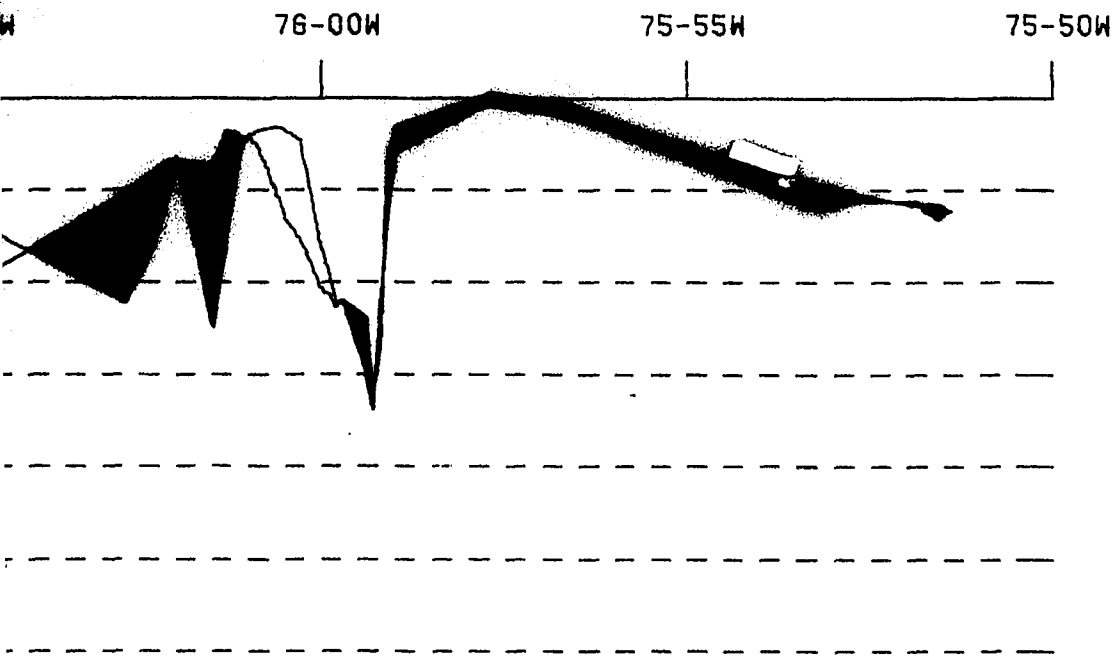


LATITUDE 37°00'

