

LOCATION MAP
Not to Scale

NOTES:

- Bearings are derived from Global Positioning System observations, based on the Texas Coordinate System, South Zone (4205) North American Datum of 1983 (NAD 83) and referenced to National Geodetic Survey monuments, SP 050 and SQ 051 (See location map).
- Distances shown hereon are surface. All measured distances are in varas with feet in parentheses. Record distances, shown in brackets, are in feet.
- Coordinates shown hereon are grid, based on the Texas Coordinate System of 1983, (South Zone) and referenced to National Geodetic Survey (NGS) Monument "SP 050".
- To calculate grid distances, multiply surface distance by a scale factor of 0.999959779.
$$\text{Grid Distance} = \text{Surface Distance} \times 0.999959779$$
- This survey was performed in accordance with Section 33.136, Natural Resources Code, for the purpose of evidencing the location of the shoreline in the area depicted in this survey as that shoreline existed before commencement of erosion response activity, as required by Chapter 33, Natural Resources Code. The line depicted on this survey fixes the shoreline boundary, subject to movement landward as provided by Section 33.136, Natural Resources Code.
- The shoreline as shown hereon represents Mean Higher High Water as established by measurements taken from a local tide staff and calculated against an existing tide gauge located near the Intracoastal Water Way and the J.F.K. Causeway, operated by the Conrad Blucher Institute for Surveying and Science and designated as "Packery Channel".
- Artificial monumentation, set for reference, as shown hereon.

8. Littoral Owners: City of Corpus Christi
1201 Leopard Street
Corpus Christi, Tx. 78408

Exxon Mobil Corporation
P.O. Box 4610
CORP-GP6-607
Houston, Tx. 77210-4610

Texas Crude Energy, Inc.
2803 Buffalo Speedway
Houston, Texas 77098

SURVEY
OF A PORTION OF THE
Western Shoreline of the Laguna Madre
Nueces County, Texas

I, David A. Pyle, LICENSED STATE LAND SURVEYOR, do hereby certify that the foregoing shoreline survey was made by me on the ground and that the limits, boundaries and corners, natural and artificial are as described hereon.

Pyle & Associates, Inc.

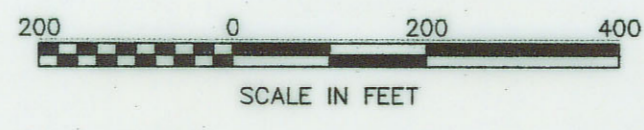
David A. Pyle 7/20/05
David A. Pyle, L.S.L.S.

Being the line of Mean Higher High Water on the western shore of the Laguna Madre, extending northeasterly, along that certain roadway, known as Laguna Shores Road, from a point in the vicinity of that certain roadway known as Lola-Johnson Road to that certain roadway known as Graham Road, and being a portion of the western boundary line of Laguna Madre Submerged Land Tracts 15 & 16.

NOTE: The foregoing map is accompanied by and a part of a separate survey report.

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Pyle & Associates, Inc.

November 8, 2005

Mr. Ben Thomson, R.P.L.S., L.S.L.S.
Texas General Land Office
1700 North Congress Ave, Room 131C
Austin, TX 78701

Re: Survey on western shore Laguna Madre, Nueces County, Texas.

Mr. Thomson:

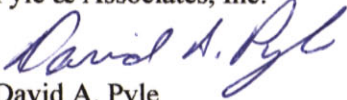
I respectfully submit herewith, a survey of a portion of the western shore of the Laguna Madre at Corpus Christi, Texas, for filing in the Land Office records. This survey has been conducted for the City of Corpus Christi and is in support of planned road rehabilitation. Other parties are including the attached survey in applications for various permits and easements required for the road project.

In addition to the map, we are enclosing the survey report to accompany and be a part of the survey, along with dated aerial photos, one each, dated 1956 and 2004.

If you require additional information or assistance please feel free to contact us.

Respectfully:

Pyle & Associates, Inc.


David A. Pyle
Licensed State Land Surveyor

TEXAS GENERAL LAND OFFICE
Art. 33.136, Natural Resources Code
Co. Nueces, sketch No. 9-A^{Small}_{format}
File Date 12-15-2005 by D. J. H.

Pyle & Associates, Inc.

Survey Report
For
A portion of the western shore of the
Upper Laguna Madre at Corpus Christi, Texas

The following report accompanies and is a part of a map prepared from a survey, made on the ground, from June thru August, 2005. The survey map delineates the Mean Higher High Water (MHHW) line that is the western shore of the Laguna Madre. The subject shoreline also forms portions of the western boundary of Laguna Madre Submerged Land Tracts 15 and 16. The survey was conducted in support of planned shoreline protection and rehabilitation of a portion of Laguna Shores Road in Corpus Christi, Texas. Over the last few decades the shoreline along the project area has suffered significant erosion from wave action of the Laguna Madre. The existing public roadway pavement is frequently threatened with failure. The limits of the subject survey extend along the eastern right-of-way of said Laguna Shores Road from Graham Road southward to Lola Johnson Road.

