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INTRODUCTION

Knowledge of the circulation of waters over the continental shelf and slope between 87°W and 90°W longitude is essential for judicious management of the regions's living and mineral resources and related industrial activities. This region, an integral part of the Fertile Fisheries Crescent (Gunter 1963), has been in a state of on-going development by the oil and gas industry for over four decades. The increase in activities of all types on the shelf, e.g. offshore oil and gas, maritime commerce, and fisheries, with the inherent risks each imposes on the environment, underscores the need for better knowledge of the region's hydrodynamics, biology, chemistry, and geology. Prior to planning and initiating any further physical oceanography studies which require taking additional measurements in this region, the authors believe it prudent to first extract whatever relevant information remains in existing data. This effort entailed the laborious, recovery of oceanographic data at the Gulf Coast Research Laboratory which was in a number of disparate forms and formats.

DESCRIPTION OF THE STUDY AREA

The study area, located in the northeast Gulf of Mexico, (Figure 1) extends from 87°W to 90°W longitude and from the barrier islands to the base of the continental slope. The bird-foot delta of the Mississippi River, situated in the western region of the study area, has a number of passages oriented in an easterly direction. The edge of the continental shelf (Figure 2) is oriented east-northeast with the shelf's narrowest width in close proximity to the Delta. With the head of the submarine De Soto Canyon located south of Pensacola, Florida, the greatest depths are found closest to the mainland here.

Circulation in the study area is largely attributable to the Loop Current, river outflow, wind stress, tides and differences in water densities. The Loop Current, the primary circulatory feature of the Gulf of Mexico, enters the Gulf through the Yucatan Straits, makes an

anticyclonic turn and then exits through the Florida Straits. The major source of freshwater introduced onto the shelf within the study area is the Mississippi River via Main Pass, Pass a Loutre, Southeast Pass, and South Pass. The River discharges into the Gulf with an average flow of 13,025 m^3s^{-1} as recorded at Tarbert's Landing (Wells 1980). Analysis of flow through the passes (Chatry 1982) showed the following distributions as percentages of the total River flow: Southwest Pass, 31.5%; South Pass, 17.0%; Pass a Loutre, 31.5%; Main Pass, 11.0%; Baptiste Collette Bayou, 4.0%; and Grand Pass, 5.0%. Approximately 63% of the total flow of the Mississippi River is discharged onto the shelf south or east of the Delta. The period of high river flow is January-July with the peak flow normally occurring during the March-May period. The low flow period is August-December with the minimum usually occurring in October or November. Additional low salinity water is contributed to the shelf by the Mobile Bay, Mississippi Sound, and Pensacola Bay estuaries.

In the study area, the tides are predominantly diurnal, but the semidiurnal components become noticeable in the tidal record at certain times during the lunar month. The primary diurnal components are K_1, O_1, and P_1 with periods of 23.93 hrs, 25.82 hrs, and 24.07 hrs, respectively. The important semi-diurnal components in the area are M_2 and S_2 with periods of 12.42 hrs and 12.00 hrs, respectively. The average diurnal range on the shelf is less than 0.5 m. The circulation over the shelf is further affected by the generation of wind-driven currents.

The subtropical atmospheric Bermuda High exerts the greatest influence on the climate (Eleuterius and Beaugez 1979) of the Gulf of Mexico. This anticyclonic high intensifies during the spring, extending its boundaries into the Gulf of Mexico. This intrusion into the Gulf brings a shift in the direction of the winds from northerly to the southeast and south. Spring and summer wind speeds are much lower than those of winter and fall. In early fall the Bermuda High diminishes in strength and its boundary of influence retreats from the Gulf. Simultaneously with this southeast withdrawal of the Bermuda High is a southward advance of continental pressure systems which move out over the Gulf. The winds accompanying these continental weather systems are primarily northerlies.

During winter, westerly systems, which influence the study area as cold fronts from the north, move southward over the Gulf of Mexico. When these cold fronts, modified by the relatively warm Gulf waters, oppose

strong maritime tropical air moving in the opposite direction, the front becomes almost stationary.

BACKGROUND

The dynamics of the Loop Current, the dominant and pervasive circulation feature of the eastern and central Gulf of Mexico, are complex and, therefore, the Gulf circulation is difficult to predict particularly at the shelf boundaries. Sweitzer (1898) believed that the currents in the Gulf could be separated into littoral currents, which are confined to the nearshore areas, and the current that enters the basin through the Yucatan Straits. Parr (1935) reported that the Gulf Stream followed the shortest possible path between the Yucatan and the Florida straits. An analyses of geostrophic currents by Austin (1955) suggested that the flow through the Yucatan Straits continued north for some distance, looped around two well-developed anticyclonic eddies, and exited through the Florida Straits.

Cochrane (1962, 1963, 1966, 1967) showed that a substantial part of the current flows northward on almost a straight course to the NNW, sometimes almost reaching the Mississippi Delta. He was the first to suggest that there was an annual cycle in the path of the current which he related to the strength and cross sectional structure of the surface currents in the Yucatan Straits. The strongest surface currents were observed in May and June and the weakest in November. In a report on a 1966 survey, Hubertz (1967) showed that the Loop Current had reached latitude 27°30'N and that an eddy subsequently formed at its northern tip. On the basis of geomagnetic electrokinetograph current measurements, Nowlin and McLellan (1967) stated that the Loop Current was a well defined gyre that extended no farther north than 27°N latitude. Leipper (1970) proposed that there was an annual cycle with respect to the path of the Loop Current. He believed that the Loop Current intruded farther into the Gulf as a relatively narrow feature in the spring as the current grew in strength and spread outwardly in the fall as the current waned.

The monthly averaged topography for the 22°C surface (Whitaker 1971) showed a maximum intrusion in June and only a minimal intrusion in December. Based on an analysis of data from cruises in 1969, Cochrane (1972) concluded that the maximum penetration of the Loop Current into

the Gulf occurred no later than May. He also reported that a detached eddy drifted west during the summer. Maul (1975) reported on a cycle in the development of the current during 1973 which was similar to that described earlier by Leipper (1970). Legecher (1976) was the first to observe a deep northward excursion of the current in winter. Observing the Loop Current's winter intrusions, Molinari (1976) found it reached its maximum northern extention during this time. He (Molinari 1977) later showed that both the maximum distance of penetration and the length of time between maximum penetration events varied from year to year. These periods were found by Behringer (1977) to be from 8 to 17 months. According to Behringer and others (1977) the separation and formation of eddies is associated with the maximum northward excursion of the current.

Waters, with different geographical origins, which comprise the Loop Current possess distinctive property characteristics. These water masses were identified by Wüst (1964) and were studied further by Nowlin and McLellan (1967). The core of the Antarctic Intermediate Water (AIW) is found between 850-1000 m. Above this layer lies the North Atlantic Central Water (NACW) with its core located between 200-850 m. Below the surface layer which varies considerably in its properties lies the Subtropical Underwater (SUW). It is the SUW which has most frequently been used to map the boundaries of the Loop Current. The core, characterized by a salinity of 36.75 ppt (Nowlin and McLellan 1967), is found between 50-200 m. This salinity maximum occurs in close proximity to, if not coincident with, 22°C water (Nowlin 1972). The SUW also has a shallower secondary salinity maximum at about 125 m with lower salinity water located to the left of the core when looking downstream (Jarvela and McComas 1975). The differences in the water masses found in the Gulf of Mexico also pertain to many other chemical properties of the Gulf.

Franceschini (1953) calculated the mean monthly wind stress on the sea surface for the Gulf of Mexico for each 2° latitude-longitude quadrangle. Eleuterius (1979) presented monthly distributions of wind data for the study area that showed the predominant source of winds for the year to be from the eastern sector.

Circulation in the study area has been the subject of a number of previous investigations. Riley (1937), in his study of the effect of river flows on the biological regimes, analyzed the outflow of the Mississippi River. Scruton (1953, 1956) studied the currents and turbidity patterns near the Delta to gain insight into the surrounding

sedimentary environment. Our understanding of the hydrodynamics in the vicinity of the Delta was furthered by Ichiye (1960). Chew et al. (1962) reported on the thermal structure of waters east of the Delta. Combining conventional hydrocast and surface drifter data, Drennan (1963) described the surface circulation on this region of the Gulf shelf. He later reported (Drennan 1968) on the results of the analysis of data from additional cruises. Murray (1972) related the currents observed over a short period at a station near the Delta to the wind, tide, and differences in water densities. A seasonal description of surface and bottom salinities and temperatures in the region was produced by Thompson and Leming (1978). The physical and chemical aspects of the waters of the shelf in an area south of Mobile Bay were investigated by Molinari et al. (1979). Studies by others since that date, which are not cited herein, have further advanced our understanding of circulation within this region.

METHODS AND MATERIALS

Water temperature and salinity measurements at finite depths through the water column were obtained for 15 oceanographic cruises made in the study area by the senior author and other researchers at the Gulf Coast Research Laboratory. All measurements included here were made with support from the Office of Naval Research under the supervision of Mr. Kirby Drennan. Temperature measurements were made with paired, calibrated reversing thermometers. Salinity was determined for water samples taken by Nansen bottle via a precision laboratory salinometer using standard sea water for calibration. The data should be considered of the highest quality obtainable by these means. All stations from the 15 cruises are shown in Figure 3, however, not all stations depicted were sampled on every cruise.

By use of a localized weighting technique, values of water temperature and salinity were obtained by interpolation for the following specified depths (meters): 0, 5, 10, 15, 20, 30, 40, 50, 75, 100, 150, 200, 250, 300, 400, 500, 600, 700, and 800 meters.

Because the authors were interested in the extent of the influence of river and estuarine waters on the shelf hydrology, they elected, for this report, to use the spatial distribution of salinity to obtain a first order estimate of circulation.

Contour charts of salinity were generated by computer from a grid of interpolated values. A uniform square grid of salinity values was produced by interpolation over a surface fitted by another localized weighting technique. Extrapolated values were excluded from further considerations. Charts were prepared for the specified depths noted earlier. Although charts for all depths were used in interpreting the results, it was deemed sufficient for illustrative purposes in this report to include only the charts for surface waters. The vertical structure of the water column with respect to salinity at the specified depths was determined through computation of descriptive statistics for measures of central tendency and variability from data aggregates.

The discussion of the results relates the indicated flow patterns, where appropriate, to prevailing winds, river discharge, Loop Current and bathymetry. Drennan (1963, 1968) analyzed and interpreted a subset of the data. The recovery, re-examination and presentation of these data were undertaken because of the potential additional information on the area hydrodynamics these data might yield. The advances in computers, numerical techniques, and knowledge of the continental shelf and Loop Current dynamics since the original study warranted the re-examination of these data.

Without regard to the year collected, surface salinity distributions and the circulation they imply are presented and discussed in chronological order by month and day. This sequencing was intended to facilitate the recognition of, if any, seasonal patterns. To consider, at least qualitatively, the influence of the Mississippi River flow on shelf circulation, the daily total flow rates recorded at Tarbert's Landing, Louisiana, for a five-day period preceding each cruise are included in the discussion of the results. Because the time of arrival at the river mouths of the river water from the gauge site varies depending on the river stage, these figures were used only as a crude indicator of the amount of fresh water introduced onto the shelf prior to the cruise. The results of the analysis of data from each cruise are discussed first individually, then later, collectively.

The text of this report addresses only one property, i.e. salinity, of four among these data which the authors have addressed in papers already published, ready for publication, or now being completed for submission for publication. These data appear in tabular form in Appendix A of this publication. A diskette of the files along with the

program to read and print the data can be found in the pocket of the inside back cover of this report. A listing of the FORTRAN computer program can be found in Appendix B of this report. Any questions regarding these data should be addressed to the senior author at the Gulf Coast Research Laboratory. Figures 21 through 35 show the station locations for each cruise.

RESULTS AND DISCUSSION

Of the 15 cruises considered, the only measurements obtained under winter conditions were made on 12-14 January, 1965. The daily total flow of the Mississippi River for the five-day period prior to the cruise showed an average of about 8,410 m^3sec^{-1} which is less than the mean flow (13,027 m^3sec^{-1}). Winds (data obtained at Pensacola, Florida), which were light and predominantly from the east prior to and during much of the cruise, switched to the northeast late in the cruise. The configuration of isohalines (Figure 4) indicates there was a westward flow on to the shelf from the De Soto Canyon. This flow swept along the inner shelf taking a cyclonic turn to the south upon approaching the Chandeleur Islands. Also evident is a northward intrusion onto the shelf from the Gulf due south of the Mississippi-Alabama coast. A strong gradient was present near the Delta with salinities ranging from 6.0 ppt to 36.0 ppt within a distance of approximately 30 km. The 36.0 ppt values may have been Loop Current Waters impinging on the shelf.

The river flow increased steadily and had just exceeded the average during the five days preceding the March 18-20 cruise. The moderate, southerly winds switched to the northwest and intensified. Severe weather caused the cruise to be brought to an early end. The chart of salinities (Figure 5) shows a northeast-directed flow of low salinity water from the Delta. Salinities increased from 8.3 ppt to 25.0 ppt within a distance of approximately 24 km. Although sparse measurements for the inner region of the shelf prevented a clear picture of the overall surface circulation, the presence of higher salinity water near the barrier islands is apparent. Water with a salinity in excess of 36.0 ppt was found on the outer shelf.

During the cruise period of March 31 - April 3, 1965, the winds were light and variable. The Mississippi River flow for the period prior to the cruise remained above 16,992 m^3sec^{-1}. A plume (Figure 6) of low-

salinity water spread outward from the delta in all directions. Salinities ranged from 7.0 ppt to 36.0 ppt within a distance of about 40 km. The 35 ppt isohaline, oriented southwest-northeast over the shelf, roughly parallels the alignment of isobaths. Water with a salinity greater than 36.0 ppt intruded onto the shelf from the south as well as from the De Soto Canyon area. The slight S-shaped configuration of isohalines suggests a cyclonic circulation pattern on the shelf.

The spring cruise of April 10-12, 1963, although limited in areal coverage, provided information on the circulation on the shelf during a period of high flow by the Mississippi River. The River discharged at more than twice its mean flow during the five-day period prior to the cruise. Winds during the cruise were initially light and northerly, but later switched to the southeast and increased in speed to about 5 m sec^{-1}). Despite the high rate of river discharge, relatively high salinities ($\geq$22.0 ppt) prevailed in close proximity to the Delta passes (Figure 7). Salinity of the surface waters reached values of 25.0 ppt within 16 km of the river passes. Although there were few stations on the middle and upper shelf, the available data indicates that, in general, the salinity of shelf waters was high. The 35 ppt isohaline was roughly aligned with the outer margin of the continental shelf.

Data acquired on the aborted cruise of May 1-2, 1963 provides relevant information on salinities near the delta. Winds during the cruise switched from east to north then back again to east accompanied by an increase in speed to approximately 5 m sec^{-1}. The 15,972 m^3sec^{-1} Mississippi River flow five days prior to the cruise diminished daily to 10,506 m^3sec^{-1} the day before the cruise. The 31 ppt isohaline (Figure 8) was located less than 8 km from the Delta. Surface salinities of 37.0 ppt were observed less than 32 km east and southeast of the delta. These salinity levels are strongly indicative of Loop Current water.

The spring cruise of May 11-14, 1965 provided additional insight into the upper shelf circulation during a period of high river flow and light winds. Variable winds with speeds less than 3 m sec^{-1} prevailed during the cruise period. The MIssissippi River flow diminished gradually from 24,335 m^3sec^{-1} five days prior to the cruise to 23,449 m^3sec^{-1} the day before. This rate of flow approaches twice the average. The 34 ppt isohaline (Figure 9) roughly followed the configuration of the isobaths. Higher salinity waters from over the head of the De Soto Canyon flowed westward on the upper shelf.

A strong front was prominent among the complex shelf circulation features of May 25-28, 1964. Winds, which were initially from the north, switched to southwest where they remained for the duration of the cruise. Winds a maximum speed of 4.8 m sec^{-1} on the last day of the cruise. River stage for the five days preceding the cruise showed that the Mississippi River flow decreased steadily from 27,414 m^3sec^{-1} to 23,959 m^3sec^{-1}. This was approximately twice the average. Lower salinity surface water (Figure 10) prevailed over the shelf with the 31 ppt isohaline located between the 100-fathom and 200-fathom isobaths. A series of meanders in the isohalines are the result of the shoreward transport of high-salinity water from the south and east and the seaward movement of low-salinity waters from the Mississippi Sound, Chandeleur Sound, Breton Sound, Mobile Bay, and the Mississippi Delta. Evident are several cells of low salinity water which were formed via entrainment by higher salinity waters. The front, identified by the roughly parallel and closely spaced isohalines, was aligned with the isobaths.

The effect of currents of high-salinity waters on the Mississippi River outflow is shown in the salinity distribution of May 27-June 1, 1963 (Figure 11). Flow of the Mississippi River during the five days preceding the cruise declined from 9,487 m^3sec^{-1} to 7,731 m^3sec^{-1}. These flows were substantially below the mean flow. Strong (4.7 m sec^{-1}), southerly winds during the cruise weakened and switched first to the north; and, then again later, to the northeast. Winds had been largely from the southeast for several days prior to the cruise. A plume of low salinity water extended from the Delta toward the northeast. Southeast of the delta, the 32 ppt to 36 ppt isohalines were aligned with the isobaths. High salinity water moved westward over the shelf from the middle and upper De Soto Canyon. Lighter, low salinity water which were deflected to the northeast was due partly to wind stress and partly to the push and drag of high salinity water which flowed along and onto the outer shelf.

Several circulatory features are apparent in the salinity chart for for June 27 - July 2, 1963 (Figure 12). Wind speeds during the cruise remained less than 3 m sec^{-1} and wind direction was almost invariably from the south. The range of daily-averaged Mississippi River flows prior to the cruise (7,788 m^3 sec^{-1} to 8,553 m^3 sec^{-1}) were considerably less than average. The combination of southerly winds and high-salinity water moving onto the shelf deflected the bouyant Mississippi River plume

toward the northeast. The direction of flow is in agreement with that which would be expected of Ekman transport. High salinity water from the area of De Soto Canyon moved westward along the upper shelf then took a cyclonic turn to the south upon approaching the Chandeleur Islands. Southeast of the Delta, the 32 ppt - 36 ppt isohalines were aligned with the isobaths. High-salinity (>36.0 ppt) water advanced over the shelf about 40 km east-southeast of Pass a Loutre.

Results of a cruise conducted at about the same time and under similar river flow conditions in 1964 (June 30-July 3) showed similar circulation patterns (Figure 13). Winds during the cruise were light (<3 m sec^{-1}) and variable. The Mississippi River flow for the five day period before the cruise ranged between 7,448 m^3 sec^{-1} and 8,524 m^3 sec^{-1} which was well below the average. Despite the low flow of the Mississippi River, surface salinities over the inner shelf were depressed. These low salinities resulted from the outflows of the rivers and estuaries of the northern coast bordering the study area. A strong gradient was present near the Delta with salinities which ranged from 5.8 ppt to greater than 36.0 ppt within a distance of 40 km. Diluted seawater from the vicinity of the De Soto Canyon flowed westward over the inner shelf. From the southeast, higher salinity water moved over the shelf to the northwest. Between these two lobes of intruding high salinity water was a large cell of low-salinity water preceding to the southeast. Although not possible to determine the origin of this low salinity cell from the existing data, its source was likely the Mobile Bay/Mississippi Sound system. The configuration of the isohalines indicates a westward flow over the inner shelf, which turned counterclockwise (cyclonic) and flowed back to the southeast over heavier, more saline waters.

With a moderate increase in river flow, the major circulatory features shown in the two earlier summer cruises were, for the most part, also present on July 19-24, 1965 (Figure 14). Winds were very light and variable during the cruise. Flow of the Mississippi River for the period prior to the cruise (7,901 m^3 sec^{-1} to 9,799 m^3 sec^{-1}) was less than average. The pattern of isohalines shows low salinity water had spread southeast and northeast from the Delta. The lowest salinity water east of the Delta comprised a cell which had separated separated from the main flow that was pushed northward higher salinity water. The 36 ppt isohaline was located 56 km south of the Delta. It is evident that high salinity water from the De Soto Canyon area had moved westward onto the

inner shelf and, just west of Mobile Bay, had turned cyclonically seaward.

Although limited in areal coverage, the cruise of August 3-5, 1964, provided additional information on the circulation near the Delta. Northerly winds of approximately 3 m sec^{-1} prevailed during the cruise. River flow for the five-day period preceding the cruise was almost half (6,655 m^3 sec^{-1} to 6,882 m^3 sec^{-1}) the average. For the area covered (Figure 15), salinities of 31.0 ppt were observed east of the Delta at more than 64 km. Across the strong gradient near the delta, the span in salinity values were from 4.8 ppt at Pass a Loutre to 29.0 ppt within a distance of 16 km.

The most prominent circulatory feature of August 6-9, 1963, was a cell of low salinity water which had separated from the Mississippi River plume (Figure 16). For the entire cruise, wind speeds remained less than 3.5 m sec^{-1}. Initially from the south, winds switched first to the northwest and then again later, to the west-southwest. The Mississippi River flow for the pre-cruise period (6,174 m^3 sec^{-1} to 6,514 m^3 sec^{-1}) was either equal to or less than one-half the average flow. Relatively high salinity conditions existed in close proximity to the Delta passes. Salinity values ranged from 23.0 ppt near Pass a Loutre to 36.0 ppt within a distance of approximately 29 km of the Delta. High salinity water (35.0-36.0 ppt) had pushed onto the shelf about 40 km east of the Delta and continued northeastward. In addition, high salinity water from the area of De Soto Canyon was over the inner shelf. The cell of low-salinity water had separated from the Mississippi River plume and had drifted to the northeast.

Deflection of the river plume to the north-northeast from the Delta during a period of low flow and light winds was apparent from the salinity chart for August 31-September 5, 1964 (Figure 17). Winds reached a maximum speed of only 3 m sec^{-1} during the cruise. These light winds, initially from the north-northwest, switched first to the south and then to north. The flow rates of the Mississippi River during the five days prior to the cruise were between 4,503 m^3 sec^{-1} and 4,673 m^3 sec^{-1}. The plume of low salinity water was deflected north-northeast from the Delta by high salinity water which pushed northward over the shelf south and west of the De Soto Canyon. Low salinity water (<30.0 ppt) covered the inner shelf. Isohalines were roughly parallel to the isobaths. The 35 ppt isohaline was located approximately 40 km south-southeast of the

Delta.

September 4-8, 1963 was the last month in the year for which data were obtained. Northerly winds with speeds less than 3 m sec^{-1} prevailed. The flow from the Mississippi River diminished to about one-third (4,560 m^3 sec^{-1} to 4,644 m^3 sec^{-1}) of the mean flow during the five days before the cruise. Except in the immediate vicinity of the Delta, high salinity water covered the entire shelf (Figure 18). The 37 ppt isohaline was located well over the shelf. The 36 ppt isohaline was located as far north on the shelf as 29°30'N. A high salinity cell (>36.0 ppt) was observed even farther north. These salinity levels support the proposition that the Loop Current or an eddy which had separated from it had moved onto the shelf. Flow onto the shelf occurred over a wide area. The high salinity waters swept in and rotated counterclockwise over the shelf.

The magnitude and orientation of the Mississippi River plumes are indicators of the River's influence on shelf hydrology. The paths and magnitudes of plumes, which are dictated by the combination of wind, tides, river stage, and semi-permanent currents, were noted by Scruton and Moore (1953), Scruton (1956), and Ichiye (1960). The shelf region influenced by the Mississippi River have been related to the distance from the Delta that the plumes were discernible. Distances to the fartherest reach of the plumes of low-salinity water vary considerably as shown by the distribution of salinity (Figures 5, 11, 12, 17) are 105, 58, 104, and 80 km, respectively. A number of observations regarding the extent of these plumes have been reported by others. Scruton and Moore (1953) showed a turbidity plume that extended 104 km from the Delta. In the same publication, a passenger on a flight from Tampa, Florida, to New Orleans, Louisiana, in February 1952, was quoted as having observed the northern margin of a turbidity plume located 64 km east of the Delta. Results of the analysis of the surface water salinities for the 15 cruises show that the plumes of river water assumed various orientations between north and south-southeast.

Comparisons of the general orientation of the Mississippi River plume, as indicated by the distribution of surface salinities, with the prevailing wind directions show general agreement. Depending on its direction and speed, the influence of wind on river outflow varies. The formation of a broad, lobed plume rather than the more common elongate tongue during the spring of 1965 (Figure 6) was apparently due to the

prevailing southeast winds. The slight northward deflection of the plume conforms with that prescribed by the Ekman theory of wind-driven circulation. The broad oceanic front present over the shelf in the spring of 1964 (Figure 10) was aided by the high-river flow and the light to strong winds from the southwest. Surface waters directed eastward by wind stress encountered high salinity waters moving over the shelf. No plume was apparent despite a high rate of river flow (the highest sustained level of the 15 cruise periods) during the early spring of 1963 (Figure 7). Strong southeast winds were probably responsible for destroying the low salinity surface layer by mixing it with high salinity subsurface waters. This rapid mixing during high river flow was also reported by Scruton and Moore (1953) who noted that when the wind is stronger than "moderate", the freshwater layer is destroyed near the passes regardless of the volume of river water discharged.

When the river flow is low, it does not require a very strong wind opposing the flow to destroy the thin surface layer of low-salinity water within the immediate vicinity of the passes. Two such events occurred in January 1965 (Figure 4) and in September 1963 (Figure 18). When southerly winds prevail during periods of low river flow, plumes of low-salinity water are pushed to the north or northeast (Figures 5, 11, 12, 16). A comparison of wind records for Burrwood, Louisiana, with those recorded at Pensacola, Florida, for the period August 31-September 5, 1964, indicated a clockwise turning of the wind field over the continental shelf. Prevailing east winds at the Delta would, according to Ekman theory, direct the surface flow to the northwest. If water had already been piled up within Breton Sound, the resultant flow in the area would be as shown in Figure 17. The duration, orientation, and magnitude of low salinity plumes are dependent, in part, on the direction and speed of the prevailing wind.

At present the actual areal extent affected by the outflow of the Mississippi River is still being expanded with new accounts reported almost yearly. On an evaluation of data from eight summer cruises, Ichiye (1960) concluded that the Mississippi River discharge did not spread beyond the continental shelf, but instead traveled along the shelf. He also stated that the surface water with salinity less than 35.0 ppt was found neither seaward of the 1,000 fathom isobath nor farther than 113 km from the coast. Drennan (1963) reported that the boundary of influence of the Mississippi River was at some distance east

of 88°W longitude. The distance from Pass a Loutre to 88°W longitude is approximately 96 km. Drennan also found convergence or foam lines, which serve as lines of demarcation between low and high salinity waters, 96-113 km east of the Delta during spring. Gaul (1967) believed the De Soto Canyon to be the eastern limit of incursion by water from the Mississippi River. Molinari, et al. (1979) found on the outer shelf south of Mobile Bay lenses of low-salinity water approximately 20 m thick which they identified as "patches" of Mississippi River water. Inspection of the surface salinities for some of the 15 cruises considered in this study (Figures 10, 11, 13, 14, 17) shows that the entire continental shelf within the defined study area is, at times, dominated by the flow of the Mississippi River. Occasionally, surface salinities are depressed (Figure 10, 11) to levels well below concentrations that are normally considered estuarine. The salinity distribution for the cruise of June 30-July 3, 1964 (Figure 13) depicts a significant event: a southeast orientation of the river plume from Pass a Loutre and the apparent separation of a cell of low salinity water which was in the process of moving seaward over the continental slope. This distance which was purported to be the limit of influence of the Mississippi River has long since been exceeded by other reported observations made by both conventional methods and remotely sensed imagery. This finding, however, adds credence to another related discovery. The source of a large mass of low-salinity water found in the Gulf Stream off Georgia in September 1973 was identified by Atkinson and Wallace (1975) as the Mississippi River. The vertical extent of the influence of the outflow is known to a far less degree.

The maximum thickness of the freshwater surface layer in the passes during low-river stages is about 1.5 m according to Scruton and Moore (1953). In the area within 40 km of the Delta, Scruton (1956) found that the alteration of the salinity concentration due to river discharge was usually confined to the upper 12-15 m. However, during a September storm, Scruton (1956) found that mixing had reached a depth of 60 m. Ichiye (1960) later stated that the mixing of fresh water and seawater in the vicinity of the Mississippi Delta was limited to the upper 10 m. In reporting on his findings, Drennan (1968) concluded that the effects of the river water on the vertical salinity structure reached between 10-20 m in the immediate vicinity of the Delta and to lesser depths with increasing distance from the Delta. The results of a re-analyses of

these and other data by Eleuterius (1994d) agree with Drennan's conclusions.

Characteristic salinities of Loop Current waters help identify the presence of the current. Parr (1937) found the maximum salinity core layer (>36.6 ppt) of upper Caribbean waters to be only 25-125 m thick. Wüst (1964) in his Caribbean study of the Loop Current source waters stated that the core of the Subtropical Underwater, located at depths between 150-200 m, had a salinity maximum of 36.7 ppm and that the boundary of the SUW had a salinity of 36.5 ppt. The salinity maximum for the SUW core water was later determined (Nowlin and McClellan 1967) to be 36.75 ppt at or near the 22°C isothermal surface. Jarvela and McComas (1975) found, when looking downstream of the current, that the SUW is shallower, ie. about 125 m, and has lower salinities, i.e. about 36.42 ppt, in the water to the left of the speed axis than the water to the right where the SUW is at a depth of 250 m and has a salinity of 36.68 ppt. Therefore, assuming that the source of waters with a salinity concentration equal to or greater than 36.5 ppt is the Loop Current, we identified the periods when the Loop Current or eddys which had separated from it were in or near the study area. Based on this salinity criterion, Loop Current waters were present at the surface over the continental slope in January (Figure 4), March and April (Figure 6), May, June, and July (Figures 8, 11, 12), and well over the shelf in September (Figure 18). High salinity conditions that were just below Loop Current concentrations were observed in March, May, July, August, and September (Figures 5, 9, 10, 14, 16, 17). These waters were either part of the left flank of the Loop Current or part of an eddy which had separated from the Loop Current.

The aperiodic occurrence of the Loop Current waters in the study area is in agreement with the findings of other researchers. When the cruises were separated by years, we found that during 1963, Loop Current waters were over the continental slope from May through September; in 1964, it was present in early summer; and in 1965, it was present during the winter. Because the frequency of cruises was irregular, it is possible that Loop Current water was present at other times. However, results of the analyses of these data sets show that its appearance within the study area of the northern Gulf is irregular. Molinari (1977) found that both the magnitude of the maximum northward penetration of the Loop Current into the Gulf and the time periods between maximum

penetrations vary from year to year. His results support the findings of this study, that is, Loop Current waters may be found at the surface over the continental slope during different months of the year with little coherence from year to year.

There are two components of flow in the surface waters of the area over the continental slope: a component parallel to the isobath moving to the northeast and another moving northward across the isobaths. The landward directed flow across the isobaths is primarily the result of mass balance which requires that seaward flow in one area be compensated by an opposite flow somewhere else. Further explanation of the dynamics of this cross-shelf flow is beyond the scope of this report. The flow toward the northeast, parallel to the isobaths, was noted by Drennan (1968) who surmised that the lighter, less saline water was being dragged along by the heavier, more saline subsurface waters. Gaul (1967) felt that the energy for driving the circulation near the continental margin is obtained though lateral transfer from the Loop Current via horizontal shear. The flow parallel to the isobaths, apparently topographically controlled, is guided into the De Soto Canyon by the continental slope.

The De Soto Canyon plays an important role in the circulation over the continental shelf of the northeastern Gulf of Mexico. The first evidence indicating the importance of the Canyon to the circulation of the northeast Gulf continental shelf was pointed out by Gaul (1967). He noticed a lateral shift in the isanosteric surface of the conspicuous, permanent "hump" of water located over the Canyon. The flow along the western flank of the Canyon was found to be frequently to the north by Molinari, et al. (1979). This supports the earlier conclusion drawn by Drennan (1968) that the presence of the canyon caused a bifurcation of an along-shelf current which followed the shelf break - continental slope into southeast and north directed branches. While the southeast branch, according to Drennan, continued to follow the continental margin off Florida, the northerly-directed branch flowed up the De Soto Canyon.

In the present study, an examination of the series of surface salinity charts revealed a feature that seemed to occur with some degree of frequency. Repeatedly, the isohalines appear to bend about an area centered near 29°30'N, 87°28'W. This pattern of isohalines suggests that the flow out of this area over the De Soto Canyon toward the northwest is retarded. This is also probably a surface manifestation of the flow of deeper waters. This feature correlates with a very steep region along

the west wall of the De Soto Canyon.

There are a number of mechanisms which could contribute to the formation of eddies over the shelf. Scruton (1956) believed a "west-directed" (cyclonic?) eddy could form east of the Delta when strong currents set toward the east along the outer shelf. Gaul (1967) found evidence of an anticyclonic circulation feature with a diameter of about 100 km located at the head of the De Soto Canyon at 28.5°N, 87.5°W. He believed these eddies, both cyclonic and anticyclonic, were shed by the Loop Current and were carried along its flank in the form of a vortex street. Drennan (1968) believed that there was a separation of flow over the De Soto Canyon south of Pensacola, Florida, which resulted in currents which flowed east and west out near the head of the Canyon. The east directed components he proposed contributed to anticyclonic circulation east of the canyon and a cyclonic circulation, a cell or eddy, west of the canyon. Drennan also concluded that there was a seasonal cycle to this circulation regime. Based only on the distribution of salinities in the present study, cyclonic circulation over the shelf did occur, but no clearly identifiable eddies were found. Results of the analysis of the data from the 15 cruises also refutes the proposition that the circulation regime follows a seasonal cycle. The cyclonic circulation over the shelf is the result of currents that flow parallel to the isobaths along the outer margin of the shelf and the westward deflection of the flow out of the middle and upper regions of the De Soto Canyon. This flow from the Canyon then sweeps westward over the inner shelf, turns south upon approaching the Chandeleur Islands, and continues south until it encounters the offshore current moving along the outer margin to the northeast. When plumes of low-salinity water from the Mississippi River are present, this recurving thrust of high salinity water from the inner shelf may sever the plume and thereby entrain cells of low-salinity water. This cyclonic circulation is apparent in some of the surface salinity charts which cover the period from January through September (Figures 4, 5, 11, 12, 13, 16, 18). At other times the salinity fields suggest a flow directed perpendicular to the isobaths, but with some indication that a cyclonic turning still exists. Also indicated is a correlation between the occurrence of a well-defined cyclonic circulation on the shelf and the presence of Loop Current water in the study area. This suggests a relationship between the circulation regime over the shelf at certain times and the northward extension of the

Loop Current.

The general flow characteristics discussed remain manifested in the surface salinity chart (Figure 19) constructed from averaging salinities from all 15 cruises. The means and ranges of salinities from the aggregate of the 15 cruises at specified depths are shown in Figure 20. The shift in the mean within the range of salinities with depth shows the influence of the Mississippi River and estuaries on the upper water column.

RECOMMENDATIONS

Future investigations of circulation in the shelf regions of the northern Gulf require placement of moored current meter arrays in at least the key areas identified within this report. The use of ground-truthed, remotely-sensed imagery and profiles of the water column with regard to temperature, salinity, dissolved oxygen, and transparency would provide a modicum of the essential data needed for furthering the understanding hydrodynamics of the shelf and slope in the northeastern Gulf of Mexico.

ACKNOWLEDGEMENTS

We wish to thank the Mineral Management Service for its support of this effort which, without its financial support, would not have been possible. Special thanks are due Dr. Murray Brown who has been unwavering in his quest to meet the needs of the Mineral Management Service and who has fostered an atmosphere of cooperation among marine scientists working in the Gulf of Mexico. Ms. Angelia Bone's work in the preparation of the manuscript and assembling the reports is also greatly appreciated. To Mr. Kirby L. Drennan, the senior author is indebted for providing the opportunity and encouragement for pursuing research on the marine waters of the northern Gulf of Mexico.