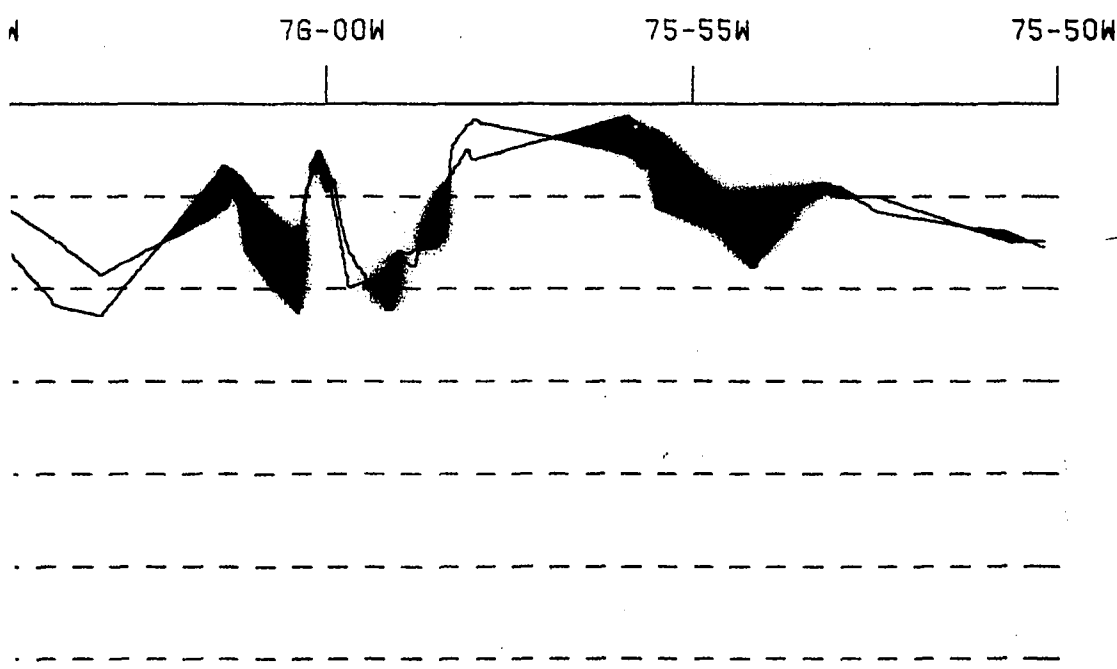




37°06'N

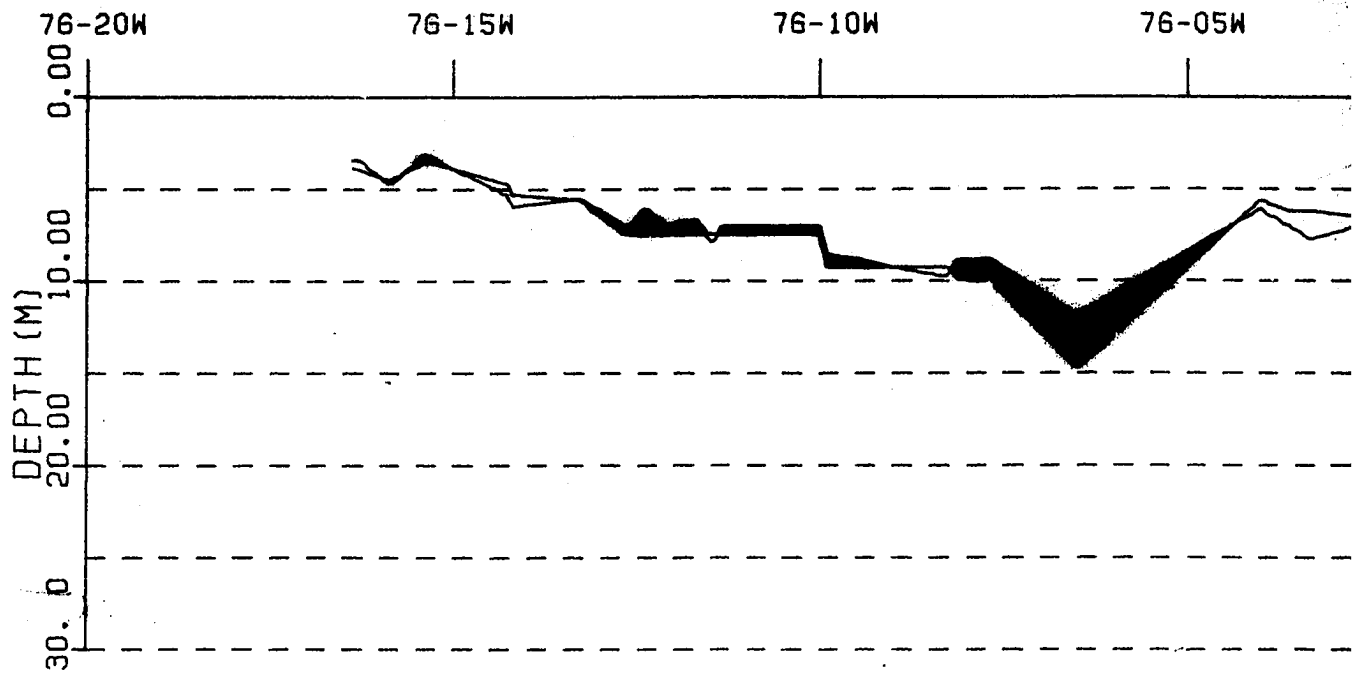


37°05'N

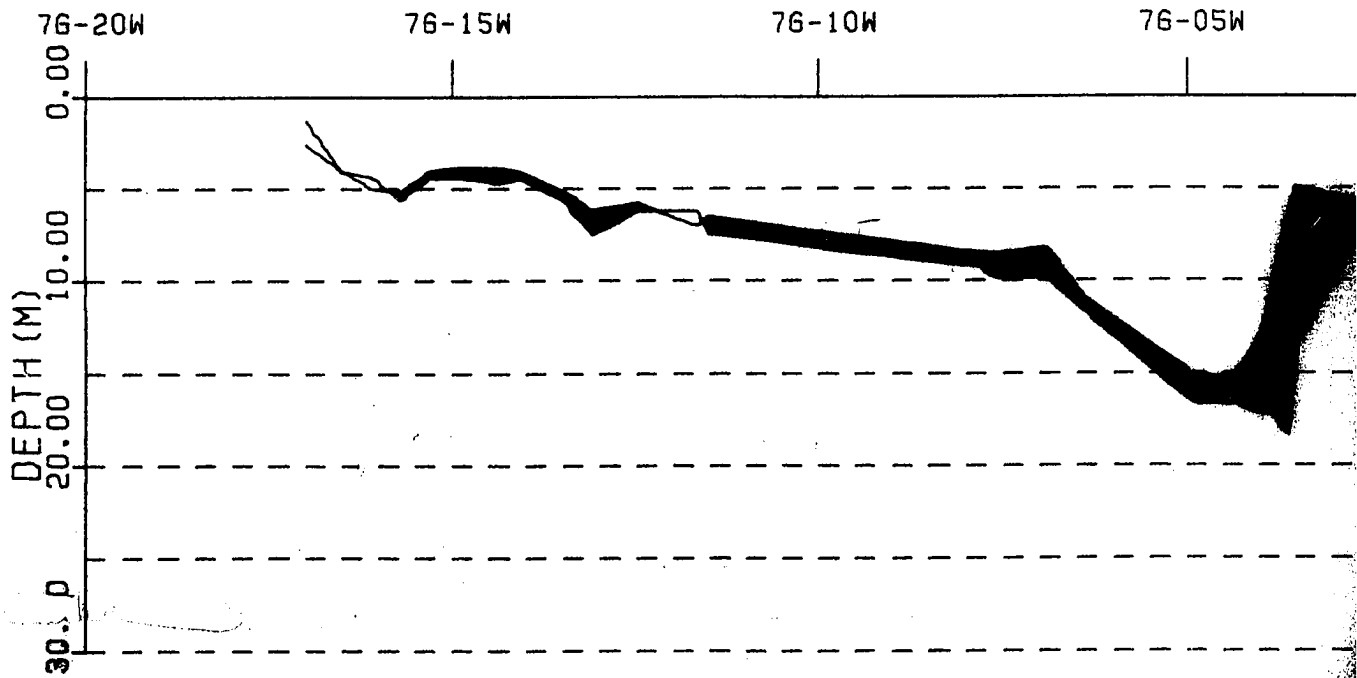




LATITUDE 37°04'



LATITUDE 37°03'