There have been several shoreline determinations in the vicinity, over the past few decades. The MHHW level used for these determinations has been derived from different sources. Due to circumstances discussed below, the MHHW level for this survey was determined from a local tide staff installed at the project site. The tide staff readings were observed over a four (4) day period and used as comparison against an operating tide gauge located on Packery Channel, near the Gulf Intracoastal Waterway. The gauge is maintained and operated by the Blucher Institute for Surveying and Science and is designated "Packery Channel".

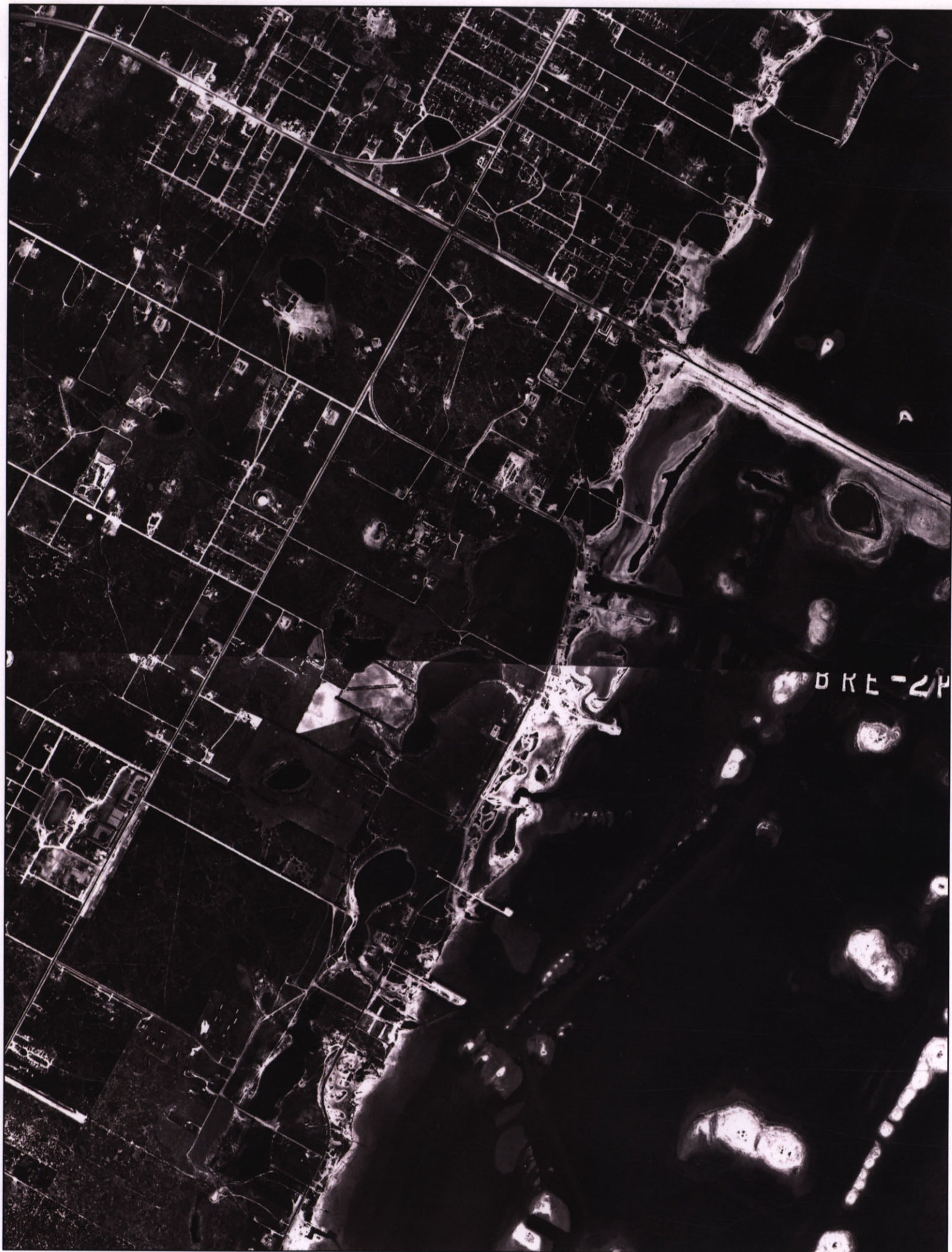
Until recently (2003-2004) the John F. Kennedy Causeway, located approximately one-half (1/2) mile to the north of the subject survey, was constructed on "spoil material" which restricted water flow between the upper Laguna Madre and Corpus Christi Bay. The construction of an elevated bridge section extending from the mainland shore to the Humble Channel (approximately one mile) has created a new and significant opening for free water flow. The tide staff monitor for this survey was conducted to account for any possible changes in the hydrology of the area and consequently the level of MHHW.

Based on review of historical aerial photography (1956 to 2004) the subject shoreline has steadily progressed westward (approximately 200'). Sometime in the 1950's or earlier several roads were constructed across then privately owned uplands, to access oil well locations. Some of these roads as well as several small islands (indicated by sinuous dashed lines on survey map) still remain in the area east of the current shoreline.