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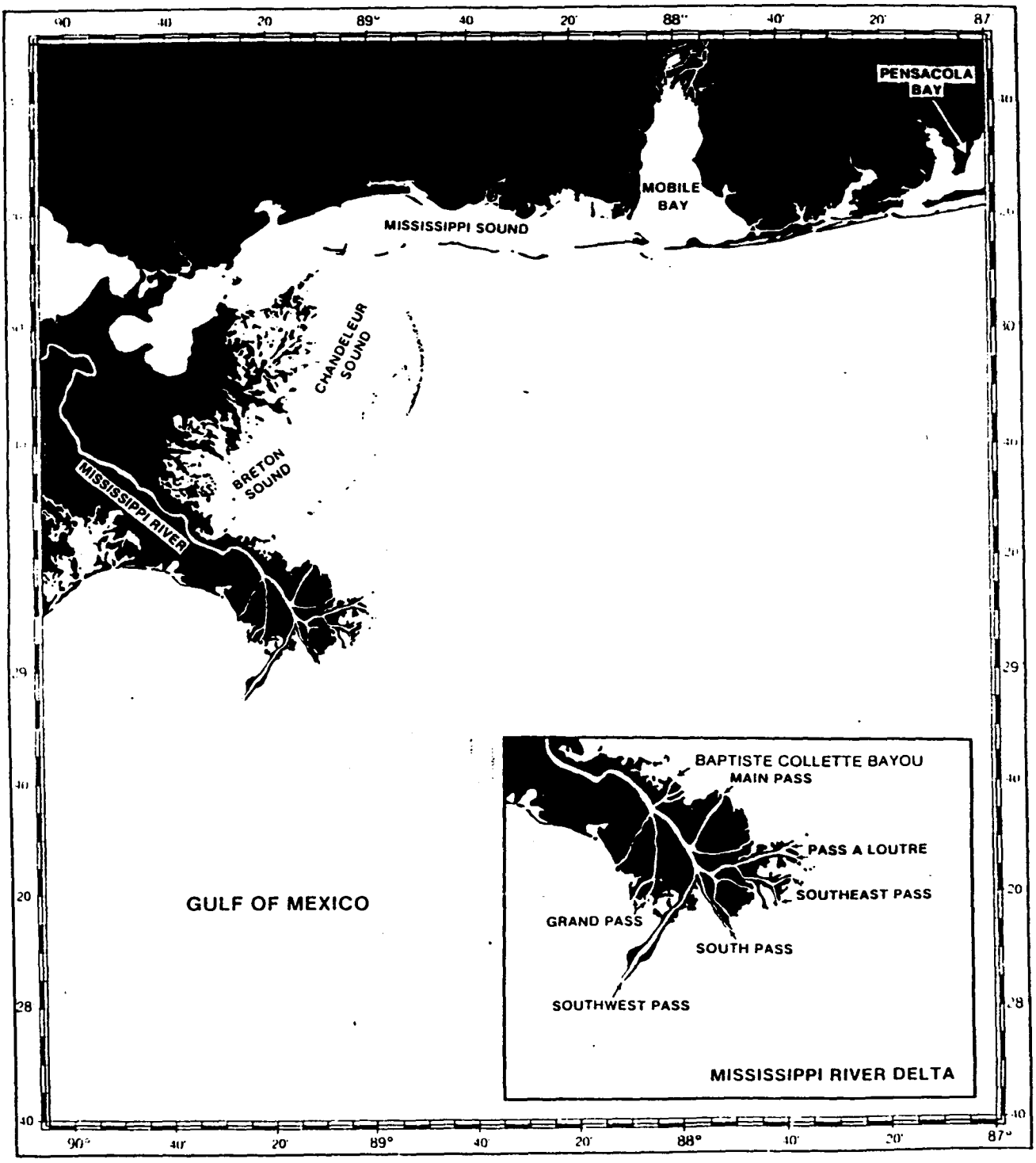

Figure 1. Study Area

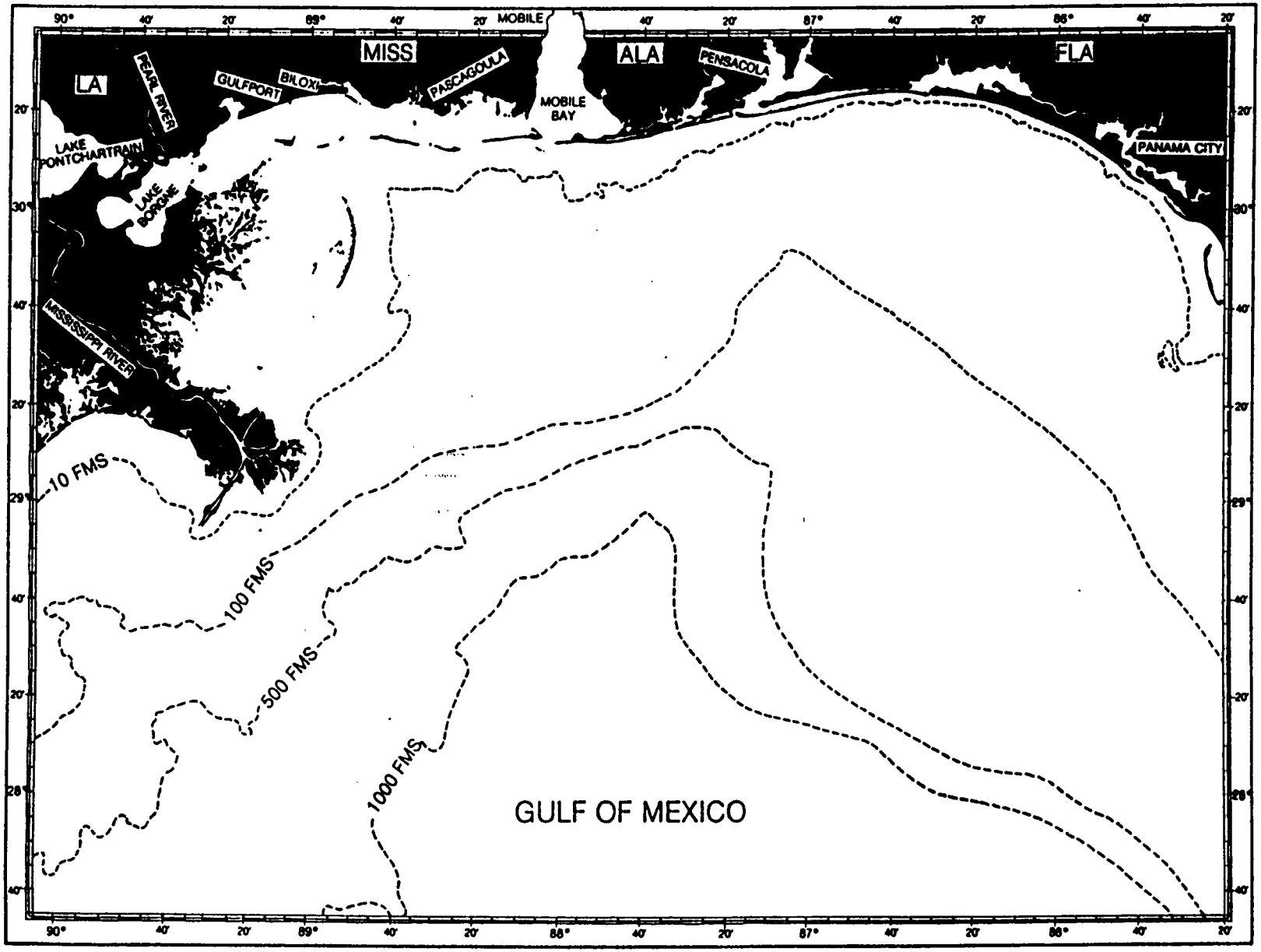

Figure 2. General Bathymetry

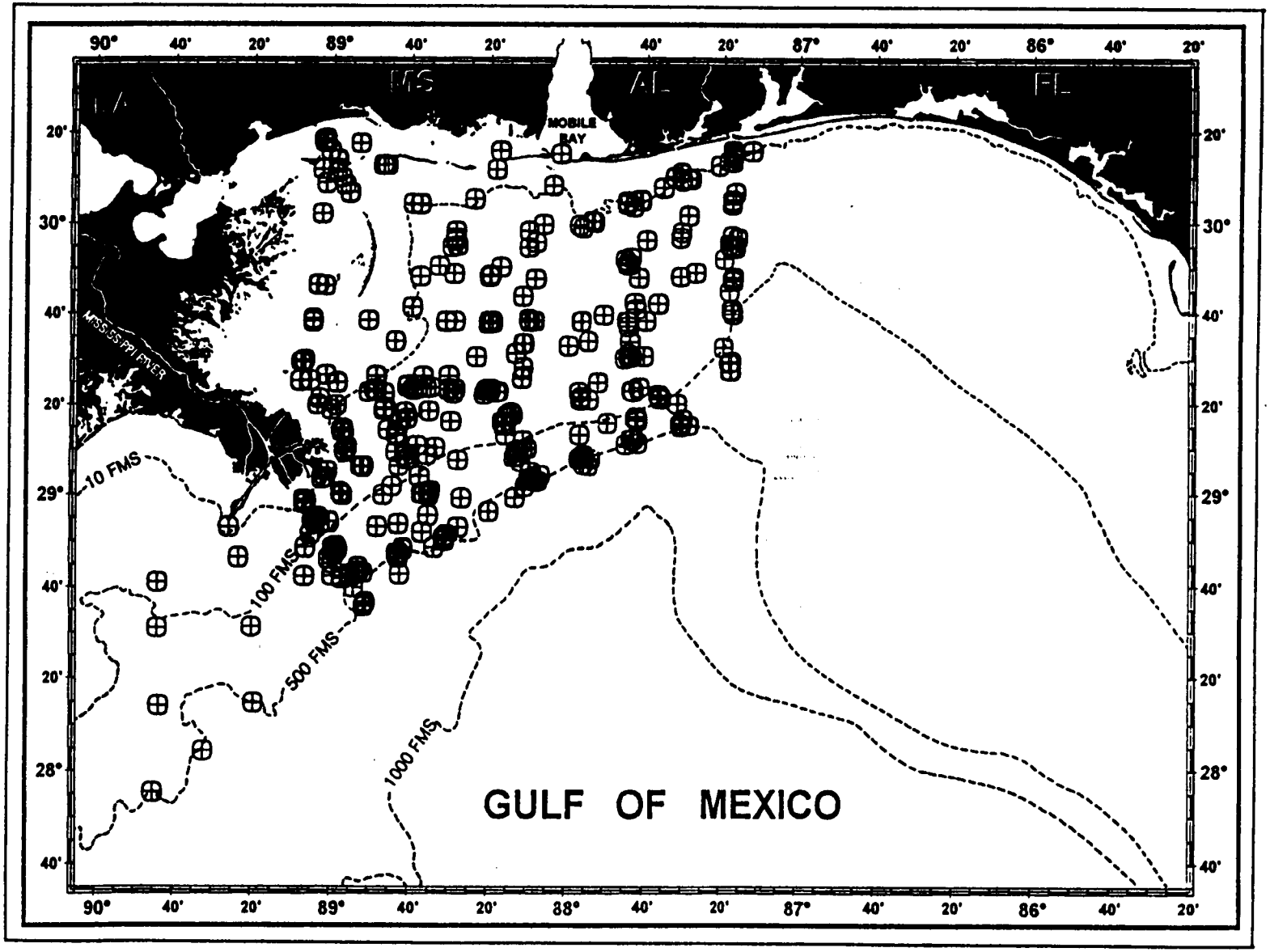

Figure 3. Station Locations: Composite

Figure 4. Surface salinity (ppt) for January 12-14, 1965.

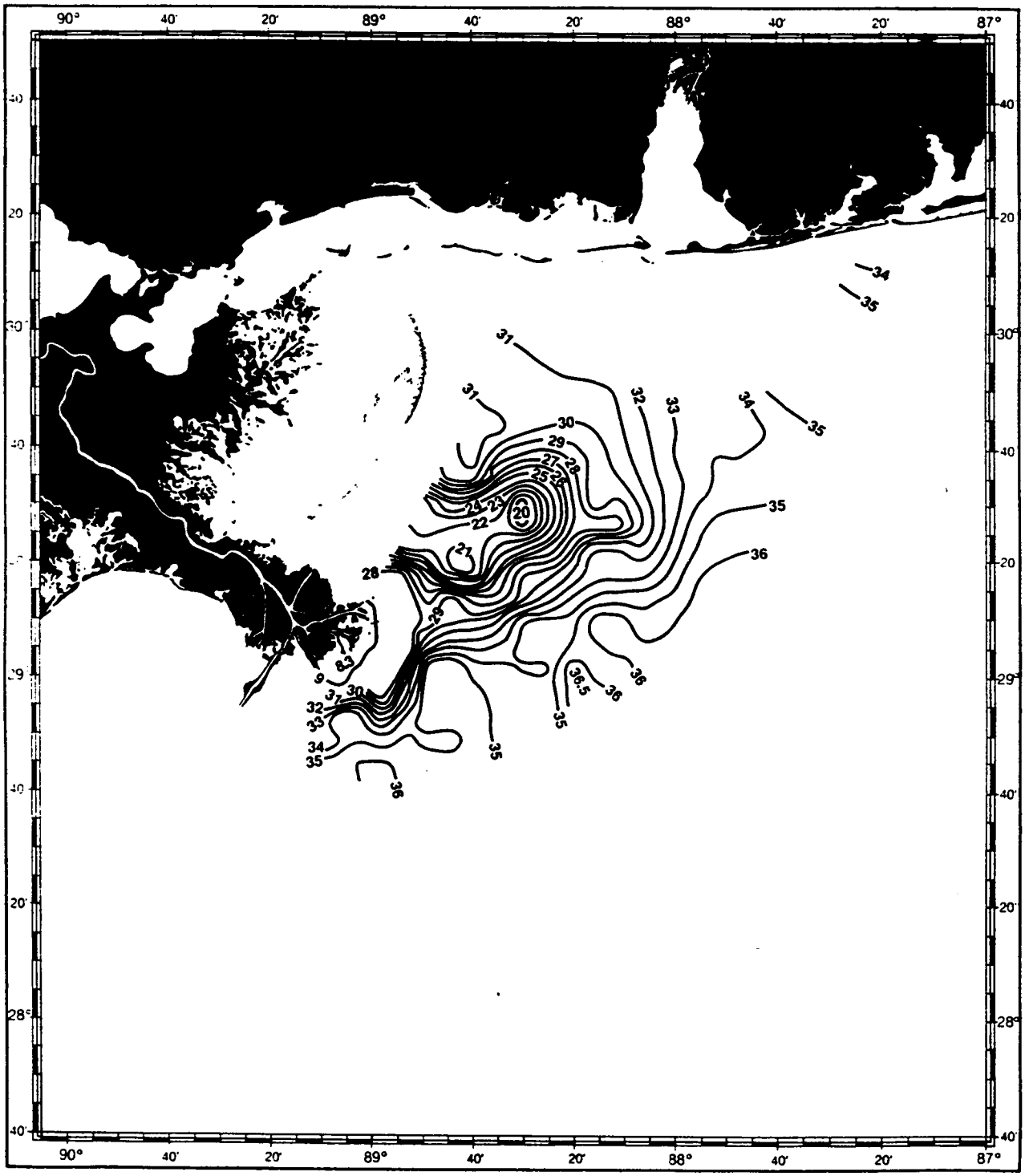

Figure 5. Surface salinity (ppt) for March 18-20, 1963.

Figure 6. Surface salinity (ppt) for March 31-April 3, 1965.

Figure 7. Surface salinity (ppt) for April 10-12, 1964.

Figure 8. Surface salinity (ppt) for May 1-2, 1963.

Figure 9. Surface salinity (ppt) for May 11-14, 1965.

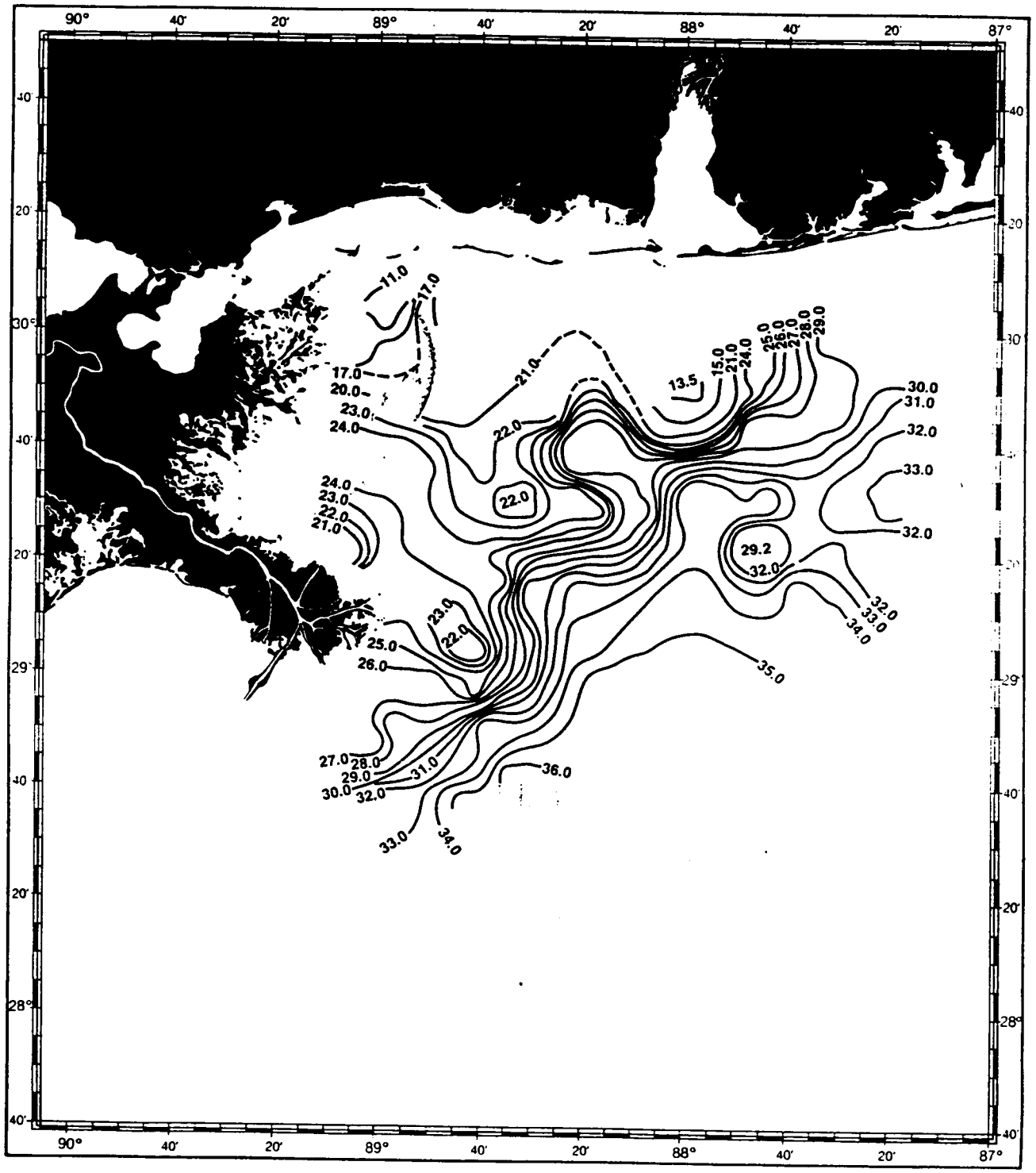

Figure 10. Surface salinity (ppt) for May 25-28, 1964.

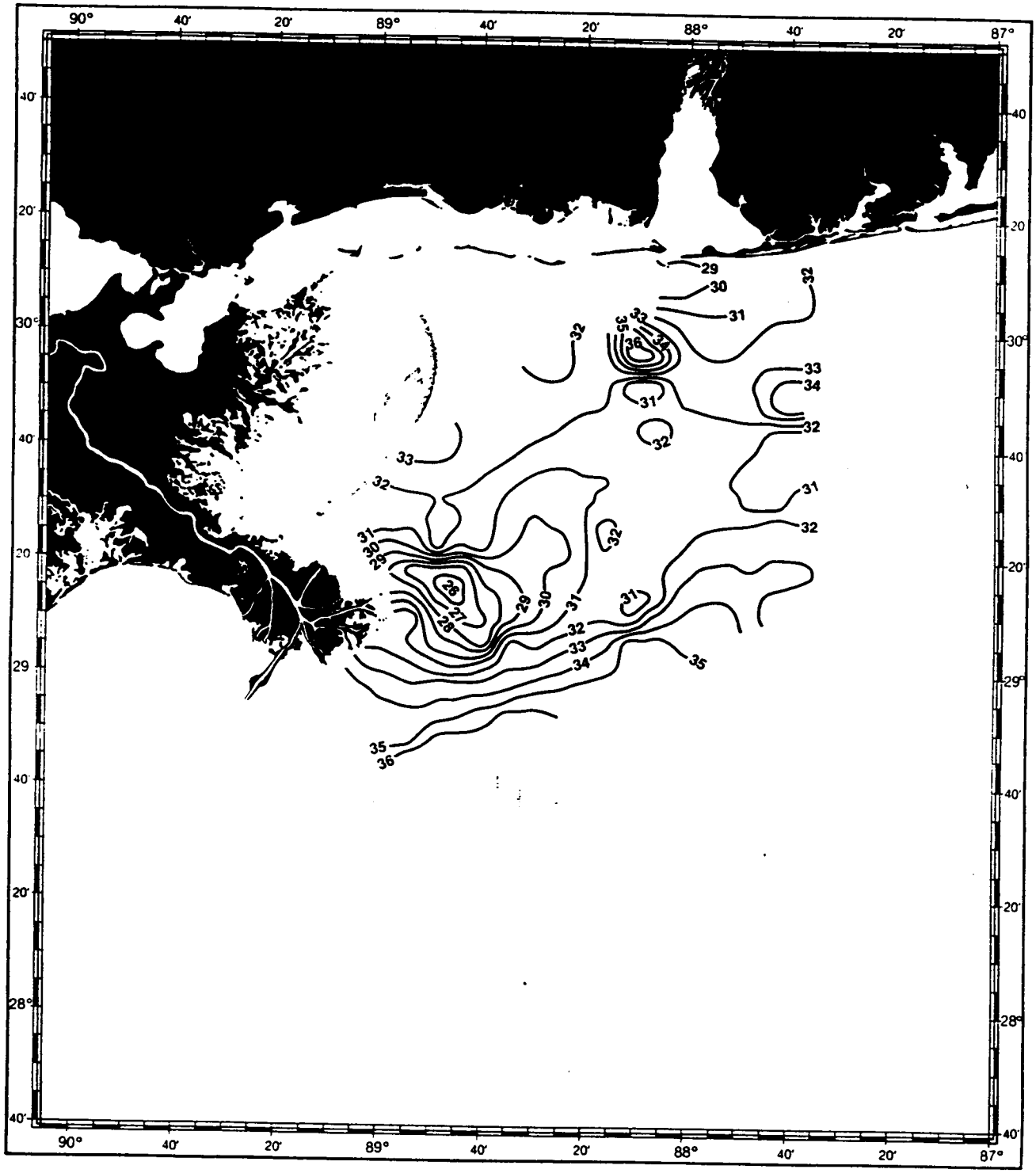

Figure 11. Surface salinity (ppt) for May 27-June 1, 1963.

Figure 12. Surface salinity (ppt) for June 27-July 2, 1963.

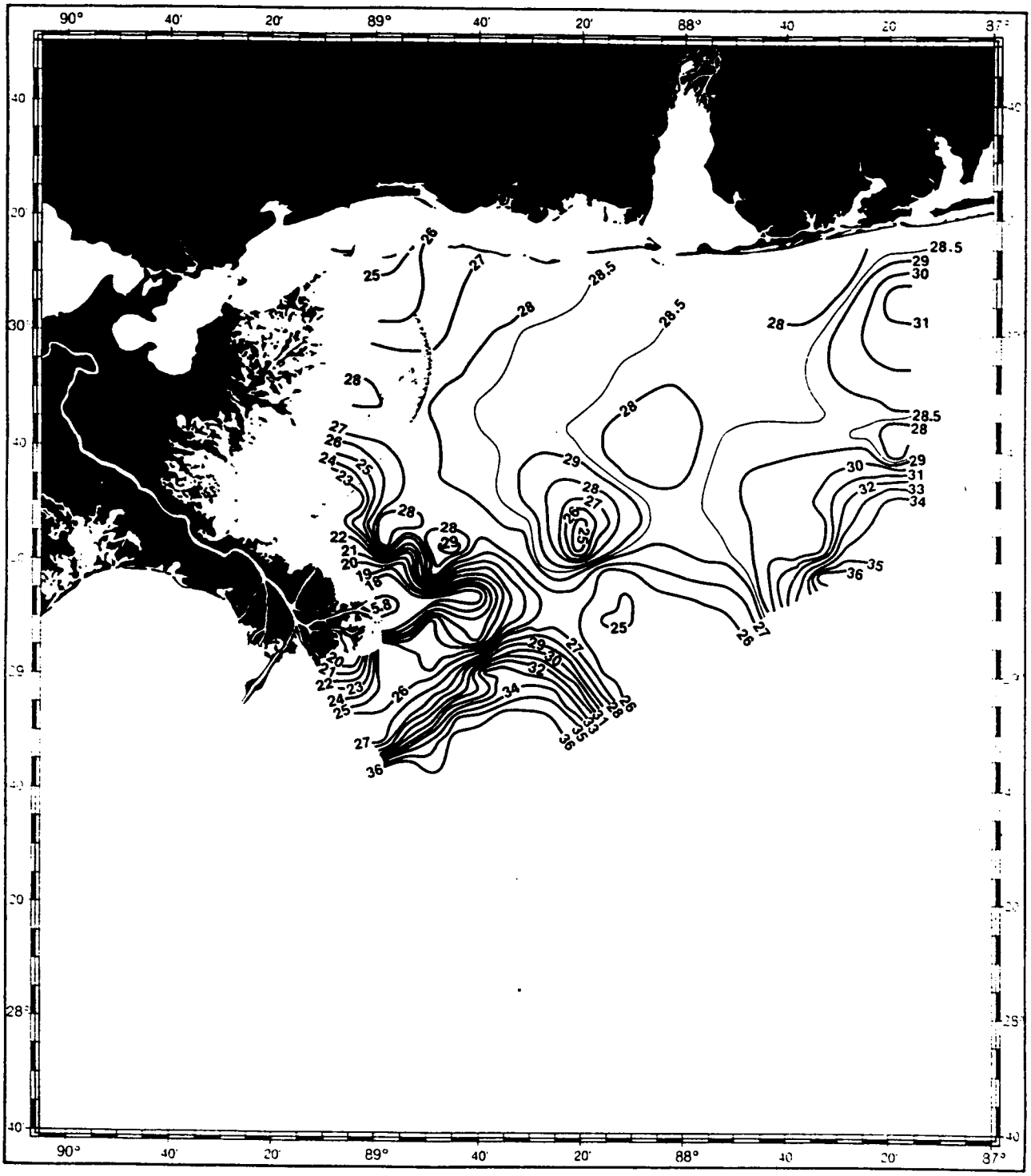

Figure 13. Surface salinity (ppt) for June 30-July 3, 1964.

Figure 14. Surface salinity (ppt) for July 19-24, 1965.

Figure 15. Surface salinity (ppt) for August 3-5, 1964.

Figure 16. Surface salinity (ppt) for August 6-9, 1963.

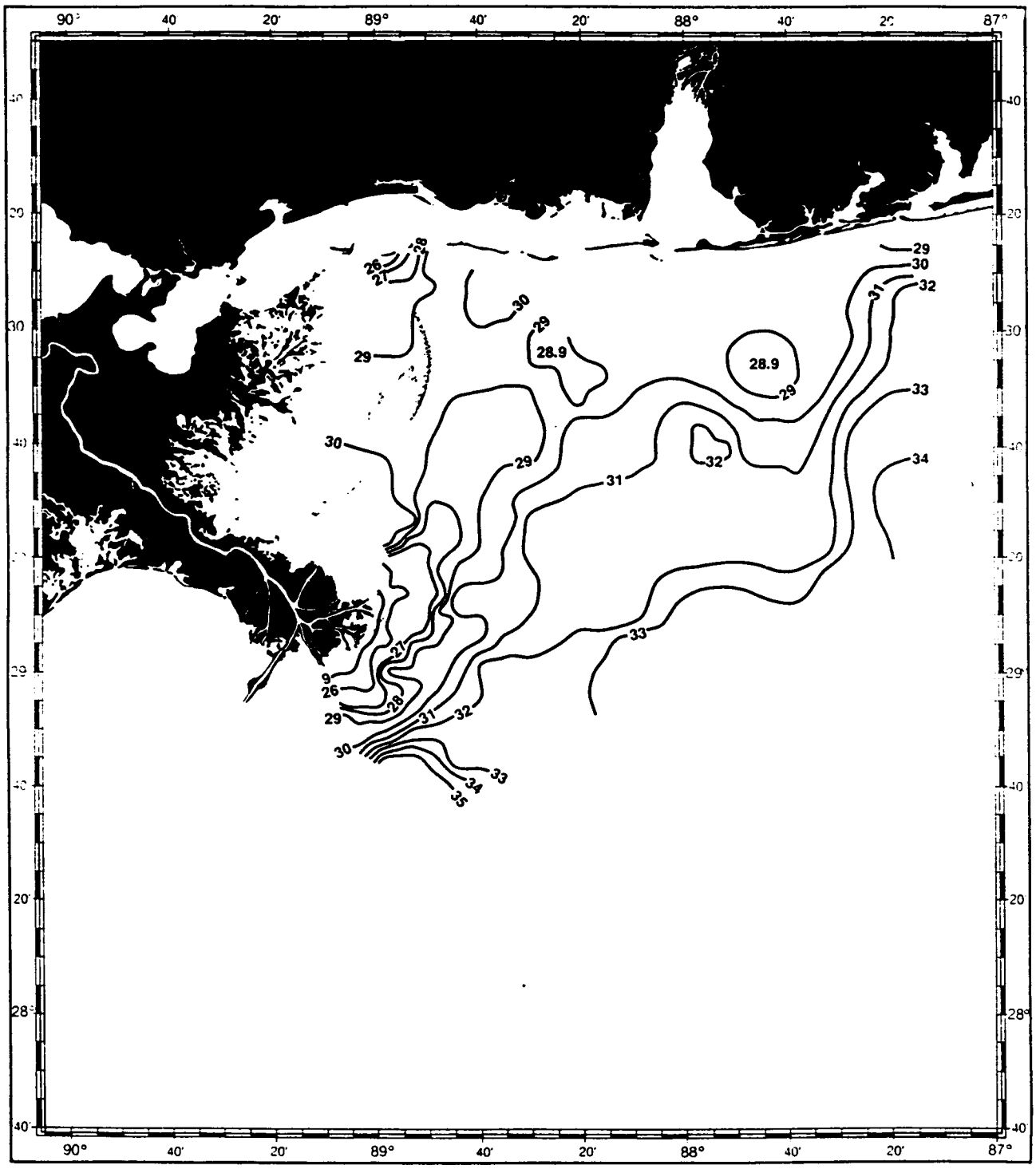

Figure 17. Surface salinity (ppt) for August 31-September 5, 1964.

Figure 18. Surface salinity (ppt) for September 4-8, 1963.

Figure 19. Distribution of mean surface salinity (ppt).

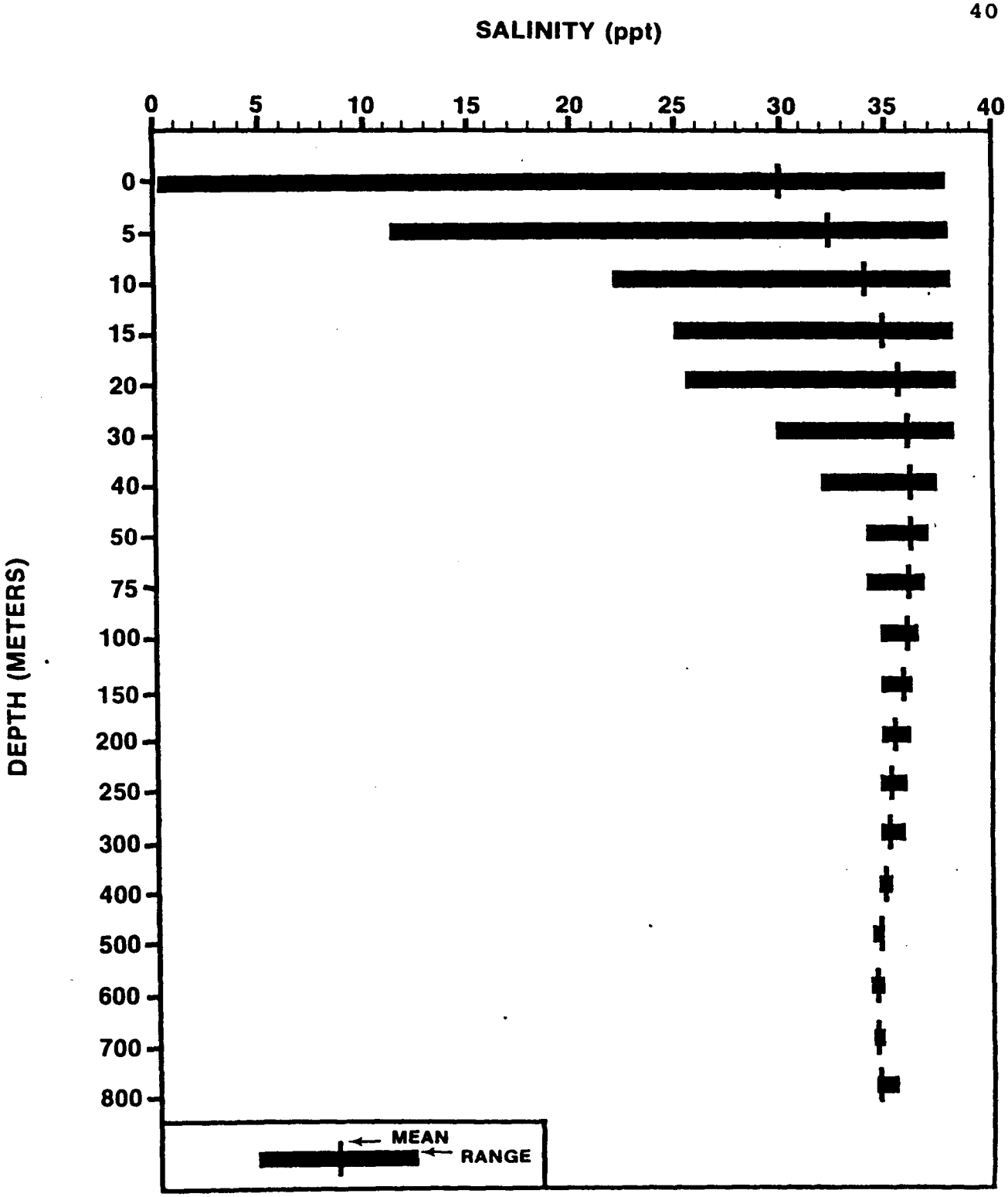

Figure 20. Range and mean salinity of the water column of the study area.