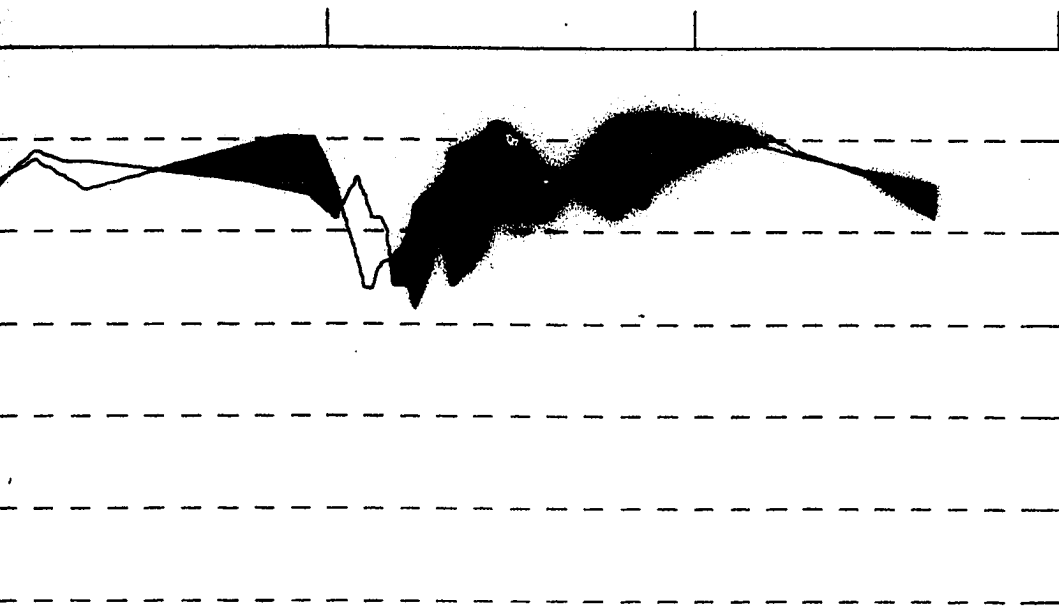






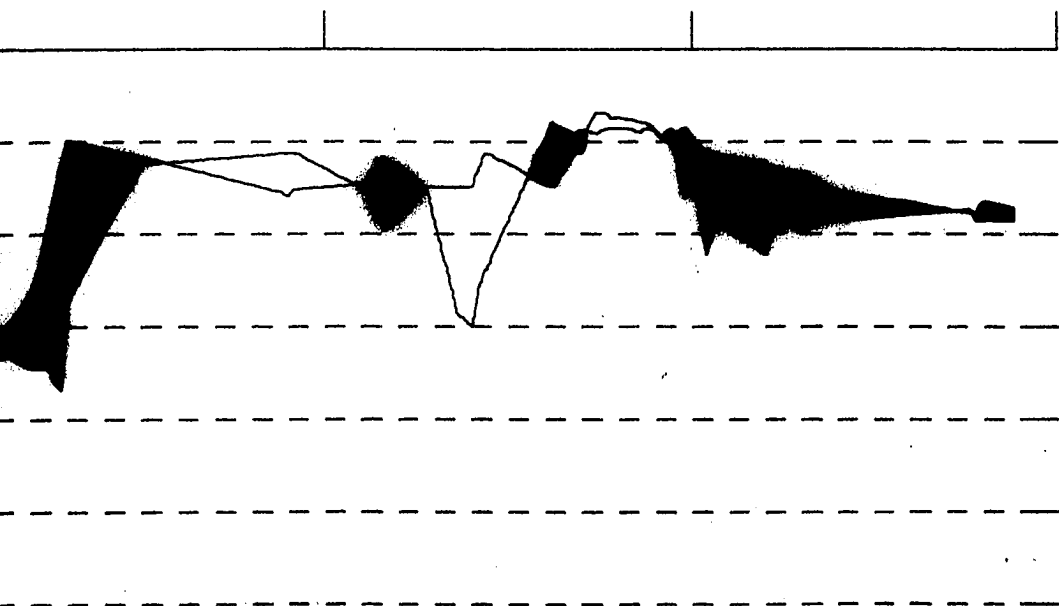
37°04'N

76-00W 75-55W 75-50W



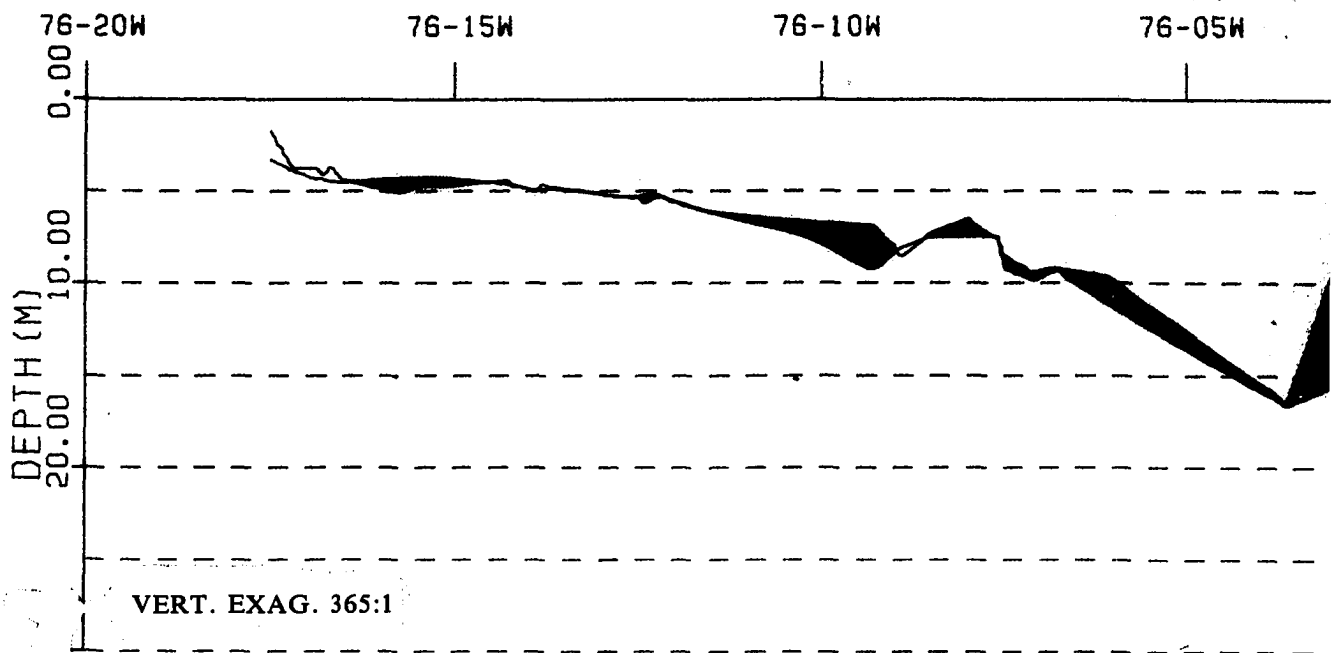
