This nautical chart has been designed to promote safe navigation. The National Ocean Service encourages users to submit corrections, additions, or comments for improving this chart to the Chief, Marine Chart Division (N/CS2), National Ocean Service, NOAA, Silver Spring, Maryland 20910-3282.

Formerly C&GS 1117, 1st Ed., Mar. 1919 C-1919-192, KAPP 178

THE NATION'S CHARTMAKER SINCE 1807

UNITED STATES - GULF COAST

GALVESTON TO RIO GRANDE

Mercator Projection
Scale 1:460,732 at Lat 28°00'

North American Datum of 1983
(World Geodetic System 1984)

SOUNDINGS IN FATHOMS
AT MEAN LOWER LOW WATER

(For offshore navigation only)
Floating Aids to Navigation inside the sea buoys are not shown on this chart.
See 1:80,000 scale series and large scale harbor charts for aids marking maintained channels.

Additional information can be obtained at nautical charts.noaa.gov.

SOURCE DIAGRAM

The outlined areas represent the limits of the most recent hydrographic survey information that has been evaluated for charting. Surveys have been banded in this diagram by date and type of survey. Channels maintained by the U.S. Army Corps of Engineers are periodically resurveyed and are not shown on this diagram. Refer to Chapter 1, United States Coast Pilot.

SOURCE

A	1990-2005	NOS Surveys	full bottom coverage
B1	1990-2005	NOS Surveys	partial bottom coverage
B2	1970-1969	NOS Surveys	partial bottom coverage
B3	1945-1969	NOS Surveys	partial bottom coverage
B4	1900-1939	NOS Surveys	partial bottom coverage

CAUTION
SUBMARINE PIPELINES AND CABLES
Charted submarine pipelines and submarine cables and submarine pipeline and cable areas are shown as:

Pipeline Area — *Cable Area*

Additional uncharted submarine pipelines and submarine cables may exist within the area of this chart. Not all submarine pipelines and submarine cables are required to be buried, and those that were originally buried may have become exposed. Mariners should use extreme caution when operating vessels in depths of water comparable to their draft in areas where pipelines and cables may exist, and when anchoring, dragging, or trawling.
Covered wells may be marked by lighted or unlighted buoys.

NOTE B
These are parallel shipping safety fairways and not a traffic separation scheme. However, in the interest of vessel traffic safety use of the northeast lane for inbound (298° true) traffic and the southwest lane for outbound (118° true) traffic is recommended.

WARNING
The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.

RADAR REFLECTORS
Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.

MINERAL DEVELOPMENT STRUCTURES
Obstruction lights and sound (fog) signals are required for fixed mineral development structures shown on this chart, subject to approval by the District Commander, U.S. Coast Guard (33 CFR 67).

ABBREVIATIONS (For complete list of Symbols and Abbreviations, see Chart No. 1.)
Aids to Navigation (lights are white unless otherwise indicated):

AERO aeronautical	G green	Mo morse code	R TR radio tower
Al alternating	IQ interrupted quick	N num	Rot rotating
B black	Iso isophase	OBSC obscured	s seconds
Bn beacon	LT HO lighthouse	Oc occulting	SEC sector
C can	M nautical mile	Or orange	St M statute miles
DIA diaphone	m minutes	Q quick	VQ very quick
F fixed	MICRO TR microwave tower	R red	W white
Fl flashing	Mkr marker	Ra Ref radar reflector	WHIS whistle
		R Bn radiobeacon	Y yellow

Bottom characteristics:

Blds boulders	Co coral	gy gray	Oys oysters	so soft
bk broken	G gravel	h hard	Rk rock	Sh shells
Cy clay	Grs grass	M mud	S sand	sy sticky

Miscellaneous:

AUTH authorized	Obstn obstruction	PD position doubtful	Subm submerged
ED existence doubtful	PA position approximate	Rep reported	

(2) Wreck, rock, obstruction, or shoal swept clear to the depth indicated.
(2) Rocks that cover and uncover, with heights in feet above datum of soundings.

HEIGHTS
Heights in feet above Mean High Water.

AUTHORITIES
Hydrography and topography by the National Ocean Service, Coast Survey, with additional data from the Corps of Engineers and U.S. Coast Guard.

CAUTION
Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners.

AIDS TO NAVIGATION
Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation.

NOTE S
Regulations for Ocean Dumping Sites are contained in 40 CFR, Parts 220-229. Additional information concerning the regulations and requirements for use of the sites may be obtained from the Environmental Protection Agency (EPA). See U.S. Coast Pilots appendix for addresses of EPA offices. Dumping subsequent to the survey dates may have reduced the depths shown.