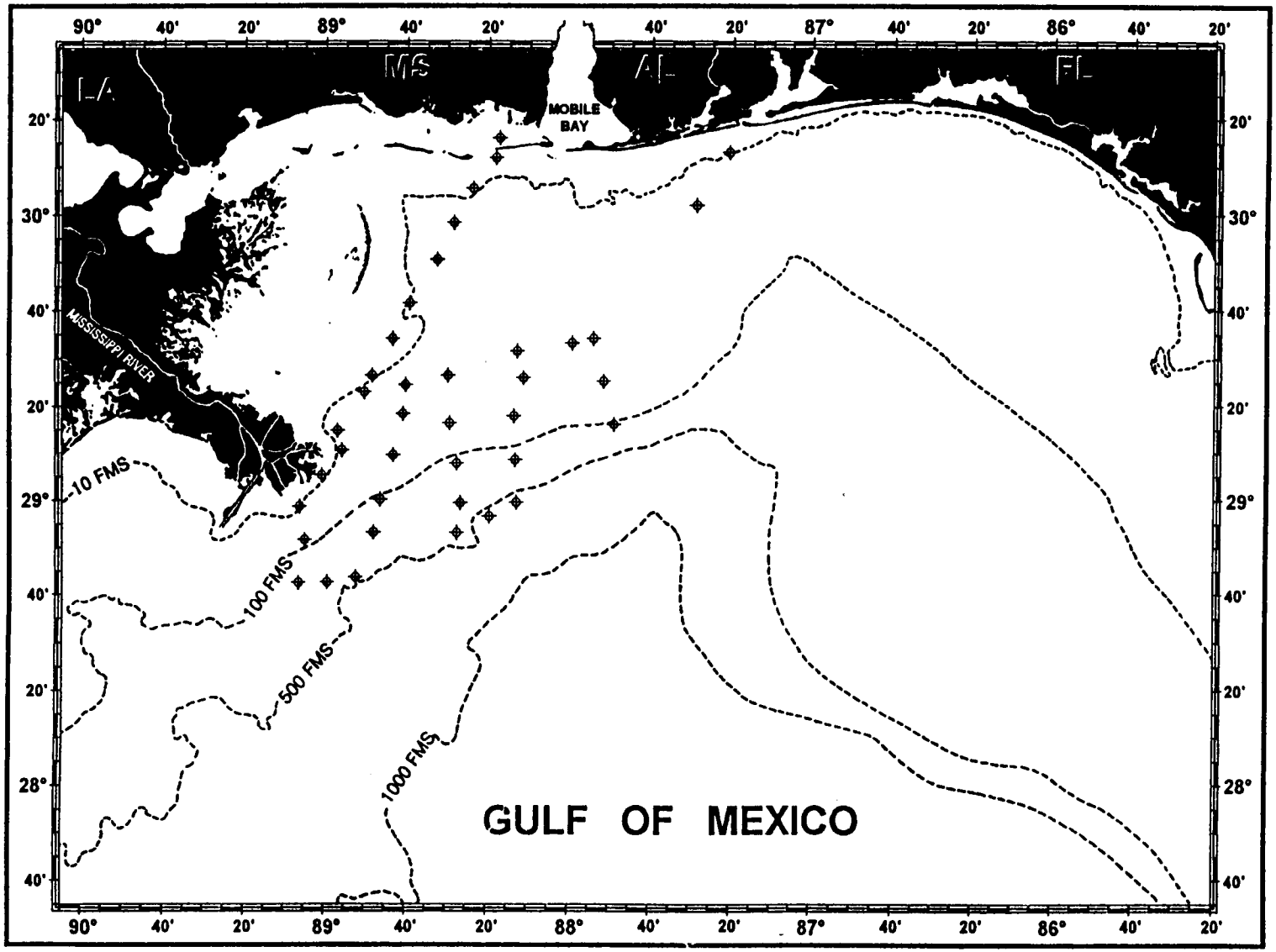

Figure 21. Station Locations: March 18-20, 1963

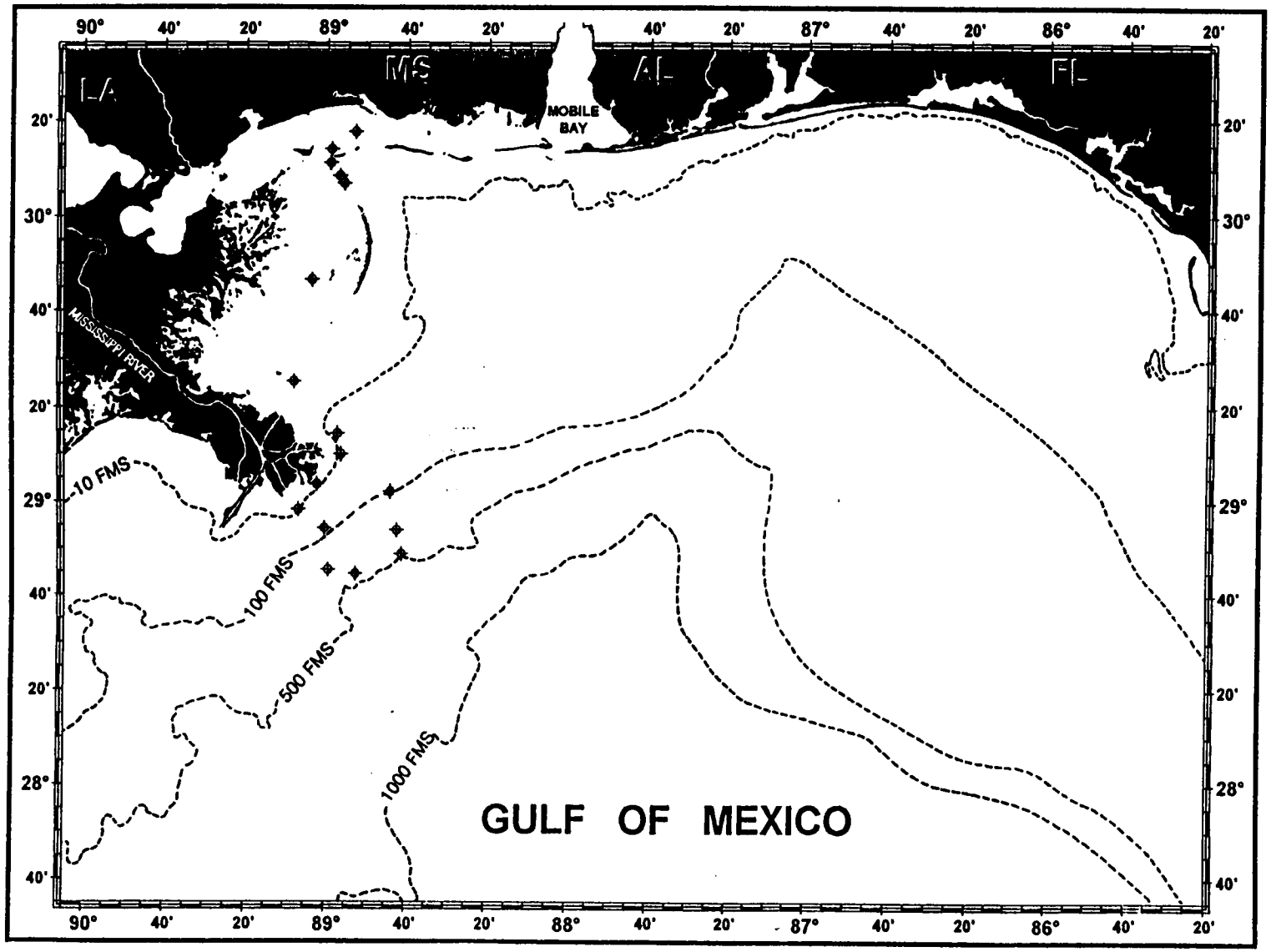

Figure 22. Station Locations: May 1-2, 1963

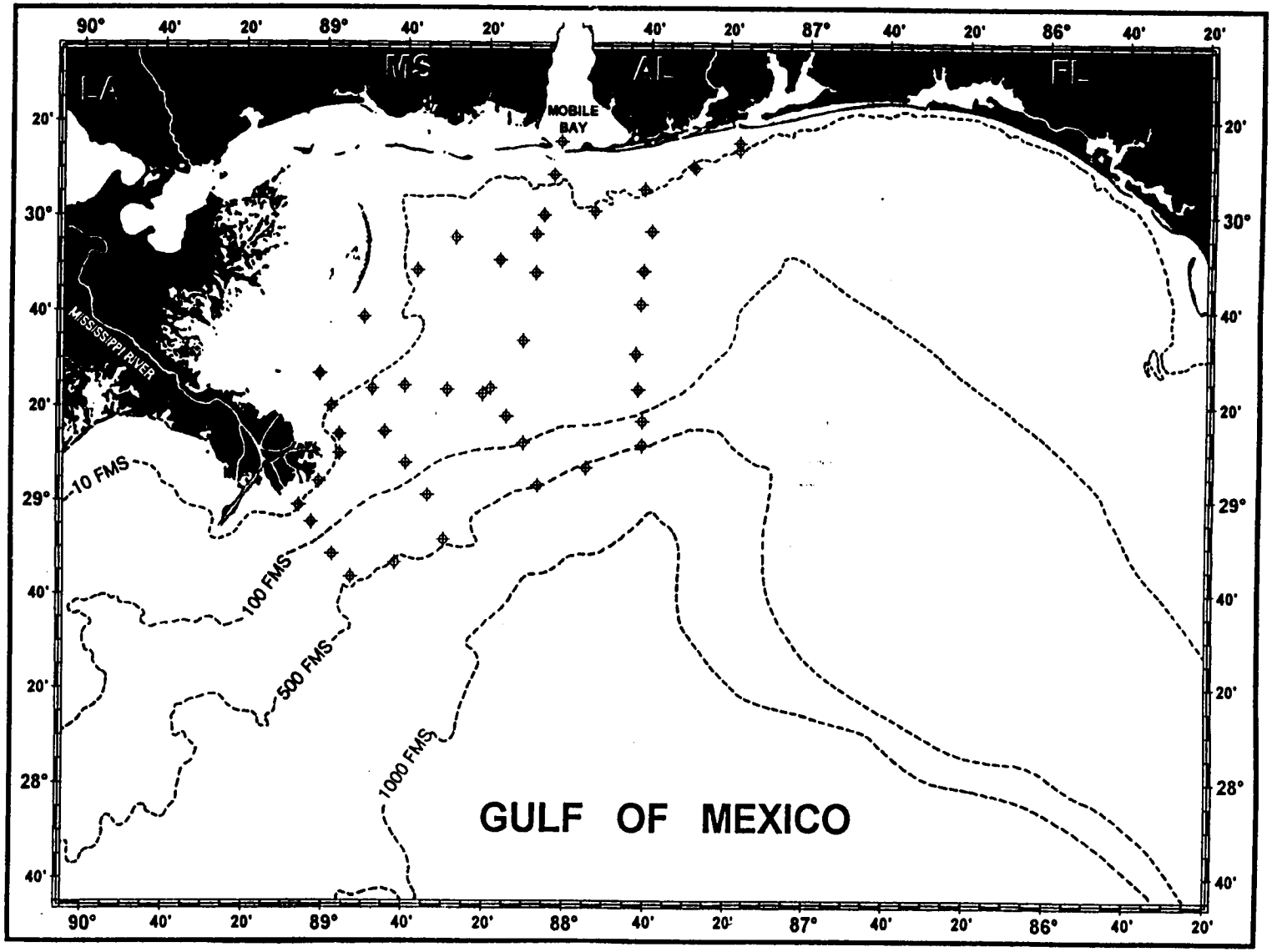

Figure 23. Station Locations: May 27- June 1, 1963

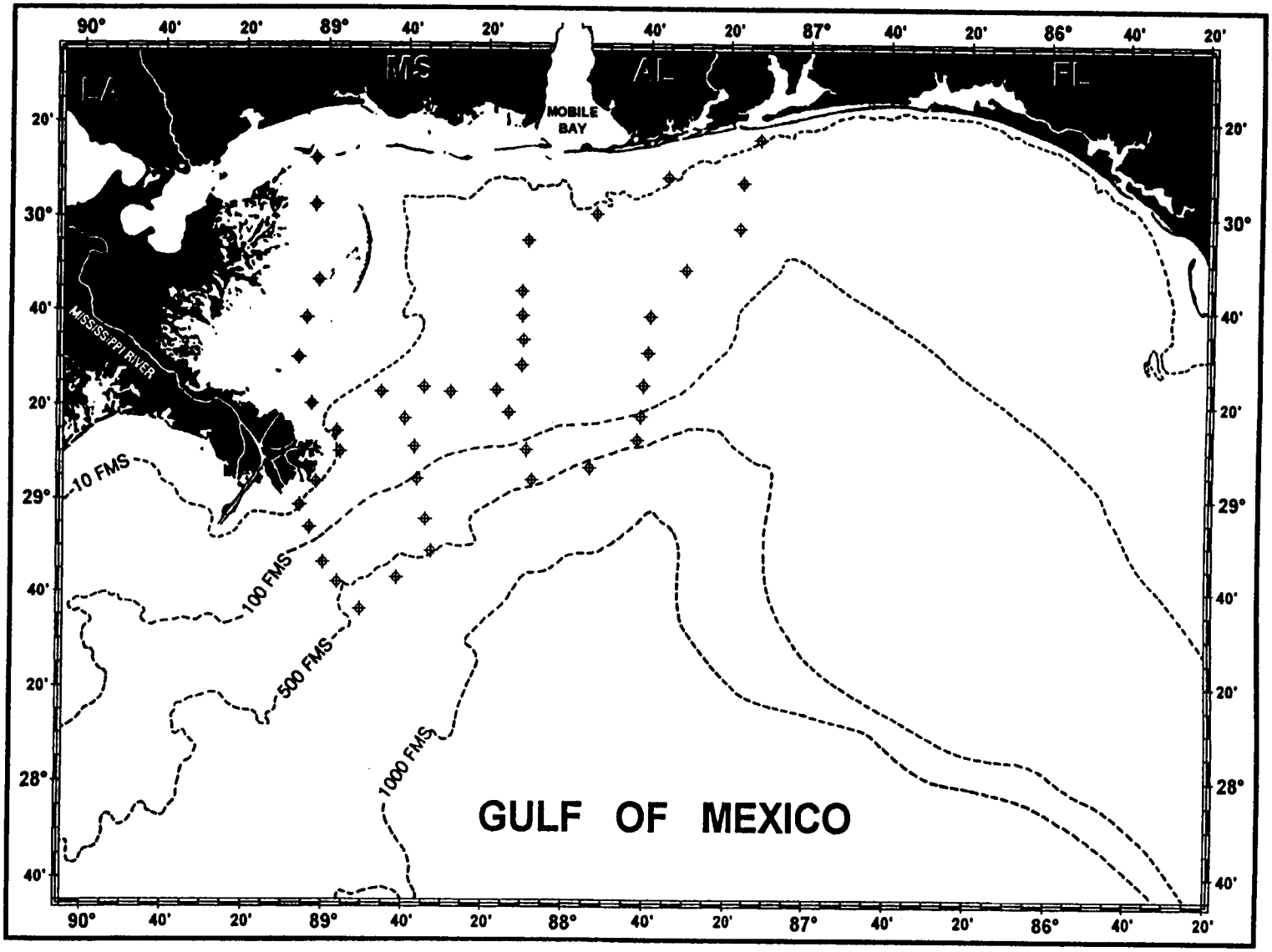

Figure 24. Station Locations: June 27 - July 2, 1963

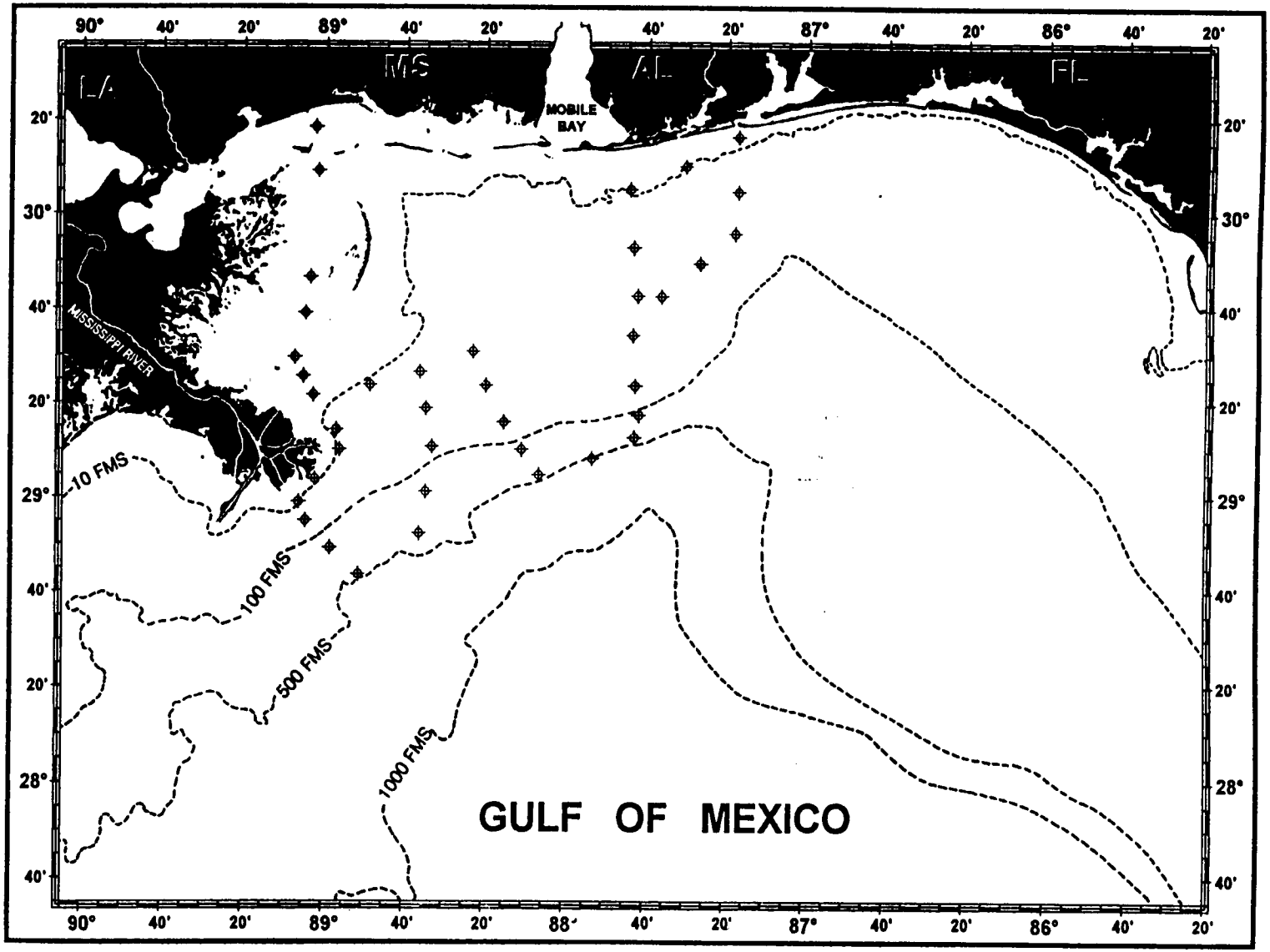

Figure 25. Station Locations: August 6-9, 1963

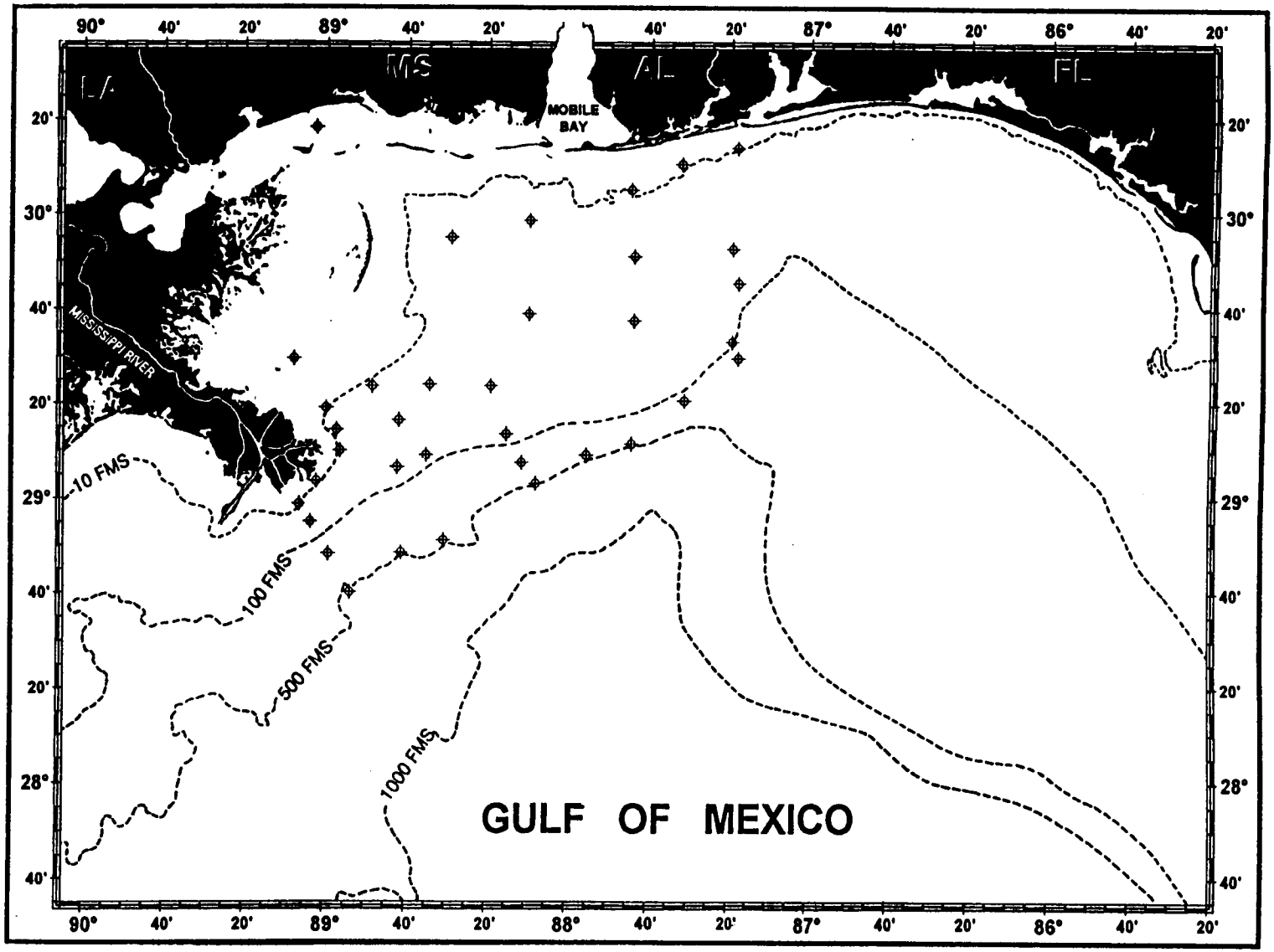

Figure 26. Station Locations: September 4-8, 1963

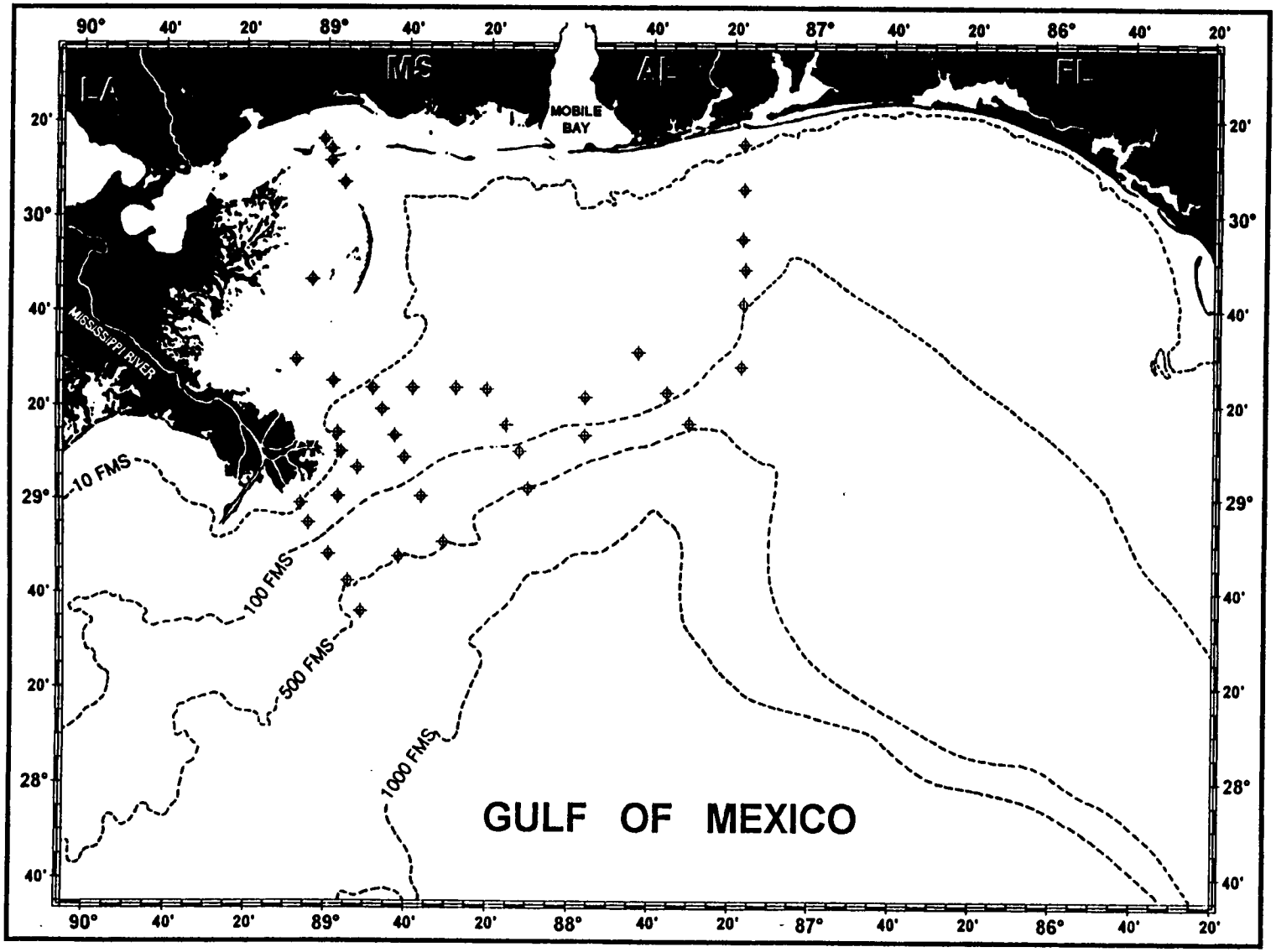

Figure 27. Station Locations: April 10-12, 1964

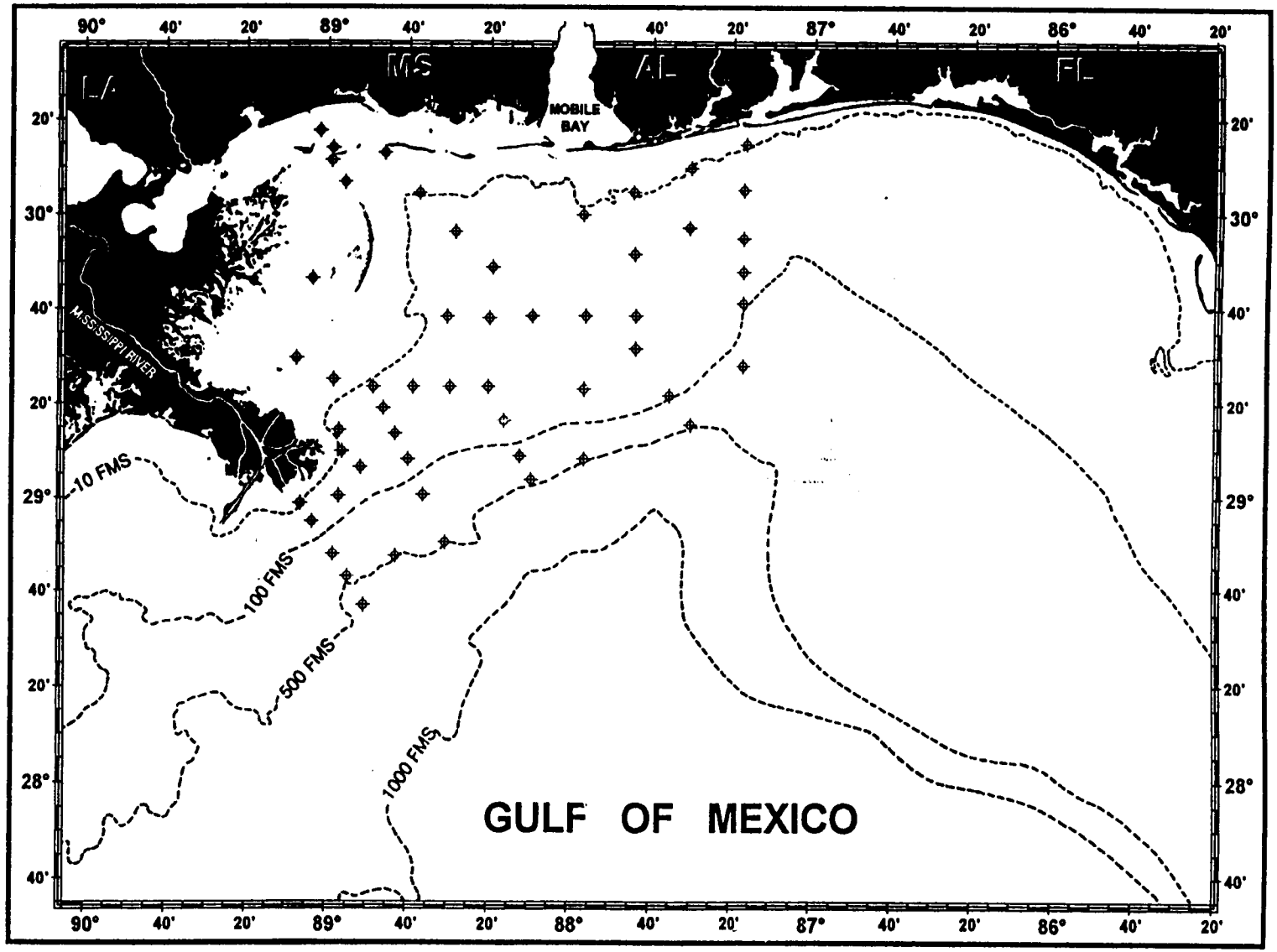

Figure 28. Station Locations: May 25-28, 1964

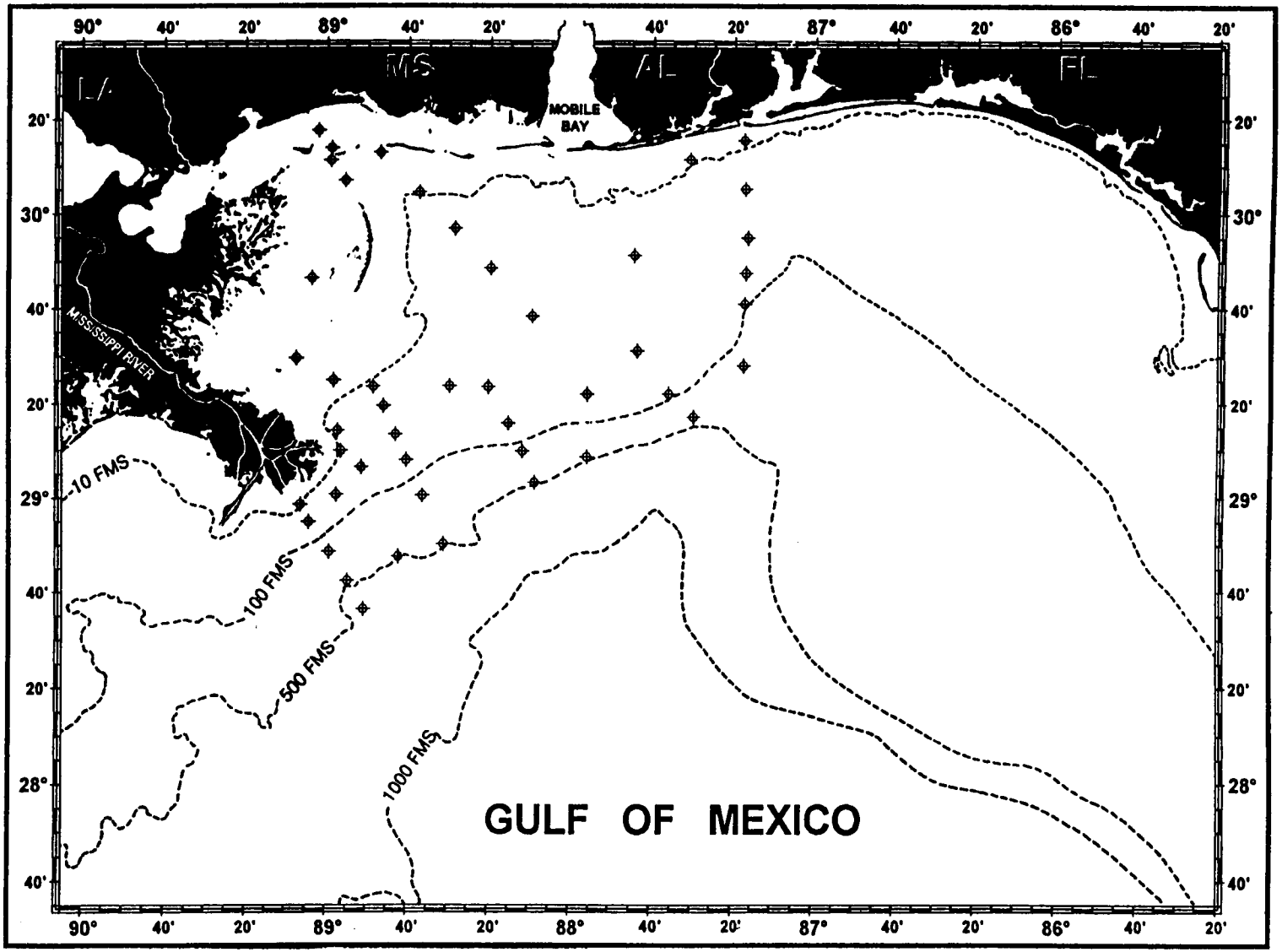

Figure 29. Station Locations: June 30 - July 3, 1964

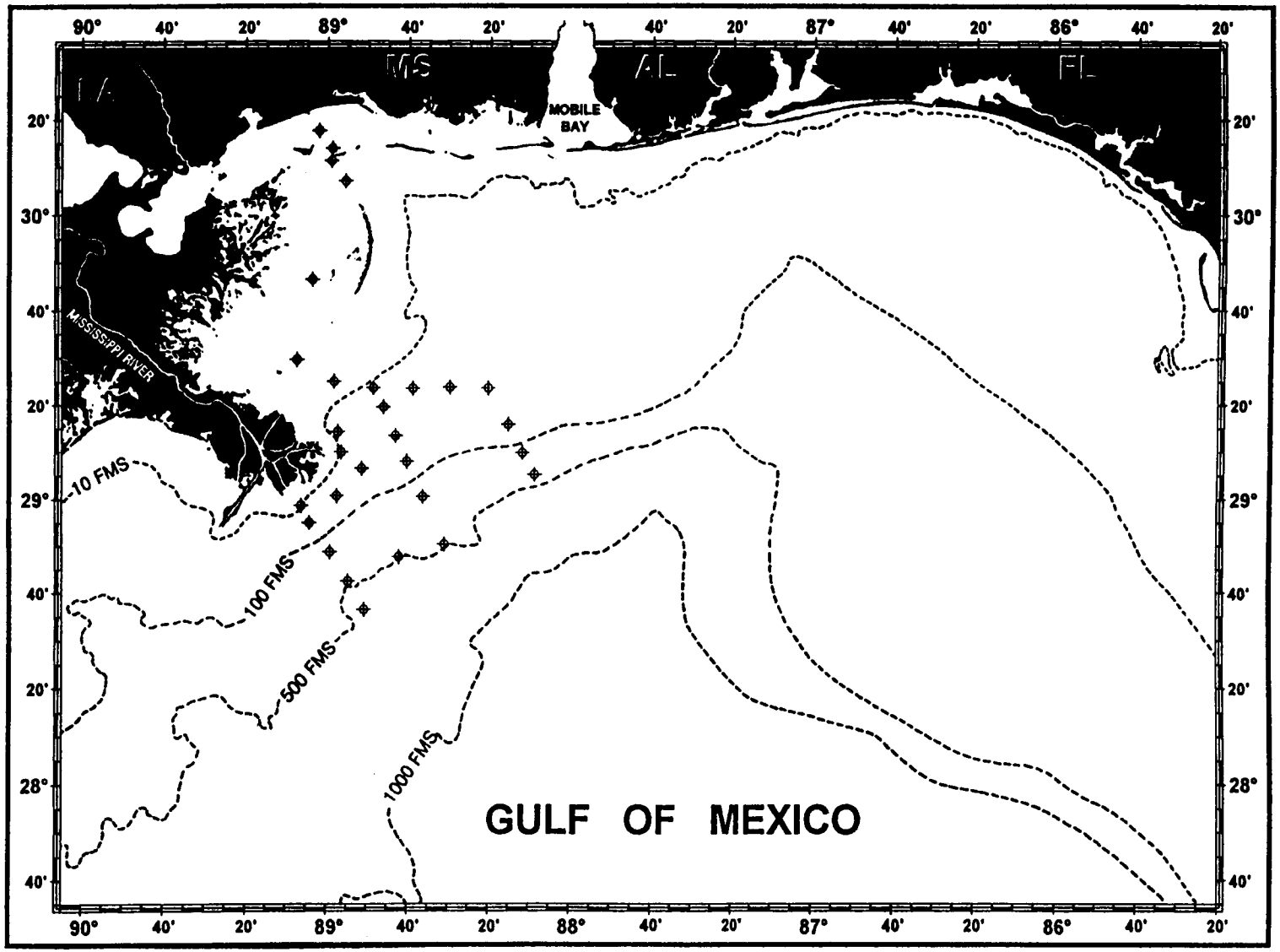

Figure 30. Station Locations: August 3-4, 1964

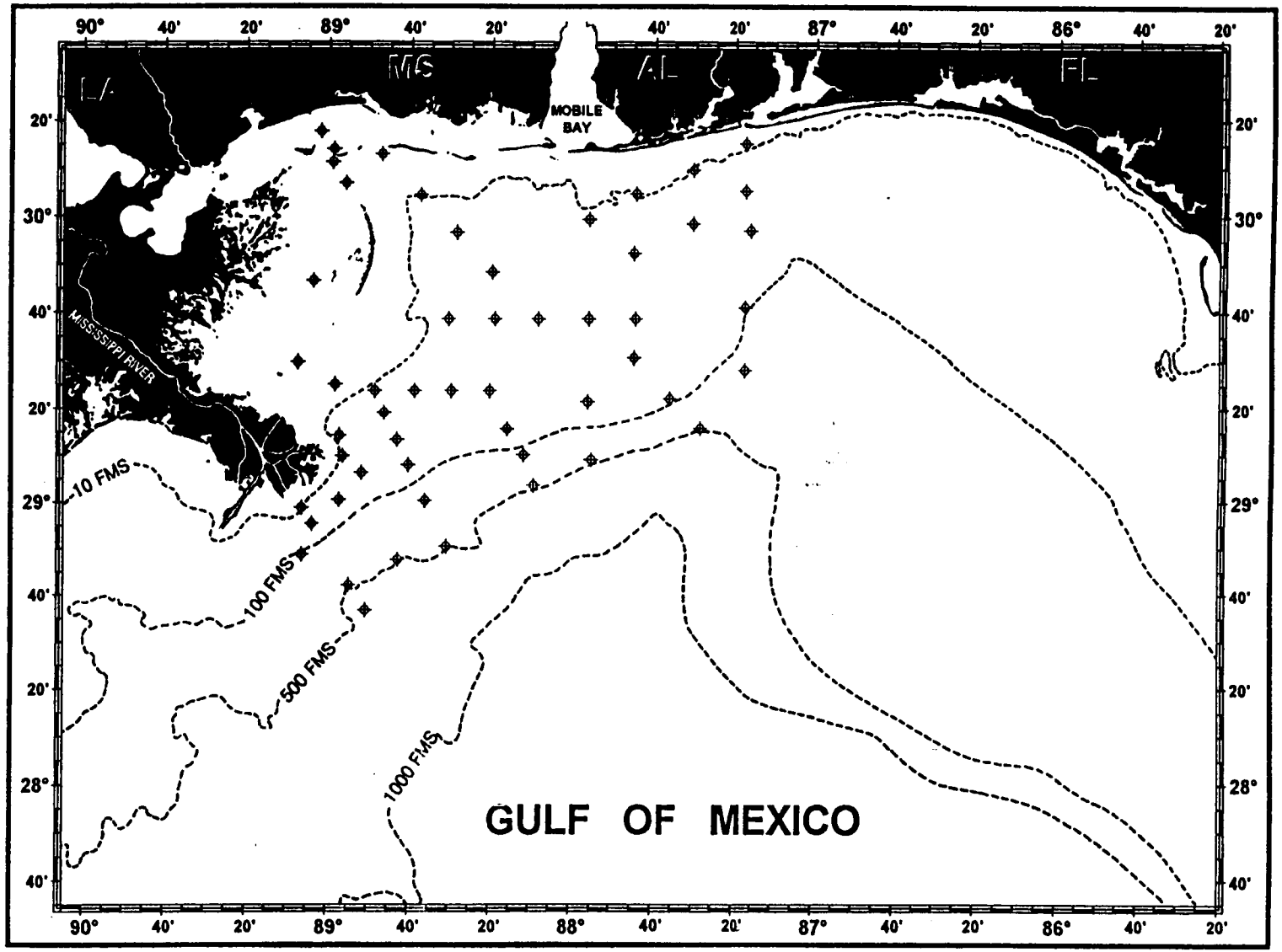

Figure 31. Station Locations: August 31 - September 5, 1964

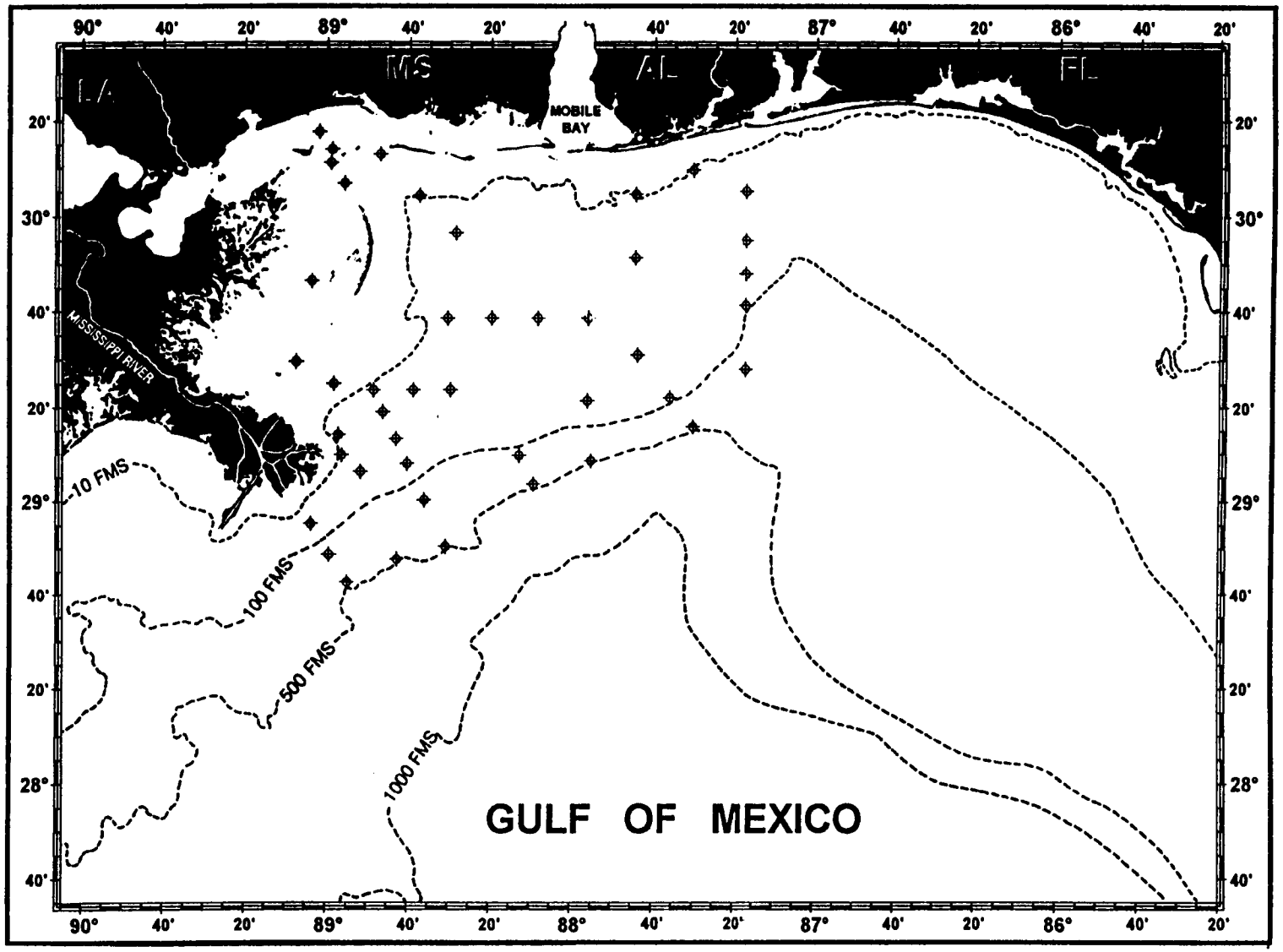

Figure 32. Station Locations: January 11-13, 1965

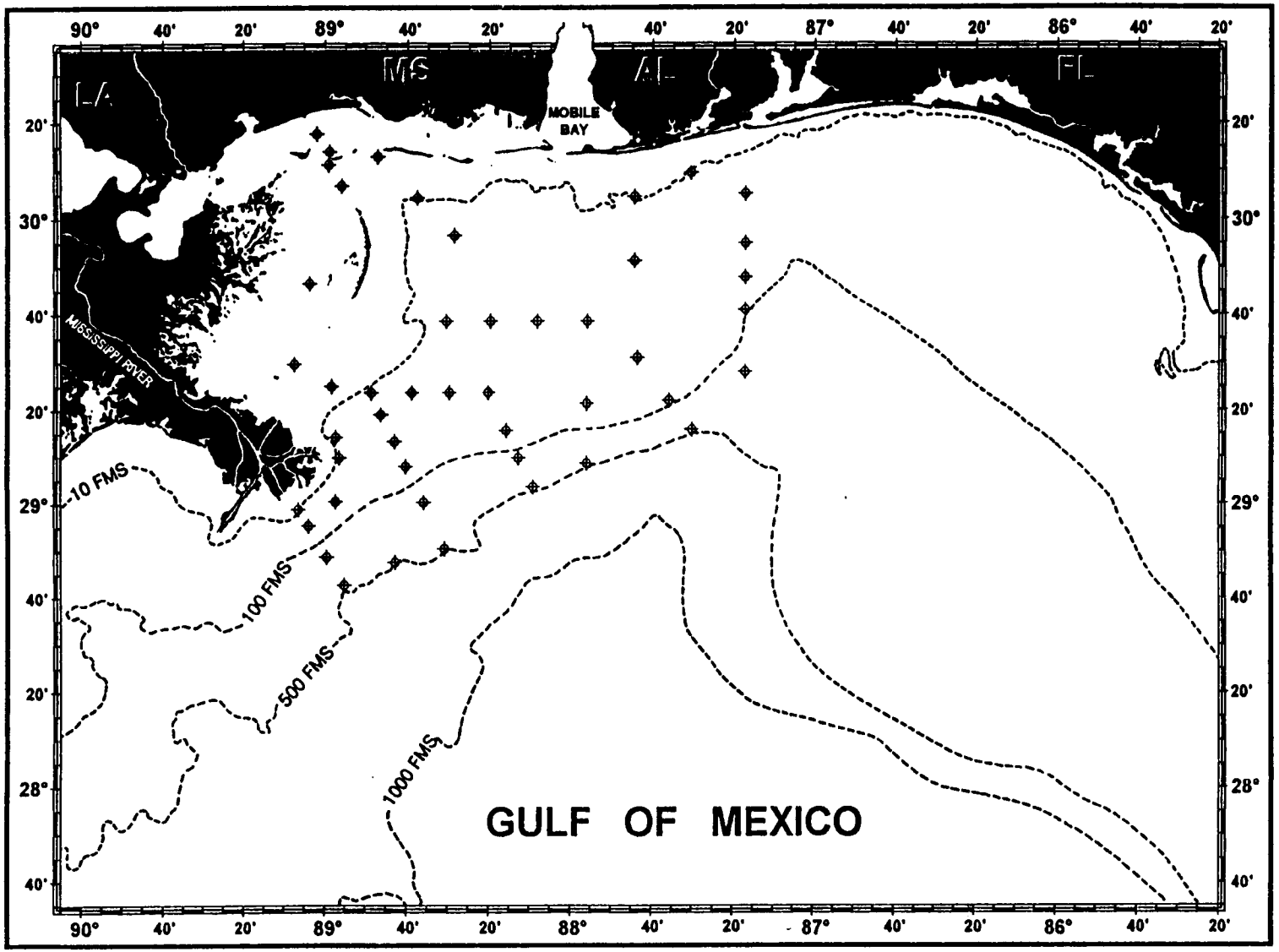

Figure 33. Station Locations: March 31 - April 3, 1965

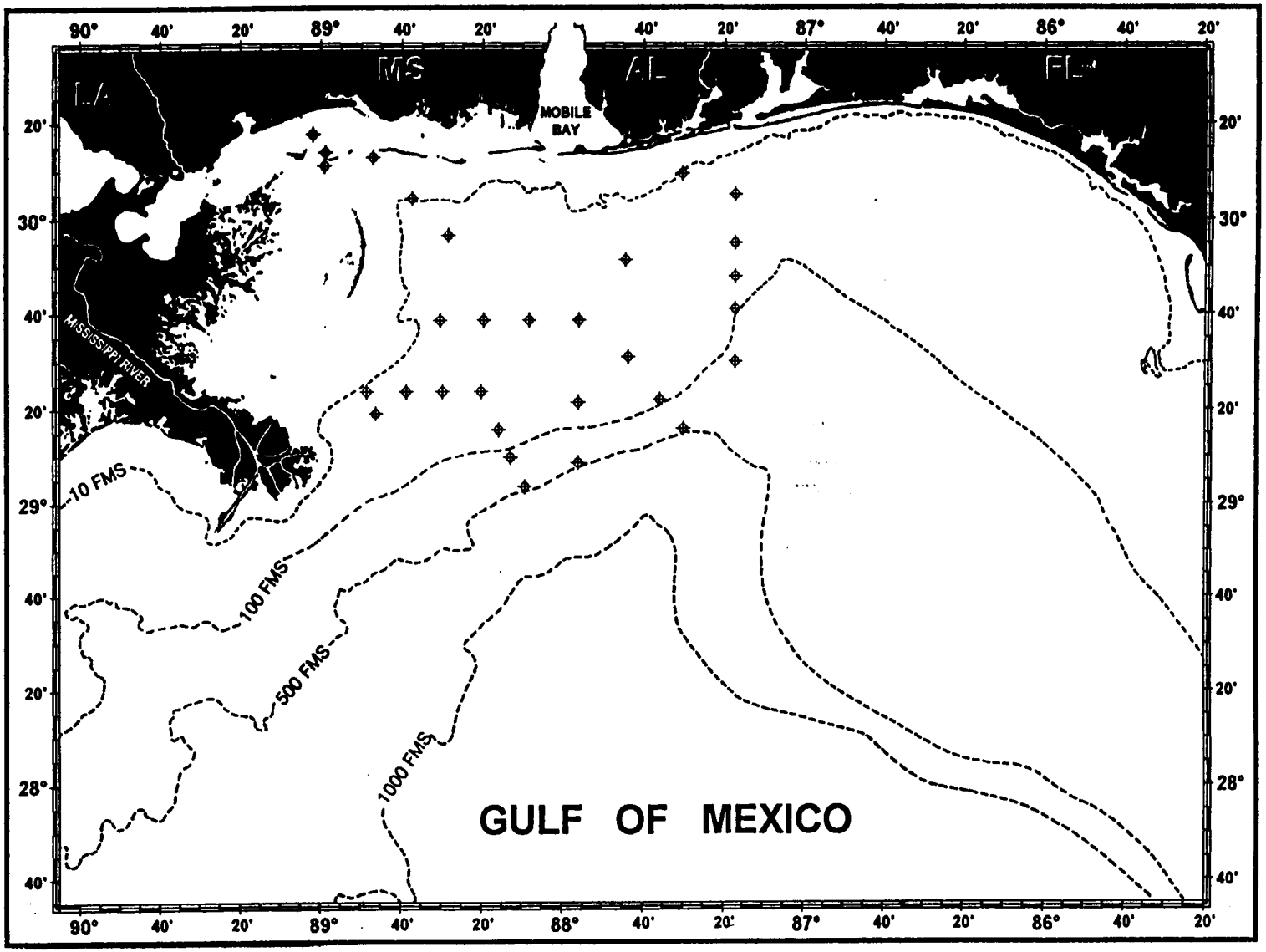

Figure 34. Station Locations: May 10-14, 1965

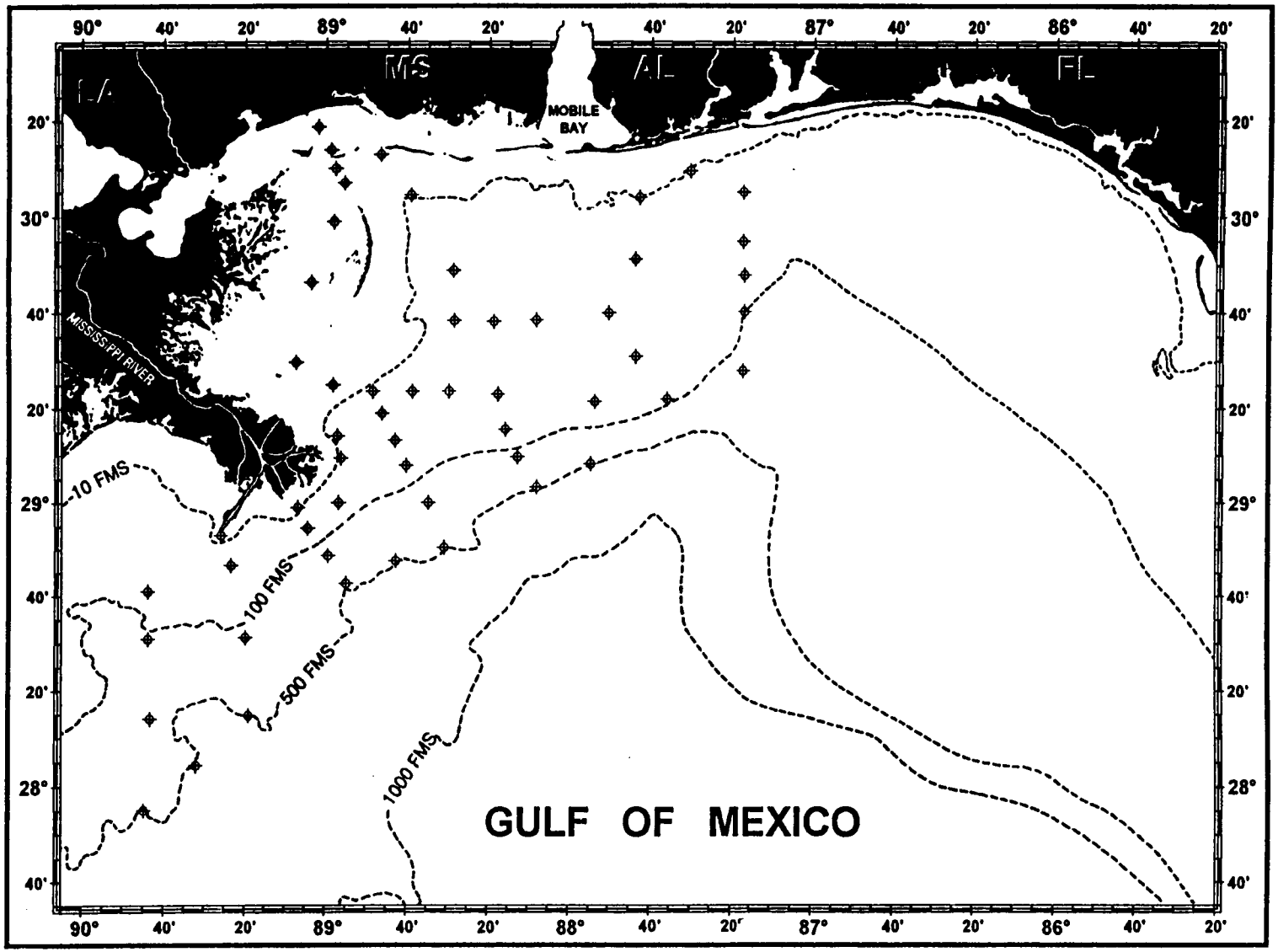

Figure 35. Station Locations: July 19-24, 1965

APPENDIX A

Data Tables

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
30°16.1′	88°17.6′	3/18/63	7:50	4	1								0	0						.6	20.670	
30° 5.5′	88°24.0′	3/18/63	10:05	18	16		64.9	64.9					0	0	X	9		2	X4	.6	18.040	31.670
																				7.6	16.700	32.150
																				15.8	15.190	34.740
29°58.4′	88°28.6′	3/18/63	11:20	28	24		68.0	58.5					0	0	X	9		2	X4	.9	18.890	31.130
																				7.6	16.040	33.380
																				15.5	15.300	34.580
																				23.5	15.420	34.940
29°50.7′	88°32.7′	3/18/63	12:35	26	16								140	4	X	9		2		.6	19.470	30.700
																				7.6	16.960	34.100
																				15.2	15.730	34.620
29°41.6′	88°39.4′	3/18/63	13:37	20	19								140	4	X	9		3	X4	.6	19.630	31.220
																				6.1	17.000	34.020
																				13.7	15.960	34.220
																				18.9	15.500	34.540
29°34.1′	88°43.6′	3/18/63	14:50	16	14						140	1	160	4				3		.9	20.670	30.860
																				7.6	17.930	33.340
																				13.7	16.230	33.260
29°26.5′	88°48.5′	3/18/63	16:05	18	16		71.6	71.1			140	1	160	8		0		3	X0	.9	22.500	22.920
																				6.4	18.740	34.520
																				10.7	18.470	34.760
																				15.8	16.850	34.920
29°23.0′	88°50.4′	3/18/63	17:05	27	20		71.2	70.9			140	1	140	7		0		3	X0	.6	21.990	21.820
																				7.0	18.000	34.420
																				12.5	18.350	35.420
																				16.2	18.120	35.580
																				19.8	17.390	35.700
29°14.8′	88°57.0′	3/18/63	18:20	16	15		63.0	63.0			140	1	140	6	X	9		2	X4	.9	16.500	29.440
																				6.4	16.960	34.020
																				10.7	17.390	35.320
																				15.2	17.470	35.740
29°10.6′	88°55.9′	3/18/63	19:05	24	20								110	7				2		.9	17.620	30.980
																				6.1	16.500	33.940
																				10.4	16.960	35.020
																				14.6	17.160	35.580
																				19.8	17.580	35.860
29° 5.3′	89° 1.0′	3/18/63	20:20	18	15		71.6	71.1					140	9				2		.9	23.090	7.590
																				7.6	17.430	32.300
																				15.2	17.540	34.740
28°58.6′	89° 6.5′	3/18/63	21:30	27	21		72.9	72.9					140	7	6	0			X0	.6	21.810	8.500
																				6.1	17.700	31.940
																				12.2	17.000	34.180
																				21.3	17.730	35.860

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
28°51.6′	89° 5.2′	3/18/63	22:50		31		71.4	70.5					140	9						1.8	20.900	35.460
																				7.9	20.690	36.540
																				15.2	20.590	36.820
																				22.9	20.480	36.820
																				30.5	20.170	36.820
28°42.5′	89° 6.7′	3/19/63	0:25		32		72.0	70.3					140	9						.6	20.170	35.820
																				7.6	19.930	36.080
																				16.5	19.890	36.160
																				24.1	19.510	36.120
																				31.7	20.360	36.640
28°42.6′	88°59.5′	3/19/63	1:45		26		72.0	71.1					140	10						.6	22.030	36.260
																				7.3	20.360	36.260
																				13.1	19.780	36.340
																				20.4	20.050	36.560
																				25.9	19.970	36.760
28°43.6′	88°52.5′	3/19/63	3:00		28		71.2	70.5					140	6						.6	20.820	35.820
																				7.6	20.480	36.080
																				14.0	19.240	35.920
																				20.7	20.320	36.800
																				27.4	20.240	36.880
28°53.2′	88°48.0′	3/19/63	4:30		28		70.9	70.0					140	8						.6	20.980	36.110
																				7.6	21.020	36.360
																				14.0	21.330	36.880
																				20.7	21.140	36.800
																				27.4	20.790	36.800
29° .1′	88°46.5′	3/19/63	6:03		31		71.2	70.5					140	10		0				.6	21.180	36.580
																				7.6		36.720
																				15.8	21.180	36.600
																				22.9	20.670	36.840
																				30.5	20.130	36.800
29° 9.6′	88°43.4′	3/19/63	7:20		61		68.5	66.9					140	5		0				.6	17.200	29.780
																				7.6	17.080	33.600
																				15.5	17.580	35.280
																				23.5	17.890	35.960
																				32.6	17.850	36.170
																				61.0		36.470
29°18.4′	88°40.9′	3/19/63	8:50		31		70.0	68.2					140	6		0				.9	19.860	20.900
																				7.6	18.780	35.040
																				15.8	18.390	35.720
																				22.9	17.660	35.920
																				30.5	17.470	36.060

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29°24.5′	88°40.3′	3/19/63	10:00		31		70.7	69.3					140	7		0				.6	19.890	21.260
																				7.6	18.780	35.160
																				15.2	18.430	35.720
																				23.2	18.550	36.160
																				30.5	17.810	36.350
29°26.5′	88°30.0′	3/19/63	11:03		31		70.9	70.2					140	8						.6	19.860	19.540
																				6.1	18.970	34.980
																				15.2	19.050	36.500
																				22.9	18.860	36.580
																				30.5	18.350	36.580
29°16.4′	88°29.5′	3/19/63	12:30	81	61		70.0	69.1					160	0						.6	20.050	29.330
																				7.6	18.700	34.340
																				15.2	18.630	35.940
																				22.9	18.930	36.540
																				30.5	18.740	36.510
																				61.0		36.200
29° 7.8′	88°27.7′	3/19/63	13:55		61		70.5	70.0					140	4						.6	20.280	34.180
																				7.6	19.630	34.080
																				15.2	18.430	36.000
																				22.9	18.630	36.400
																				30.5	18.350	36.400
																				61.0		36.240
28°59.4′	88°26.7′	3/19/63	15:20		61		71.1	70.3					140	6		0	9		X0	.6	21.140	33.940
																				8.8	18.080	35.900
																				15.5	19.590	36.700
																				23.5	16.700	35.900
																				32.9	18.740	36.660
																				61.0		36.640
28°53.1′	88°27.5′	3/19/63	16:35		61		72.9	71.2					140	8		0	9		X0	.9	21.060	34.270
																				7.6	18.550	35.000
																				15.8	19.970	36.810
																				23.5	18.700	36.610
																				31.4	18.550	36.650
																				61.0		36.330
28°56.5′	88°19.7′	3/19/63	18:20		61		71.2	70.5					180	5		0	9		X0	.6	20.790	36.510
																				7.6	20.900	36.580
																				15.2	20.090	36.780
																				22.9	19.590	36.740
																				29.6		36.800
																				30.5	19.510	36.800
																				61.0		36.450

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
28°59.5′	88°13.0′	3/19/63	20:00		61		71.8	70.9					0	0					X0	1.2	21.210	35.860
																				7.6	20.520	36.330
																				15.2	19.890	36.490
																				23.8	19.470	36.530
																				31.1	18.890	36.470
																				61.0		36.310
29° 8.5′	88°13.4′	3/19/63	21:35		61		72.7	71.8					200	7		0	9		X0	1.2	22.030	36.600
																				7.9	22.110	36.600
																				15.2	21.720	36.600
																				22.9	21.290	36.760
																				30.5	20.860	36.740
																				61.0		36.450
29°17.9′	88°13.8′	3/19/63	23:05		61		70.5	70.0					230	8			9		X0	.6	20.340	32.560
																				7.6	18.510	34.880
																				15.2	17.580	35.280
																				22.9	18.470	36.000
																				30.5	18.550	36.270
																				61.0		36.440
29°26.0′	88°11.5′	3/20/63	0:35		48		70.0	70.2					230	10		0	9			1.5	20.360	29.020
																				9.1	18.200	34.220
																				15.2	17.850	35.060
																				22.9	15.650	34.900
																				30.5	15.500	35.140
																				47.2		35.480
29°31.5′	88°13.0′	3/20/63	1:50	43	23		70.2	69.8					230	9		0	0		X0	.9	19.970	29.940
																				7.3	16.890	34.300
																				12.5	16.500	35.300
																				17.4	16.310	35.000
																				22.9	15.230	35.000
29°33.2′	87°59.6′	3/20/63	3:10	39	26		68.9	68.4					230	8		0			X0	.6	18.820	32.470
																				7.3	17.770	34.600
																				13.1	15.270	35.040
																				19.8	14.680	35.120
																				24.7		35.610
																				25.9	14.680	35.610
29°34.2′	87°54.4′	3/20/63	3:50	39	24		68.5	68.0					230	10		0	9		X0	1.2	18.280	34.040
																				7.3	15.570	34.680
																				12.8	14.760	34.520
																				18.3	14.680	35.120
																				24.4	15.340	35.590

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29°25.2′	87°51.8′	3/20/63	5:10	70	60		65.3	61.3					340	12		0	9		XO	3.0	18.120	35.460
																				8.2	17.660	35.380
																				15.2	16.810	35.180
																				23.2	16.350	35.340
																				31.1	16.230	35.380
																				59.4		35.990
29°16.1′	87°49.2′	3/20/63	6:30		61		66.7	61.2					340	14		0	9	4	XO	2.4	21.150	36.490
																				7.6	21.020	36.490
																				12.5	21.600	36.500
																				18.9	21.680	36.700
																				25.0	21.140	36.850
																				61.0		36.470
30° 2.0′	87°29.0′	3/20/63	15:30	24	23		64.2	58.8					320	5		0	9	2	XO	.6	16.350	35.610
																				7.6	16.310	35.800
																				15.2	16.930	36.180
																				23.2	16.190	36.380
30°13.0′	87°21.0′	3/20/63	17:10	20	15		66.9	55.8					320	10		0	9	3	XO	.6	16.810	33.950
																				7.6	16.350	34.500
																				15.2	15.170	36.500
30°17.8′	88°53.2′	5/ 1/63	5:40		10		65.0	55.0					0	0	1	5	9	3		3.0	24.400	26.800
																				10.0	22.880	26.400
30°14.1′	88°59.0′	5/ 1/63	6:30		10		67.0	57.0												4.0	23.700	31.600
																				10.0	22.600	28.600
30°11.4′	88°59.3′	5/ 1/63			15		68.0	57.0						8	1	5	9	3		4.0	24.300	30.160
																				15.0	23.120	28.280
30° 8.5′	88°57.0′	5/ 1/63	7:32		19		68.5	57.0							1	5	9	3		3.0	24.300	30.240
																				19.0	23.080	30.360
30° 7.0′	88°55.9′	5/ 1/63	8:02		15		58.6	56.0							1	4	9	3		3.0	24.400	31.040
																				15.0	23.240	31.040
29°46.5′	89° 3.8′	5/ 1/63	11:15		10		70.0	58.5						10	1	4	8	3		3.0	24.400	30.240
																				10.0	23.400	30.160
29°25.4′	89° 8.1′	5/ 1/63	14:10		6		73.0	65.5						15		9	8	3		6.0	22.700	32.160
29°14.3′	88°57.4′	5/ 2/63	2:35		60															.0	21.300	31.100
																				12.0	20.800	30.200
																				30.0	21.960	32.560
																				60.0	21.800	32.960
29°10.0′	88°56.5′	5/ 2/63	3:35		50		67.0	65.5						15	1	9	8	4		5.0	22.400	31.280
																				26.0	21.440	31.240
																				50.0	21.300	32.560
29° 3.6′	89° 2.4′	5/ 2/63	4:55		25		73.5	67.0						14	1	9	8	4		5.0	22.760	30.880
																				25.0	21.920	31.520
28°58.2′	89° 7.0′	5/ 2/63	6:18		27		73.0	67.0						10	1	9	8	3		8.0	22.680	30.720
																				27.0	22.040	32.000

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP.°F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
28°54.2′	89° .5′	5/ 2/63	8:30		100		74.0	70.0							1	9	8	3		4.0		36.800
																				34.0		36.280
																				59.0		36.240
																				87.0		36.000
																				93.0		35.430
																				100.0		35.420
28°45.3′	88°59.5′	5/ 2/63	10:10		200													4		4.0		36.720
																				32.0		36.720
																				60.0		36.800
																				100.0		36.810
																				112.0		36.840
																				200.0		36.800
28°44.5′	88°52.8′	5/ 2/63	11:00		300		72.0	68.5						18				4		4.0	22.200	37.120
																				60.0	21.520	37.200
																				102.0	20.920	37.600
																				200.0		36.580
																				300.0		36.510
28°48.6′	88°41.3′	5/ 2/63	13:15		300									18						5.0	22.800	36.520
																				31.0	22.600	36.800
																				63.0	22.580	36.800
																				99.0	22.200	37.200
																				200.0		37.160
																				300.0		37.120
28°53.8′	88°42.5′	5/ 2/63	14:40		7		72.0	70.0												31.0	22.560	37.200
																				7.0	23.700	37.120
29° 2.0′	88°44.2′	5/ 2/63	16:30		0															.0		
30°15.5′	88° 2.2′	5/27/63	6:40		3								170	10	3	6	7	1		.0	26.810	27.320
																				3.3	26.960	28.280
30° 8.5′	88° 4.0′	5/27/63	15:00	13	9		82.9	75.9					170	10	2	6	7	2		1.0	28.260	29.450
																				4.6	27.140	32.280
																				9.1	25.720	33.360
30° .0′	88° 6.4′	5/27/63	16:10	22	19		81.0	75.9					170	8	2	6	7	3		.6	27.930	31.480
																				4.6	27.550	32.320
																				9.1	27.260	32.840
																				18.6	20.560	35.520
29°56.0′	88° 8.2′	5/27/63	17:07	29	25		81.0	71.1					170	7	2	6	7	3		1.5	28.090	31.980
																				9.1	26.810	21.580
																				19.8	19.970	35.720
																				25.3	19.780	35.820
29°50.5′	88°17.1′	5/27/63	18:40	40	33		80.4	75.9					170	10	2	6	7	3		1.0	27.800	32.250
																				9.4	27.510	32.440
																				18.6	25.800	35.320
																				32.0	20.670	35.900

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29°55.3′	88°28.2′	5/27/63	19:43	25	22		79.0	75.9					190	8						1.2	27.720	31.600
																				9.1	26.890	32.840
																				15.2	27.060	32.760
																				21.6	27.790	35.770
29°48.4′	88°37.5′	5/27/63	21:38	18	16		79.3	75.6					200	6						.6	27.380	32.680
																				7.6	27.300	33.320
																				16.2	21.180	36.120
29°38.7′	88°50.6′	5/27/63	23:40	9	6		79.5	75.0					200	7						.6	27.430	33.190
																				3.0	27.440	33.280
																				6.4	27.370	33.240
29°26.7′	89° 1.5′	5/28/63	1:55	9	6		79.0	75.0					200	6						.6	27.340	31.710
																				6.4	25.840	33.720
29°20.0′	88°58.7′	5/28/63	3:03	18	16		79.0	75.9					200	6						2.1	26.320	31.000
																				6.1	27.010	33.200
																				16.2	20.710	36.160
29°14.0′	88°56.7′	5/28/63	4:06	24	22		78.1	75.6					0	0						9.1	25.680	33.960
																				15.2	21.490	36.160
																				21.6	20.440	35.960
29°10.0′	88°56.5′	5/28/63	4:53	22	19		78.4	75.0					0	0	2	6	7	2		1.2	26.960	31.680
																				7.6	25.240	35.000
																				13.7	21.410	36.080
																				19.2	20.010	36.160
29° 4.0′	89° 1.5′	5/28/63	6:10	17	14		79.5	75.6					0	0	2	7	7	2		2.1	25.640	
																				7.6	23.480	
																				14.0	20.940	
28°58.8′	89° 6.5′	5/28/63	9:37	23	18								180	4	2	6	7	2		2.4	25.720	34.560
																				7.6	24.330	35.000
																				13.7	29.960	35.840
																				17.7	21.020	36.080
28°55.2′	89° 3.3′	5/28/63	10:33	88	36		81.0	75.9					180	5	2	6	7	2		1.8	27.510	34.560
																				9.1	29.930	36.240
																				18.3	25.200	36.520
																				27.4	23.440	36.440
																				35.7	22.070	36.360
28°48.3′	88°58.2′	5/28/63	11:42	450	279		81.3	75.7					180	5	2	6	7	3		1.2	27.640	34.250
																				9.1	27.100	36.440
																				18.3	25.840	36.480
																				27.4	24.910	36.720
																				36.6	23.400	36.290
																				61.0	20.600	36.550
																				122.0	18.300	36.330
																				183.0	16.300	36.150
																				279.0	13.800	35.550

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
28°43.5′	88°53.5′	5/28/63	13:15	810	183		81.3	75.4					0	0	3	7	7			1.8	27.930	36.870