37°03'N

76-00W 75-55W 75-50W

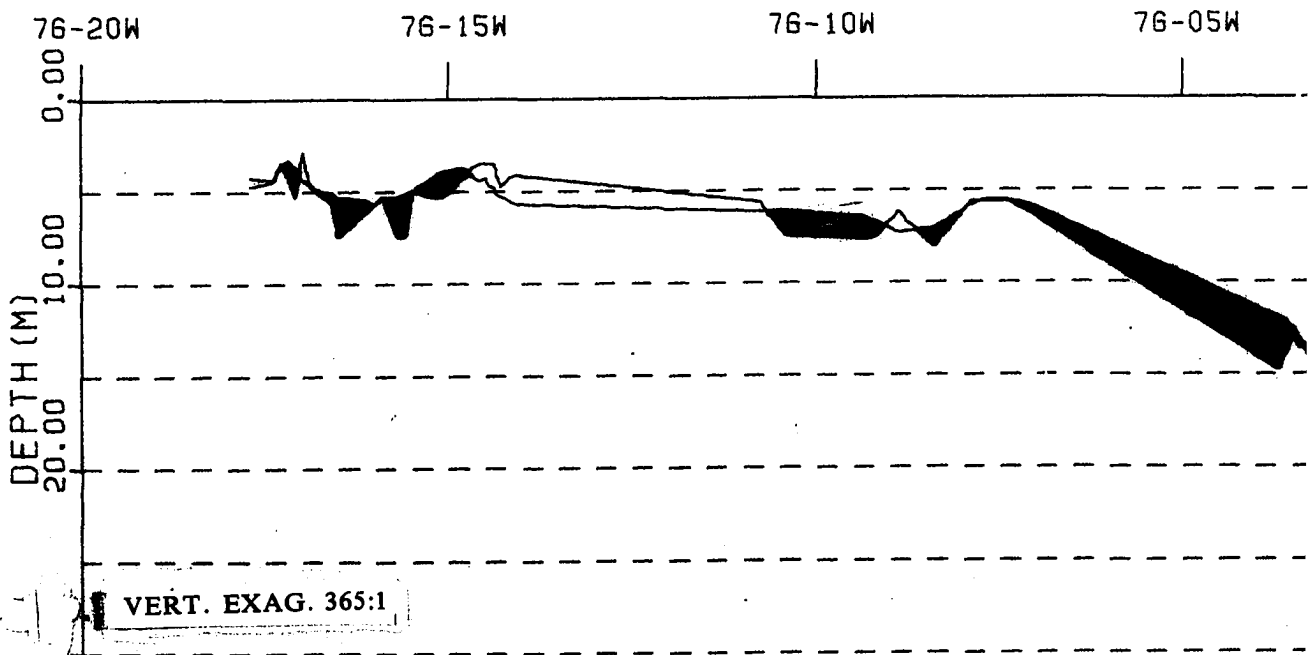




LATITUDE 37°



LATITUDE 37°



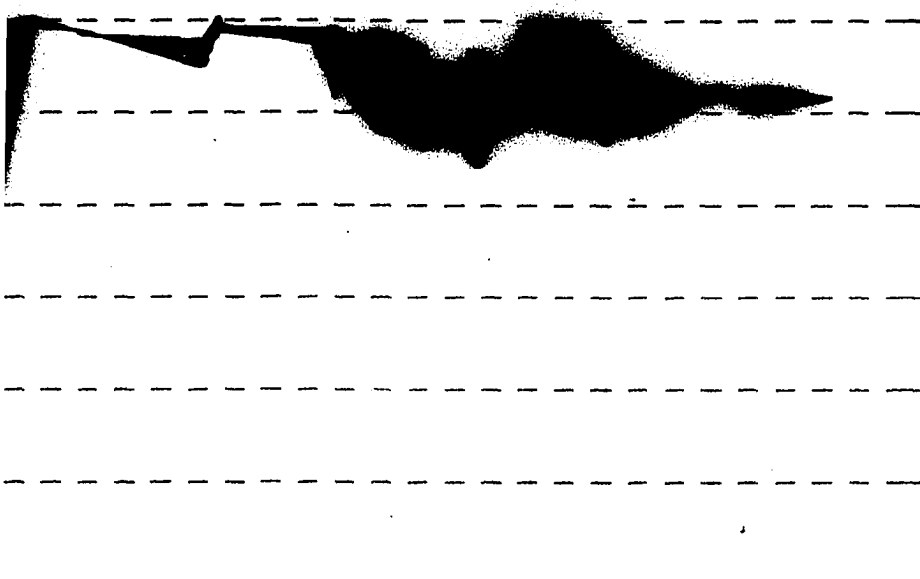


2°N