NOTE D
CAUTION
Unexploded ordnance is known to exist in this area. Ordnance removed from the ocean floor should be reported to the U.S. Coast Guard immediately for disposal instructions. See annual NM 1 (39).

HURRICANES AND TROPICAL STORMS
Hurricanes, tropical storms and other major storms may cause considerable damage to marine structures, aids to navigation and moored vessels, resulting in submerged debris in unknown locations.
Charted soundings, channel depths and shoreline may not reflect actual conditions following these storms. Fixed aids to navigation may have been damaged or destroyed. Buoys may have been moved from their charted positions, damaged, sunk, extinguished or otherwise made inoperative. Mariners should not rely upon the position or operation of an aid to navigation. Wrecks and submerged obstructions may have been displaced from charted locations. Pipelines may have become uncovered or moved.
Mariners are urged to exercise extreme caution and are requested to report aids to navigation discrepancies and hazards to navigation to the nearest United States Coast Guard unit.

CAUTION
Gas and Oil Well Structures
Platforms, gas and oil well structures, some of which are submerged and capped, and submarine pipelines and cables are charted only where offshore of the indicated chart limits of the 1:80,000 scale series charts.

POLLUTION REPORTS
Report all spills of oil and hazardous substances to the National Response Center via 1-800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

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NOTE A
Navigation regulations are published in Chapter 2, U.S. Coast Pilot 5. Additions or revisions to Chapter 2 are published in the Notice to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 8th Coast Guard District in New Orleans, LA. or at the Office of the District Engineer, Corps of Engineers in Galveston, TX. Refer to charted regulation section numbers.

HORIZONTAL DATUM
The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83), which for charting purposes is considered equivalent to the World Geodetic System of 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 do not require conversion to NAD 83 for plotting on this chart.

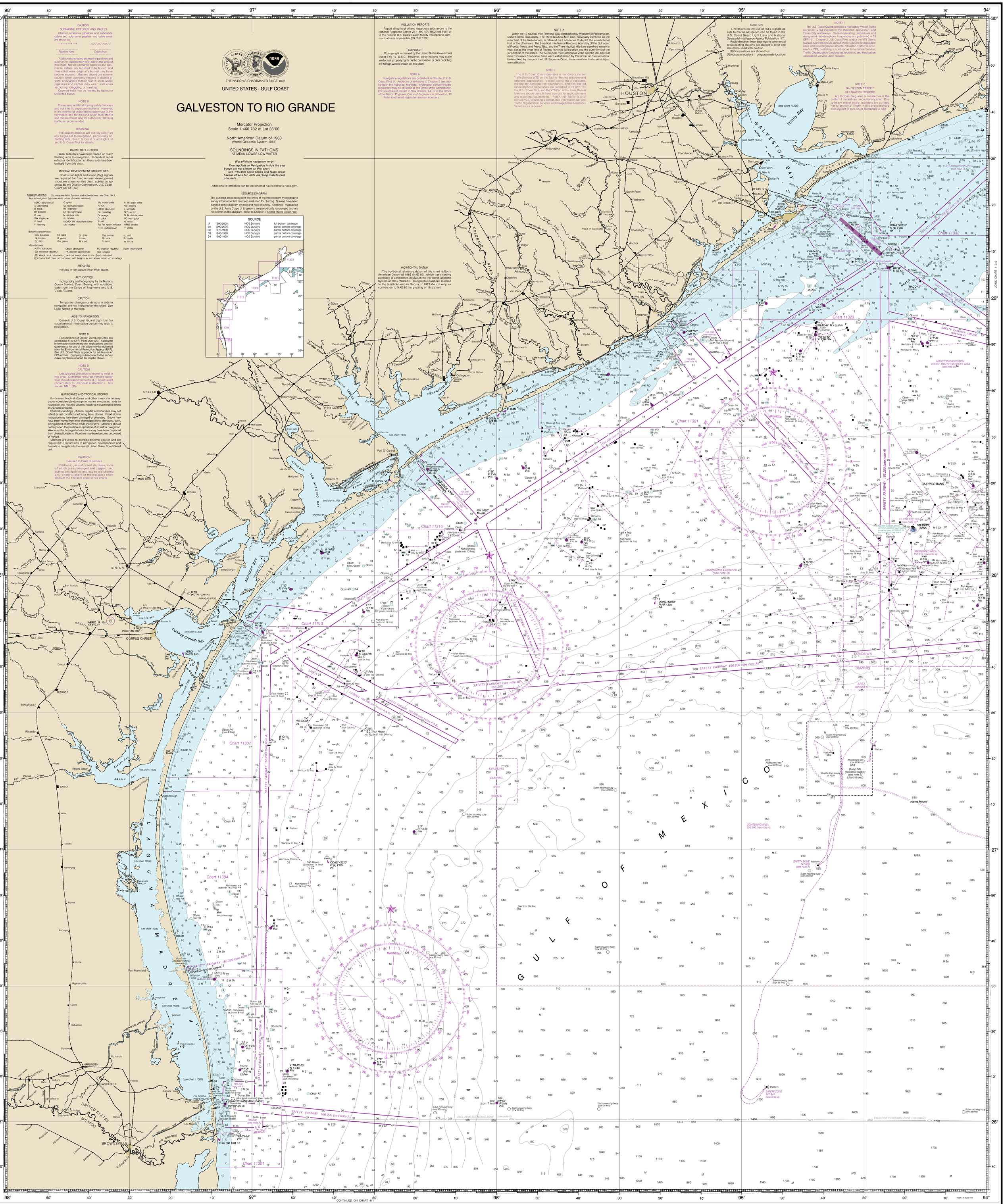
NOTE X
Within the 12-nautical mile Territorial Sea, established by Presidential Proclamation, some Federal laws apply. The Three Nautical Mile Line, previously identified as the outer limit of the territorial sea, is retained as it continues to depict the jurisdictional limit of the other laws. The 9-nautical mile Natural Resource boundary off the Gulf coast of Florida, Texas, and Puerto Rico, and the Three Nautical Mile Line elsewhere remain in most cases the inner limit of Federal fisheries jurisdiction and the outer limit of the jurisdiction of the states. The 24-nautical mile Contiguous Zone and the 200-nautical mile Exclusive Economic Zone were established by Presidential Proclamation. Unless fixed by treaty or the U.S. Supreme Court, these maritime limits are subject to modification.