																				9.1	27.180	36.560
																				18.3	26.120	36.560
																				27.4	25.270	36.560
																				36.9	23.920	36.480
																				61.0	21.370	36.600
																				122.0	18.370	35.110
																				183.0	16.930	36.000
28°46.6′	88°42.5′	5/28/63	14:50	1008	122		82.6	75.4					0	0	3	7	7			1.2	28.420	36.420
																				8.8	27.720	36.600
																				18.3	26.770	36.760
																				27.4	25.960	36.640
																				37.5	23.370	36.180
																				61.0	21.370	36.510
																				122.0	18.540	36.380
28°51.4′	88°30.5′	5/28/63	17:15	1564	271		82.6	76.3					0	0	3	7	7			1.2	28.550	36.290
																				9.1	27.550	36.920
																				18.3	26.470	36.960
																				27.7	25.640	36.840
																				37.5	24.520	36.880
																				60.4	21.900	36.820
																				121.0	18.000	36.350
																				181.0	16.800	36.200
																				271.0	14.400	35.840
29° 1.0′	88°34.6′	5/28/63	18:40	366	274		81.1	75.2					0	0						1.5	27.510	33.720
																				9.1	26.970	36.400
																				18.3	21.290	36.680
																				27.4	24.520	36.720
																				36.6	23.170	36.530
																				61.0	21.100	36.450
																				124.0	18.200	36.200
																				183.0	16.800	36.110
																				274.0	13.900	35.640
29° 8.0′	88°40.0′	5/28/63	20:10	94	38		81.0	75.6					0	0						1.5	28.380	28.440
																				8.8	25.960	33.920
																				18.3	25.960	35.920
																				27.7	20.110	36.200
																				38.1	19.440	36.290
29°14.5′	88°45.3′	5/28/63	21:25	63	29		80.4	70.0					180	5						2.7	28.260	28.960
																				7.6	25.720	33.080
																				14.6	21.630	36.360
																				22.6	20.750	36.360
																				29.3	20.050	36.350

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NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29°23.5′	88°48.5′	5/28/63	22:50	27	23		80.1	75.9					180	6						.0	27.600	32.570
																				9.4	27.640	33.000
																				19.2	20.940	36.000
																				23.2	20.480	36.080
29°24.2′	88°40.4′	5/29/63	0:10	47	35		80.1	75.9					180	6						1.2	27.640	31.440
																				9.1	26.770	33.160
																				18.6	21.720	36.240
																				27.4	20.480	36.200
																				35.1	17.840	36.240
29°23.3′	88°30.0′	5/29/63	1:25	56	32		80.1	75.0					180	6						.0	27.600	29.670
																				9.1	25.000	34.880
																				16.8	21.530	36.080
																				25.3	20.790	36.200
																				32.0	19.750	36.740
29°22.5′	88°21.2′	5/29/63	2:35	54	31		80.1	75.0					0	0						.0	27.700	29.040
																				9.4	26.120	33.250
																				16.8	21.180	36.120
																				25.6	20.090	36.160
																				31.1	19.480	36.200
29°17.8′	88°15.2′	5/29/63	3:40	85	35		79.5	75.0					0	0						.0	27.000	31.550
																				9.1	26.770	35.920
																				18.3	24.680	36.600
																				27.4	21.630	36.360
																				35.4	21.760	36.360
29°12.2′	88°11.0′	5/29/63	4:50	243	122		79.2	75.2					0	0						.0	27.500	30.970
																				9.8	26.770	35.720
																				18.6	24.760	36.640
																				27.4	24.400	36.560
																				35.4	23.050	36.420
																				61.0	20.800	36.260
																				122.0	18.500	36.380
29° 3.2′	88° 7.3′	5/29/63	6:20	954	186		79.5	75.6					0	0						.0	27.100	35.710
																				9.1	26.920	36.480
																				18.6	25.840	36.600
																				27.7	25.070	36.440
																				37.5	22.740	36.160
																				62.2	21.400	36.330
																				124.0	18.600	36.380
																				186.0	16.900	36.020

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NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29° 6.9′	87°55.5′	5/29/63	8:00	1030	183		80.1	75.9					0	0	2	6				1.2	27.060	34.740
																				9.1	26.730	35.800
																				18.9	24.920	36.320
																				27.4	24.320	36.400
																				34.1	23.730	36.620
																				61.0	21.400	36.490
																				122.0	18.300	36.330
																				183.0	16.600	36.150
29°11.7′	87°41.5′	5/29/63	10:10	954	163		80.1	74.8					360	5	3	6	7	3		1.5	27.510	33.280
																				7.6	26.530	35.840
																				16.1	25.240	36.680
																				23.2	24.600	36.840
																				31.1	23.880	36.800
																				54.2	21.200	36.490
																				108.0	18.870	36.380
																				163.0	17.040	36.200
29°16.7′	87°41.5′	5/29/63	11:25	378	165		79.0	73.9					360	5	2	6	7	3		.0	27.800	33.350
																				9.1	27.060	35.520
																				16.2	25.390	36.680
																				24.4	24.760	36.600
																				31.1	24.280	36.350
																				82.3	19.400	36.270
																				110.0	18.800	36.220
																				165.0	17.200	36.020
29°23.3′	87°42.6′	5/29/63	12:55	99	90		81.0	73.0					0	0	2	4	7			1.2	28.260	32.760
																				8.8	27.500	33.640
																				17.4	25.360	36.520
																				26.2	24.560	36.560
																				32.9	24.160	36.670
																				61.0	19.700	36.380
																				90.0	19.100	36.260
29°30.8′	87°43.2′	5/29/63	14:25	50	35		82.6	74.5					0	0	2	2	7	2		.6	28.340	30.560
																				9.1	27.460	33.160
																				17.7	25.120	36.680
																				26.8	23.490	36.520
																				35.4	22.300	36.200
29°41.3′	87°42.1′	5/29/63	15:50	36	36		87.1	76.5					210	5	2	2	7	2		1.2	29.060	30.500
																				9.1	26.120	34.840
																				18.0	25.160	36.480
																				27.4	23.600	36.320
																				36.3	21.570	36.530

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29°48.2′	87°41.5′	5/29/63	16:52	36	27		82.9	75.0					0	0	2	2	7	2		1.2	28.560	34.480
																				9.4	25.800	35.640
																				18.3	24.790	35.760
																				27.4	19.050	35.440
29°56.5′	87°39.6′	5/29/63	18:03	29	22		81.0	75.0					0	0	2	2	7	2		1.8	27.350	32.200
																				9.1	26.690	32.360
																				15.5	20.900	35.560
																				21.6	20.290	35.640
30° 5.2′	87°41.0′	5/29/63	19:09	20	14		80.4	70.0					210	5						.0	27.100	31.780
																				4.6	26.690	32.800
																				9.8	24.920	34.680
																				14.0	23.960	35.160
30°10.2′	87°29.3′	5/29/63	20:47	23	19		80.1	74.5					0	0						1.2	26.970	32.410
																				6.1	26.850	33.200
																				12.2	25.320	34.200
																				18.6	22.070	34.840
30°13.8′	87°17.5′	5/29/63	22:17	20	14		79.0	75.6					0	0						.0	26.900	32.230
																				7.6	26.930	33.440
																				13.7	25.480	34.840
30°15.2′	87°17.5′	5/30/63	9:30	18	13		79.0	71.1					0	0		0		2		1.2	26.640	33.200
																				6.1	26.480	33.200
																				12.8	25.280	34.680
30° 9.9′	87°28.7′	5/30/63	11:00	23	21		80.1	69.1					360	4		0				1.2	26.910	32.770
																				10.4	26.530	33.240
																				21.0	21.800	35.520
30° 5.4′	87°41.4′	5/30/63	12:28	20	14		80.1	72.0					290	8		0		2		.0	27.200	33.010
																				9.1	24.720	34.480
																				14.0	23.920	34.920
30° .8′	87°53.8′	5/30/63	13:57	23	15		81.0	72.0					300	8		0		3		1.2	27.760	31.000
																				4.6	27.640	31.280
																				7.6	27.510	32.160
																				11.6	25.120	34.280
																				15.2	22.620	35.560
29°47.9′	88° 8.2′	5/30/63	16:25	29	22		82.9	72.0					0	0		0		2		1.2	28.050	30.140
																				8.2	25.640	34.360
																				16.1	23.720	36.120
																				21.6	19.700	36.020
29°33.6′	88°11.3′	5/30/63	20:50	40	29		82.0	72.0					300	15		0				1.2	28.190	31.000
																				8.5	25.120	34.960
																				16.8	21.450	36.880
																				25.0	20.400	36.760
																				29.3	19.900	36.380

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29°23.6′	88°19.3′	5/31/63	11:00	54	38								50	5						.0	27.500	32.500
																				9.1	25.800	36.060
																				18.3	21.530	36.760
																				27.4	20.290	36.720
																				37.8	18.980	36.680
29°23.6′	88°19.3′	5/31/63	12:30	54	37								0	0	2	4	7			1.2	27.720	32.290
																				9.4	26.600	36.480
																				18.3	21.610	36.800
																				27.4	20.250	36.840
																				36.9	19.480	36.870
29°23.6′	88°19.3′	5/31/63	13:35	54	37		80.1	64.8					50	5	2	3	7			.9	28.380	32.400
																				9.1	24.280	35.800
																				19.2	21.760	36.320
																				27.4	20.480	36.440
																				36.9	19.780	36.480
29°23.6′	88°19.3′	5/31/63	15:05	54	37		81.0	67.3					50	5	2	3	7	3		1.2	28.090	32.380
																				4.6	27.800	32.600
																				9.1	26.810	35.080
																				13.7	23.960	36.280
																				18.3	22.540	36.520
																				27.4	20.860	36.640
																				36.9	20.010	36.520
29°23.6′	88°19.3′	5/31/63	16:20	54	38		82.0	68.5					0	0	2	2	7	2		.9	27.880	35.520
																				9.8	25.000	33.960
																				14.0	23.690	36.260
																				18.6	22.580	36.560
																				28.0	20.750	36.480
																				37.5	19.700	36.480
29°23.6′	88°19.3′	5/31/63	17:30	54	37								0	0	2	2	7	2		1.2	27.800	33.360
																				8.8	26.560	33.880
																				13.7	23.170	35.720
																				18.3	22.930	36.720
																				27.4	20.640	36.520
																				36.9	19.740	36.600
29°23.6′	88°19.3′	5/31/63	18:54	37	37		80.1	68.0					0	0						1.2	27.510	32.800
																				8.8	26.280	34.400
																				14.0	22.780	35.840
																				18.3	23.010	36.680
																				27.4	20.440	36.720
																				36.6	19.550	36.780

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CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29°23.6′	88°19.3′	5/31/63	20:04	54	37								0	0						.0	27.470	32.000
																				8.8	26.970	33.560
																				13.7	23.210	35.960
																				18.0	22.580	36.560
																				27.4	20.640	36.520
																				36.9	19.670	36.520
29°23.6′	88°19.3′	5/31/63	22:05	54	37								0	0						1.2	27.340	32.400
																				9.1	26.440	33.680
																				14.0	23.120	36.560
																				18.3	22.310	36.600
																				27.7	20.670	36.480
																				36.6	19.820	36.440
29°23.6′	88°19.3′	5/31/63	23:25	54	37								0	0						.0	27.600	31.740
																				.9	27.340	32.440
																				10.7	23.560	35.120
																				13.7	22.930	36.480
																				20.1	21.770	36.720
																				28.3	20.480	36.560
																				37.2	19.780	36.560
29°23.6′	88°19.3′	5/31/63	23:25	52	37								0	0						.9	27.340	32.520
																				9.4	25.360	34.360
																				13.7	23.370	36.600
																				18.6	21.640	36.640
																				27.8	20.600	36.480
																				36.3	19.700	36.600
29°23.6′	88°19.3′	6/ 1/63	2:11	52	37															.9	26.490	33.320
																				9.1	25.120	34.640
																				13.7	23.410	36.480
																				18.6	21.800	36.360
																				27.4	20.790	36.640
																				36.9	19.670	36.560
29°23.6′	88°19.3′	6/ 1/63	2:09		36															.9	27.220	32.030
																				9.1	25.840	33.800
																				13.7	23.460	36.520
																				18.3	21.760	36.560
																				27.7	21.450	36.480
																				36.3	19.630	36.480
29°28.4′	88°11.2′	6/30/63	12:20	48	36								0	0			7		X9	.0	28.420	31.850
																				10.0	24.200	35.900
																				18.0	22.270	35.900
																				27.0	20.940	36.020
																				36.0	20.400	36.180

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CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29°28.4′	88°11.2′	6/30/63	13:20	48	38								0	0			7		X9	.0	28.130	32.350
																				9.0	24.280	35.700
																				20.0	21.720	36.580
																				29.0	20.900	36.700
																				38.0	20.210	36.580
29°28.4′	88°11.2′	6/30/63	14:40	48	38		82.9	78.1					0	0			7		X9	.0	28.760	31.850
																				10.0	24.470	35.940
																				19.0	22.150	36.220
																				28.0	21.060	36.420
																				38.0	20.130	36.380
29°28.4′	88°11.2′	6/30/63	15:50	48	38		83.5	77.5					140	6		0	7		X0	.0	28.680	31.850
																				9.0	24.400	36.220
																				19.0	21.920	36.260
																				29.0	20.980	36.300
																				38.0	20.010	36.300
29°28.4′	88°11.2′	6/30/63	17:20	48	37		83.8	77.2					140	6		0	7		X0	.0	28.850	31.960
																				9.0	23.920	36.300
																				19.0	21.760	36.260
																				28.0	20.940	36.380
																				37.0	20.010	36.340
29°28.4′	88°11.2′	6/30/63	18:30	48	38		84.0	77.0					140	7		0	7		X0	.0	28.550	32.080
																				10.0	23.450	36.500
																				19.0	21.450	36.500
																				28.0	20.900	36.620
																				38.0	19.660	36.500
29°28.4′	88°11.2′	6/30/63	19:20	48	38		82.9	77.2					140	5		0	7		X0	.0	28.550	32.040
																				10.0	24.320	36.500
																				19.0	21.720	36.500
																				29.0	20.940	36.620
																				38.0	19.570	36.460
29°28.4′	88°11.2′	6/30/63	20:10	48	38		82.8	78.1					160	6		0	7		X0	.0	28.500	31.630
																				9.0	24.120	36.580
																				19.0	22.000	36.420
																				28.0	20.980	36.500
																				38.0	19.860	36.580
29°28.4′	88°11.2′	6/30/63	22:20	48	38		82.2	77.9					120	8		0	7		X0	.0	28.340	32.290
																				10.0	24.870	36.500
																				19.0	21.950	36.340
																				29.0	21.020	36.500
																				38.0	19.580	36.300

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29°28.4′	88°11.2′	6/30/63	23:40	48	30		82.2	77.2					120	8		0	7		X0	.0	28.680	32.040
																				8.0	23.520	36.460
																				16.0	21.800	36.460
																				23.0	20.940	36.580
																				30.0	20.090	36.620
29°28.4′	88°11.2′	7/ 1/63	1:20	48	37		82.0	78.1					0	0		0	7		X0	.0	28.640	31.710
																				10.0	23.530	36.300
																				19.0	21.530	36.300
																				28.0	20.820	36.420
																				37.0	19.590	36.300
29°28.4′	88°11.2′	7/ 1/63	2:30	48	38		81.5	77.0					120	5		0	7		X0	.0	28.340	31.920
																				10.0	23.960	36.460
																				19.0	21.570	36.460
																				29.0	20.820	36.540
																				38.0	19.590	36.420
29°28.4′	88°11.2′	7/ 2/63	4:10	48	38		81.1	76.8					0	0		0	7		X0	.0	28.080	36.460
																				10.0	24.670	36.620
																				19.0	21.990	36.660
																				29.0	21.140	36.700
																				38.0	19.430	36.660
29°28.4′	88°11.2′	7/ 2/63	5:10	48	38		82.0	77.0					0	0		0	7		X0	.0	27.930	32.630
																				9.0	25.110	35.280
																				19.0	22.310	36.420
																				29.0	21.250	36.500
																				38.0	19.390	36.380
29°28.4′	88°11.2′	7/ 2/63	7:20	48	37		83.8	73.0					0	0		0	7		X0	.0	28.010	32.960
																				9.0	24.630	36.380
																				19.0	22.310	36.300
																				27.0	21.300	36.460
																				37.0	20.360	36.540
29°28.4′	88°11.2′	7/ 2/63	8:10	48	36		83.5	73.6					120	5		0	7		X0	.0	28.630	33.260
																				10.0	25.150	36.220
																				19.0	22.660	36.180
																				28.0	21.610	36.260
																				36.0	20.250	36.420
30°12.0′	89° 3.0′	6/27/63	8:00	5	0		81.7	75.0					180	3	1	7	7		X8	.0	28.640	29.450
30° 2.3′	89° 3.0′	6/27/63	9:30	3	0		84.9	77.5					0	0	1	7	7		X8	.0	28.220	31.150
29°46.3′	89° 2.0′	6/27/63	11:30	4	0		82.9	77.0					320	5	1	7	7		X8	.0	29.440	31.390
29°38.4′	89° 5.0′	6/27/63	12:30	3	0		82.2	72.3					0	0	1	7	7		X8	.0	28.930	33.480
29°30.0′	89° 7.0′	6/27/63	13:20	7	5		84.0	75.0					0	0	1	7	7		X8	.0	28.220	32.390
																				5.2	27.100	33.730
29°20.2′	89° 3.6′	6/27/63	14:50	12	9		84.9	76.5					0	0	1	7	7		X8	.0	29.020	32.390
																				9.1	26.770	34.770