76-00W

75-55W

75-50W

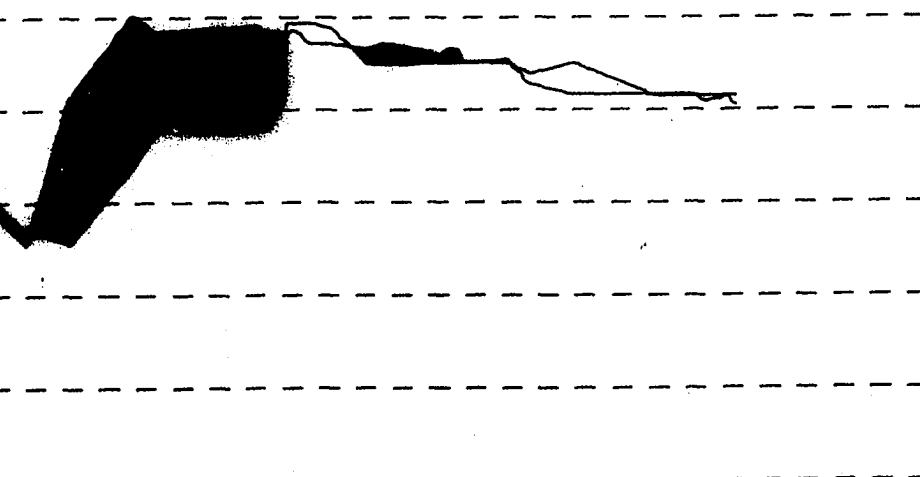


°N

76-00W

75-55W

75-50W

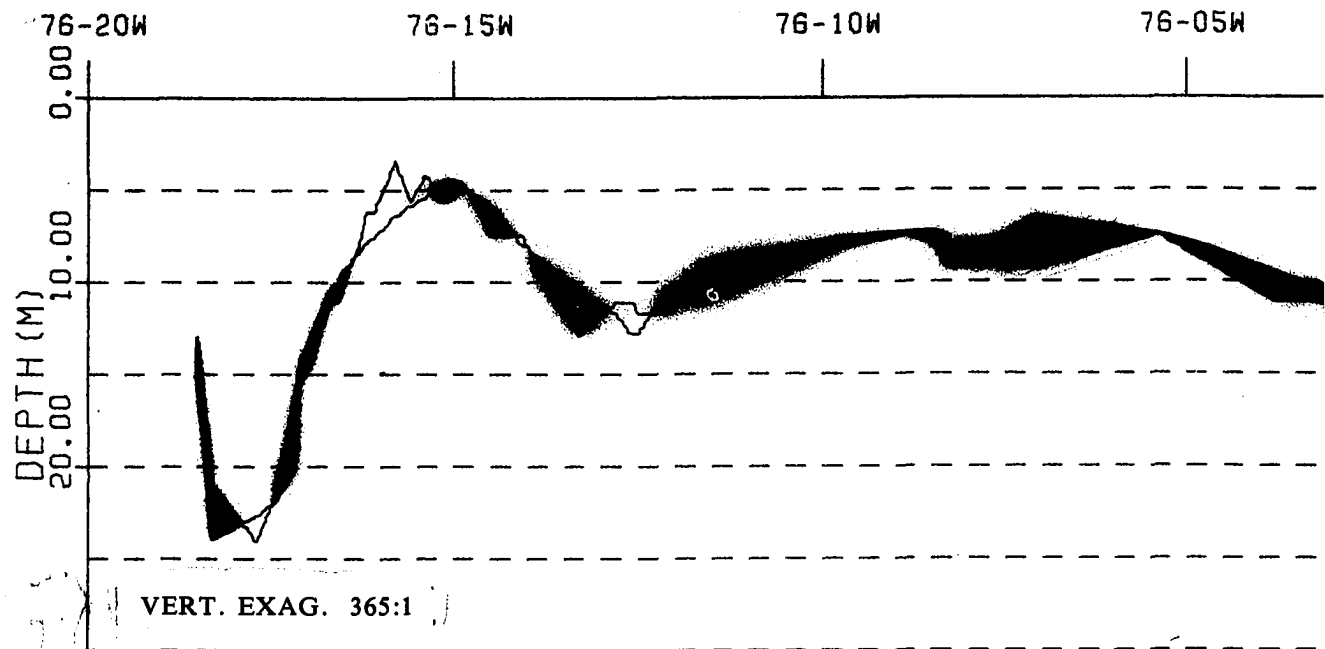


E-30