NOTE E
The U.S. Coast Guard operates a mandatory Vessel Traffic Services (VTS) on the Sabine - Neches Waterway and offshore approaches. Vessel operating procedures, mandatory participation boundaries, and designated radiotelephone frequencies are published in 33 CFR 161, the U.S. Coast Pilot, and the VTS Port Arthur User Manual. Mariners should consult these sources for applicable rules and reporting requirements. "Port Arthur Traffic" is a full service VTS, providing a continuous Information Service; Traffic Organization Services and Navigational Assistance Services as required.

CAUTION
Limitations on the use of radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and National Geospatial-Intelligence Agency Publication 117.
Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution.
Station positions are shown thus:
○(Accurate location) o(Approximate location)

NOTE H
The U.S. Coast Guard operates a mandatory Vessel Traffic Services (VTS) system in the Houston, Galveston, and Texas City waterways. Vessel operating procedures and designated radiotelephone frequencies are published in 33 CFR 161; Chapter 2 U.S. Coast Pilot; and/or the VTS User's Manual. Mariners should consult these sources for applicable rules and reporting requirements. "Houston Traffic" is a full service VTS, providing a continuous Information Service; Traffic Organization Services as requisite; and Navigation Assistance Service upon request.

NOTE C
GALVESTON TRAFFIC SEPARATION SCHEME
A pilot boarding area is located near the center of the inshore precautionary area. Due to heavy vessel traffic, mariners are advised not to anchor or linger in this precautionary area except to pick up or disembark a pilot.



CONTINUED ON CHART 411

CAUTION
This chart has been corrected from the Notice to Mariners (NM) published weekly by the National Geospatial-Intelligence Agency and the Local Notice to Mariners (LNM) issued periodically by each U.S. Coast Guard district to the dates shown in the lower left hand corner. Chart updates corrected from Notice to Mariners published after the dates shown in the lower left hand corner are available at nauticalcharts.noaa.gov.

Last Correction: 11/2/2016. Cleared through:
LNM: 4516 (11/8/2016), NM: 4416 (10/29/2016)

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If the line does not measure six inches (152 millimeters), this copy is not certified safe for navigation.

SOUNDINGS IN FATHOMS

Published at Washington, D.C.
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
COAST SURVEY

FATHOMS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
FEET	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102
METERS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
	18	19	20	21	22	23	24	25	26	27	28	29	30	31			

Galveston to Rio Grande
SOUNDINGS IN FATHOMS - SCALE 1:460,732

11300

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