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP.°F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29°14.3′	88°57.4′	6/27/63	16:00	14	12		81.1	76.5					0	0	1	7	7		X8	.0	27.630	28.410
																				6.1	25.680	33.860
																				12.2	24.480	35.210
29°10.0′	88°56.5′	6/27/63	16:30	20	19		80.8	75.7					0	0	1	7	7		X8	.0	28.760	23.000
																				6.1	26.810	33.690
																				12.2	25.760	34.960
																				18.6	24.920	35.040
29° 3.6′	89° 2.4′	6/27/63	17:20	9	8		80.4	75.2					0	0	1	7	7		X8	.0	28.380	27.590
																				7.6	27.680	34.790
28°58.6′	89° 6.5′	6/27/63	18:00	24	17		81.5	75.0					0	0	1	7	7		X8	.0	29.020	34.070
																				4.9	28.340	35.250
																				15.2	28.050	35.980
																				16.8	26.480	35.590
28°53.8′	89° 4.0′	6/27/63	19:10	90	35		82.0	73.9					0	0	1	7	7		X8	.0	28.980	30.570
																				8.8	26.380	33.480
																				17.7	24.200	36.220
																				26.5	22.190	36.340
																				35.4	20.590	36.530
28°46.2′	89° .5′	6/27/63	20:30	360	120		81.5	75.4					0	0						.0	28.850	26.850
																				9.1	24.680	33.570
																				18.9	20.790	36.140
																				36.6	20.090	36.260
																				59.7	19.360	36.380
																				119.5	17.430	36.170
28°42.0′	88°57.0′	6/27/63	21:10	586	137		81.5	75.0					0	0						.0	28.340	28.120
																				9.4	26.970	34.790
																				18.6	26.400	36.340
																				28.0	23.330	36.380
																				36.0	22.300	36.460
																				61.0	19.700	36.530
																				137.0	16.200	36.420
28°36.2′	88°51.3′	6/27/63	22:30	1098	122		81.1	75.9					0	0						.0	29.020	35.680
																				9.0	28.630	36.460
																				18.0	28.510	36.460
																				27.0	27.920	36.540
																				36.6	25.750	36.540
																				61.0	22.760	36.730
																				122.0	18.810	36.360

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
28°43.0′	88°42.1′	6/28/63	0:30	970	122		80.8	75.4					0	0						.0	28.260	36.260
																				8.5	28.340	36.380
																				18.0	27.930	36.220
																				26.0	27.220	36.500
																				35.0	25.630	36.580
																				61.0	21.810	36.670
																				122.0	18.540	36.490
28°48.8′	88°33.5′	6/28/63	1:20	915	122		81.0	75.7					230	7						.0	28.470	36.500
																				8.0	28.640	36.500
																				18.0	28.010	36.540
																				25.0	26.850	36.500
																				33.0	26.200	36.450
																				61.0	21.980	36.520
																				122.0	18.810	36.660
28°55.6′	88°35.1′	6/28/63	2:40	549	122		80.8	76.5					230	7						.0	28.220	36.180
																				9.0	28.220	36.260
																				17.0	28.050	36.540
																				25.0	26.040	36.500
																				32.0	25.510	36.500
																				61.0	22.140	36.490
																				122.0	18.530	36.650
29° 4.2′	88°37.3′	6/28/63	4:20	238	122		80.8	75.9					230	5						.0	28.180	35.900
																				8.0	28.300	36.500
																				16.0	27.800	36.540
																				24.0	25.760	36.500
																				32.0	24.400	36.620
																				61.0	21.200	36.490
																				122.0	18.150	36.450
29°11.0′	88°38.0′	6/28/63	5:00	77	33		80.1	75.9					230	4	6	2	7		X1	.0	27.720	33.150
																				8.0	27.590	33.150
																				18.0	25.920	36.520
																				25.0	23.450	36.420
																				33.0	22.740	36.580
29°17.0′	88°40.5′	6/28/63	6:10	60	29		82.0	76.3					0	0		0	7		X0	.0	27.880	31.940
																				8.0	26.320	35.700
																				14.0	24.790	36.420
																				22.0	22.000	36.060
																				29.0	21.450	36.400
29°22.7′	88°46.4′	6/28/63	7:20	40	30		85.5	77.5					230	4		0	7		X0	.0	28.420	33.650
																				9.0	26.810	35.980
																				17.0	24.670	36.300
																				26.0	21.760	36.180
																				30.0	21.370	36.260

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29°23.8′	88°35.7′	6/28/63	8:50	55	33		84.0	75.0					230	4		0	7		X0	.0	28.510	33.570
																				8.0	25.390	34.720
																				16.0	23.170	35.940
																				24.0	21.570	35.980
																				33.0	20.670	36.020
29°22.7′	88°29.0′	6/28/63	9:40	57	31		84.0	75.7					230	5		0	7		X0	.0	28.850	33.230
																				9.0	26.930	34.580
																				16.0	22.030	35.780
																				23.0	20.590	36.100
																				31.0	19.930	36.100
29°23.1′	88°17.5′	6/28/63	11:00	57	31		84.0	76.3					230	4		0	7		X0	.0	28.980	29.820
																				9.0	22.190	36.060
																				16.0	21.140	36.020
																				25.0	20.550	36.140
																				31.0	19.940	36.340
29°18.4′	88°14.4′	6/28/63	11:40	86	34		83.5	75.6				-	180	6		0	7		X0	.0	28.260	32.520
																				9.0	25.670	34.580
																				17.0	21.760	36.180
																				26.0	20.790	36.460
																				34.0	20.090	36.580
29°10.4′	88°10.0′	6/28/63	13:00	366	61		84.9	76.8					180	5		0	7		X0	.0	28.510	32.690
																				6.0	28.590	35.740
																				12.0	28.550	36.020
																				18.0	27.010	36.300
																				23.0	26.970	36.300
																				61.0	21.030	36.580
29° 4.0′	88° 8.5′	6/28/63	14:10	915	122		84.9	75.2					180	5		0	7		X0	.0	29.230	34.750
																				8.0	28.930	36.020
																				15.0	28.640	36.060
																				23.0	27.880	36.380
																				30.0	26.560	36.620
																				61.0	21.980	36.710
																				122.0	18.150	36.450
29° 6.6′	87°54.2′	6/28/63	17:30	1098	122		86.0	75.9					0	0		0	7		X0	.0	29.350	35.820
																				10.0	28.800	35.940
																				19.0	28.720	36.100
																				28.0	26.720	36.780
																				37.0	25.670	36.620
																				61.0	22.030	36.550
																				122.0	18.870	36.420

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29°12.5′	87°42.5′	6/28/63	17:50	824	122		84.0	75.2					0	0		0	7		X0	.0	28.850	33.730
																				9.0	28.510	35.820
																				19.0	28.420	35.860
																				28.0	26.320	36.620
																				37.0	25.230	36.620
																				61.0	22.030	36.640
																				122.0	18.540	36.360
29°17.5′	87°41.8′	6/28/63	18:40	311	122		82.8	72.0					0	0					X0	.0	28.590	33.820
																				6.0	28.380	34.320
																				9.0	28.300	34.900
																				14.0	28.170	35.700
																				19.0	27.510	36.020
																				28.0	26.280	36.700
																				37.0	24.590	36.740
																				61.0	21.980	36.520
																				122.0	17.040	36.250
29°24.1′	87°41.2′	6/28/63	19:50	90	37		82.0	74.1					230	4					X0	.0	28.400	34.580
																				12.0	27.920	34.620
																				18.0	27.800	34.790
																				28.0	27.510	36.500
																				37.0	23.880	36.500
29°31.0′	87°40.1′	6/28/63	20:40	59	29		81.5	73.0					0	0					X0	.0	28.180	32.690
																				7.0	27.260	35.000
																				15.0	25.110	36.460
																				22.0	23.090	36.380
																				29.0	22.270	36.420
29°38.7′	87°39.6′	6/28/63	21:30	40	30		81.1	73.9					0	0						.0	28.420	34.030
																				8.0	28.340	35.210
																				15.0	24.950	36.540
																				23.0	23.050	36.540
																				30.0	21.640	36.300
29°48.5′	87°30.9′	6/28/63	23:30	37	26		81.9	73.2					230	5						.0	28.260	34.830
																				7.0	27.970	35.000
																				13.0	26.770	35.380
																				20.0	24.710	35.980
																				26.0	22.310	36.380
29°57.5′	87°17.4′	6/29/63	0:50	29	19		81.1	75.6					160	6						.0	27.720	34.450
																				9.0	27.800	34.620
																				19.0	25.270	35.900
30° 7.0′	87°16.7′	6/29/63	2:20	24	20		79.0	75.4					200	9						.0	27.100	34.580
																				9.0	26.850	34.870
																				20.0	22.770	36.340
30°16.2′	87°12.5′	6/29/63	3:00	12	6		79.0	75.2					230	9						.0	27.550	31.320
																				6.0	27.430	34.280

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
30°16.2′	87°12.5′	6/29/63	12:30	12	9		84.0	76.3					180	5						.0	28.590	33.570
																				9.0	27.470	34.320
30° 8.1′	87°35.4′	6/29/63	14:30	18	14		84.6	79.0					180	5		0	7		X0	.0	28.850	33.780
																				9.0	27.930	33.990
																				14.0	27.430	34.360
30° .5′	87°53.1′	6/29/63	16:20	21	19		84.6	77.2					180	7		0	7		X0	.0	27.890	33.610
																				9.0	27.720	34.620
																				13.0	26.000	34.830
																				19.0	22.350	35.700
29°54.9′	88°10.0′	6/29/63	18:10	32	23		83.8	77.7					180	6		0	7		X0	.0	29.020	33.310
																				8.0	28.090	34.920
																				15.0	26.000	35.820
																				23.0	23.520	36.180
29°44.0′	88°11.4′	6/29/63	20:10	36	25		82.6	75.9					180	7		0	7		X0	.0	28.760	33.360
																				8.0	28.130	34.490
																				17.0	23.720	36.660
																				25.0	21.880	36.300
29°33.7′	88°10.9′	6/29/63	19:30	38	20		81.9	76.5					180	7		0	7		X0	.0	28.090	31.690
																				6.0	26.400	35.550
																				11.0	24.440	36.420
																				17.0	22.880	36.500
																				20.0	22.890	36.780
29°28.4′	88°11.2′	6/30/63	9:20	48	31														X9	.0	29.140	31.560
																				9.0	24.790	35.820
																				18.0	21.940	35.740
																				26.0	21.370	35.860
																				31.0	20.940	35.900
29°28.4′	88°11.2′	6/30/63	10:00	48	38														X9	.0	28.470	32.690
																				9.0	24.550	36.260
																				19.0	21.880	36.540
																				28.0	21.020	36.580
																				38.0	20.050	36.660
29°28.4′	88°11.2′	6/30/63	11:00	48	37								0	0					X9	.0	28.260	32.390
																				9.0	24.910	35.640
																				19.0	22.190	36.500
																				28.0	20.980	36.300
																				37.0	20.200	36.340
30°18.4′	89° 2.8′	8/ 6/63	9:00		0		85.6	80.4					90	4		6				.0	31.080	29.600
30° 9.0′	89° 2.0′	8/ 6/63	10:00		0		84.9	80.1					50	4		6			X0	.0	31.170	31.640
29°46.6′	89° 3.8′	8/ 6/63	12:30		0		87.3	80.4					50	7		6			X1	.0	31.900	33.520
29°39.0′	89° 5.0′	8/ 6/63	13:00		0		86.5	80.4					120	7		6				.0	32.000	32.720
29°29.5′	89° 7.5′	8/ 6/63	14:30		0		86.9	80.4					90	6		6				.0	31.400	33.320
29°25.5′	89° 5.5′	8/ 6/63	15:20		0		85.1	81.0					120	6		7				.0	30.990	33.680

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP.°F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29°21.5′	89° 3.0′	8/ 6/63	15:50		9		84.9	80.2					90	9						.0	29.300	33.800
																				9.0	29.170	33.840
29°14.2′	88°57.4′	8/ 6/63	17:10		11		86.0	80.2					50	6						.0	31.210	32.400
																				11.0	30.690	33.920
29°10.0′	88°56.5′	8/ 6/63	17:40		14		85.5	80.4					120	6		7				.0	30.990	23.120
																				5.0	31.390	24.760
																				9.0	30.650	33.840
																				14.0	30.220	34.040
29° 3.7′	89° 2.5′	8/ 6/63	18:30		6		85.6	81.0					120	10		8				.0	31.170	22.360
																				6.0	31.400	28.360
28°58.7′	89° 6.5′	8/ 6/63	19:10		17		85.3	80.4					90	7						.0	31.350	28.440
																				9.0	29.700	33.480
																				17.0	27.930	34.200
28°54.7′	89° 4.8′	8/ 6/63	20:30		55		84.9	80.2					120	7						.0	29.960	34.800
																				9.0	30.000	34.880
																				16.0	29.830	35.560
																				25.0	29.020	36.000
																				27.0	26.470	36.330
																				55.0	21.100	36.830
28°49.0′	88°58.7′	8/ 6/63	22:10		128		84.9	80.1					140	8						.0	29.530	35.120
																				9.0	29.700	35.200
																				14.0	29.610	35.360
																				21.0	28.510	36.000
																				24.0	28.550	36.160
																				64.0	21.400	36.800
																				128.0	17.800	36.560
28°43.3′	88°51.6′	8/ 6/63	23:50		53		84.9	80.1					140	6						.0	29.660	36.080
																				8.0	29.740	36.040
																				15.0	29.610	36.160
																				23.0	29.270	36.400
																				53.0	24.100	36.540
28°52.0′	88°36.5′	8/ 7/63	2:10		111		84.7	79.0					0	0						.0	29.530	36.280
																				9.0	29.490	36.280
																				15.0	29.400	36.320
																				23.0	29.150	36.520
																				55.0	23.600	36.500
																				111.0	19.200	36.210
29° .9′	88°35.0′	8/ 7/63	3:30		122		84.6	79.0					0	0						.0	29.530	36.320
																				9.0	29.530	36.400
																				18.0	29.440	36.280
																				26.0	28.890	36.400
																				30.0	27.260	36.480
																				61.0	21.100	36.580
																				122.0	18.300	36.600

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29°10.6′	88°33.4′	8/ 7/63	5:10		91		84.6	78.4					0	0						.0	29.610	32.920
																				9.0	29.700	32.800
																				18.0	28.130	34.360
																				26.0	24.240	35.920
																				32.0	21.640	36.000
																				91.0	19.700	36.690
29°18.7′	88°35.0′	8/ 7/63	6:10		34		84.0	78.1					0	0						.0	29.400	32.240
																				9.0	27.930	33.720
																				18.0	25.040	35.080
																				27.0	23.680	36.280
																				34.0	21.720	36.120
29°23.6′	88°49.0′	8/ 7/63	8:20		24		84.9	79.9					0	0		2				.0	29.100	34.000
																				9.0	26.970	35.040
																				17.0	26.080	35.240
																				24.0	24.200	35.720
29°26.4′	88°36.5′	8/ 7/63	9:30		35		87.3	80.1					0	0		2				.0	30.430	32.760
																				9.0	29.610	33.520
																				19.0	24.600	35.480
																				27.0	22.420	35.760
																				35.0	21.720	35.880
29°30.7′	88°23.2′	8/ 7/63	11:00		30		86.5	79.5					0	0		6				.0	30.690	32.120
																				9.0	29.060	33.920
																				18.0	26.280	36.040
																				24.0	24.840	36.320
																				30.0	23.490	36.400
29°23.5′	88°20.0′	8/ 7/63	12:10		30		86.0	79.5					0	0		6				7.0	30.390	32.800
																				9.0	29.530	35.120
																				18.0	25.470	35.960
																				27.0	22.780	36.280
																				30.0	21.680	36.760
29°15.8′	88°15.5′	8/ 7/63	13:30		32		86.2	79.5					0	0		6				2.0	30.560	28.870
																				9.0	28.470	34.280
																				19.0	24.480	35.680
																				27.0	22.380	36.280
																				32.0	21.450	36.480
29°10.0′	88°11.0′	8/ 7/63	14:30		122		85.3	79.0					0	0		2				.0	30.470	32.640
																				8.0	29.060	34.080
																				15.0	26.570	34.480
																				23.0	25.190	35.280
																				35.0	24.870	35.800
																				61.0	19.800	36.180
																				122.0	18.100	36.000

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP.°F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29° 4.5′	88° 6.7′	8/ 7/63	16:00		122		85.3	79.0					0	0						.0	30.260	36.040
																				9.0	29.740	36.320
																				18.0	29.530	36.440
																				24.0	27.220	36.240
																				27.0	25.840	36.520
																				61.0	22.200	36.210
																				122.0	18.100	36.780
29° 8.1′	87°53.5′	8/ 7/63	17:30		122		85.5	79.0					0	0					XO	.0	29.740	35.800
																				9.0	29.360	36.440
																				18.0	29.400	36.560
																				24.0	28.980	36.800
																				27.0	26.570	36.800
																				61.0	21.800	36.100
																				122.0	18.300	35.980
29°12.5′	87°43.1′	8/ 7/63	19:10		122		85.3	79.0					0	0						.0	29.830	34.720
																				9.0	29.440	35.840
																				18.0	29.190	36.560
																				21.0	28.980	36.720
																				24.0	28.010	36.840
																				122.0	18.400	36.050
29°17.2′	87°42.0′	8/ 7/63	20:00		117		84.9	78.4					0	0						.0	29.910	33.120
																				11.0	27.510	34.200
																				18.0	26.080	35.280
																				24.0	23.180	36.200
																				26.0	22.070	36.320
																				58.0	20.200	36.010
																				117.0	16.700	35.960
29°23.4′	87°43.0′	8/ 7/63	21:00		80		84.9	79.0					0	0						.0	30.000	31.080
																				9.0	28.050	34.240
																				18.0	24.870	35.600
																				27.0	23.210	36.200
																				33.0	22.460	36.280
																				80.0	19.700	35.890
29°34.1′	87°43.6′	8/ 7/63	22:20		24		84.9	79.0					0	0						.0	30.220	33.480
																				9.0	27.760	35.080
																				17.0	26.360	36.320
																				21.0	24.280	36.520
																				24.0	22.540	36.520
29°42.5′	87°36.5′	8/ 7/63	23:50		23		84.7	79.5					0	0						.0	29.150	34.240
																				9.0	29.060	34.280
																				17.0	27.510	36.000
																				23.0	24.240	36.200

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29°49.4′	87°27.0′	8/ 8/63	1:20		23		84.2	80.1					0	0						.0	29.360	34.320
																				9.0	28.930	34.440
																				17.0	27.550	35.520
																				23.0	24.000	36.120
29°55.7′	87°18.2′	8/ 8/63	2:10		23		84.6	79.5					320	6						.0	29.530	34.400
																				9.0	28.930	34.520
																				17.0	25.880	35.320
																				23.0	24.640	35.800
30° 4.5′	87°17.5′	8/ 8/63	3:50		23		80.4	79.0					250	7						.0	28.980	34.600
																				8.0	29.060	34.800
																				17.0	28.470	34.960
																				23.0	26.770	35.200
30°16.3′	87°17.5′	8/ 8/63	6:00		9								250	5						.0	30.040	33.000
																				9.0	29.060	34.920
30°16.3′	87°17.5′	8/ 8/63	18:50		14								0	0						.0	29.190	33.600
																				9.0	29.190	34.480
																				14.0	28.980	34.800
30°10.0′	87°30.8′	8/ 8/63	20:20		19								0	0						.0	29.740	33.240
																				9.0	27.970	34.400
																				19.0	26.720	34.920
30° 5.0′	87°44.5′	8/ 8/63	22:40		9		84.6	79.9					270	8						.0	29.190	33.920
																				9.0	29.100	34.160
29°52.7′	87°43.6′	8/ 9/63	0:10		27		84.6	79.2					270	8						.0	29.190	34.400
																				9.0	29.100	34.480
																				18.0	28.010	34.840
																				27.0	24.710	36.000
29°42.6′	87°42.5′	8/ 9/63	1:50		18		84.6	78.8					0	0						.0	29.310	34.200
																				9.0	29.100	36.440
																				18.0	26.200	36.600
30°18.4′	89° 2.8′	9/ 4/63	1:15		0		84.0	81.0			50	8				3		1		.0	29.870	32.400
29°29.5′	89° 7.9′	9/ 4/63			1		86.3	78.5					90	6				1		.0	31.800	
																				.9	31.170	32.000
29°19.0′	89° .0′	9/ 4/63	8:40		14		86.0	78.8					90	6						.0	32.700	33.560
																				.6		26.840
																				4.6	29.170	34.200
																				9.1	29.960	35.720
																				13.7	29.780	36.000
29°14.4′	88°57.5′	9/ 4/63	9:35		9		87.2	78.8					270	6		5		1		.0	33.000	
																				1.8	30.990	27.840
																				4.6	30.560	34.200
																				9.1	30.040	35.480

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP.°F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29°10.0′	88°56.6′	9/ 4/63	10:25		14		87.5	78.5					270	6				3		.0	32.700	
																				4.6	30.560	34.040
																				9.1	29.790	35.600
																				13.7	29.270	36.480
29° 3.6′	89° 2.3′	9/ 4/63	11:28		5		86.0	78.0					270	3		1		1		.0		15.000
																				4.6	29.780	35.600
28°58.7′	89° 6.5′	9/ 4/63	12:25		11		85.5	78.0					270	6						.0	33.000	
																				.9		24.480
																				4.6	30.090	35.080
																				5.5	29.230	36.200
																				8.5	29.020	36.400
																				11.3	28.680	36.640
28°55.0′	89° 3.7′	9/ 4/63	13:10		31		85.0	78.0												.0	31.200	
																				.6	29.570	35.840
																				7.6	29.060	36.480
																				15.2	28.590	37.200
																				23.2	27.050	37.920
																				30.5	25.520	37.960
28°48.1′	88°59.3′	9/ 4/63	14:30		122		84.5	78.0					0	0						.0	29.270	36.240
																				6.1	29.270	38.200
																				11.9	29.930	38.280
																				18.0	29.100	38.320
																				23.2	28.850	38.280
																				61.0		36.910
																				121.9		36.550
28°40.0′	88°54.0′	9/ 4/63	16:00		31		84.5	77.9												.0	30.700	36.560
																				.6	29.440	38.400
																				8.5	29.060	38.400
																				16.2	28.890	38.440
																				24.1	28.340	38.400
																				31.1	26.890	38.360
28°48.3′	88°41.4′	9/ 4/63	17:55		38		84.5	78.5												.0	28.850	38.160
																				9.4	28.980	38.120
																				18.3	28.810	38.200
																				27.4	28.050	38.280
																				37.5	25.960	38.240
28°51.0′	88°31.0′	9/ 4/63	19:35		34															.6	28.930	37.360
																				8.2	29.060	37.400
																				16.8	28.980	38.000
																				25.0	27.550	38.200
																				34.1	25.400	38.240

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29° 9.0′	88°35.5′	9/ 4/63	21:10		34		83.5	78.8					0	0						.6	28.760	38.200
																				5.2	28.680	38.240
																				16.8	28.380	38.280
																				25.0	25.850	38.040
																				34.1	24.920	38.200
29° 6.5′	88°42.5′	9/ 4/63	22:35		23		83.5	78.0												.0	30.500	34.000
																				.3	29.190	35.840
																				6.1	28.810	37.840
																				12.5	28.720	38.080
																				18.6	28.260	38.240
																				22.6	28.010	38.280
29°16.4′	88°42.2′	9/ 5/63			27		84.5	80.0					320	6						.6	29.190	33.370
																				7.6	29.270	36.400
																				14.9	28.930	37.680
																				22.6	26.690	37.640
																				26.8	26.000	38.000
29°23.6′	88°48.8′	9/ 5/63	1:30		18		85.5	80.0								1		1		.9	29.310	34.240
																				10.1	28.680	36.880
																				18.3	26.930	37.280
29°24.0′	88°34.6′	9/ 5/63	3:00		27		85.5	79.0					350	8				2		.9	29.400	35.840
																				7.6	29.440	37.000
																				15.5	28.550	37.560
																				23.2	27.340	37.560
																				26.5	26.970	37.580
29°23.6′	88°19.4′	9/ 5/63	4:30		24											1		2		.0	29.530	35.040
																				6.1	29.230	36.040
																				12.2		37.400
																				18.3	26.320	37.920
																				23.5	25.280	37.840
29°13.5′	88°15.5′	9/ 5/63	5:50		24		86.2	78.2					350	8						.0	30.130	32.840
																				6.1	29.530	37.160
																				12.2	29.230	37.720
																				18.3	28.180	38.160
																				23.5	26.930	37.880
29° 7.5′	88°11.6′	9/ 5/63	7:00		28											2		2		.0	29.700	37.280
																				7.9	29.360	37.280
																				15.2	29.270	38.000
																				22.9	28.850	38.280
																				28.0	27.100	38.120
29° 3.0′	88° 8.0′	9/ 5/63	8:00		25		88.0	78.5					350	6						.0	29.660	37.320
																				6.7	29.400	37.480
																				13.7	29.060	38.080
																				20.4	28.430	38.280
																				25.0	27.590	38.160

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29° 9.0′	87°55.6′	9/ 5/63	9:35		25		88.0	79.5								0				.0	29.570	38.040
																				6.1	29.100	37.960
																				13.7	29.150	38.440
																				18.6	28.260	38.680
																				25.0	27.430	38.680
29°11.4′	87°44.4′	9/ 5/63	11:15		22		87.2	80.0					350	6				2		.9	29.190	35.700
																				7.3	28.980	35.710
																				14.6	28.850	36.010
																				22.3	28.260	36.440
29°20.5′	87°31.5′	9/ 5/63	13:05		34		85.5	79.5					270	6						.6	28.810	36.040
																				8.5	27.040	37.800
																				17.1	28.680	38.000
																				25.6	28.180	38.760
																				34.1	26.000	38.520
29°29.5′	87°18.0′	9/ 5/63	14:50		31		85.8	80.2					320	8						.0		34.490
																				.6	28.810	35.440
																				7.6	28.680	35.280
																				15.2	28.550	35.600
																				22.9	25.680	36.120
																				30.5	22.420	36.040
29°33.0′	87°19.5′	9/ 5/63	16:20		30		85.6	79.5					320	8						.0	30.300	34.360
																				.6	28.680	36.360
																				7.3	28.580	36.320
																				14.6	28.340	36.720
																				22.3	25.200	37.920
																				29.6	22.270	38.120
29°45.4′	87°18.0′	9/ 5/63	18:10		30		85.3	80.0					320	10						.0	30.300	34.690
																				1.2	28.550	36.160
																				7.6	28.550	36.200
																				14.9	28.300	36.760
																				22.6	24.960	37.640
																				29.6	22.860	38.160
29°52.5′	87°19.5′	9/ 5/63	19:30		31															.0	30.300	34.630
																				.6	28.590	36.280
																				7.9	28.620	36.320
																				15.8	27.720	37.600
																				30.5	24.160	38.080
30°14.0′	87°18.5′	9/ 5/63	22:00		7		88.0	78.0					230	6						.3	28.430	34.720
																				4.6	28.470	36.080
																				7.0	28.470	36.160
30°14.0′	87°18.5′	9/ 6/63	9:47		10															.0	31.400	33.300
																				3.4		34.400
																				6.4	28.930	34.960
																				9.8	28.720	35.120

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
30°10.5′	87°32.5′	9/ 6/63	11:55		10		85.5	77.5												.3	29.100	35.240
																				3.4	28.930	35.360
																				6.4	28.760	36.080
																				9.8	28.430	36.560
30° 5.0′	87°44.8′	9/ 6/63	13:37		11		85.5	78.0												.0	30.300	33.800
																				.6	28.890	35.840
																				3.7	28.810	35.840
																				7.6	28.980	36.080
																				11.3	28.760	36.400
29°51.0′	87°44.0′	9/ 6/63	15:23		24															.6	29.190	36.280
																				7.9	28.760	36.280
																				15.8	28.010	37.800
																				23.8	24.290	38.000
29°37.5′	87°44.0′	9/ 7/63	4:45		34															.0	29.570	35.760
																				8.5	29.610	37.080
																				17.1	29.490	37.960
																				25.6	25.800	37.920
																				34.1	23.920	37.760
29°37.5′	87°44.0′	9/ 7/63	5:40		31								50	8						.6	29.440	36.040
																				7.6	29.440	37.400
																				15.2	29.230	38.240
																				22.9	25.520	37.840
																				30.5	23.840	37.920
29°37.5′	87°44.0′	9/ 7/63	7:10		33															.6	29.100	36.160
																				8.2	29.100	37.480
																				16.2	28.980	38.280
																				24.4	25.400	38.040
																				32.6	23.600	37.760
29°37.5′	87°44.0′	9/ 7/63	8:15		37		88.2	76.5												.6	29.910	35.760
																				9.1	29.490	37.240
																				18.3	29.360	37.880
																				28.0	25.400	37.720
																				36.6	23.800	37.720
29°37.5′	87°44.0′	9/ 7/63	11:40		37		87.0	76.0												.6	29.740	35.800
																				9.1	29.270	37.240
																				18.3	29.270	37.720
																				27.4	26.840	37.920
																				36.6	23.640	36.740
29°37.5′	87°44.0′	9/ 7/63			37		87.0	76.0												.6	29.490	36.320
																				8.8	29.060	38.200
																				27.4	27.140	37.920
																				36.6	23.880	37.680

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29°37.5′	87°44.0′	9/ 7/63	15:18		37															.6	29.490	35.720
																				9.1	29.020	37.360
																				18.3	28.930	38.320
																				27.4	25.320	37.800
																				36.6	23.720	37.720
29°37.5′	87°44.0′	9/ 7/63	17:10		37		86.0	76.0												.6	29.270	35.560
																				9.1	29.230	37.720
																				18.3	27.840	38.080
																				27.4	24.090	37.720
																				36.6	23.720	37.760
29°37.5′	87°44.0′	9/ 7/63	19:23		37															.0	30.400	35.560
																				.6	29.190	37.560
																				9.1	29.150	38.120
																				18.3	27.970	37.720
																				27.4	24.320	37.720
																				36.6	23.720	37.720
29°37.5′	87°44.0′	9/ 7/63	21:20		37															.0	30.400	34.090
																				1.5	28.850	36.020
																				9.1	28.980	37.920
																				18.3	27.760	38.080
																				27.4	24.040	37.720
																				36.6	23.640	37.840
29°37.5′	87°44.0′	9/ 7/63	23:10		37			77.5					20	5						.0	30.500	34.040
																				.9	28.760	35.440
																				9.1	28.810	38.160
																				18.3	27.670	38.280
																				27.4	24.080	37.800
																				36.6	23.490	38.040
29°39.0′	88°10.0′	9/ 8/63			31													2		.0	30.800	34.630
																				1.2	29.780	36.040
																				9.1	29.490	36.120
																				18.3	28.890	38.160
																				31.1	24.920	37.640
29°58.5′	88°10.0′	9/ 8/63	9:00		27		87.2	74.0					140	3						.0	31.400	34.220
																				1.2	29.360	35.320
																				9.1	28.890	35.520
																				18.3	26.040	37.200
																				27.4	24.370	37.440
29°55.0′	88°29.5′	9/ 8/63			27		86.5	76.0					180	6						.0	30.900	34.430
																				1.5	29.440	35.520
																				9.1	29.100	35.480
																				18.3	26.920	36.680
																				27.4	25.680	37.080

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
30°16.2′	89° 1.0′	4/10/64	5:30	9	7		56.5	51.1					100	4		0	8	2	X0	.0	17.800	11.290
																				.6	17.980	11.430
																				6.7	19.010	21.670
30°14.1′	88°59.2′	4/10/64	6:00	10	7	30.3	59.0	53.1					100	5		0	8	2	X0	.0	18.100	14.020
																				.9	18.250	14.150
																				6.7	18.510	23.510
30°11.6′	88°59.2′	4/10/64	6:15	10	7	30.3							100	5		0	8	2	X0	.0	18.200	21.640
																				.6	18.890	21.870
																				6.7	18.820	24.270
30° 7.0′	88°55.9′	4/10/64	8:00	11	7		60.4	54.3					100	5		0	8	2	X0	.0	18.200	21.920
																				.6	18.360	22.380
																				6.7	18.740	23.190
29°46.5′	89° 3.7′	4/10/64	9:33	6	4	30.3	63.3	54.3					110	5	0	2	8	2	X0	.0	18.900	21.820
																				.6	19.040	21.790
																				4.3	18.980	21.910
29°29.5′	89° 7.6′	4/10/64	11:33	14	11		63.0	55.0					100	10		0	8	2	X0	.0	19.300	24.830
																				.6	19.540	24.990
																				5.5	19.350	25.070
																				11.3	18.980	25.950
29°25.0′	88°58.5′	4/10/64	12:53	16	16		61.3	51.6					90	9		0	8	3	X0	.0	19.200	25.210
																				.6	19.390	25.470
																				5.8	19.270	25.510
																				12.2	19.800	26.390
																				15.5	18.290	32.840
29°14.1′	88°57.4′	4/10/64	15:00	14	11	30.2	61.5	53.4					110	9		0	8	3	X0	.0	14.900	
																				5.2	18.930	22.790
																				10.7	19.010	26.470
29°10.0′	88°56.5′	4/10/64	15:35	23	20	30.2	64.2	53.4									8	3	X0	.0	15.800	
																				4.9	18.740	26.830
																				10.1	18.780	27.670
																				20.4	18.060	25.590
29° 6.5′	88°52.5′	4/10/64	16:30	100	75		63.9	53.4					80	4			8	3	X0	.0	19.400	29.050
																				.6	19.550	29.270
																				5.2	19.200	29.510
																				10.7	19.850	31.400
																				21.3	19.470	36.170
																				31.7	19.320	36.330
																				50.3	18.260	36.380
																				75.3	16.700	36.260

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29° .3′	88°57.3′	4/10/64	17:40	102	72	30.2	63.3	53.8					70	4			7	2	X0	.0	19.400	26.200
																				.9	19.630	26.470
																				4.9	19.390	29.190
																				9.8	19.740	30.800
																				19.5	20.170	36.050
																				29.0	20.090	36.450
																				47.5	18.090	36.200
																				71.9	17.200	36.320
28°58.8′	89° 6.5′	4/10/64	18:47	22	16		63.0	55.8					70	4						.0	17.100	8.480
																				.9	17.990	8.950
																				5.2	18.740	19.070
																				10.7	19.540	28.550
																				16.2	19.080	31.320
28°54.5′	89° 4.5′	4/10/64	19:30	82	72		63.9	54.7					100	5						.0	19.200	27.230
																				.9	19.430	27.430
																				4.6	19.510	28.950
																				9.4	20.090	31.320
																				18.6	20.050	35.370
																				27.7	19.970	36.090
																				47.5	18.260	36.430
																				71.9	17.090	36.290
28°48.0′	88°59.5′	4/10/64	21:05	424	291		65.1	56.5					100	5					X	.0	20.700	36.060
																				.9	20.830	36.050
																				5.2	20.900	36.090
																				10.7	21.060	36.250
																				21.0	21.060	36.330
																				31.7	21.020	36.250
																				57.6	17.870	36.180
																				83.5	16.760	36.290
																				108.2	16.100	36.130
																				161.8	14.320	35.900
																				213.7	13.040	35.680
																				265.8	12.380	35.530
																				291.4	11.320	35.410

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
28°42.3′	88°54.7′	4/10/64	22:45	914	298	30.2	65.7	57.7					90	5						.0	20.300	35.810
																				.6	20.510	35.850
																				5.2	20.510	35.970
																				10.7	20.630	36.050
																				21.3	20.400	36.050
																				32.6	19.660	36.170
																				57.0	17.760	36.260
																				83.8	16.480	36.150
																				110.3	15.540	36.040
																				163.9	13.820	35.820
																				217.6	12.380	35.590
																				270.6	11.040	35.410
																				297.5	10.270	35.340
28°35.8′	88°51.5′	4/11/64	0:25	1143	273	30.2	66.9	57.9					100	9						.0	20.400	36.110
																				.9	20.750	36.130
																				5.5	20.750	36.130
																				10.4	20.790	36.090
																				21.0	20.900	36.330
																				31.1	20.750	36.410
																				48.2	18.480	36.290
																				74.1	17.260	36.370
																				99.3	16.820	36.330
																				149.0	14.760	35.990
																				199.0	13.150	35.710
																				248.7	11.600	35.480
																				273.1	11.100	35.340
28°47.5′	88°42.3′	4/11/64	2:25	988	270	30.2	67.3	57.4					110	13						.0	20.700	36.480
																				.9	20.940	36.410
																				5.2	20.940	36.570
																				10.7	20.940	36.570
																				21.3	20.980	36.570
																				31.7	20.940	36.570
																				47.2	19.260	36.560
																				72.8	18.700	36.560
																				97.8	17.760	36.360
																				146.0	15.710	36.040
																				196.6	13.930	35.770
																				245.9	12.100	35.530
																				270.0	11.540	35.410

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
28°50.5′	88°31.2′	4/11/64	4:25	881	267	30.2	66.9	60.1					90	12						.0	20.600	36.550
																				1.2	20.870	36.450
																				4.9	20.830	36.530
																				10.4	20.870	36.650
																				20.7	20.830	36.690
																				31.1	20.870	36.730
																				48.5	19.260	36.550
																				73.2	18.700	36.470
																				97.8	17.760	36.440
																				145.4	15.820	36.130
																				194.7	14.100	35.840
																				243.2	12.430	35.550
																				267.0	11.820	35.450
29° .3′	88°36.8′	4/11/64	6:15	351	255	30.2	66.7	60.8					100	10			8	3	X0	.0	20.100	35.280
																				.9	20.440	35.290
																				5.2	20.320	35.490
																				10.4	20.510	35.850
																				21.0	19.780	35.930
																				31.1	19.850	36.610
																				49.7	18.320	36.310
																				71.6	17.090	36.290
																				96.0	16.870	36.260
																				141.7	15.710	36.290
																				187.1	14.430	35.950
																				232.5	13.100	35.680
																				254.5	12.380	35.580
29° 8.7′	88°41.0′	4/11/64	8:00	80	78		67.6	62.1					100	9			8	3	X0	.0	19.800	33.420
																				.6	19.970	33.200
																				4.9	19.850	33.360
																				10.1	20.480	34.440
																				20.4	20.210	36.210
																				30.2	20.090	36.290
																				51.5	18.310	36.480
																				78.0	17.040	36.270
29°13.4′	88°43.3′	4/11/64	9:00	68	64	30.3	69.1	62.1					100	10	0	6	8	3	X0	.0	19.200	31.910
																				.6	19.430	31.920
																				4.9	19.470	32.000
																				9.8	19.580	33.640
																				19.8	20.320	36.370
																				29.6	19.480	36.490
																				52.4	17.760	36.310
																				63.7	16.930	