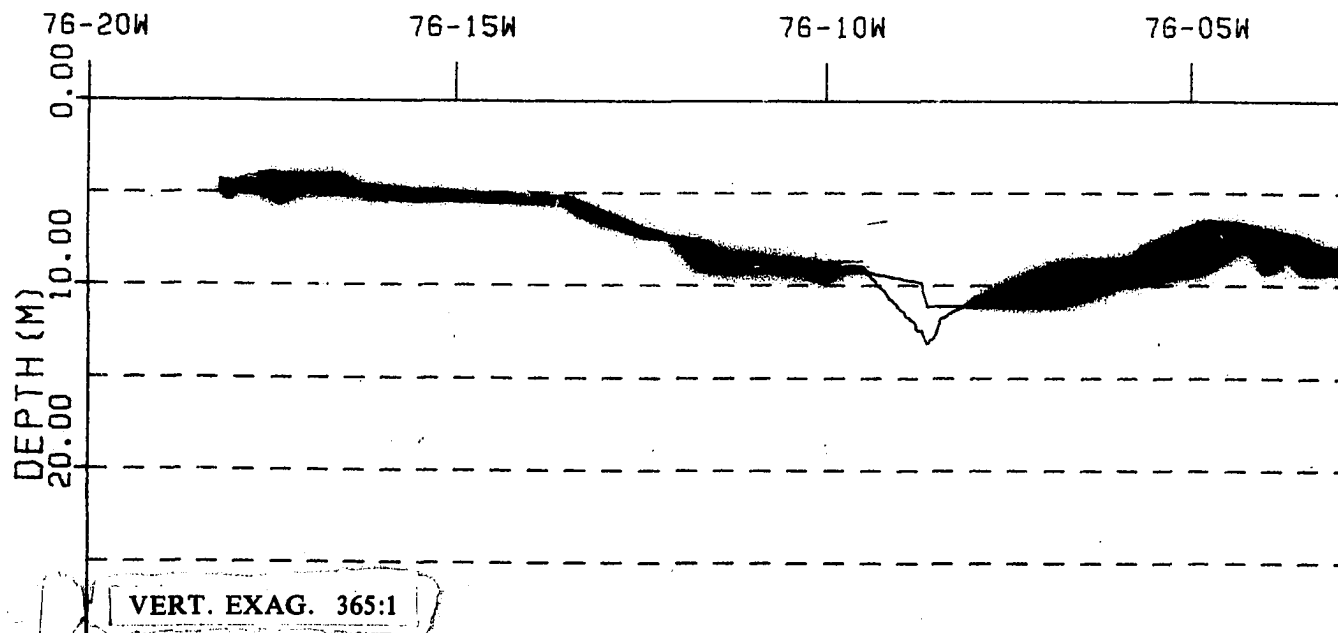
6-5



LATITUDE 37°0



LATITUDE 36°59

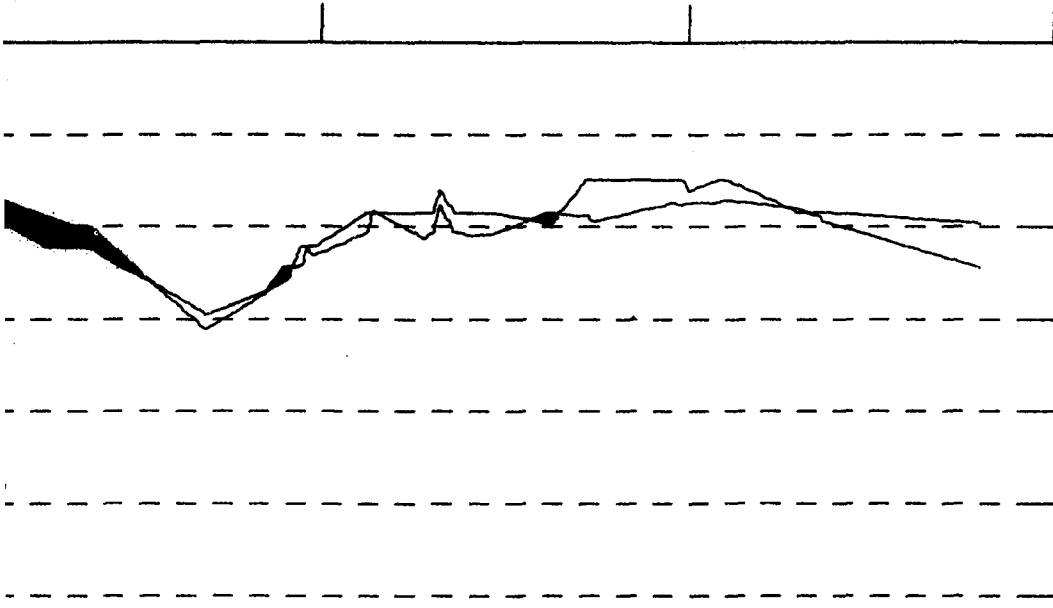






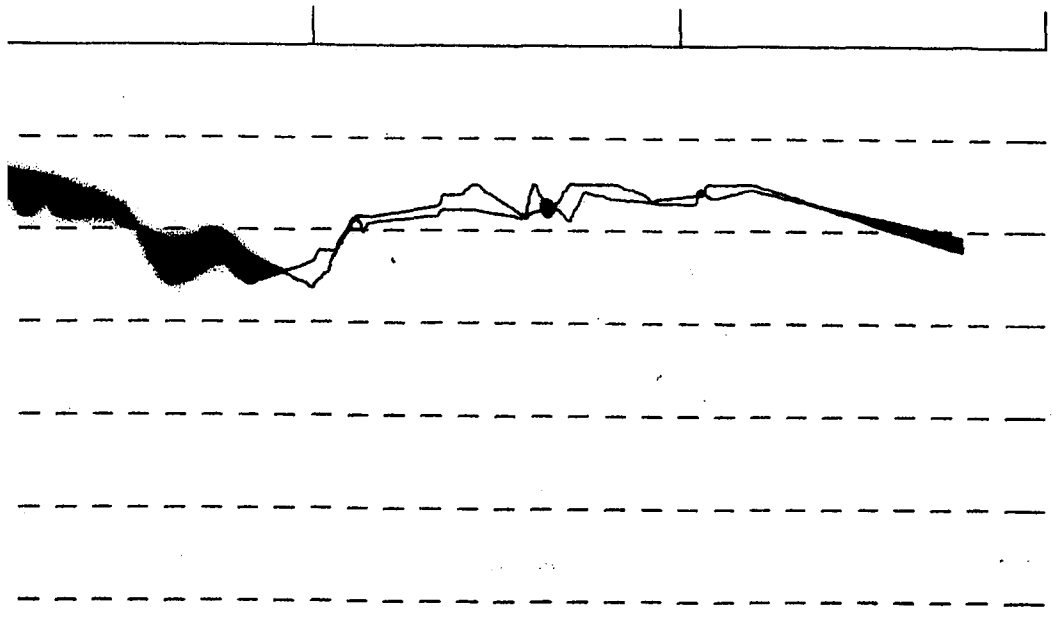
37°00'N