Respectfully Submitted:
Pyle & Associates, Inc.

David A. Pyle 10-27-05
David A. Pyle, L.S.L.S.

TEXAS GENERAL LAND OFFICE
Art. 33.136, Natural Resources Code
Co. NUECES, Sketch No. 9-B ^{Small} Format
File Date 12-15-2005 by D. J. H.

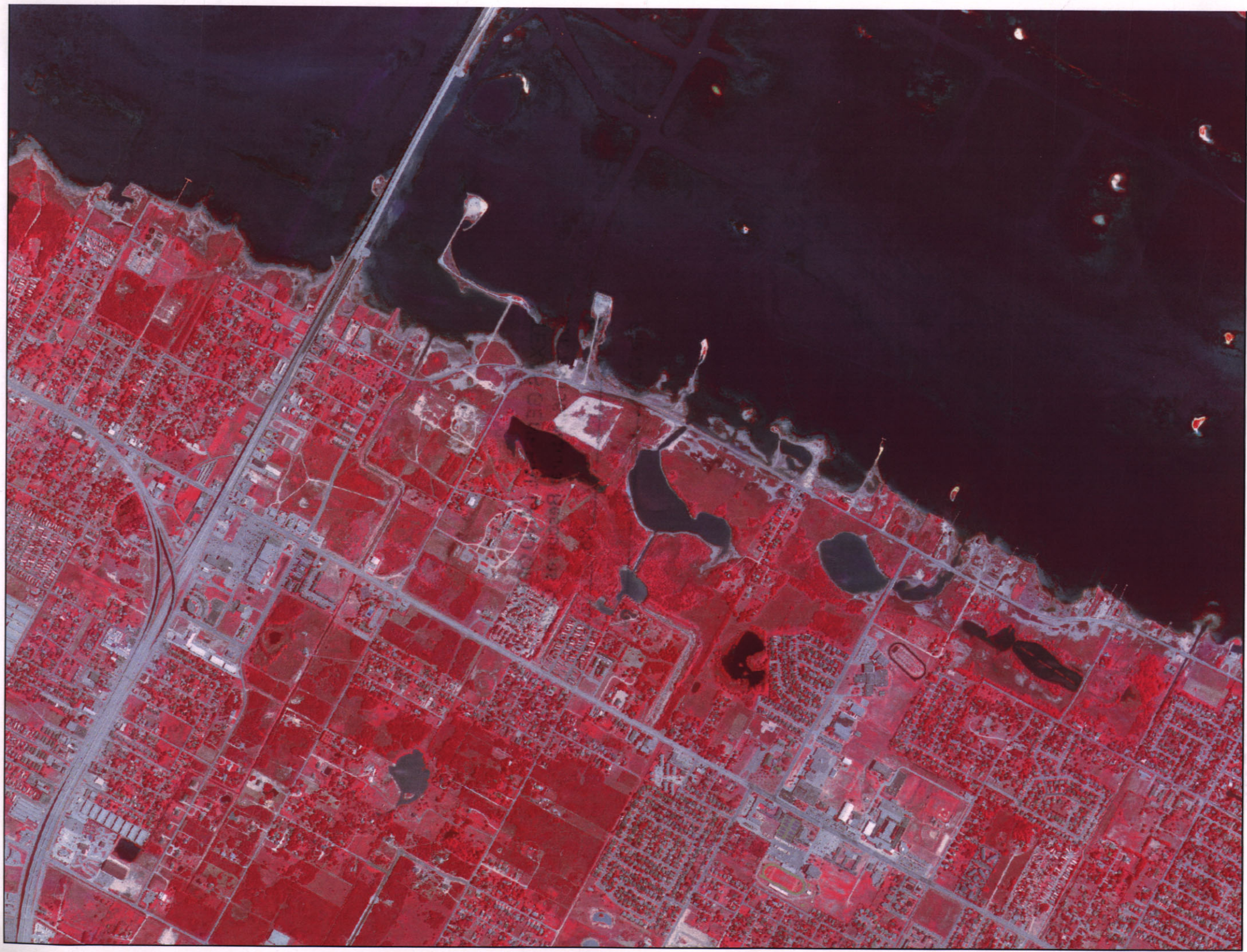


ORE-2P

Frame:
County: Nueces
Source:
Scale: 1" = 1500
Date: 1956

↑N

TEXAS GENERAL LAND OFFICE
Art. 33.136, Natural Resources Code
Co. NUECES, SKETCH No. 9 - ^{Small} C Format
File Date 12-15-2005 by D. J. H.



Frame: —
County: Nueces
Source: USDA
Scale: 1" = 1500
Date: 2004

↑N

TEXAS GENERAL LAND OFFICE
Art. 33.136, Natural Resources Code
Co. NUECES, SKETCH No. 9-D ^{Small} _{Format}
File Date 12-15-2005 by D. J. H.