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP.°F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29°19.0′	88°46.5′	4/11/64	10:00	55	48	30.2	68.4	60.4							0	5	8	3		.0	18.900	27.360
																				1.2	19.200	27.590
																				4.9	19.120	27.750
																				9.8	19.660	31.800
																				19.8	19.580	36.330
																				29.6	19.280	36.250
																				47.5	17.810	36.150
29°23.5′	88°48.7′	4/11/64	11:05	26	20	30.2	71.2	62.2							0	5	8	3		.0	19.100	25.680
																				.9	19.470	25.750
																				4.9	19.370	25.830
																				10.1	19.120	28.310
																				20.1	19.120	35.450
29°23.5′	88°39.0′	4/11/64	12:30	49	31	30.2									0	9	7	4		.0	19.500	33.210
																				1.2	19.620	33.160
																				4.9	19.720	33.280
																				10.4	18.850	33.680
																				20.4	19.390	35.930
																				30.8	18.460	36.290
29°23.5′	88°28.5′	4/11/64	14:35	55	31	30.2	69.8	61.0					100	11	0	7	8	4		.0	19.800	33.960
																				.9	19.930	34.120
																				5.5	19.970	34.040
																				11.3	19.890	34.840
																				22.3	19.430	36.330
																				30.5	19.160	36.370
29°23.2′	88°20.8′	4/11/64	16:30	53	52	30.1	71.1	66.0					110	12		5	7	4	X0	.0	19.300	35.340
																				.9	19.510	35.200
																				5.2	19.510	35.370
																				10.7	19.580	35.290
																				21.3	19.510	35.530
																				31.7	19.010	35.650
																				52.1	17.810	36.170
29°15.7′	88°16.0′	4/11/64	18:05	86	70	30.1	69.1	64.9					120	15		9	0	4	X2	.0	20.040	36.310
																				1.2	20.630	36.290
																				5.2	20.630	36.410
																				11.0	20.670	36.330
																				21.6	20.590	36.370
																				32.3	20.510	36.490
																				46.6	19.480	36.180
																				70.4	17.590	36.330

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE	LONGITUDE	DATE	TIME	DEPTH (m)	BAROMETRIC	AIR TEMP.°F	WATER	TRANS-	SWELL	WIND	CLOUD	VISI-	SEA	WEATHER	SAMPLE	WATER	SALINITY

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29°21.5′	87°56.5′	4/12/64	1:30	154	67	30.1	68.7	67.3					140	13						.0	20.100	36.210
																				.9	20.010	36.090
																				5.2	20.170	36.130
																				10.7	20.010	36.130
																				21.0	20.480	36.370
																				31.7	20.550	36.530
																				67.4	17.200	36.400
29°31.0′	87°43.5′	4/12/64	3:28	53	33	30.1	68.0	66.9					130	9						.0	18.900	35.080
																				.6	19.200	35.000
																				5.2	19.120	35.120
																				11.0	19.430	35.360
																				21.9	19.160	35.720
																				32.6	18.550	36.290
29°22.5′	87°36.3′	4/12/64	5:00		145	30.1	70.2	68.2					140	10				3		.0	20.300	36.470
																				1.5	20.510	36.530
																				5.2	20.400	36.530
																				9.8	20.510	36.530
																				21.0	20.440	36.530
																				31.4	20.440	36.530
																				47.5	19.090	36.200
																				71.9	17.650	36.400
																				96.3	16.820	35.970
																				145.1	15.150	36.020
29°16.0′	87°30.7′	4/12/64	6:26	805	270		71.1	68.0					140	9		0	8	3	X0	.0	20.600	36.450
																				.9	20.710	36.490
																				5.2	20.710	36.490
																				10.7	20.710	36.490
																				21.3	20.670	36.490
																				31.7	20.710	36.490
																				48.2	19.420	36.330
																				72.8	18.090	36.380
																				97.8	17.320	36.290
																				147.2	15.540	36.000
																				196.6	13.600	35.730
																				245.9	12.100	35.500
																				270.0	11.430	35.530

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP.°F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29°28.0′	87°17.8′	4/12/64	9:00	366	258		71.8	69.8					140	15		9	7	3	X2	.0	20.400	36.550
																				1.5	20.750	36.450
																				5.2	20.750	36.530
																				10.7	20.670	36.530
																				21.0	20.670	36.530
																				31.4	20.830	36.570
																				46.0	19.420	36.580
																				69.5	17.760	36.450
																				93.2	17.040	36.330
																				140.5	15.650	36.110
																				187.4	14.100	35.860
																				234.7	12.930	35.700
																				257.5	12.320	35.590
29°41.3′	87°17.5′	4/12/64	10:55	168	151		72.7	69.4								7	7	4	X2	.0	20.500	36.480
																				1.5	20.710	36.410
																				5.8	20.630	36.530
																				24.1	20.550	36.570
																				32.6	20.590	36.570
																				53.0	17.370	36.510
																				77.7	16.210	36.020
																				101.8	15.930	36.090
																				151.2	15.100	36.110
29°48.5′	87°17.0′	4/12/64	12:15	79	31		72.1	68.7					160	15		9	7	4	X2	.0	18.600	34.920
																				1.2	18.740	34.920
																				5.2	18.890	35.080
																				10.7	18.820	35.000
																				21.0	18.250	35.370
																				31.4	17.460	35.850
29°55.0′	87°17.7′	4/12/64	13:25	31	31	30.1	68.2	66.9					150	19		9	7	4	X2	.0	18.300	34.560
																				1.5	18.440	34.640
																				5.2	18.480	34.600
																				10.4	18.670	34.680
																				21.0	17.310	35.690
																				31.1	17.200	35.850
30° 5.5′	87°17.5′	4/12/64	14:25	26	22		68.4	66.7					140	17		8	7	4	X2	.0	18.200	34.220
																				1.5	18.400	34.200
																				5.2	18.440	34.200
																				11.0	18.140	34.320
																				21.6	17.240	34.560
30°15.0′	87°17.5′	4/12/64	15:39	18	17		68.2	66.2					150	10		8	7	4	X2	.0	17.900	33.390
																				1.2	18.100	33.440
																				5.2	17.980	33.440
																				11.0	18.020	33.520
																				16.5	21.260	34.000

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
30°17.8′	89° 2.1′	5/25/64	5:50	29	0	30.2	75.9	75.0					40	10		7	8	1	X	.0	26.850	10.430
30°14.0′	88°59.0′	5/25/64	6:30	60	0	30.2	78.3	75.4					70	9		4	8	1	XO	.0	26.800	11.960
30°11.4′	88°59.3′	5/25/64	7:05	68	0	30.2	79.0	75.9					20	9		5	8	1	XO	.0	26.600	16.510
30° 6.8′	88°56.0′	5/25/64	7:45	68	0	30.2	79.9	76.1					50	9		6	8	1	XO	.0	26.850	16.420
29°46.5′	89° 3.8′	5/25/64	10:12	35	0	30.2	82.0	75.9					70	4			8	1	XO	.0	27.450	24.580
29°29.6′	89° 7.7′	5/25/64	12:15	84	7	30.2	80.1	75.0					80	7		2	9	1	XO	.0	26.600	19.980
																				2.1	26.580	21.980
																				7.3	25.470	34.000
29°25.1′	88°58.6′	5/25/64	13:30	77	11	30.2	81.5	75.9					90	4		2	8	1	XO	.0	27.600	26.310
																				6.1	25.090	27.950
																				11.3	21.140	32.880
29°14.3′	88°57.3′	5/25/64	14:50	86	13	30.1	78.1	73.0					130	5		1	8	2	XO	.0	26.050	
																				5.5	24.590	35.300
																				12.8	27.640	31.890
29° 9.8′	88°56.5′	5/25/64	15:30	124	10	30.1	78.4	74.5					140	7		2	8	1	XO	.0	26.750	
																				4.9	25.810	36.090
																				10.4	22.200	33.710
29° 6.4′	88°51.8′	5/25/64	16:30		79	30.1	82.6	75.9					150	5		2	8	1	XO	.0	27.230	26.560
																				11.0	22.480	32.810
																				31.7	21.640	36.290
																				78.6	18.480	36.440
29° .3′	88°57.3′	5/25/64	17:15	84	77	30.1	78.3	73.6					240	5	0	2	8	1		.0	25.750	28.400
																				11.0	24.420	33.530
																				31.1	21.200	36.420
																				77.1	18.430	36.360
28°58.7′	89° 6.6′	5/25/63	18:15	26	21	30.1	78.4	74.5					160	9				1	XO	.0	28.050	
																				10.1	24.310	32.360
																				20.7	24.030	33.930
28°54.8′	89° 3.7′	5/25/64	19:05	117	80	30.1	78.4	74.5					130	7				1		.0	27.200	20.520
																				11.3	24.420	34.470
																				31.1	21.100	36.450
																				80.2	18.300	36.040
28°47.8′	88°58.6′	5/25/64	20:22	521	289	30.1	77.5	72.5					140	3				0		.0	26.500	32.660
																				10.7	24.030	34.490
																				30.8	21.530	36.450
																				78.6	14.760	36.490
																				158.1	14.700	36.040
																				288.9	11.380	35.550
28°43.0′	88°55.1′	5/25/64	21:30	896	283	30.1	77.5	73.0					100	3				0		.0	26.300	32.450
																				7.9	23.900	33.080
																				28.7	19.900	35.190
																				75.6	18.500	36.530
																				153.3	15.300	36.080
																				282.8	12.300	35.480

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
28°36.9′	88°51.0′	5/25/64	22:45	1134	265	30.1	77.0	72.9					0	0						.0	25.950	33.820
																				9.1	24.400	35.070
																				28.3	20.800	36.350
																				71.6	18.900	36.580
																				144.2	16.300	36.240
																				264.5	12.300	35.660
28°47.4′	88°43.1′	5/26/64	0:15	914	258	30.1	77.0	73.4					0	0						.0	25.850	35.010
																				9.4	25.500	35.350
																				28.0	22.300	36.260
																				70.4	19.300	36.560
																				140.8	16.600	36.240
																				258.4	12.500	35.620
28°50.3′	88°30.9′	5/26/64	2:15	914	274	30.1	77.0	73.6					130	1						.0	25.800	36.380
																				9.4	25.700	36.450
																				29.3	22.700	36.620
																				74.1	19.400	36.620
																				149.0	16.600	36.220
																				273.4	12.500	35.750
29° .5′	88°36.4′	5/26/64	3:45	380	274	30.1	77.0	73.0					260	6						.0	26.250	33.400
																				9.4	24.400	34.780
																				29.3	21.100	36.990
																				74.1	19.300	36.640
																				149.0	16.000	36.260
																				273.7	12.200	35.660
29° 8.1′	88°40.1′	5/26/64	5:00	91	68	30.1	77.0	72.7					300	5		1	8	1	XO	.0	26.750	24.690
																				8.5	25.000	34.810
																				26.2	22.800	35.820
																				68.0	18.100	36.440
29°13.6′	88°43.3′	5/26/64	6:00	64	54	30.1	78.1	73.9					320	4		2	8	0	XO	.0	27.000	20.970
																				10.1	24.100	36.600
																				31.1	21.100	34.450
																				54.3	18.900	35.770
29°19.0′	88°46.4′	5/26/64	7:00	55	49	30.1	79.7	73.9					350	4		6	8	0	XO	.0	26.450	22.740
																				9.4	25.100	32.940
																				29.3	19.600	35.250
																				49.4	18.600	36.000
29°23.5′	88°48.9′	5/26/64	7:45		21	30.1	81.0	75.6					0	0		3	8	0	XO	.0	27.100	23.980
																				4.6	23.200	24.980
																				21.0	21.900	34.850
29°23.5′	88°39.0′	5/26/64	9:05	53	51	30.1	84.0	78.1					260	4		1	8	0	XO	.0	27.500	24.450
																				9.8	23.700	33.310
																				30.5	20.300	35.930
																				51.2	18.800	36.020

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29°23.5′	88°30.0′	5/26/64	10:00	57	52	30.2	82.0	77.0					0	0		0	8	0	X0	.0	26.750	30.550
																				10.1	24.600	33.510
																				30.5	21.100	36.450
																				51.8	18.700	36.180
29°23.5′	88°20.5′	5/26/64	11:10	55	51	30.1	80.4	77.2					270	5		0	8	0	X0	.0	25.900	32.410
																				9.8	25.000	34.560
																				30.5	23.700	36.510
																				51.2	17.800	36.170
29°16.3′	88°16.5′	5/26/64	12:20	88	79	30.1	82.8	76.5					290	4		0	8	1	X0	.0	25.800	33.570
																				10.1	25.600	36.360
																				30.8	22.400	36.600
																				78.6	18.400	36.400
29° 8.7′	88°12.6′	5/26/64	13:15	481	280	30.1	82.9	77.0					300	4		0	8	1	X0	.0	27.080	35.600
																				9.8	25.700	36.580
																				29.9	23.900	36.780
																				75.9	18.600	36.440
																				152.4	15.900	36.150
																				279.8	12.100	35.590
29° 3.7′	88° 9.7′	5/26/64	14:25	933	274	30.1	82.6	77.0					300	6		0	8	1	X0	.0	27.050	35.640
																				9.4	25.800	36.650
																				29.3	25.000	36.670
																				74.4	19.300	36.510
																				149.0	16.300	36.240
																				273.7	12.400	35.570
29° 8.1′	87°56.7′	5/26/64	15:50	852	277	30.1	82.0	77.5					310	10	0	2	8	1	X0	.0	26.600	35.460
																				9.4	25.700	36.350
																				29.6	24.700	36.600
																				75.0	19.200	36.380
																				150.9	16.200	36.130
																				276.7	12.300	35.680
29°23.0′	87°56.8′	5/26/64	17:30	82	51	30.1	81.1	78.1					240	9		0	8	1	X0	.0	26.150	34.760
																				9.8	24.700	34.880
																				30.5	23.600	35.840
																				51.2	20.000	36.240
29°31.5′	87°43.9′	5/26/64	19:15	51	51	30.1	80.2	77.5					290	4						.0	26.900	29.270
																				9.8	24.800	33.660
																				30.5	22.100	35.250
																				51.2	19.400	36.260
29°21.6′	87°35.7′	5/26/64	20:45	201	194	30.1	80.1	77.5					240	3						.0	26.400	34.470
																				10.1	25.000	35.410
																				31.1	24.600	36.420
																				79.2	18.900	36.450
																				194.4	15.400	36.080

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP.°F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29°15.4′	87°30.5′	5/26/64	22:00	914	274	30.1	79.0	77.0					230	5						.0	25.450	34.790
																				9.4	25.100	34.600
																				29.3	23.300	36.620
																				74.4	18.300	36.420
																				149.0	15.600	36.080
																				273.7	12.100	35.570
29°27.9′	87°17.4′	5/26/64	23:50	375	274	30.1	80.1	78.1					210	6						.0	26.550	30.150
																				9.4	23.100	33.300
																				29.3	21.100	35.230
																				74.7	18.100	36.400
																				150.0	15.600	36.090
																				274.3	11.100	35.350
29°41.2′	87°17.4′	5/27/64	1:46	176	164	30.1	79.0	77.0					230	9						.0	25.750	33.570
																				10.4	23.800	35.010
																				31.7	20.000	35.700
																				80.5	17.300	36.350
																				163.9	14.400	35.900
29°47.8′	87°17.4′	5/27/64	2:47	82	70	30.1	79.0	77.5					240	9						.0	26.200	32.950
																				9.8	22.900	34.550
																				29.9	21.100	35.640
																				50.6	17.900	36.020
																				69.5	17.100	36.180
29°54.8′	87°17.4′	5/27/64	3:46	31	31	30.1	79.9	77.7					250	10						.0	26.950	31.170
																				30.8	21.500	35.490
30° 5.0′	87°17.4′	5/27/64	5:02	26	20	30.1	80.2	78.8					260	8		5		1		.0	26.800	28.370
																				20.1	21.900	34.740
30°14.7′	87°17.4′	5/27/64	6:06	15	13	30.1	79.5	77.0					0	0		3	8	0	X0	.0	26.400	30.910
																				13.1	24.600	33.570
30° 9.7′	87°30.7′	5/27/64	7:25	16	12	30.1	81.5	77.0					210	5		1	8	1	X0	.0	26.700	29.200
																				12.2	23.100	33.820
29°57.1′	87°31.0′	5/27/64	8:40	33	31	30.1	82.0	77.5					300	7		1	8	1	X0	.0	27.750	28.390
																				31.4	21.300	35.350
30° 4.5′	87°44.7′	5/27/64	10:20	20	19	30.1	82.9	77.0					290	8		0	8	1	X0	.0	28.100	24.830
																				18.6	21.700	34.720
29°59.8′	87°57.1′	5/27/64	11:20	26	21	30.6	82.4	77.5					270	6		3	8	1	X0	.0	27.650	13.150
																				20.7	21.900	34.790
29°51.5′	87°44.3′	5/27/64	13:15	31	27	30.6	84.2	78.4					270	6		2	8	1	X0	.0	28.100	28.460
																				26.8	21.100	35.420
29°38.5′	87°44.0′	5/27/64	16:13	37	31	30.6	82.6	78.4					250	10		4	8	1	X0	.0	26.700	33.270
																				31.1	23.300	35.550
29°38.5′	87°56.4′	5/27/64	17:40	31	31	30.0	82.2	78.3					260	9		0	1	8	X0	.0	26.900	34.810
																				9.8	25.400	34.970
																				30.5	22.200	36.140

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29°38.5′	88° 9.6′	5/27/64	19:05	37	30	30.0	82.0	77.5					240	10		3	8	2	X0	.0	27.900	27.280
																				10.1	25.600	35.360
																				29.9	19.800	36.020
29°38.0′	88°20.2′	6/27/64	20:10	38	30	30.0	82.0	75.9					240	13						.0	28.200	23.310
																				10.1	24.800	34.450
																				29.9	19.400	35.710
29°38.4′	88°30.8′	5/27/64	21:15	37	31	30.0	82.6	78.1					220	12						.0	28.300	21.470
																				9.8	24.500	33.240
																				30.5	20.500	36.180
29°48.8′	88°19.5′	5/27/64	22:55	35	30	30.0	82.6	78.4					250	13						.0	27.900	30.760
																				10.1	24.600	32.610
																				29.9	20.600	35.840
29°56.2′	88°28.7′	5/28/64	0:32		18	30.0	82.6	78.4					250	13						.0	27.800	21.680
																				4.0	27.200	22.390
																				18.0	20.700	33.750
30° 4.4′	88°37.6′	5/28/64	2:00		15	30.0	81.5	77.0					260	18						.0	28.100	20.050
																				9.4	23.300	30.350
																				14.6	20.200	34.330
30°12.9′	88°46.2′	5/28/64	3:55	46	8	30.0	80.1	75.9					290	11						.0	26.900	20.580
																				7.6	22.000	32.200
30°17.8′	89° 2.1′	5/28/64	6:25		0	30.0							280	16		2				.0	27.400	12.120
30°14.0′	88°59.0′	5/28/64	5:45		0	30.0	78.1	75.6					280	13		2	8	2	X0	.0	26.900	19.270
30°11.4′	88°59.3′	5/28/64	5:25	11	9	30.0	78.1	75.7					280	13		4	8	2		.0	27.300	17.650
																				4.3	25.200	28.960
																				9.1	24.800	27.120
30°17.8′	89° 2.3′	6/30/64	7:25	9	0	30.2	78.4	77.0					80	9		7	6	1	X6	.0	27.680	21.870
30°14.0′	88°59.0′	6/30/64	8:05	7	6	30.2	80.1	77.5					100	10		7	6	1	X8	.0	28.200	22.050
																				5.8	28.330	23.460
30°11.3′	88°59.3′	6/30/64	8:43	8	8	30.2	81.0	76.8					80	10		6	7	1	X8	.0	28.550	26.220
																				7.0	28.330	26.260
30° 7.0′	88°55.8′	6/30/64	9:25	11	9	30.2	82.9	78.4					90	9		6	7	1	X8	.0	28.300	25.840
																				7.9	28.600	26.460
29°46.5′	89° 3.8′	6/30/64	11:55	5	0	30.2	85.3	79.2					110	10		6	7	1	X8	.0	28.800	28.040
29°29.6′	89° 7.6′	6/30/64	13:50	13	11	30.2	84.6	79.0					130	9	0	6	7	1	X	.0	28.800	22.010
																				10.4	28.670	28.080
29°25.0′	88°58.5′	6/30/64	15:00	15	11	30.2	84.9	78.8					150	6		4	8	1	X0	.0	29.450	28.910
																				10.7	26.890	34.020
29°14.3′	88°57.5′	6/30/64	16:25	15	13	30.1	80.1	79.5					180	10		3	8	1	X0	.0	29.130	3.000
																				12.5	25.670	34.490
29°10.0′	88°56.7′	6/30/64	17:03	22	20	30.1	84.9	78.4					90	7	8	2	8	1	X0	.0	29.700	8.690
																				10.1	25.670	31.510
																				19.5	24.170	35.350

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29° 6.5′	88°51.6′	6/30/64	17:55	93	75	30.1	84.6	78.4					170	7		3	7	1	XO	.0	29.450	24.290
																				10.0	24.600	34.610
																				30.0	24.000	36.200
																				75.0	17.600	36.350
29° .7′	88°57.7′	6/30/64	18:50	101	73	30.1	84.2	78.1					230	5		2		1	X	.0	29.750	26.290
																				9.1	28.240	36.090
																				29.3	25.560	36.490
																				72.5	18.400	36.360
28°58.6′	89° 6.5′	6/30/64	20:08	22	22	30.1	84.0	78.1					0	0						.0	29.950	19.940
																				10.1	26.790	33.390
																				21.0	24.850	35.390
28°55.0′	89° 4.4′	6/30/64	21:10	92	73	30.2	84.0	77.9					140	6						.0	29.050	26.240
																				7.6	28.820	36.130
																				27.4	24.290	36.470
																				71.9	17.790	36.400
28°48.6′	88°59.4′	6/30/64	22:20	400	271	30.2	83.5	78.3					130	8						.0	28.750	26.000
																				9.0	23.900	34.560
																				27.0	21.350	36.360
																				68.0	17.070	36.260
																				136.0	13.600	35.750
																				271.0	10.430	35.260
28°42.5′	88°55.0′	7/ 1/64	0:43	915	772	30.1	82.6	77.5					130	7						.0	28.670	36.530
																				8.0	28.320	36.560
																				53.0	22.330	36.450
																				125.0	14.290	35.860
																				247.0	10.700	35.320
																				468.0	7.870	34.970
																				772.0	5.570	34.900
28°36.5′	88°51.0′	7/ 1/64	1:34	1135	716	30.1	82.6	77.0					170	6						.0	28.600	36.640
																				10.0	28.280	36.710
																				29.0	27.510	36.730
																				73.0	20.330	36.510
																				145.0	14.850	35.280
																				267.5	10.600	35.070
																				486.0	7.790	34.970
																				716.0	6.200	34.880
28°47.6′	88°42.4′	7/ 1/64	4:15		711	30.1	82.0	76.5					0	0						.0	28.550	36.690
																				9.0	28.280	36.670
																				28.0	27.030	36.670
																				71.0	20.780	36.470
																				142.5	13.820	35.770
																				263.0	10.720	35.320
																				482.0	7.770	34.900
																				711.0	5.850	34.830

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
28°50.2′	88°31.2′	7/ 1/64	5:52	878	714	30.1	84.0	77.5					0	0						.0	28.650	36.510
																				9.0	28.060	36.550
																				28.4	27.030	36.600
																				72.0	19.830	36.640
																				144.0	15.990	36.090
																				265.0	11.340	35.370
																				485.0	7.610	34.960
																				714.0	5.900	34.850
29° .5′	88°36.5′	7/ 1/64	8:08	366	264	30.1	82.9	76.5					0	0	1	5	8	0	X0	.0	28.450	33.100
																				9.5	27.110	36.380
																				28.8	26.460	36.620
																				70.8	19.130	36.420
																				143.0	13.250	35.860
																				264.0	10.700	35.280
29° 8.0′	88°40.5′	7/ 1/64	9:40	86	72	30.1	85.3	78.3					310	4		4	8	0	X0	.0	29.600	21.260
																				9.8	28.220	36.130
																				28.7	25.880	36.640
																				71.6	19.240	36.420
29°13.4′	88°43.2′	7/ 1/64	10:38	68	49	30.1	83.7	77.5					0	0		4	8	0	X	.0	29.750	18.280
																				9.8	27.150	32.940
																				29.6	23.350	36.490
																				48.8	19.580	36.240
29°19.5′	88°46.2′	7/ 1/64	11:39	55	48	30.1	86.0	78.8					0	0	1	6	8		X	.0	29.150	29.630
																				9.8	27.720	34.790
																				28.7	22.280	35.910
																				47.5	21.830	36.110
29°23.6′	88°48.8′	7/ 1/64	12:37	27	25	30.1	86.2	77.0					0	0		6	8	0	X0	.0	29.700	27.830
																				10.3	26.000	33.930
																				24.4	24.560	35.370
29°23.7′	88°30.0′	7/ 1/64	15:16	57	50	30.1	85.3	77.0					180	5		5	8	1	X0	.0	30.300	28.060
																				10.1	27.610	36.580
																				29.6	23.670	36.450
																				49.1	18.170	36.380
29°23.5′	88°20.5′	7/ 1/64	16:22	55	50	30.1	84.9	77.0					260	6		7	8	1	X0	.0		
																				10.1	25.280	34.850
																				29.6	19.830	36.240
																				49.1	17.940	36.400
29°15.8′	88°15.5′	7/ 1/64	17:35	88	73	30.1	83.7	76.5					280	5	0	6	8	0	X	.0	30.600	25.680
																				9.4	27.880	36.600
																				28.7	23.280	36.310
																				72.5	18.580	36.350

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP.°F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29° 9.8′	88°12.0′	7/ 1/64	18:50	329	263	30.1	83.3	75.0					220	6		4		0	X0	.0	29.700	24.900
																				10.6	28.800	36.690
																				29.0	25.450	36.690
																				72.0	19.420	36.470
																				143.0	14.380	35.800
																				263.0	10.450	35.260
29° 3.2′	88° 9.0′	7/ 1/64	20:03	856	712	30.1	84.0	76.8					210	6						.0	29.750	25.430
																				9.5	28.060	36.760
																				28.5	24.670	36.740
																				72.0	19.410	36.550
																				144.0	15.800	36.150
																				265.0	11.640	35.430
																				485.0	7.920	34.900
																				712.0	5.890	34.850
29° 8.5′	87°56.0′	7/ 1/64	22:32	791	758	30.1	83.1	75.9					200	5						.0	29.100	25.610
																				10.7	28.810	36.670
																				33.2	23.610	36.650
																				78.3	19.510	36.450
																				155.8	15.560	36.080
																				284.0	11.620	35.410
																				517.9	8.010	34.940
																				757.7	5.960	34.830
29°22.0′	87°56.0′	7/ 2/64	0:47	79	69	30.1	82.8	75.9					250	6						.0	29.650	28.400
																				8.8	25.940	36.550
																				27.1	21.560	36.690
																				68.0	17.210	36.640
29°31.0′	87°43.7′	7/ 2/64	2:22		49	30.1	82.9	76.5					240	7						.0	29.800	29.070
																				9.4	28.020	36.420
																				29.0	22.800	35.480
																				48.2	19.700	28.980
29°22.0′	87°36.0′	7/ 2/64	4:00	187	152	30.1	82.6	75.6					230	4						.0	29.100	29.180
																				11.0	28.640	36.490
																				31.1	26.790	36.470
																				76.5	19.840	36.350
																				151.8	12.320	36.650
29°17.0′	87°30.0′	7/ 2/64	5:08	791	714	30.1	82.2	75.4					260	5		6	8	1	X0	.0	29.100	36.360
																				9.0	28.770	36.400
																				29.0	24.110	36.620
																				71.0	19.390	36.550
																				143.0	15.250	35.820
																				264.0	11.470	35.440
																				483.0	8.110	34.990
																				714.0	6.150	34.920

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP.°F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29°28.0′	87°17.5′	7/ 2/64	7:40	366	264	30.2	82.9	75.9					270	5		6	8	1	X0	.0	29.250	34.520
																				9.0	28.910	36.470
																				28.0	27.930	36.530
																				70.0	19.600	36.380
																				142.0	13.620	35.750
																				264.0	10.200	35.210
29°41.0′	87°17.2′	7/ 2/64	9:42	183	150	30.1	83.5	75.9					0	0		4	8	1	X0	.0	29.450	27.450
																				11.0	29.010	35.370
																				30.8	24.470	36.360
																				75.6	17.670	36.270
																				150.3	12.760	35.610
29°47.5′	87°17.0′	7/ 2/64	11:15	79	73	30.1	84.0	75.0					220	4		2	8	0	X0	.0	29.700	29.070
																				10.1	27.940	34.220
																				29.3	25.460	36.750
																				72.5	18.080	36.220
29°55.0′	87°16.5′	7/ 2/64	12:20	32	31	30.1	90.0	79.0					240	7		2	8	1	X0	.0		
																				10.7	27.390	34.420
																				20.7	26.060	36.170
																				29.9	23.060	36.020
30° 5.2′	87°17.3′	7/ 2/64	13:39	28	20	30.1	84.9	77.0					200	6		2	8	1	X0	.0	29.850	31.440
																				10.1	30.000	34.670
																				19.5	29.720	35.070
30°15.5′	87°17.5′	7/ 2/64	14:43	16	11	30.1	85.5	78.4					230	10		4	8	1	X0	.0	30.200	28.100
																				5.2	30.170	28.060
																				10.1	29.110	30.050
30°11.3′	87°31.0′	7/ 2/64	16:02	17	12	30.0	84.6	78.1					220	13	0	6	8	2	X0	.0	30.100	27.180
																				6.4	29.170	28.510
																				11.0	28.560	31.530
29°51.2′	87°44.5′	7/ 2/64	18:46	32	29	30.1	84.0	77.0					190	6		4	8	2	X0	.0	30.300	28.350
																				9.8	27.940	33.750
																				19.5	25.390	34.810
																				28.3	22.850	35.880
29°38.4′	88° 9.7′	7/ 2/64	21:53	37	30	30.1	83.5	76.5					140	7						.0	30.050	27.520
																				10.1	23.670	34.900
																				20.1	21.110	36.220
																				29.3	19.720	36.310
29°48.5′	88°20.0′	7/ 2/64	23:32	33	30	30.0	83.5	77.5					190	10						.0	29.700	28.620
																				10.1	28.950	35.520
																				19.8	26.500	36.130
																				29.3	24.840	36.310
29°57.0′	88°28.7′	7/ 3/64	1:00	29	21	30.0	83.5	76.6					180	10						.0	29.350	28.730
																				10.4	29.420	34.880
																				20.1	23.510	35.350

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
30° 4.5′	88°37.6′	7/ 3/64	2:24	17	15	30.0	82.9	79.0					200	12					X8	.0	29.100	27.540
																				7.3	29.250	28.930
																				14.6	25.040	34.330
30°13.0′	88°47.2′	7/ 3/64	3:53	8	7	30.0							200	15						.0	29.600	26.710
																				6.1	29.390	26.760
30°17.8′	89° 2.3′	8/ 3/64	9:38	6	6	30.2	89.2	79.0					290	7	1	2	6	2	X1	.0	30.700	23.170
																				6.4	29.700	26.260
30°14.0′	88°59.0′	8/ 3/64	9:15	9	8	30.2	81.3	77.0					290	4		2	7	2	X1	.0	30.700	24.340
																				7.6	30.000	28.330
30°11.3′	88°59.3′	8/ 3/64	9:41	8	6	30.2	84.0	78.1					50	7		2	7	2	X1	.0	30.300	27.360
																				6.4	30.000	27.420
30° 7.0′	88°55.8′	8/ 3/64	10:18	11	10	30.2	84.6	78.4					90	9		2	7	2	X1	.0	30.500	27.850
																				9.8	27.800	31.620
29°46.5′	89° 3.8′	8/ 3/64	12:48	4	3	30.2	87.1	78.4					320	5	8	2	8	1	X1	.0	31.200	28.440
																				3.0	31.000	28.390
29°29.6′	89° 7.6′	8/ 3/64	14:48	12	9	30.2	90.0	79.2					0	0	8	2	8	1	X1	.0	30.800	25.910
																				8.5	29.990	27.850
29°25.0′	88°58.5′	8/ 3/64	16:03	15	13	30.2	89.1	78.8					0	0	8	2	8	1	X1	.0	31.880	22.110
																				12.5	28.900	28.280
29°14.3′	88°57.5′	8/ 3/64	17:20	15	11	30.2	89.1	79.0					0	0	3	1	8	0	X1	.0	31.400	10.210
																				5.5	31.300	26.330
																				11.2	29.000	31.240
29°10.0′	88°56.7′	8/ 3/64	17:52	20	17	30.1	88.9	79.0					0	0	3	1	8	0	X1	.0	32.100	4.810
																				8.5	29.800	30.700
																				17.4	27.100	34.810
29° 6.5′	88°51.6′	8/ 3/64	18:37	84	81	30.1	89.1	79.5					0	0	9		7	0	X1	.0	31.100	25.860
																				8.2	28.100	31.760
																				29.6	24.600	36.510
																				45.1	23.400	36.330
																				81.4	16.500	36.260
29° .7′	88°57.7′	8/ 3/64	19:38	84	77	30.1	87.1	80.1					200	4		2		1	X1	.0	31.700	20.210
																				5.5	29.940	29.140
																				27.4	26.880	36.330
																				43.9	23.360	36.490
																				76.8	17.220	36.330
28°58.6′	89° 6.5′	8/ 3/64	20:52	26	20	30.1	86.2	79.3					260	9				1	X1	.0	31.600	17.480
																				10.7	29.300	31.400
																				20.1	27.900	34.610
28°55.0′	89° 4.4′	8/ 3/64	21:42	91	81	30.1	85.8	79.2					270	7				1	X1	.0	30.200	26.870
																				8.8	29.670	30.770
																				30.8	27.920	36.240
																				47.2	22.380	36.470
																				81.4	18.200	36.440

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP.°F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
28°48.6′	88°59.4′	8/ 3/64	23:18	358	253	30.1	89.2	75.2					270	7				1	X1	.0	30.100	29.360
																				9.0	29.310	30.910
																				25.7	28.520	36.240
																				62.4	20.050	36.530
																				136.0	13.730	35.840
																				253.2	10.180	35.260
28°42.5′	88°55.0′	8/ 4/64	1:00	914	751	30.1	84.9	80.1					270	9				1	X1	.0	29.900	29.960
																				8.0	29.570	30.770
																				25.0	26.500	35.880
																				62.0	21.470	36.580
																				122.0	16.100	36.380
																				228.0	11.700	35.570
																				415.0	8.230	35.010
																				584.0	6.440	34.920
																				751.0	5.660	34.970
28°36.5′	88°51.0′	8/ 4/64	3:13	1097	536	30.2	85.1	80.4					320	13		2		1		.0	29.700	30.720
																				10.0	29.760	31.020
																				58.0	20.500	36.560
																				164.0	14.470	35.930
																				356.0	9.070	35.140
																				536.0	6.790	34.960
28°47.6′	88°42.4′	8/ 4/64	6:29	1028	683	30.2	84.7	80.8					330	13		2	7	2	X1	.0	29.700	30.070
																				8.0	29.660	30.120
																				59.0	20.000	36.580
																				167.0	15.100	35.970
																				348.0	9.680	35.160
																				524.0	7.250	34.960
																				683.0	5.990	34.970
28°50.2′	88°31.2′	8/ 4/64	7:14	914	482	30.2	86.0	81.3					320	14		2	7	2	X1	.0	29.600	29.970
																				7.0	29.550	29.970
																				52.0	20.300	36.580
																				146.0	15.930	36.200
																				317.0	10.690	35.350
																				482.0	8.020	34.990
29° .5′	88°36.5′	8/ 4/64	11:12	380	110	30.1	86.9	81.0					360	14		1		3	X1	.0	30.200	30.300
																				8.0	29.700	35.820
																				22.0	27.820	36.400
																				51.0	21.260	36.650
																				110.0	16.630	36.260
29° 8.0′	88°40.5′	8/ 4/64	12:55	88	81	30.1	89.1	81.1					340	11	4	6	7	2	X2	.0	30.700	29.360
																				8.8	29.730	31.420
																				30.8	24.410	36.380
																				47.2	22.140	36.420
																				81.4	17.020	36.170

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29°13.4′	88°43.2′	8/ 4/64	14:00	68	58	30.1	88.5	80.1					310	10	0	6	7	1	X1	.0	30.200	31.000
																				10.0	29.830	31.180
																				29.0	25.870	36.400
																				57.6	18.200	36.330
29°19.5′	88°46.2′	8/ 4/64	15:10	55	49	30.0	89.1	81.5					300	6	0	7	7	1	X1	.0	30.700	30.140
																				9.4	29.770	30.930
																				29.3	26.330	36.440
																				49.1	22.410	36.260
29°23.6′	88°48.8′	8/ 4/63	15:48	27	24	30.5	89.1	80.2					280	7	0	6	7	1	X1	.0	30.900	29.200
																				9.1	30.140	30.570
																				23.5	26.440	35.810
29°23.5′	88°39.0′	8/ 4/64	17:05	51	45	30.0	91.9	82.6					270	4	0	6	7	1	X1	.0	30.200	31.220
																				11.6	29.260	31.580
																				44.8	24.090	36.360
29°23.7′	88°30.0′	8/ 4/64	18:30	57	49	30.0	87.1	81.9					250	6	8	7		1	X1	.0	30.700	30.720
																				9.1	30.180	31.220
																				29.3	24.490	36.400
																				49.1	21.270	36.420
29°23.5′	88°20.5′	8/ 4/64	19:53	53	49	30.2	87.1	80.8					250	6				1	X1	.0	30.200	31.200
																				9.1	29.560	32.360
																				29.0	23.730	36.270
																				48.5	21.610	36.360
29°15.8′	88°15.5′	8/ 4/64	21:20	93	83	30.2	87.1	81.0					250	7				1	X1	.0	30.400	31.180
																				8.8	29.470	35.250
																				31.4	25.570	36.580
																				48.2	21.300	36.510
																				82.9	15.370	36.060
29° 9.8′	88°12.0′	8/ 4/64	22:20	344	315	30.2	86.7	82.0					270	9				1	X1	.0	30.400	30.500
																				9.0	27.800	35.280
																				26.0	26.660	36.560
																				63.0	19.930	36.600
																				136.0	13.500	35.810
																				250.0	10.790	35.440
																				315.0	10.150	35.280
29° 5.2′	88° 9.0′	8/ 4/64	23:53	914	466	30.2	86.4	82.0					280	13				4	X9	.0	30.400	29.070
																				6.0	29.950	31.090
																				50.0	21.290	36.560
																				141.0	13.900	35.840
																				307.0	9.380	35.210
																				466.0	7.640	34.990
30°17.8′	89° 2.2′	8/31/64	7:58	4	0		84.0	79.2					20	5		0	7	1	X0	.0	29.900	22.500
30°14.0′	88°59.0′	8/31/64	8:31	11	7		86.5	78.4					40			0	7	1	X0	.0	30.700	21.740
																				7.3	28.400	32.120

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP.°F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
30°11.2′	88°59.3′	8/31/64	8:56	11	7		86.5	79.5					40	6		0	7	1	X0	.0	30.400	27.750
																				7.3	27.900	33.710
30° 6.8′	88°56.0′	8/31/64	7:36	11	7		87.8	80.1					30	7		0	7	1	X0	.0	30.500	28.690
																				7.3	26.400	33.550
29°46.5′	89° 3.8′	8/31/64	12:08	6	0		88.0	79.0					80	5		0	7	1	X0	.0	32.100	29.250
29°29.6′	89° 7.6′	8/31/64	13:58	12	11		88.0	81.0					80	5		0	7	1	X0	.0	31.700	30.930
																				10.7	30.600	31.000
29°25.0′	88°58.5′	8/31/64	15:03	15	12		88.0	80.4					70	6		0	7	1	X0	.0	31.100	31.200
																				11.9	24.400	35.660
29°14.2′	88°57.4′	8/31/64	16:42	15	12		87.8	80.4					0	0	1	2	7	1	X1	.0	31.700	15.910
																				5.5	30.800	28.350
																				11.9	22.200	35.880
29° 9.8′	88°56.5′	8/31/64	17:57	22	19								120	4	1	2	7	1	X1	.0	31.800	16.260
																				9.4	21.900	35.900
																				18.9	20.900	36.470
29° 6.2′	88°51.9′	8/31/64	18:47	91	81		86.7	79.5					90	5	1	2	7	1	X1	.0	31.400	30.190
																				8.2	29.890	33.770
																				21.3	23.130	36.600
																				44.2	20.070	36.510
																				81.4	17.320	36.350
29° .4′	88°57.4′	8/31/64	19:02	97	78		87.4	79.9					0	0				0		.0	31.100	30.440
																				8.2	29.810	33.210
																				26.8	23.670	36.800
																				45.4	21.100	36.580
																				78.3	17.720	36.370
28°58.7′	89° 6.5′	8/31/64	20:46	21	19		86.5	80.1					140	5				1		.0	33.300	8.570
																				8.5	25.900	34.670
																				18.6	21.300	36.550
28°55.3′	89° 4.0′	8/31/64	21:20	91	78		85.8	79.2					0	0				0		.0	31.400	28.440
																				8.8	29.690	33.550
																				29.6	23.220	36.470
																				45.7	20.900	36.570
																				78.3	16.810	36.270
28°48.7′	89° 6.5′	8/31/64	23:45	366	331		85.6	78.1					0	0				0		.0	31.200	29.580
																				10.0	30.220	35.230
																				28.0	27.600	36.490
																				66.0	20.530	36.580
																				143.0	15.500	36.110
																				265.0	13.600	35.820
																				331.0	12.690	35.800
28°48.7′	89° 6.5′	8/31/64	22:35	366	276		87.4	78.1					0	0				0		273.1	13.580	35.790
																				274.6	13.570	35.810
																				276.4	13.560	35.810