W 76-00W 75-55W 75-50W



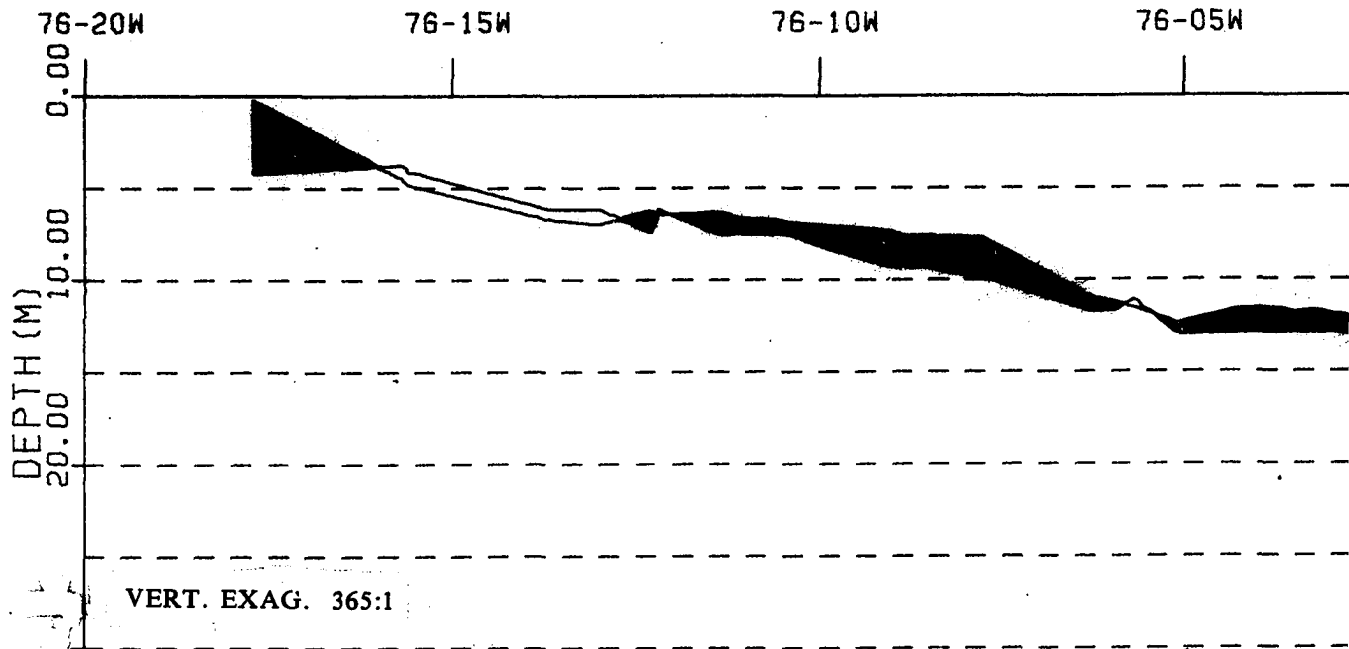
36°59'N

76-00W 75-55W 75-50W

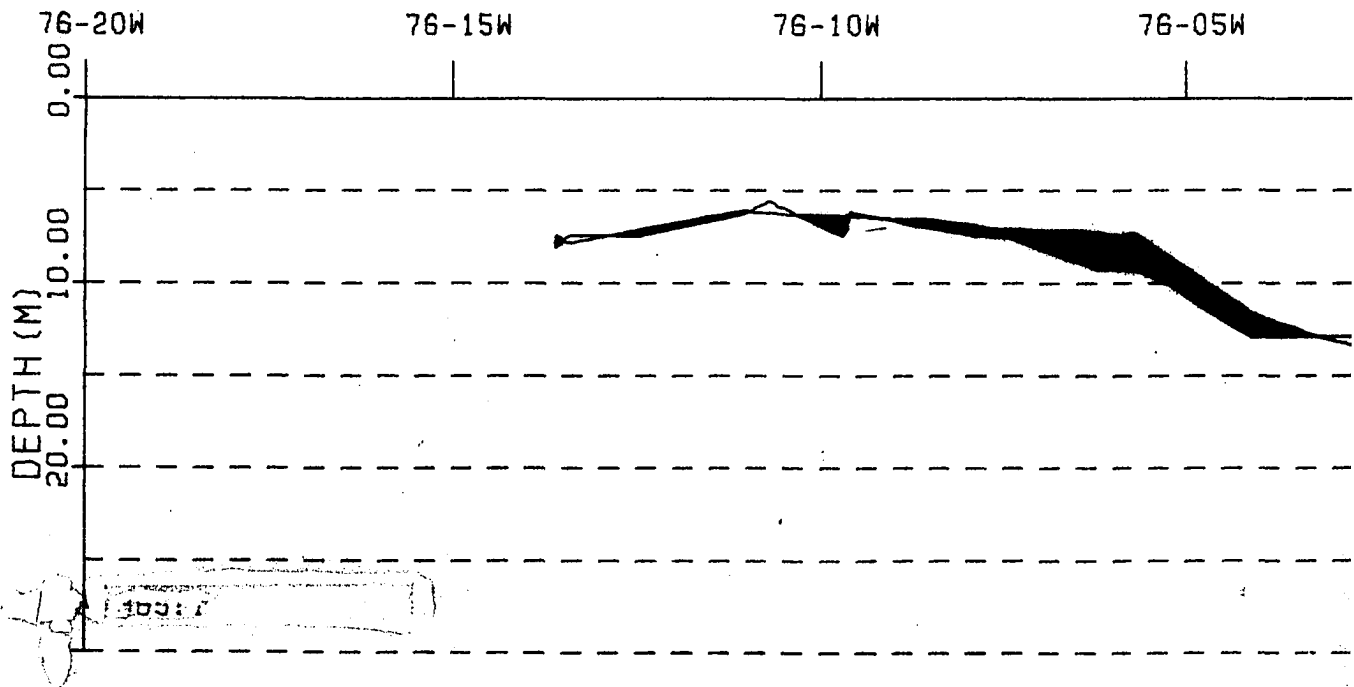




LATITUDE 36°58'



LATITUDE 36°57'N



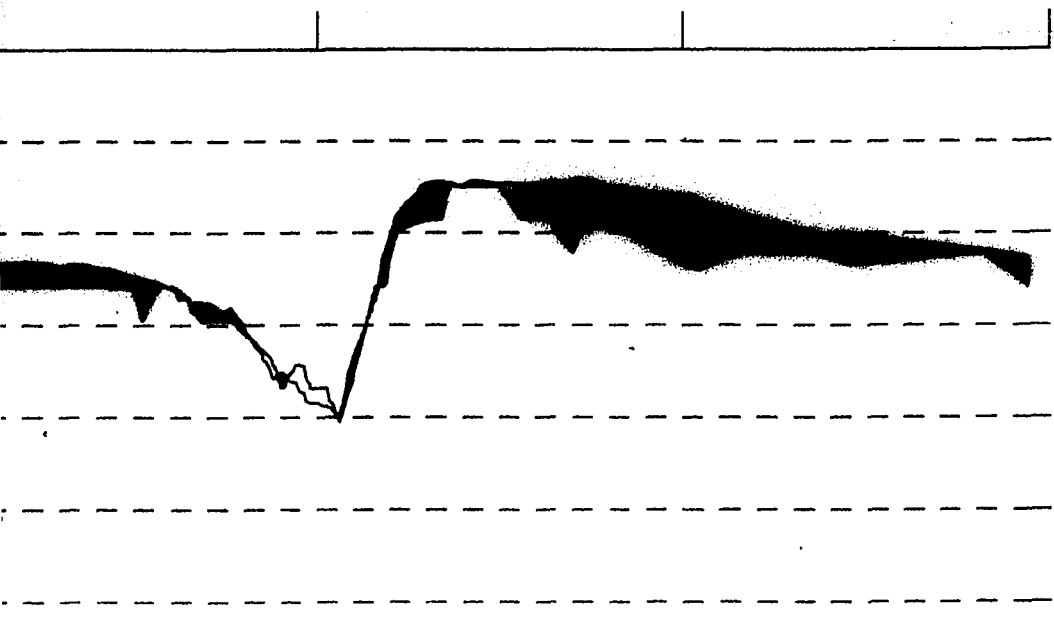


36°58'N

76-00W

75-55W

75-50W

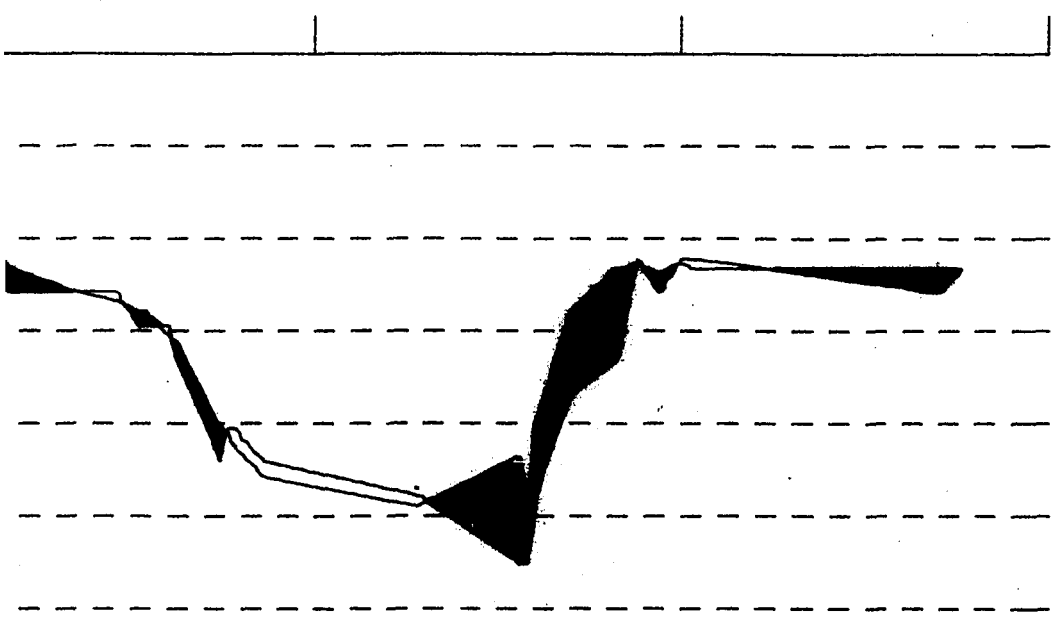


36°57'N

76-00W

75-55W

75-50W



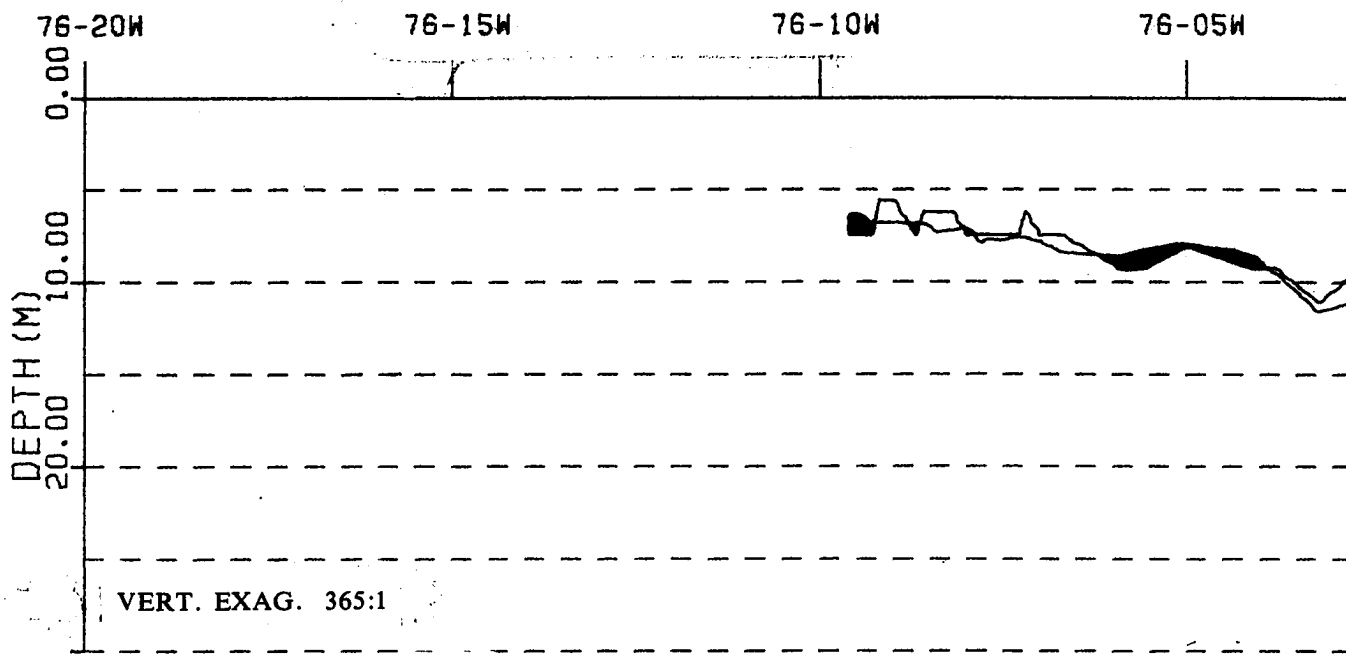
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T-1



LATITUDE 36°56'





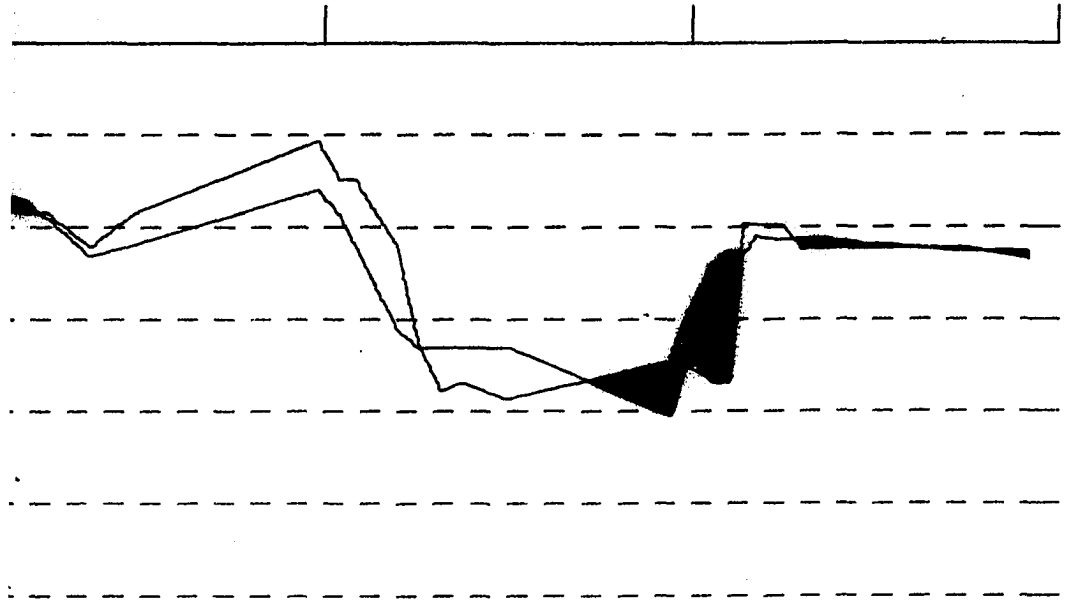


36°56'N

76-00W

75-55W

75-50W



E-33