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
28°42.0′	88°55.0′	9/ 1/64	1:33	914	476		84.9	78.4					0	0				0		.0	30.700	35.880
																				10.0	30.070	36.240
																				29.0	27.400	36.510
																				71.0	21.200	36.530
																				140.0	16.700	36.330
																				262.0	12.580	35.700
																				476.0	8.670	35.120
28°36.7′	88°50.9′	9/ 1/64	3:15	1127	675		84.9	79.0					50	6				1		.0	30.300	35.950
																				9.8	30.220	36.080
																				29.0	27.500	36.310
																				71.0	22.300	36.560
																				143.0	18.400	36.390
																				262.0	12.530	35.580
																				481.0	8.600	35.240
																				675.0	6.620	34.850
28°47.5′	88°43.0′	9/ 1/64	5:42	944	834		85.3	80.1					340	10	1	2	7	1	X1	.0	30.300	32.000
																				9.5	30.160	35.080
																				29.0	29.300	36.410
																				71.0	21.300	36.530
																				139.0	17.200	36.300
																				260.0	12.200	35.530
																				476.0	8.900	35.100
																				669.0	6.550	34.870
																				834.0	5.390	34.930
28°50.3′	88°31.0′	9/ 1/64	7:40	892	835		86.0	80.4					350	10	1	2	7	2	X1	.0	30.300	32.470
																				9.5	30.390	33.130
																				29.0	28.700	36.510
																				71.0	20.200	36.560
																				139.0	15.600	36.150
																				260.0	12.740	35.610
																				476.0	8.780	35.050
																				669.0	6.540	34.950
																				835.0	5.420	34.900
29° .2′	88°36.3′	9/ 1/64	10:25	366	249		86.5	79.5					30	9	1	2	7	1	X1	.0	30.700	32.380
																				9.0	30.230	33.300
																				27.0	29.500	36.310
																				63.0	29.850	36.670
																				136.0	16.080	36.220
																				249.0	13.210	35.750
29° 7.9′	88°40.5′	9/ 1/64	12:05	91	88		87.1	81.0					350	8		0	7	1	X0	.0	30.900	29.970
																				10.0	30.450	34.380
																				34.7	26.480	36.560
																				53.0	22.660	36.510
																				87.5	18.940	36.450

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29°13.2′	88°43.2′	9/ 1/64	13:20	68	59		87.4	81.0					10	6		0	7	1	X0	.0	31.400	30.680
																				9.1	29.510	35.250
																				28.3	24.900	36.580
																				58.5	20.210	36.640
29°19.0′	88°46.5′	9/ 1/64	14:25	55	48		88.0	79.0					20	5		0	7	1	X0	.0	32.100	27.920
																				9.1	29.010	35.430
																				28.7	21.440	36.550
																				47.9	18.450	36.400
29°23.6′	88°48.8′	9/ 1/64	15:30	27	24		88.5	79.5					0	0		0	7	1	X0	.0	32.700	26.650
																				9.1	26.880	36.110
																				18.9	20.780	36.520
																				23.5	19.750	36.450
29°23.6′	88°39.1′	9/ 1/64	17:05	48	43		89.1	79.0					0	0		0	7	0	X0	.0	31.600	29.250
																				10.4	29.250	35.700
																				18.3	26.860	36.510
																				43.0	21.140	36.530
29°23.6′	88°30.0′	9/ 1/64	18:15	55	48		88.5	79.5					270	5	1	2		1	X1	.0	30.900	31.530
																				8.8	29.900	33.950
																				28.7	27.590	36.530
																				47.9	22.660	36.580
29°23.6′	88°20.5′	9/ 1/64	19:40	55	46		87.4	79.0					310	6				0		.0	31.000	31.920
																				8.8	30.380	33.040
																				27.7	29.410	36.450
																				46.3	24.150	36.510
29°15.5′	88°16.1′	9/ 1/64	21:10	88	84		87.4	79.5					300	9				1		.0	30.600	31.530
																				9.1	30.360	31.910
																				32.9	28.900	36.560
																				49.1	23.250	36.440
																				84.4	18.990	36.360
29°10.0′	88°12.0′	9/ 1/64	22:35	366	146		87.1	80.4					250	7				1		.0	30.600	31.110
																				9.8	30.190	32.370
																				28.3	27.460	36.410
																				67.4	21.500	36.470
																				146.3	15.920	36.090
29° 3.5′	88° 9.5′	9/ 2/64	0:40	933	688								330	7				1		.0	30.300	33.930
																				9.5	30.560	34.540
																				29.5	28.900	36.460
																				73.5	19.800	36.510
																				144.0	15.600	36.020
																				267.0	13.610	35.820
																				490.5	8.320	35.030
																				688.0	6.160	34.900

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29° 8.9′	87°55.3′	9/ 2/64	3:45	914	630		84.9	79.0					40	7				1		.0	30.400	33.910
																				9.0	30.400	34.090
																				26.5	28.910	36.470
																				65.0	21.100	36.530
																				128.0	16.700	36.290
																				240.0	12.540	35.620
																				442.0	8.500	35.250
																				630.0	6.740	34.960
29°21.3′	87°56.3′	9/ 2/64	8:12	88	84		83.5	78.4					170	9	8	4	7	2	X1	.0	30.300	31.550
																				9.1	30.400	33.010
																				32.0	24.800	36.400
																				49.1	21.300	36.400
																				84.4	18.300	36.380
29°30.5′	87°44.9′	9/ 2/64	14:00	55	48		91.9	80.4					0	0		0	7	1	X0	.0	31.300	31.440
																				9.4	30.000	32.250
																				28.7	27.300	36.470
																				47.9	21.800	36.450
29°30.5′	87°44.9′	9/ 2/64	15:43	55	48		89.1	80.1					0	0	1	2		0	X0	.0	31.600	31.470
																				9.1	30.500	32.290
																				28.7	26.400	36.490
																				47.9	22.100	36.470
29°30.5′	87°44.9′	9/ 2/64	17:15	55	49		87.4	78.4					0	0		0	7	0	X0	.0	31.500	31.360
																				9.4	30.200	31.920
																				29.0	26.500	36.600
																				48.5	20.400	36.510
29°30.5′	87°44.9′	9/ 3/64		55	51		88.0	79.0					0	0				0		.0	30.800	31.270
																				9.8	30.400	32.100
																				30.5	25.900	36.420
																				51.2	20.300	36.440
29°30.5′	87°44.9′	9/ 2/64	19:20	55	47		87.3	79.3												.0	31.300	31.440
																				9.1	30.500	31.970
																				28.0	26.500	36.420
																				47.2	22.100	36.400
29°30.5′	87°44.9′	9/ 2/64	20:22	55	48		87.4	79.5					0	0				0		.0	31.200	31.240
																				9.1	30.500	32.750
																				28.7	26.800	36.420
																				48.2	21.500	36.640
29°30.5′	87°44.9′	9/ 2/64	21:25	55	48		88.0	80.1					0	0				0		.0	31.200	31.240
																				9.1	30.400	32.950
																				28.7	27.600	36.360
																				47.9	22.100	36.470

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29°30.5′	87°44.9′	9/ 2/64	22:15	55	48		86.5	79.0					0	0				0		.0	30.900	31.080
																				9.1	30.500	32.120
																				28.7	27.300	36.400
																				47.9	22.100	36.520
29°30.5′	87°44.9′	9/ 2/64	23:01	55	48		87.1	79.9					0	0				0		.0	30.700	30.990
																				9.1	30.500	31.960
																				28.7	27.600	36.310
																				48.2	22.000	36.560
29°30.5′	87°44.9′	9/ 2/64	24:00	55	48		86.2	79.0					0	0				0		.0	30.800	30.970
																				9.1	30.600	31.730
																				28.7	28.000	36.330
																				48.2	21.600	36.450
29°30.5′	87°44.9′	9/ 3/64	1:10	55	49		85.5	78.4					0	0				0		.0	30.800	30.880
																				9.1	30.300	31.940
																				28.7	27.600	36.360
																				48.5	21.800	36.510
29°30.5′	87°44.9′	9/ 3/64	2:13	55	29		85.5	78.4					0	0				0		.0	30.600	30.900
																				9.1	30.600	31.530
																				28.7	27.100	36.360
29°30.5′	87°44.9′	9/ 3/64	5:22	55	48		85.6	78.4					0	0				0		.0	30.600	30.930
																				9.1	30.500	31.800
																				28.7	27.600	36.450
																				47.9	22.000	36.470
29°30.5′	87°44.9′	9/ 3/64	6:20	55	48		85.3	78.3												.0	30.600	31.080
																				9.1	30.500	31.560
																				28.7	26.400	36.400
																				47.9	21.800	36.420
29°30.5′	87°44.9′	9/ 3/64	7:30	55	49		88.0	79.5					0	0	1	4	7	0	X1	.0	30.400	31.040
																				9.1	30.500	31.640
																				29.0	26.200	36.460
																				48.5	20.700	36.400
29°30.5′	87°44.9′	9/ 3/64	9:25	55	49		89.1	80.1					0	0	1	4	7	0	X0	.0	30.400	31.490
																				9.1	30.500	32.010
																				29.0	26.500	36.490
																				48.5	21.000	36.420
29°30.5′	87°44.9′	9/ 3/64	9:25	55	49		87.1	79.9					0	0	1	2	7	0	X0	.0	30.600	31.550
																				9.1	30.600	32.230
																				29.0	26.000	36.420
																				48.5	20.500	36.420
29°30.5′	87°44.9′	9/ 3/64	10:32	55	49		89.1	80.1					0	0		0	7	0	X0	.0	31.000	31.660
																				9.1	30.800	32.320
																				29.0	26.200	36.400
																				48.5	20.700	36.510

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29°30.5′	87°44.9′	9/ 3/64	11:25	55	49		87.1	79.3					80	7		0		1	X0	.0	31.100	31.620
																				9.1	30.600	32.520
																				29.0	26.400	36.450
																				48.5	20.800	36.450
29°30.5′	87°44.9′	9/ 3/64	6:59	55	49		88.0	78.4					110	7	1	2	8	1	X1	.0	31.100	31.400
																				9.1	30.600	32.680
																				29.0	26.500	36.490
																				48.5	21.100	36.470
29°30.5′	87°44.9′	9/ 3/64	13:53	55	48		91.0	79.0					110	7	1	2	8	1	X1	.0	31.100	31.320
																				9.1	30.700	32.810
																				29.0	27.600	36.510
																				47.9	21.500	36.490
29°22.0′	87°36.0′	9/ 3/64	16:40	183	159		86.0	79.0					100	8		2	7	1	X1	.0	31.400	31.090
																				9.0	30.160	32.190
																				17.0	29.890	36.020
																				70.0	18.820	36.440
																				159.0	15.830	36.110
29°15.7′	87°28.5′	9/ 3/64	18:12	922	450		85.5	79.2					150	9	1	2	7	1	X0	.0	30.700	33.980
																				9.0	30.700	35.010
																				27.5	29.020	35.050
																				68.0	21.700	36.510
																				133.0	17.000	36.310
																				250.0	13.040	35.700
																				450.0	8.380	35.070
29°27.9′	87°17.4′	9/ 3/64	21:55	366	284		85.3	78.4					150	11				2		.0	30.500	34.330
																				7.0	30.470	34.230
																				22.0	27.200	36.490
																				55.0	23.050	36.670
																				118.0	16.890	36.200
																				222.0	13.750	35.840
																				284.0	12.870	35.630
29°41.0′	87°17.4′	9/ 3/64	23:30	183	159		85.5	78.3					150	7				2		.0	30.400	33.910
																				9.2	30.230	34.970
																				17.0	29.400	36.180
																				70.0	19.640	36.510
																				159.0	16.290	36.200
29°57.0′	87°16.0′	9/ 4/64	2:15	33	28		81.0	73.9					0	0						.0	30.300	32.290
																				8.8	30.330	32.410
																				18.6	28.510	36.080
																				28.0	24.920	36.380
30° 5.1′	87°17.4′	9/ 4/64	3:18	27	27		82.9	74.5					0	0				1		.0	30.400	32.090
																				9.1	30.600	32.090
																				15.8	27.530	35.820
																				26.5	24.500	36.330

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
30°15.1′	87°17.4′	9/ 4/64	4:45	18	14		82.2	75.9					90	7				1		.0	29.400	28.490
																				4.0	30.050	31.800
																				9.1	26.690	35.900
																				14.3	25.300	36.110
30° 9.6′	87°30.7′	9/ 4/64	6:15	16	0		84.0	78.1						9	6	5	7	1	X1	.0	30.500	29.420
29°58.3′	87°30.7′	9/ 4/64	7:45	33	24		84.0	78.1						11	8	8	7	1	X1	.0	30.900	29.650
																				4.0	30.800	29.670
																				8.8	30.280	33.350
																				24.4	24.790	36.380
30° 4.5′	87°44.5′	9/ 4/64	9:23	18	14		83.1	77.5					80	10	8	4	7	1	X1	.0	30.800	29.430
																				4.0	30.600	29.430
																				9.1	28.260	36.270
																				14.0	26.030	36.040
29°59.3′	87°56.2′	9/ 4/64	10:42	24	19		84.0	77.9					90	8	8	1	7	2	X0	.0	30.600	29.360
																				4.9	31.100	29.430
																				9.1	28.360	36.110
																				18.9	25.400	36.380
29°52.2′	87°45.0′	9/ 4/64	12:12	33	27		84.6	77.5					90	10	8	3	7	2	X1	.0	30.900	28.210
																				9.1	30.800	33.220
																				19.2	24.690	36.480
																				26.5	23.320	36.580
29°38.6′	87°44.5′	9/ 4/64	13:52	40	24		83.5	76.6					70	8	8	1	7	3	X1	.0	30.900	30.340
																				8.2	30.600	30.430
																				17.4	29.500	36.060
																				24.1	29.040	36.490
29°38.6′	87°56.2′	9/ 4/64	15:08	40	34		86.0	76.8					130	7	2	3	7	3	X1	.0	30.500	32.250
																				8.5	30.000	32.430
																				18.3	29.450	35.880
																				33.8	26.880	36.450
29°38.6′	88° 8.5′	9/ 4/64	16:20	37	28		84.6	77.5					110	10	2	3	7	3	X1	.0	30.900	30.840
																				8.5	29.900	31.330
																				18.9	29.790	36.170
																				28.0	29.200	36.330
29°38.6′	88°19.3′	9/ 4/64	17:30	38	31		84.6	77.5					120	10	1	2	7	3	X1	.0	30.700	30.840
																				8.5	28.400	32.840
																				18.3	27.650	36.080
																				31.1	25.660	36.560
29°38.6′	88°30.7′	9/ 4/64	18:40	37	27		84.0	76.5					130	10				3		.0	31.100	28.590
																				8.8	28.400	33.890
																				18.3	23.330	36.330
																				27.4	21.730	36.450

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP.°F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29°48.3′	88°20.0′	9/ 4/64	20:07	35	28		84.2	77.0					90	8				3		.0	31.100	28.910
																				9.1	27.800	36.330
																				19.2	22.960	36.510
																				28.0	22.360	36.510
29°56.5′	88°28.7′	9/ 4/64	21:27	27	23		84.2	77.5					180	7				3		.0	30.700	28.980
																				9.1	24.400	36.420
																				18.6	23.420	36.530
																				23.2	22.760	36.550
30° 4.3′	88°37.7′	9/ 4/64	22:42	16	14		84.2	76.5					180	4				2		.0	30.300	30.410
																				4.9	30.100	30.720
																				9.1	27.030	34.940
																				14.3	25.420	36.200
30°12.9′	88°47.3′	9/ 5/64	0:12	11	9		84.0	77.0					0	0				0		.0	30.300	29.870
																				8.8	26.700	35.030
30°17.8′	89° 2.2′	9/ 5/64			0															.0	30.100	26.130
30°14.0′	88°59.0′	9/ 5/64			0															.0	30.100	29.110
30°11.2′	88°59.3′	9/ 5/64			0															.0	30.000	27.720
30°17.8′	89° 2.2′	1/11/65	9:50	9	7		43.0	40.0	3		40	3					7	0	X1	.0	14.000	19.090
30°14.0′	88°59.0′	1/11/65	10:20	11	8		44.0	40.0	4				70	8			7	0	X1	.0	14.500	26.230
																				7.6	15.000	27.930
30° 6.8′	88°56.0′	1/11/65	11:30	11	7		45.0	42.5	6				0	0			7	1	X1	.0	15.800	29.140
																				6.7	15.000	29.170
29°46.5′	89° 3.8′	1/11/65	13:55	5	4		47.0	42.0	6				0	0					X2	.0	14.700	27.280
																				4.0	14.500	27.250
29°29.6′	89° 7.6′	1/11/65	15:50	13	11		48.5	45.0	6				70	3			7	0	X2	.0	16.100	27.590
																				1.5	16.100	
																				3.0	16.100	
																				10.7	16.100	29.700
29°25.0′	88°58.5′	1/11/65	16:53	15	13		50.0	46.0					0	0			7	0	X2	.0	16.400	33.030
																				1.5	16.400	
																				3.0	16.600	
																				4.6	16.800	
																				6.1	17.100	
																				7.6	17.200	
																				11.9	17.200	34.150
																				12.2	17.200	

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29°14.2′	88°57.4′	1/11/65	16:04	18	15		52.0	49.0					0	0						.0	15.300	23.240
																				1.5	15.700	
																				3.0	15.800	
																				4.6	16.500	
																				6.1	17.100	
																				7.0	17.200	33.540
																				7.6	17.200	
																				10.7	17.200	
																				12.2	17.300	
																				13.7	17.400	
																				14.9	17.800	34.410
																				15.2	17.700	
29° 9.8′	88°56.5′	1/11/65	18:40		22		52.0	48.0					0	0						.0	14.300	5.180
																				1.5	16.400	
																				3.0	17.000	
																				4.6	17.100	
																				6.1	17.200	
																				10.4	17.200	33.780
																				13.7	17.300	
																				16.8	17.400	
																				19.8	17.500	
																				21.6	17.900	34.470
29° 6.2′	88°51.9′	1/11/65	20:10	88	85		52.0	49.0					120	8						.0	14.700	22.720
																				6.1	18.600	
																				8.2	20.000	32.760
																				12.2	18.900	
																				18.3	19.900	
																				24.4	21.100	
																				27.4	22.100	34.940
																				30.5	21.100	
																				36.6	20.100	
																				42.7	19.600	
																				45.1	16.800	36.230
																				77.7	17.000	36.090
28°55.3′	89° 4.0′	1/11/65	21:50		85		53.0	50.0					350	9						.0	15.900	28.960
																				10.1	18.700	32.730
																				29.9	20.000	35.610
																				50.0	16.000	35.560
																				85.3	16.000	35.560

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP.°F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
28°48.7′	88°59.5′	1/11/65	22:50	402	268		55.0	52.0			50	13								.0	16.200	29.000
																				6.1	21.100	
																				8.8	21.900	32.120
																				12.2	22.100	
																				24.4	22.200	
																				28.3	22.200	36.230
																				30.5	22.200	
																				42.7	21.700	
																				54.9	20.600	
																				72.5	19.300	35.990
																				91.4	18.900	
																				121.9	18.600	
																				146.9	18.500	36.320
																				152.4	18.400	
																				182.9	17.100	
																				213.4	15.800	
																				243.8	14.800	
																				257.9	14.300	35.620
																				262.1	14.200	
28°42.7′	88°55.2′	1/12/65	0:06	805	274		58.5	53.5												.0	19.200	33.310
																				6.1	21.400	
																				8.8	21.400	35.870
																				12.2	22.100	
																				18.3	22.400	
																				28.7	22.200	36.320
																				61.0	22.100	
																				73.5	22.100	36.410
																				91.4	22.100	
																				106.7	20.000	
																				121.9	19.200	
																				147.2	17.500	36.310
																				152.4	17.400	
																				182.9	16.300	
																				213.4	15.400	
																				243.8	14.300	
																				268.2	13.300	
																				270.7	13.300	35.720

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
28°47.5′	88°43.0′	1/12/65	1:36	878	276		59.0	53.0												.0	22.800	36.420
																				9.1	22.400	36.420
																				29.3	22.400	36.420
																				74.7	22.400	36.420
																				79.2	22.400	
																				85.3	22.200	
																				91.4	21.700	
																				103.6	20.400	
																				121.9	19.400	
																				152.4	17.800	36.400
																				182.9	16.700	
																				213.4	15.600	
																				243.8	14.700	
																				274.3	13.900	
28°50.3′	88°31.0′	1/12/65	3:41	856	279		60.0	53.5					120	3						.0	22.600	36.420
																				9.4	22.200	36.350
																				29.6	22.200	36.380
																				75.6	22.100	36.340
																				103.6	21.700	
																				109.7	20.200	
																				121.9	19.400	
																				152.1	17.900	36.220
																				182.9	16.700	
																				213.4	15.600	
																				243.8	14.600	
																				278.9	13.800	35.630
29° .2′	88°36.3′	1/12/65	5:07	366	273		55.0	50.0					90	2						.0	21.100	35.860
																				9.4	23.900	35.990
																				24.4	24.000	
																				29.0	24.000	36.180
																				30.5	24.100	
																				61.0	24.200	
																				74.1	24.000	36.330
																				97.5	23.300	
																				103.6	22.300	
																				109.7	22.100	
																				115.8	21.800	
																				121.9	21.400	
																				149.1	20.000	36.240
																				152.4	19.800	
																				182.9	18.600	
																				213.4	17.600	
																				243.8	16.700	
																				273.4	16.100	35.660

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP.°F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29° 7.9′	88°40.5′	1/12/65	6:25		81		59.0	54.0									5	1	X2	.0	18.900	33.070
																				6.1	19.900	
																				9.4	20.000	33.330
																				15.2	20.300	
																				29.0	21.700	36.060
																				30.5	21.800	
																				45.7	20.000	
																				49.1	19.900	35.940
																				61.0	19.400	
																				76.2	18.900	
																				81.4	18.600	36.040
29°13.2′	88°43.2′	1/12/65	7:20		61		58.5	53.0					270	12			7	1	X2	.0	17.200	32.490
																				1.5	17.500	
																				7.6	18.900	
																				9.1	20.000	33.000
																				15.2	21.700	
																				22.9	21.900	
																				29.0	21.100	36.240
																				30.5	21.100	
																				38.1	20.300	
																				45.7	20.200	
																				53.3	18.300	
																				60.0	18.300	36.040
																				61.0	18.200	
29°19.0′	88°46.5′	1/12/65	8:15	91	50		58.5	53.5					60	5			7		X2	.0	16.400	31.720
																				1.5	17.200	
																				3.0	17.800	
																				4.6	18.400	
																				6.1	18.600	
																				7.6	18.900	
																				9.4	18.900	34.690
																				29.6	18.900	35.820
																				50.0	18.900	36.060

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29°23.6′	88°48.8′	1/12/65	8:50		23		57.5	51.0					0	0			7		X2	.0	16.600	32.640
																				1.5	17.000	
																				3.0	17.400	
																				4.6	17.700	
																				6.1	17.800	
																				7.6	18.600	
																				8.8	18.800	35.150
																				9.1	18.800	
																				12.2	18.600	
																				15.2	18.300	
																				19.8	18.300	35.070
																				22.9	18.300	35.130
29°23.6′	88°39.1′	1/12/65	9:53	51	45		58.5	53.0					90	5				0	X3	.0	17.400	32.200
																				4.6	17.500	
																				7.6	17.700	
																				9.4	20.000	32.760
																				10.7	20.600	
																				15.2	21.100	
																				19.5	21.400	36.090
																				19.8	21.400	
																				22.9	20.300	
																				30.5	20.000	
																				44.8	18.300	36.120
29°23.6′	88°30.0′	1/12/65	10:24		49				8		0	0					7	0		.0	19.600	34.880
																				9.1	19.400	34.850
																				13.7	20.000	
																				16.8	19.800	
																				18.3	19.400	
																				29.0	19.300	36.090
																				30.5	19.300	
																				49.1	19.600	36.430
29° 9.7′	88°13.0′	1/12/65	13:50		273		62.0	55.0	9				0	0			7	0	X1	.0	22.300	35.810
																				9.1	22.200	36.480
																				29.0	22.200	36.450
																				30.5	22.200	
																				61.0	22.200	
																				74.1	22.100	36.430
																				109.7	20.000	
																				121.9	19.400	
																				149.1	17.900	36.440
																				182.9	16.700	
																				213.4	15.700	
																				243.8	14.600	
																				273.4	13.600	36.340

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29° 3.5′	88° 9.5′	1/12/65	14:50		274		63.0	55.5	9				250	5			7	0	X1	.0	22.400	36.500
																				9.8	21.800	36.440
																				29.6	21.800	36.440
																				74.4	21.800	36.440
																				149.7	21.800	36.390
																				274.1	21.800	35.810
29° 8.4′	87°55.3′	1/12/65	16:30		273		62.0	55.0									7	1	X1	.0	19.100	33.840
																				6.1	21.200	
																				9.4	21.900	33.860
																				12.2	22.000	
																				28.7	21.900	36.380
																				30.5	21.900	
																				73.5	21.900	36.470
																				91.4	21.900	
																				97.5	21.400	
																				103.6	20.200	
																				109.7	19.600	
																				115.8	19.400	
																				121.9	19.200	
																				149.0	18.100	36.360
																				152.4	17.800	
																				182.9	16.400	
																				213.4	15.400	
																				243.8	14.800	
																				273.4	13.100	35.910
29°21.3′	87°56.3′	1/12/65	18:19	183	84		65.0	51.0					0	0						.0	20.700	34.010
																				6.1	20.300	
																				9.4	20.300	35.460
																				12.2	20.400	
																				18.3	21.400	
																				24.4	21.500	
																				28.6	21.600	36.000
																				30.5	21.600	
																				42.7	20.600	
																				49.1	20.600	36.240
																				61.0	20.500	
																				79.2	20.400	
																				84.4	19.900	36.270

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29°30.9′	87°44.0′	1/12/65	20:00	55	53		62.0	55.0					0	0						.0	19.700	35.800
																				1.5	19.300	
																				9.8	19.300	35.810
																				15.2	19.400	
																				30.5	19.500	35.900
																				41.1	19.700	
																				45.7	19.800	
																				52.7	20.000	36.340
29°22.0′	87°36.0′	1/12/65	21:30	183	170		56.5	52.0					150	5						.0	20.800	36.010
																				6.1	20.900	
																				9.8	20.700	35.940
																				29.9	20.500	36.060
																				75.9	20.300	36.340
																				121.9	19.400	
																				167.6	16.400	
																				170.4	16.400	36.150
29°15.8′	87°30.5′	1/12/65	22:48		273															.0	20.000	35.680
																				6.1	20.400	
																				9.4	20.400	35.860
																				29.0	20.400	36.310
																				76.6	20.600	36.260
																				149.0	17.600	36.320
																				152.4	17.300	
																				273.4	12.900	35.520
29°27.9′	87°17.4′	1/13/65	0:50		273		64.0	59.0					150	5						.0	21.200	36.000
																				7.6	20.600	
																				9.1	20.600	36.210
																				25.9	20.600	
																				29.0	20.700	36.340
																				38.1	20.800	
																				45.7	20.700	
																				53.3	20.400	
																				73.2	20.400	
																				74.1	20.400	
																				121.9	17.900	
																				149.0	16.700	36.190
																				182.9	14.300	
																				213.4	13.800	
																				243.8	12.800	
																				273.4	12.300	35.440

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29°41.3′	87°17.4′	1/13/65	2:34	177	173		64.0	59.0					150	8						.0	20.700	36.380
																				9.4	20.600	36.340
																				12.2	20.600	36.550
																				30.2	20.600	36.350
																				61.0	20.400	
																				77.1	20.300	35.950
																				91.4	19.900	
																				109.7	19.800	
																				121.9	17.500	
																				152.4	16.900	
																				167.6	16.200	
																				173.4	16.100	36.100
29°47.9′	87°17.4′	1/13/65	3:40		85		63.0	59.0					50	5						.0	20.200	36.300
																				9.1	20.000	36.240
																				12.2	20.000	
																				29.0	20.000	36.260
																				48.8	19.900	
																				49.1	19.900	36.260
																				84.4	19.200	36.200
																				85.3	19.100	
29°55.0′	87°17.4′	1/13/65	4:45		274		62.0	58.0					130	3						.0	20.000	36.400
																				9.4	20.400	36.360
																				19.5	20.300	36.360
																				29.6	20.300	36.360
																				30.5	22.000	
																				91.4	21.900	
																				121.9	19.300	
																				152.4	17.800	
																				182.9	16.400	
																				213.4	15.500	
																				243.8	14.900	
																				274.3	13.100	
30° 5.1′	87°17.4′	1/13/65	6:10		28		69.0	62.0					20	3						.0	18.200	35.650
																				7.6	18.200	
																				9.4	18.200	35.740
																				15.2	18.200	
																				20.1	18.200	35.890
																				27.7	18.200	35.880

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
30° 9.6′	87°30.7′	1/13/65	7:32	27	18		62.5	58.5	9				0	0			7	0	X1	.0	16.300	34.040
																				3.7	16.400	34.400
																				4.6	16.400	
																				7.6	16.400	
																				8.5	16.400	34.660
																				15.2	16.700	
																				18.3	17.200	35.190
30° 4.5′	87°44.5′	1/13/65	9:12		13		63.0	59.0	9				250	5			7	0	X1	.0	16.500	33.980
																				1.5	16.700	
																				3.7	16.900	34.470
																				7.6	17.200	
																				8.5	17.200	35.370
																				13.4	17.300	35.460
29°51.3′	87°44.5′	1/13/65	10:26		26		68.0	61.0	9				280	2			7	0	X2	.0	19.100	36.070
																				7.6	18.300	
																				8.8	18.300	36.080
																				16.8	18.300	
																				18.6	18.300	36.110
																				22.9	18.300	
																				25.8	18.300	36.090
29°38.6′	87°56.2′	1/13/65	12:25	40	34		68.0	61.0					290	6			7		X0	.0	19.500	35.600
																				8.8	19.300	35.600
																				18.3	19.300	35.640
																				34.4	19.600	36.140
29°38.6′	88° 8.5′	1/13/65	13:38	37	29		68.5	61.0	9				250	6			7	0	X1	.0	18.900	34.970
																				9.1	18.600	35.140
																				19.2	18.600	35.170
																				29.0	19.600	36.140
29°38.6′	88°19.9′	1/13/65	14:48		31		69.0	63.5	7				0	0				0	X1	.0	17.400	31.420
																				4.6	17.800	
																				7.6	17.900	
																				8.5	18.400	34.370
																				15.2	18.300	
																				18.3	18.900	34.840
																				24.4	18.900	
																				30.5	19.100	
																				31.1	19.200	36.030

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR	TRANS-PARENCY	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb	Forel-Ule	Secchi Disc (m)	Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29°38.6′	88°30.7′	1/13/65	15:55		28		67.5	61.5					270	5			7	0	X1	.0	17.800	32.500
																				4.6	19.000	
																				8.8	20.000	34.940
																				15.2	20.300	
																				18.3	19.300	35.660
																				22.9	18.900	
																				27.4	18.900	
																				27.7	18.900	36.120
29°56.5′	88°28.7′	1/13/65	17:40		23		64.5	61.0					60	3						.0	18.400	35.160
																				8.8	18.600	35.200
																				15.2	18.700	
																				18.6	18.700	35.230
																				22.9	19.100	35.680
30° 4.3′	88°37.7′	1/13/65	19:06		14		62.5	60.5					0	0				0		.0	16.500	32.130
																				4.6	15.900	32.230
																				7.6	16.100	
																				8.8	16.300	32.690
																				10.7	16.000	
																				13.7	16.900	
																				14.0	17.100	34.420
30°12.9′	88°47.3′	1/13/65	20:19	15	11		54.0	52.0					0	0						.0	15.700	28.660
																				11.0	15.800	32.210
30°11.2′	88°59.3′	1/13/65	21:35	9	4		59.7	59.0					0	0						.0	15.300	27.380
																				4.3	15.100	28.690
30°14.0′	88°59.0′	3/31/65	10:00	9	7		60.0	58.2	7				60	4		8	6	2		.0	18.100	19.970
																				6.4		23.140
30°11.2′	88°59.3′	3/31/65	10:30	9	7		62.0	59.0	6				40	4		8	6	1	X1	.0	17.950	25.630
																				6.4		26.480
30° 6.8′	88°56.0′	3/31/65	13:00		28															.0	20.920	22.720
																				28.0	18.030	27.460
29°46.5′	89° 3.8′	4/ 3/65	12:45	17	14		70.2	68.8					170	9		2	7	1	X1	.0	20.790	27.060
																				14.3		33.880
29°29.6′	89° 7.6′	4/ 3/65	11:40	15	12		70.0	67.2	7				160	12		2		1	X1	.0	19.760	29.090
																				12.2		33.950
29°25.0′	88°58.5′	4/ 3/65	10:45	20	16		66.1	63.5	2				140	7		3	6		X1	.0	16.390	.830
																				16.2		35.460
29°14.2′	88°57.4′	4/ 3/65	8:45	13	11		59.0	58.9	2				0	0		3	5	0	X1	.0	8.920	.270
																				6.4		29.510
																				11.3		32.980
29° 9.8′	88°56.5′	4/ 3/65	2:48	24	22		59.0	57.8					160	5						.0	9.370	.310
																				11.3		32.000
																				21.9		36.000

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29° .4′	88°57.4′	4/ 3/65	1:25	86	85		67.4	65.8					180	4						.0	19.050	11.430
																				10.1		35.470
																				32.9	20.510	36.540
																				50.0		36.310
																				85.3		36.030
28°58.7′	89° 6.5′	4/ 3/65	0:14	26	23		63.5	62.6					150	6						.0	14.790	.320
																				10.1		34.230
																				22.6		36.050
28°55.3′	89° 4.0′	4/ 2/65	23:25	77	85		69.0	66.9					160	6						.0	19.810	8.870
																				10.1	20.270	34.890
																				32.9	19.100	36.240
																				50.0	17.950	36.400
																				85.3	15.320	36.020
28°48.7′	88°59.5′	4/ 2/65	21:45		343		71.0	67.0					160	10						.0	21.340	36.570
																				10.4	21.180	
																				29.3	20.840	36.590
																				69.5	19.690	36.570
																				150.0	16.320	36.150
																				274.3	12.920	35.750
																				343.0		35.500
28°42.7′	88°55.2′	4/ 2/65	20:00		868		70.5	67.0					150	11						.0	21.630	36.620
																				10.4	21.550	36.580
																				30.2		36.580
																				75.0	19.730	36.520
																				146.9		36.460
																				274.3	12.600	35.900
																				499.9	9.650	35.280
																				700.0	7.450	35.050
																				868.3	2.230	35.000
28°47.5′	88°43.0′	4/ 2/64	17:15	914	869		71.5	66.0	9				150	8		2	7	1	X1	.0	21.760	36.510
																				10.4	21.720	36.470
																				30.2		36.520
																				75.0	20.410	36.560
																				146.9		36.410
																				274.3		35.760
																				499.9		35.170
																				699.5		35.000
																				868.7		35.010

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP.°F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
28°50.3′	88°31.0′	4/ 2/65	15:05	914	869		70.0	65.3	9				150	13		4	7	1	X1	.0	21.900	35.360
																				10.4	21.670	36.340
																				30.2		36.460
																				75.0	19.710	36.360
																				146.9		36.340
																				274.3	13.510	35.690
																				499.9	8.860	35.150
																				699.5	7.260	35.000
																				868.7	5.700	35.000
29° .2′	88°36.0′	4/ 2/65	12:50	394	343		70.2	65.8	9				120	11		6	7	1	X1	.0	21.580	36.440
																				10.4	21.280	36.440
																				29.3	19.700	36.260
																				37.2	19.450	36.280
																				150.0	16.830	36.210
																				274.3	12.760	35.590
																				342.9	11.640	35.380
29° 7.9′	88°40.5′	4/ 2/65	11:32	91	85		69.5	65.5	5				130	9		3	7	1	X1	.0	22.500	21.310
																				10.1	22.100	24.410
																				32.9		36.490
																				50.0	19.770	36.430
																				85.3	18.120	36.330
29°13.2′	88°43.2′	4/ 2/65	10:41	71	61		66.0	64.8					90	6		2	7	0	X1	.0	17.470	1.090
																				10.4	17.400	32.630
																				30.2	16.700	35.530
																				61.0	15.860	36.010
29°19.0′	88°46.5′	4/ 2/65	9:47	59	50		66.2	64.5	2				80	8		2	7	0	X1	.0	16.600	9.970
																				10.4	19.130	32.600
																				30.2	16.080	35.220
																				50.0	15.880	35.980
29°23.6′	88°48.8′	4/ 2/65	9:46	27	24		67.2	65.2	5				0	0		2	7	0		.0	19.760	18.030
																				10.1	18.760	31.800
																				20.1	16.160	34.760
																				24.4	16.020	35.520
29°23.6′	88°39.1′	4/ 2/65	7:39		45		67.5	65.2	7				0	0		2	7	0	X0	.0	19.420	33.150
																				12.5	18.330	33.770
																				19.8	16.630	
																				45.4	16.020	
29°23.6′	88°30.0′	4/ 2/65	6:21	57	50		68.2	66.0	7				0	0		5	7	0	X1	.0	19.730	28.610
																				10.1	18.600	34.310
																				28.0	18.280	36.250
																				50.0	17.560	36.380

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29°23.6′	88°20.5′	4/ 2/65	5:15	55	50		66.5	65.0					340							.0	19.130	31.790
																				10.4	19.620	35.790
																				30.2	20.120	36.420
																				50.0	19.430	36.430
29°15.5′	88°16.1′	4/ 2/65	3:52	94	85		69.0	65.2					250	2						.0	21.100	36.450
																				10.1	21.040	36.440
																				32.9	20.060	36.430
																				50.0	19.830	36.440
																				85.3	18.940	36.410
29° 9.7′	88°13.0′	4/ 2/65	2:00	365	343		68.5	65.2					190	6						.0	21.150	36.490
																				10.4	20.810	36.340
																				29.0		36.460
																				69.5	19.650	36.440
																				150.0	16.530	36.140
																				277.5	12.790	35.560
																				342.9	11.200	35.330
29° 3.5′	88° 9.5′	4/ 1/65	23:38	951	869		68.0	65.4					160	6						.0	21.100	36.280
																				10.4	20.820	36.260
																				30.2	20.800	36.210
																				75.0	19.590	36.420
																				146.9		36.240
																				274.3	18.830	35.540
																				499.9	12.370	35.040
																				700.1	6.660	34.980
																				868.7		34.980
29° 8.5′	87°56.3′	4/ 1/65	20:47	914	868		68.0	65.0					120	6						.0	21.080	36.380
																				10.4	20.970	36.380
																				30.2		36.450
																				75.0	19.700	36.490
																				146.9		36.110
																				274.3	12.140	35.500
																				499.9	8.890	35.060
																				700.1	6.330	34.890
																				868.3	5.170	34.910
29°21.3′	87°56.3′	4/ 1/65	18:45	86	85		68.0	65.0					130	4				1		.0	19.550	34.940
																				10.1	20.000	36.280
																				32.9	22.140	36.400
																				50.0	19.590	36.720
																				85.3	17.210	36.220
29°30.9′	87°43.8′	4/ 1/65	17:00	53	50		67.5	64.0	9				150	6		2	7	1	X1	.0	20.260	35.500
																				10.1	19.890	35.840
																				30.2	18.700	35.940
																				50.3	18.390	36.590

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP.°F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29°22.0′	87°36.0′	4/ 1/65	15:25	183	169		67.5	64.2	9				110	8		2	7	2	X1	.0	20.470	35.750
																				10.1	20.350	36.330
																				29.3	19.570	36.580
																				93.5	19.540	36.710
																				169.1	14.400	36.040
29°15.8′	87°30.3′	4/ 1/65	13:20	950	877		68.0	64.8	9				110	8		2	7	1	X1	.0	20.500	34.790
																				10.1	19.910	34.930
																				29.9		36.120
																				143.3	15.610	36.250
																				151.5		36.230
																				287.7	11.740	35.680
																				504.4	8.100	35.200
																				706.8	6.580	35.110
																				876.9	5.160	35.140
29°27.9′	87°17.4′	4/ 1/65	10:30	366	348		66.8	64.0	7				100	13		4	7	1	X2	.0	20.100	35.580
																				11.3	21.200	36.640
																				31.4	20.270	36.670
																				76.8	19.560	36.710
																				152.1	16.310	36.370
																				269.4	13.020	35.730
																				347.5	12.000	35.580
29°41.0′	87°17.4′	4/ 1/65	8:44	183	177		66.5	64.5	9				90	13		6	7	1	X2	.0	21.680	36.380
																				9.8	21.280	36.310
																				146.0	20.170	35.710
																				167.0	18.770	35.690
																				177.0	13.990	35.960
29°47.8′	87°17.4′	4/ 1/65	8:30	90	91		65.0	63.0	9				100	6		7	6	1	X3	.0	19.600	35.380
																				31.7	19.600	36.130
																				58.8	17.200	36.000
																				79.9	14.550	35.740
																				90.5	14.380	35.720
29°55.0′	87°17.4′	4/ 1/65	6:39		32															.0	19.590	35.340
																				7.0	19.490	35.440
																				21.0	19.130	35.320
																				31.7	17.560	35.230
30° 5.1′	87°17.4′	4/ 1/65	5:02	29	29		62.0	61.2					50	2						.0	17.500	33.800
																				9.8	17.440	33.810
																				18.3	16.380	34.420
																				29.0	16.170	35.140
30° 9.6′	87°30.7′	4/ 1/65	3:20	26	21		62.2	61.2					40	1						.0	17.450	34.750
																				10.7	16.900	33.650
																				15.8	16.390	34.260
																				21.3	16.180	34.560

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
30° 4.5′	87°44.5′	4/ 1/65	1:31	17	16		62.8	62.2					40	6						.0	18.070	33.830
																				5.5	18.020	33.860
																				11.0	17.960	34.560
																				16.2	17.860	34.800
29°51.3′	87°44.5′	3/31/65	23:52	33	29		64.5	62.8					330	2						.0	18.870	34.730
																				11.0	18.730	34.740
																				18.3	17.790	34.830
																				29.0	17.210	35.220
29°38.6′	87°56.2′	3/31/65	21:45	42	39		64.4	62.0					300	2						.0	19.150	33.830
																				19.2	18.150	35.020
																				28.0	18.100	35.760
																				38.7	18.080	36.230
29°38.6′	88° 8.5′	3/31/65	20:01	39	39		65.5	63.5					310	1						.0	18.870	34.040
																				17.4	19.360	35.510
																				28.0	19.030	36.360
																				38.7	18.010	36.160
29°38.6′	88°19.9′	3/31/65	18:45	38	36		64.6	61.5					190	1				1		.0	19.250	33.270
																				14.3	18.200	34.890
																				25.0	17.870	36.200
																				35.7	17.200	36.260
29°38.6′	88°30.7′	3/31/65	17:32	37	32		66.5	62.2	7				220	1		4	7	0	X1	.0	19.300	31.290
																				10.4	18.590	33.680
																				21.0	17.320	35.240
																				31.7	17.280	35.860
29°56.5′	88°28.7′	3/31/65	15:10	31	26		67.2	62.0	7				160	2		6	7	0	X2	.0	18.860	32.150
																				4.9	18.400	32.310
																				15.5	16.960	34.790
																				26.2	16.650	35.080
30° 4.3′	88°37.7′	3/31/65	12:30		16															.0	18.300	30.800
																				5.5	18.110	30.960
																				11.0	17.460	31.440
																				16.2	16.450	34.150
30°12.9′	88°47.3′	3/31/65	11:50	9	6		63.5	60.5	7				50	2		6	6	1	X2	.0	18.000	28.130
																				6.4		28.860
30°17.8′	89° 2.2′	4/ 3/65	17:45	10	8		70.5	68.0					0	0		2	7	1	X1	.0	20.840	16.280
																				8.2		23.920
30°14.0′	88°59.0′	4/ 3/65	17:24	7	6		71.0	69.5	7				190	14		2	7	1	X1	.0	20.810	19.030
																				5.8		23.200
30°11.2′	88°59.3′	4/ 3/65	16:44	7	6		71.5	68.0	7							3	7	2	X1	.0	21.260	19.840
																				5.8		22.140
30° 6.8′	88°56.0′	4/ 3/65	16:00	12	8		70.0	67.5	7				180	11		2	7	1	X1	.0	20.920	22.720
																				8.2		27.460
30°17.8′	89° 2.2′	5/11/65	9:00	9	8		77.5	72.8	4				200	8		5	7	0	X2	.0	26.000	17.220
																				7.3		

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP.°F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
30°14.0′	88°59.0′	5/11/65	9:40	9	8		79.0	72.0	6				160	3			5	0	X1	.0	25.900	21.050
																				7.3		24.380
30°11.2′	88°59.3′	5/11/65	10:13	9	9		79.9	77.5	5				280	5		5	7	0	X1	.0	26.100	23.850
																				7.3		25.680
29°19.0′	88°46.5′	5/13/65	21:20	55	50		76.8	72.0					140	16					X	.0	26.200	22.240
																				8.5	25.020	29.060
																				26.8	20.070	36.210
																				45.4	18.060	36.180
29°23.6′	88°48.8′	5/13/65	20:08	29	24		76.6	71.1					140	16						.0	25.700	26.780
																				8.5	25.070	28.720
																				17.7	21.030	34.530
																				21.6	20.500	35.070
29°23.6′	88°39.1′	5/13/65	18:40	51	50		77.0	70.5	6				120	17		2	7	3	X1	.0	25.500	28.750
																				8.2	23.990	29.770
																				26.2	21.360	34.140
																				44.2	18.230	36.240
29°23.6′	88°30.1′	5/14/65	17:25	59	50		77.0	71.1	6				120	14		3	7	2	X1	.0	25.500	30.720
																				9.4	24.510	31.420
																				29.3	22.990	36.390
																				49.1	18.350	36.280
29°23.6′	88°20.5′	5/14/65	16:00	57	50		78.0	70.0	6				130	13		2	7	2	X1	.0	25.000	30.990
																				7.9	25.410	31.330
																				25.6	20.800	36.160
																				43.0	18.190	36.310
29°15.5′	88°16.1′	5/14/65	14:45	91	85		77.9	77.0	6				120	14		2	7	2	X1	.0	25.200	34.530
																				8.5	24.360	34.780
																				29.9	22.980	36.410
																				46.0	20.850	36.330
																				79.2	17.940	36.270
29° 9.7′	88°13.0′	5/14/65	13:40	366	343		77.0	70.0	6				140	15		1	7	2	X1	.0	29.900	34.530
																				9.4		34.900
																				28.3	24.190	36.440
																				68.3		36.310
																				149.0	19.530	36.350
																				273.4	17.430	36.310
																				342.0	14.840	35.970

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29° 3.5′	88° 9.5′	5/14/65	11:45	988	868		77.5	70.0	9				140	16		2	7	1	X1	.0	25.200	34.320
																				9.4		35.140
																				29.3		36.460
																				75.0		36.420
																				149.0	18.880	36.350
																				270.4		35.940
																				499.0	8.990	35.070
																				699.2	6.870	34.940
																				867.5	5.800	34.880
29° 8.5′	87°56.3′	5/14/65	9:00	746	868		78.0	71.0	9				110	13		2	7	1	X1	.0	25.000	35.460
																				9.4		35.430
																				29.3		36.340
																				75.0		36.310
																				149.0	17.740	36.010
																				270.4		35.650
																				498.9	7.910	34.970
																				699.2	6.240	34.870
																				867.5	5.480	34.900
29°21.3′	87°56.3′	5/14/65	9:30	87	81		77.3	71.3	9				120	10		2	7	0	X1	.0	25.000	33.870
																				4.3	24.690	34.510
																				25.3	23.550	36.550
																				41.1	21.520	36.470
																				74.1	18.440	36.290
29°30.9′	87°43.8′	5/12/65	10:00	55	50		78.0	73.0	9				230	9		3	7	0	X1	9.4	24.260	34.180
																				29.3	20.780	36.440
																				49.1	19.240	36.380
29°30.9′	87°43.8′	5/12/65	11:00	55	50		77.2	73.9	9				270	9		2	7	1	X1	.0	24.900	
																				9.4	24.520	34.330
																				29.3	20.680	36.500
																				49.1	19.040	36.380
29°30.9′	87°43.8′	5/12/65	12:00	55	50		79.0	74.4	9				270	11		2	7	1	X1	.0	25.200	33.740
																				9.4	24.370	34.240
																				29.3	20.570	36.470
																				49.1	19.240	36.360
29°30.9′	87°43.8′	5/12/65	13:00	55	50		79.0	75.0	9				270	9		2	7	1	X1	.0	25.400	34.050
																				29.3	20.720	36.370
																				9.4	24.170	33.680
																				49.1	19.110	36.430
29°30.9′	87°43.8′	5/12/65	15:05	55	50		79.0	73.0	9				240	10		2	7	0	X1	.0	25.000	33.970
																				9.4	24.190	33.920
																				29.3	20.820	36.420
																				49.1	18.730	36.260

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29°30.9′	87°43.8′	5/12/65	15:55	55	50		79.0	74.5	9				240	12		2	7		X1	.0	25.000	33.870
																				10.7	24.360	34.080
																				30.5	21.310	36.430
																				50.3	18.730	36.220
29°30.9′	87°43.8′	5/12/65	17:10	55	50		77.0	74.0	9				230	15		2	7		X1	.0	25.000	33.860
																				9.4	24.180	34.060
																				29.3	20.940	36.330
																				49.1	18.750	36.270
29°22.0′	87°36.0′	5/14/65	4:47	192	168		75.5	70.2	9				110	5		3	7	0	X1	.0	24.900	34.390
																				9.1	24.450	34.330
																				16.8	24.320	36.050
																				67.4	18.800	36.330
																				151.5	16.420	36.100
29°15.8′	87°30.3′	5/14/65	1:53	951	869		69.6	76.0					140	2						.0	24.850	35.090
																				9.1		35.740
																				29.0		36.520
																				74.1	19.350	36.890
																				149.0		36.410
																				273.4		35.490
																				499.0	8.150	34.970
																				699.2	6.320	34.870
																				867.8		34.880
29°29.9′	87°17.4′	5/12/65	22:10	366	597		69.5	76.0					250	6						.0	24.600	35.160
																				9.4		35.210
																				29.0		35.140
																				68.3		35.080
29°41.0′	87°17.4′	5/12/65	19:30	170	168		79.0	69.0	6				190	2						.0	25.200	34.230
																				8.5	24.980	34.250
																				16.5	23.840	35.590
																				70.1	18.270	36.230
																				157.5	15.440	35.990
29°47.8′	87°17.4′	5/13/65	17:15	91	85		77.0	67.5	9				120	3		2	7	0	X1	.0	25.600	34.250
																				9.1	24.510	34.490
																				30.2	21.440	36.160
																				44.8	17.910	35.940
																				77.1	17.350	36.090
29°55.0′	87°17.4′	5/13/65	16:15	44	30		77.0	67.0	7				200	6		5	7		X0	.0	25.600	34.480
																				9.4	24.800	34.810
																				19.2	23.840	35.380
																				29.0	19.750	35.700
30° 5.1′	87°17.4′	5/13/65	14:15	31	27		77.2	67.0	8				180	8		3	7	1	X1	.0	25.300	33.040
																				8.8	24.430	33.930
																				18.9	21.580	33.200
																				25.9	19.310	35.090

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
30° 9.6′	87°30.7′	5/13/65	8:39	31	20		78.5	73.0					350	15				3	X0	.0	25.600	32.560
																				4.0	24.590	32.570
																				9.1	23.700	34.460
																				20.1	21.350	35.560
29°51.3′	87°44.5′	5/11/65	22:00	31	27		77.5	74.8					250	20						.0	24.700	33.590
																				9.1	24.460	34.380
																				19.2	22.800	35.890
																				27.4	18.010	35.480
29°30.9′	87°43.8′	5/12/65	10:00	55	50		78.0	73.0	9				230	9		3	7	0	X1	9.4	24.260	34.180
																				29.3	20.780	36.440
																				49.1	19.240	36.380
29°38.6′	87°56.2′	5/10/65	21:45	37	36		75.9	71.5												.0	25.300	31.920
																				8.8	23.660	34.540
																				18.9	22.940	35.970
																				35.1	18.140	35.870
29°38.6′	88° 8.5′	5/10/65	20:18	37	30		76.0	70.5												.0	24.700	33.470
																				9.4	24.530	33.840
																				19.2	23.040	34.350
																				29.0	18.550	35.900
29°38.6′	88°19.9′	5/10/65	18:24	38	34		77.0	71.4					70	3		4	7	0	X1	.0	25.700	33.150
																				9.1	23.930	34.110
																				19.2	22.580	35.060
																				33.5	19.050	36.310
29°38.6′	88°30.7′	5/11/65	17:16	39	34		71.9	70.9	6				150	2		2	7	0	X1	.0	26.300	28.210
																				8.5	23.160	34.140
																				18.0	21.810	35.420
																				30.2	19.310	36.280
29°56.5′	88°28.7′	5/11/65	16:42	24	25		79.0	73.0	9				180	4			4	0	X1	.0	26.200	32.000
																				10.1	24.680	32.210
																				20.1	19.650	34.510
																				24.4	18.920	34.960
30° 4.3′	88°37.7′	5/11/65	13:06	16	15		78.4	70.2	8				180	3		4	7		X1	.0	25.950	27.780
																				4.0		28.340
																				8.5	25.950	30.020
																				14.3	23.530	32.680
30°12.9′	88°47.3′	5/11/65	11:30	15	10		78.0	72.4	7				210	4		6	7	0	X1	.0	26.600	27.300
28°41.0′	89°44.0′	7/20/65	3:47	93	83		83.3	78.9					270	7						.0	28.700	32.341
																				9.6	29.560	35.829
																				31.2	27.480	36.457
																				48.5	24.150	36.446
																				82.4		35.991

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
28°30.9′	89°44.0′	7/20/65	5:15	549	529		83.0	77.9	9				350	6		2	7	1	X1	.0	28.700	34.834
																				19.7	26.820	36.168
																				51.7	21.460	36.447
																				113.0	14.960	36.523
																				185.2	10.580	35.927
																				506.5	10.290	35.244
																				528.5	7.570	35.309
28°14.0′	89°43.5′	7/20/65	8:20	549	484		82.7	77.5	9	29			20	8		1	7	1	X1	.0	29.200	36.434
																				12.0	29.040	36.421
																				22.0		36.492
																				42.9	24.230	36.447
																				82.9	19.260	36.381
																				154.0	15.840	36.073
																				272.8	12.010	35.490
																				484.0	7.750	34.866
27°55.0′	89°45.0′	7/20/65	11:00	914	819		83.0	76.8	9	31			10	7		2	7	1	X1	.0	29.600	36.628
																				9.0	29.200	34.549
																				27.5		34.539
																				70.0	20.180	34.457
																				131.0	15.110	36.161
																				258.0	12.640	35.579
																				471.0	8.370	35.000
																				660.0	6.540	34.870
																				819.0		36.052
28° 4.3′	89°32.2′	7/20/65	14:05	914	819		84.5	78.0	9	23			30	11			7	1	X1	.0	29.660	36.764
																				9.0	29.250	36.653
																				28.0		36.602
																				70.0	21.050	36.497
																				131.0		36.157
																				258.0	13.070	35.663
																				471.0	8.280	34.964
																				819.0	5.580	34.872
28°14.7′	89°19.3′	7/20/65	17:00	914	819		85.0	79.9	9	23			10	11		2	7	2	X1	.0	29.500	36.712
																				9.0	29.300	36.641
																				28.0		36.617
																				70.0	21.440	36.415
																				131.0		36.218
																				258.0	12.750	35.581
																				471.0	9.030	35.074
																				660.0	6.960	34.882
																				819.0	5.560	34.874

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP.°F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
28°31.2′	89°20.0′	7/20/65	20:00	366	324		83.8	78.8					10	11						.0	29.300	32.787
																				9.8	29.050	36.369
																				28.7	27.440	36.436
																				65.5	20.140	36.372
																				141.4	16.940	36.202
																				258.8	12.700	35.576
																				323.4	11.330	35.369
28°46.5′	89°23.5′	7/20/65	22:18	91	80		84.2	80.2					10	10						.0	29.400	30.633
																				9.0	29.140	35.309
																				30.0	26.020	36.486
																				47.0	21.540	36.525
																				80.0	19.180	36.498
28°54.5′	89° 4.5′	7/21/65	0:25	91	81		83.5	80.5					180	6						.0	29.500	24.205
																				9.3	29.400	36.038
																				32.0	23.830	36.480
																				47.8	20.820	36.437
																				81.0	17.880	36.334
28°48.7′	88°59.5′	7/21/65	1:50	384	324		84.0	79.0					20	7						.0	29.400	27.637
																				10.0	29.310	35.963
																				28.0	27.040	36.435
																				66.0	20.860	36.531
																				142.0	17.010	36.243
																				259.0	10.930	35.310
																				324.0	9.880	35.167
28°42.7′	88°55.2′	7/21/65	3:30	914	820								20	6						.0	29.200	29.029
																				10.5	29.050	36.463
																				29.0		36.743
																				70.0	20.590	36.414
																				141.0		36.198
																				259.0	12.640	35.559
																				472.0	8.330	34.982
																				661.0	5.960	34.873
																				820.0	5.370	34.894
28°47.5′	88°43.0′	7/21/65	5:45	1002	869		84.5	78.8	9				0	0		1	7	1	X1	.0	29.400	28.376
																				10.0	29.000	36.438
																				30.0		36.407
																				75.0	20.300	36.506
																				150.0		36.126
																				255.0	12.680	35.574
																				500.0	7.900	34.946
																				700.0	6.940	34.870
																				869.0	6.020	34.891

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
28°50.3′	88°31.0′	7/21/65	17:55	958	869		84.8	79.2	7				0	0		6	7	1	X1	.0	29.300	27.215
																				10.0	28.960	36.622
																				30.0		36.448
																				75.0	20.700	36.563
																				150.0		36.160
																				255.0	12.820	35.590
																				500.0	9.320	35.012
																				700.0		34.871
																				869.0	5.200	34.909
29° .0′	88°35.0′	7/21/65	10:00	395	343		86.0	82.3	7				220	24		8	7	1	18	.0	29.800	26.258
																				10.0	29.110	36.215
																				30.0	26.920	36.443
																				75.0	20.180	36.507
																				110.0	18.680	36.427
																				274.0	12.050	35.494
																				343.0	10.710	35.286
29° 7.9′	88°40.5′	7/21/65	11:45	88	85		81.5	76.0	7	7			260	18		4	7	2	X1	.0	29.700	32.118
																				10.0	28.020	32.473
																				30.0	21.030	36.474
																				50.0	18.430	36.378
																				85.0	16.030	36.098
29°13.2′	88°43.2′	7/21/65	13:50	73	64		83.6	77.0	7	5			230	5		3	7	2	X1	.0	29.700	32.884
																				9.7	28.420	33.492
																				31.3	20.160	36.482
																				50.8	18.080	36.376
																				61.3	16.750	36.208
29°19.0′	88°46.5′	7/21/65	13:48	66	50		86.0	77.0	7	6			0	0		4	7	1	X1	.0	30.300	33.091
																				10.0	28.960	33.157
																				40.0	20.010	36.473
																				50.0	19.960	36.473
29°23.6′	88°48.8′	7/21/65	14:35	27	25		80.0	79.0	7				300	5		6	7	1	X1	.0	30.000	31.489
																				10.0	27.510	34.973
																				20.0	23.460	36.458
																				25.0	22.250	36.367
29°23.6′	88°39.1′	7/21/65	16:05	55	46								290	5		8	6	1		.0	29.300	29.848
																				9.5	28.380	35.067
																				20.0	25.230	36.479
																				46.0	20.110	36.483
29°23.6′	88°30.0′	7/21/65	17:05	57	50		84.0	78.5	7	6			0	0		7	7	1	X1	.0	29.450	30.808
																				10.0	28.380	34.515
																				30.0	22.420	36.545
																				50.0	19.430	36.498

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29°23.0′	88°18.0′	7/21/65	18:30	48	50		84.0	78.5	7	6			360	5		4	7	0	X1	.0	29.400	31.378
																				10.0	28.030	35.447
																				30.0	20.990	36.499
																				50.0	19.100	36.457
29°15.5′	88°16.1′	7/21/65	19:35	91	85		83.8	78.5					70	4						.0	29.500	31.418
																				10.0	28.410	35.541
																				30.0	21.890	36.477
																				50.0	19.900	36.525
																				85.0	17.190	36.257
29° 9.7′	88°13.0′	7/21/65	20:40	461	343		84.0	78.0					30	13						.0	29.400	28.274
																				10.0	28.990	36.312
																				30.0	24.900	36.468
																				75.0	19.800	36.449
																				150.0	16.140	36.131
																				274.0	12.300	35.535
																				343.0	11.480	35.409
29° 3.3′	88° 8.3′	7/21/65	22:15	1024	869		84.5	79.0					0	0						.0	29.420	27.009
																				10.0	29.000	36.411
																				30.0		36.360
																				75.0	19.980	36.505
																				150.0		36.107
																				255.0	12.560	35.552
																				500.0	7.830	34.944
																				700.0	5.690	34.874
																				869.0	5.140	34.905
29° 8.2′	87°55.0′	7/22/65	0:05	1024	869		83.3	78.3					90	5						.0	29.800	24.525
																				10.0	28.870	36.446
																				30.0		36.371
																				75.0	19.760	36.392
																				150.0		35.988
																				255.0	10.730	35.284
																				500.0	7.080	34.899
																				700.0	5.920	34.866
																				869.0	5.220	34.900
29°21.4′	87°54.0′	7/22/65	3:00	87	85		83.5	77.0					150	12						.0	29.600	26.292
																				10.0	29.280	36.098
																				30.0	23.580	36.524
																				49.0	20.020	36.465
																				85.0	17.250	36.336
29°30.9′	87°43.8′	7/22/65	4:47	53	50		83.0	77.2					130	11		4	7	2	X1	.0	29.200	32.157
																				10.0	29.460	34.919
																				30.0	23.580	36.434
																				50.0	20.120	36.347

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29°22.0′	87°36.0′	7/22/65	6:40	230	168		83.5	78.0	7				200	11		2	7	2		.0	29.200	32.710
																				10.0	29.630	36.070
																				30.0	27.130	36.402
																				75.0	20.260	36.482
																				168.0	14.540	35.853
29°27.9′	87°17.4′	7/22/65	10:50	358	343		82.5	75.5	7	11			80	11		2	7	2	X1	.0	29.100	30.866
																				10.0	28.850	33.772
																				29.5	27.480	36.488
																				75.0	18.230	36.280
																				110.0	16.090	36.092
																				274.0	11.810	35.442
																				343.0	9.640	35.152
29°40.3′	87°17.0′	7/22/65	12:55	169	168		83.0	76.0	7	10			90	20		1	7	3	X1	.0	29.200	32.874
																				10.0	29.110	32.825
																				30.0	24.270	35.973
																				75.0	18.470	35.307
																				168.0	15.120	35.948
29°48.0′	87°17.0′	7/22/65	14:05	88	85		83.8	77.3	7	13				11		2	7	3	X1	.0	29.200	32.754
																				10.0	28.950	32.731
																				30.0	23.180	36.047
																				50.0	21.320	36.478
																				85.0	17.970	36.238
29°55.0′	87°17.4′	7/22/65	15:05	31	30		83.5	77.2	7	14			110	12		0	7	3	X1	.0	29.100	32.402
																				10.0	28.810	33.252
																				20.0	26.680	36.222
																				30.0	22.840	36.134
30° 5.1′	87°17.4′	7/22/65	16:20	33	27		83.4	75.5					140	12		2	7	3	X1	.0	28.900	32.523
																				10.0	28.440	33.408
																				20.0	23.820	35.507
																				27.0	23.480	35.547
30° 9.6′	87°30.7′	7/23/65	10:40	21	20		82.7	75.2					0	0		2	7	1	X1	.0	28.800	33.737
																				5.0	28.320	33.809
																				10.0	28.060	34.128
																				20.0	27.790	34.216
30° 4.0′	87°43.0′	7/23/65	12:20	18	15		86.5	74.5	8	11			0	0			7	1	X1	.0	29.000	33.018
																				5.0	28.500	32.955
																				10.0	28.470	33.455
																				15.0	27.030	34.451
29°51.3′	87°44.0′	7/23/65	14:05	31	27		83.0	72.0	9	21			0	0		2	7	1	X1	.0	29.900	33.402
																				10.0	29.120	33.362
																				20.0	27.850	36.344
																				27.0	23.170	35.580

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR Forel-Ule	TRANS-PARENCY Secchi Disc (m)	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb			Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29°40.0′	87°50.5′	7/23/65	16:25	40	37		83.5	72.0	7	7			0	0		3	7	1	X1	.0	29.900	29.096
																				10.0	29.140	34.386
																				20.0	27.710	36.380
																				37.0	23.860	36.293
29°38.6′	88° 8.5′	7/23/65	17:35	37	30		83.5	73.0	7	6			0	0		2	7	1	X1	.0	29.600	30.682
																				10.0	28.900	36.105
																				20.0	27.310	36.422
																				30.0	25.250	36.490
29°38.2′	88°19.0′	7/23/65	18:43	38	34		83.0	73.0					110	5						.0	29.700	32.543
																				10.0	29.270	33.447
																				20.0	26.850	35.061
																				34.0	23.930	36.487
29°38.5′	88°28.7′	7/23/65	19:50	40	30		83.0	72.5					0	0						.0	29.600	33.110
																				10.0	29.170	33.842
																				20.0	25.220	36.349
																				30.0	21.950	36.439
29°49.0′	88°29.0′	7/23/65	21:30	32	31		82.9	73.5					120	6						.0	29.000	32.581
																				10.0	28.270	36.210
																				15.0	26.140	36.335
																				31.0	22.910	36.488
30° 4.5′	88°39.5′	7/23/65	23:25	18	15		82.5	73.0					0	0						.0	28.700	32.780
																				5.0	28.630	32.776
																				10.0	28.030	34.737
																				15.0	25.370	35.970
30°13.0′	88°47.0′	7/24/65	0:45	10	9		82.5	73.5					0	0						.0	28.700	32.167
																				9.0		32.711
30° 7.0′	88°55.8′	7/19/65	12:08	12	11		85.9	77.0	7				0	0		2	7	1	X1	.0	28.740	29.005
																				10.5		35.576
29°46.5′	89° 3.8′	7/19/65	15:00	5	4		80.9	79.9	6	1			290	15		2	7	2	X1	.0	29.600	27.260
																				4.0		27.409
29°29.7′	89° 7.5′	7/19/65	17:00	13	11		86.0	79.0	7	3			260	13		2	7	2	X1	.0	28.740	33.152
																				10.8		34.656
29°25.0′	88°58.5′	7/19/65	18:00	13	12		85.8	80.1	7	7			170	17		2		2	X1	.0	28.700	33.937
																				11.6		36.148
29°14.2′	88°57.4′	7/19/65	19:20	20	19		85.0	78.8					280	10						.0	30.200	20.006
																				11.0		31.791
																				18.8		36.403
29° 9.5′	88°56.5′	7/19/65	20:00	26	27		83.5	79.5					270	11						.0	28.550	18.223
																				14.8		34.600
																				26.1		36.446

GULF COAST RESEARCH LABORATORY

NORTHEASTERN GULF OF MEXICO
CONTINENTAL SHELF BETWEEN 87°W AND 90°W

LATITUDE N	LONGITUDE W	DATE	TIME (CST)	DEPTH (m)		BAROMETRIC PRESSURE (in. Hg)	AIR TEMP. °F		WATER COLOR	TRANS-PARENCY	SWELL		WIND		CLOUD		VISI-BILITY (mi.)	SEA STATE (ft.)	WEATHER	SAMPLE DEPTH (m)	WATER TEMP. °C	SALINITY ppt
				Bottom	Maximum Sampled		Dry Bulb	Wet Bulb	Forel-Ule	Secchi Disc (m)	Dir. °	Speed mph	Dir. °	Speed mph	Type	Amount						
29° .0′	88°57.0′	7/19/65	21:20	91	88		83.5	79.9					270	13						.0	28.600	24.582
																				36.2	21.960	36.482
																				57.2	19.550	36.471
																				77.2		36.398
																				87.7	17.150	36.224
28°59.0′	89° 7.0′	7/19/65	22:45	25	22		83.0	80.5					270	7						.0	28.200	27.758
																				10.0		36.139
																				21.9		36.404
28°53.0′	89°26.0′	7/20/65	0:04	24	21		82.9	79.0					270	5						.0	27.700	26.309
																				10.0		35.577
																				20.3		36.332
30°18.8′	89° 2.2′	7/24/65	3:00		0		86.0	78.5	6				0	0						.0		28.544
30°14.0′	88°59.0′	7/19/65	2:00		0		86.0	78.5					0	0						.0		28.231
30°10.1′	88°58.0′	7/19/65	1:00		0		85.5	78.2												.0		30.531
30°14.0′	88°59.0′	7/19/65	10:52	11	3		86.0	78.5		25			0	0		0	7	0	X1	.0	28.700	27.224
																				2.5		33.433
30°10.1′	88°58.0′	7/19/65	11:35	10	8		85.5	78.2	6	35			0	0		2	7	0	X1	.0	28.450	29.300
																				7.6		35.021

APPENDIX B

Fortran Program for Reading and Printing Data Files

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      PROGRAM CONSH2
C*****READS AND PRINTS 1963-65 CONTINENTAL SHELF DATA FILES (.DTA)
C     REVISED 8-23-94
      CHARACTER FILIN*78,SCPAS*1,PRTYN*1,SHIP*2,STA*4,CLDTP*2,WTHR*2
      DIMENSION DEPTH(20),TEMP(20),SAL(20)
C*****OPEN INPUT FILE
      WRITE (*,5)
    5 FORMAT (/' ENTER NAME OF INPUT FILE'/'  )'\)
      READ (*,'(A)') FILIN
      OPEN (2,FILE=FILIN)
C*****REQUEST PRINT-OUT INFO FROM USER
      WRITE (*,6)
    6 FORMAT (/' PAUSE AFTER EACH STATION ON SCREEN PRINT-OUT (Y/N)?'/'
     1 )'\)
      READ (*,'(A)') SCPAS
      WRITE (*,7)
    7 FORMAT (/' SEND OUTPUT TO PRINTER ALSO (Y/N)?'/'  )'\)
      READ (*,'(A)') PRTYN
      IF (PRTYN .EQ. 'y') PRTYN = 'Y'
      IF (PRTYN .EQ. 'Y') OPEN (3,FILE='PRN')
      LPCNT = 2
      IF (PRTYN .EQ. 'Y') GO TO 8
      GO TO 10
    8 WRITE (3,9) FILIN
    9 FORMAT ('+',A//)
C*****READ HEADER CARD
   10 READ(2,11,END=199) SHIP,ICRUS,STA,LATDG,RLATM,LONDG,RLONM,MONTH,ID
     1AY,IYEAR,ICSTH,ICSTM,IBOTD,MSDEP,IWIRL,IWIRA,BARP,DRYBL,WETBL,IWCL
     2R,ITRNS,ISWDR,ISWSP,IWNDR,IWNSP,CLDTP,ICLDA,IVIS,ISEAS,WTHR,NMOBS
   11 FORMAT (A2,I4,A4,I2,F4.1,I3,F4.1,5(I2),3(I4),I2,3(F4.1),2(I2),I3,I
     12,I3,I2,A2,3I2,A2,I2)
      DO 15 N = 1,NMOBS
      READ (2,12) DEPTH(N),TEMP(N),SAL(N)
   12 FORMAT (F6.1,2(F6.3))
   15 CONTINUE
C*****WRITE DATA TO SCREEN
      IF (ICSTM .LT. 10 .AND. ICSTM .GE. 0) GO TO 32
      WRITE (*,30) SHIP,ICRUS,STA,LATDG,CHAR(248),RLATM,LONDG,CHAR(248),
     1RLONM,MONTH,IDAY,IYEAR,ICSTH,ICSTM
   30 FORMAT (/' ',64('=')/' SHIP  CRUISE  STATION  LATITUDE  LONGITUDE'
     1,'   DATE   TIME-CST'/2X,A2,3X,I4,5X,A4,4X,I2, A1,F4.1,'''',2X,I3,
     2A1,F4.1,'''',1X,2(I2,'/'),I2,2X,I2,':',I2/)
      GO TO 49
   32 WRITE (*,33) SHIP,ICRUS,STA,LATDG,CHAR(248),RLATM,LONDG,CHAR(248),
     1RLONM,MONTH,IDAY,IYEAR,ICSTH,ICSTM
   33 FORMAT (/' ',64('=')/' SHIP  CRUISE  STATION  LATITUDE  LONGITUDE'
     1,'   DATE   TIME-CST'/2X,A2,3X,I4,5X,A4,4X,I2, A1,F4.1,'''',2X,I3,
     2A1,F4.1,'''',1X,2(I2,'/'),I2,2X,I2,':0',I1/)
   49 WRITE  (*,40) IBOTD,MSDEP,IWIRL,IWIRA,BARP,DRYBL,WETBL,IWCLR,ITRNS
     1,ISWDR,ISWSP
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   40 FORMAT ('   DEPTH       WIRE    BAR.   AIR-TEMP.   WATER     SWELL'
     1/'  BOT MAX-S  LEN ANG  PRES.  DRY   WET  COL TRNS  DIR SPD'/1X,I4
     2,1X,I4,2X,I4,1X,I2,3X,F4.1,2X,2(F4.1,2X),2(I2,3X),I3,1X,I2/)
      WRITE (*,50) IWNDR,IWNSP,CLDTP,ICLDA,IVIS,ISEAS,WTHR
   50 FORMAT ('  WIND      CLOUD   VIS.  SEA    WEATHER'/' DIR SPD  TYPE
     1 AMT      STATE'/1X,I3,1X,I2,3X,A2,2(3X,I2),4X,I2,7X,A2/)
      WRITE (*,55)
   55 FORMAT ('   DEPTH   TEMP.   SAL.')
      LSCNT = 12
      DO 65 N = 1,NMOBS
      WRITE (*,60) DEPTH(N),TEMP(N),SAL(N)
   60 FORMAT (2X,F6.1,2(2X,F6.3))
      LSCNT = LSCNT + 1
      IF (LSCNT .GE. 23) GO TO 64
      GO TO 65
   64 IF (SCPAS .EQ. 'Y') PAUSE '   '
      LSCNT = 0
   65 CONTINUE
      IF (SCPAS .EQ. 'Y' .OR. SCPAS .EQ. 'y') PAUSE '   '
C*****WRITE DATA TO PRINTER
      IF (PRTYN .NE. 'Y') GO TO 10
      JPCNT = 1
      IF (LPCNT+NMOBS .GT. 46) GO TO 127
      GO TO 129
  127 WRITE (3,128)
  128 FORMAT ('1')
      LPCNT = 0
  129 IF (ICSTM .LT. 10 .AND. ICSTM .GE. 0) GO TO 132
      WRITE (3,130) SHIP,ICRUS,STA,LATDG,CHAR(248),RLATM,LONDG,CHAR(248)
     1,RLONM,MONTH,IDAY,IYEAR,ICSTH,ICSTM
  130 FORMAT ('+',64('=')/' SHIP  CRUISE  STATION  LATITUDE  LONGITUDE
     1 DATE  TIME-CST'/2X,A2,3X,I4,5X,A4,4X,I2, A1,F4.1,'''',2X,I3, A1,F
     24.1,'''',1X,2(I2,'/'),I2,2X,I2,':',I2/)
      GO TO 149
  132 WRITE (3,133) SHIP,ICRUS,STA,LATDG,CHAR(248),RLATM,LONDG,CHAR(248)
     1,RLONM,MONTH,IDAY,IYEAR,ICSTH,ICSTM
  133 FORMAT ('+',64('=')/' SHIP  CRUISE  STATION  LATITUDE  LONGITUDE
     1 DATE  TIME-CST'/2X,A2,3X,I4,5X,A4,4X,I2, A1,F4.1,'''',2X,I3, A1,F
     24.1,'''',1X,2(I2,'/'),I2,2X,I2,':0',I1/)
  149 WRITE  (3,140) IBOTD,MSDEP,IWIRL,IWIRA,BARP,DRYBL,WETBL,IWCLR,ITRN
     1S,ISWDR,ISWSP
  140 FORMAT ('   DEPTH       WIRE    BAR.   AIR-TEMP.   WATER     SWELL'
     1/'  BOT MAX-S  LEN ANG  PRES.  DRY   WET  COL TRNS  DIR SPD'/1X,I4
     2,1X,I4,2X,I4,1X,I2,3X,F4.1,2X,2(F4.1,2X),2(I2,3X),I3,1X,I2/)
      WRITE (3,150) IWNDR,IWNSP,CLDTP,ICLDA,IVIS,ISEAS,WTHR
  150 FORMAT ('  WIND      CLOUD   VIS.  SEA    WEATHER'/' DIR SPD  TYPE
     1 AMT      STATE'/1X,I3,1X,I2,3X,A2,2(3X,I2),4X,I2,7X,A2/)
      WRITE (3,155)
  155 FORMAT ('   DEPTH   TEMP.   SAL.')
      LPCNT = LPCNT + 13
      DO 165 N = 1,NMOBS
      WRITE (3,160) DEPTH(N),TEMP(N),SAL(N)
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160 FORMAT (2X,F6.1,2(2X,F6.3))
    LPCNT = LPCNT + 1
    IF (LPCNT .GE. 59) GO TO 163
    GO TO 165
163 WRITE (3,164)
164 FORMAT ('1')
    LPCNT = 0
    JPCNT = JPCNT + 1
165 CONTINUE
    IF (LPCNT .GT. 0) GO TO 166
    GO TO 168
166 WRITE (3,'(/)')
    LPCNT = LPCNT + 1
168 IF (JPCNT .GT. 1 .AND. LPCNT .GT. 0) GO TO 169
    GO TO 171
169 WRITE (3,170)
170 FORMAT ('1')
    LPCNT = 0
171 GO TO 10
199 END
```

```
 Volume in drive A has no label
 Volume Serial Number is 245F-0FF7
 Directory of A:\

CONSH2    EXE      60513 08-23-94    1:30p
CONSH2    FOR       4984 08-23-94    1:30p
DD24CS    DTA       7094 02-07-94    9:00a
JE25CS    DTA       2480 02-07-94    2:45p
GR26CS    DTA      11174 02-08-94    2:24p
PO27CS    DTA      11195 02-02-94    7:08p
PO28CS    DTA       6741 02-02-94   11:40a
P_29CS    DTA       8610 02-02-94    5:38p
GR31CS    DTA       9721 02-01-94    4:32p
GR32CS    DTA       8920 02-02-94    3:12p
GR33CS    DTA       7863 02-02-94    6:55p
GR34CS    DTA       4964 02-02-94    5:34p
GR35CS    DTA      13060 02-08-94    2:15p
GR38CS    DTA      11689 02-02-94    2:48p
GR39CS    DTA       8851 02-07-94    1:17p
GR40CS    DTA       6420 02-07-94    1:53p
GR41CS    DTA      10420 02-08-94   11:33a
       17 file(s)     194699 bytes
                     1259520 bytes free
```

The Department of the Interior Mission

As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The Department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

The Minerals Management Service Mission

As a bureau of the Department of the Interior, the Minerals Management Service's (MMS) primary responsibilities are to manage the mineral resources located on the Nation's Outer Continental Shelf (OCS), collect revenue from the Federal OCS and onshore Federal and Indian lands, and distribute those revenues.

Moreover, in working to meet its responsibilities, the **Offshore Minerals Management Program** administers the OCS competitive leasing program and oversees the safe and environmentally sound exploration and production of our Nation's offshore natural gas, oil and other mineral resources. The MMS **Minerals Revenue Management** meets its responsibilities by ensuring the efficient, timely and accurate collection and disbursement of revenue from mineral leasing and production due to Indian tribes and allottees, States and the U.S. Treasury.

The MMS strives to fulfill its responsibilities through the general guiding principles of: (1) being responsive to the public's concerns and interests by maintaining a dialogue with all potentially affected parties and (2) carrying out its programs with an emphasis on working to enhance the quality of life for all Americans by lending MMS assistance and expertise to economic development and environmental protection.