

VOLUME I
APPENDICES A - L
for
FINAL ENGINEERING REPORT
ISLES DERNIERES
RESTORATION PROJECT:
PHASE 0 - EASTERN ISLE DERNIERE and
PHASE 1 - TRINITY ISLAND

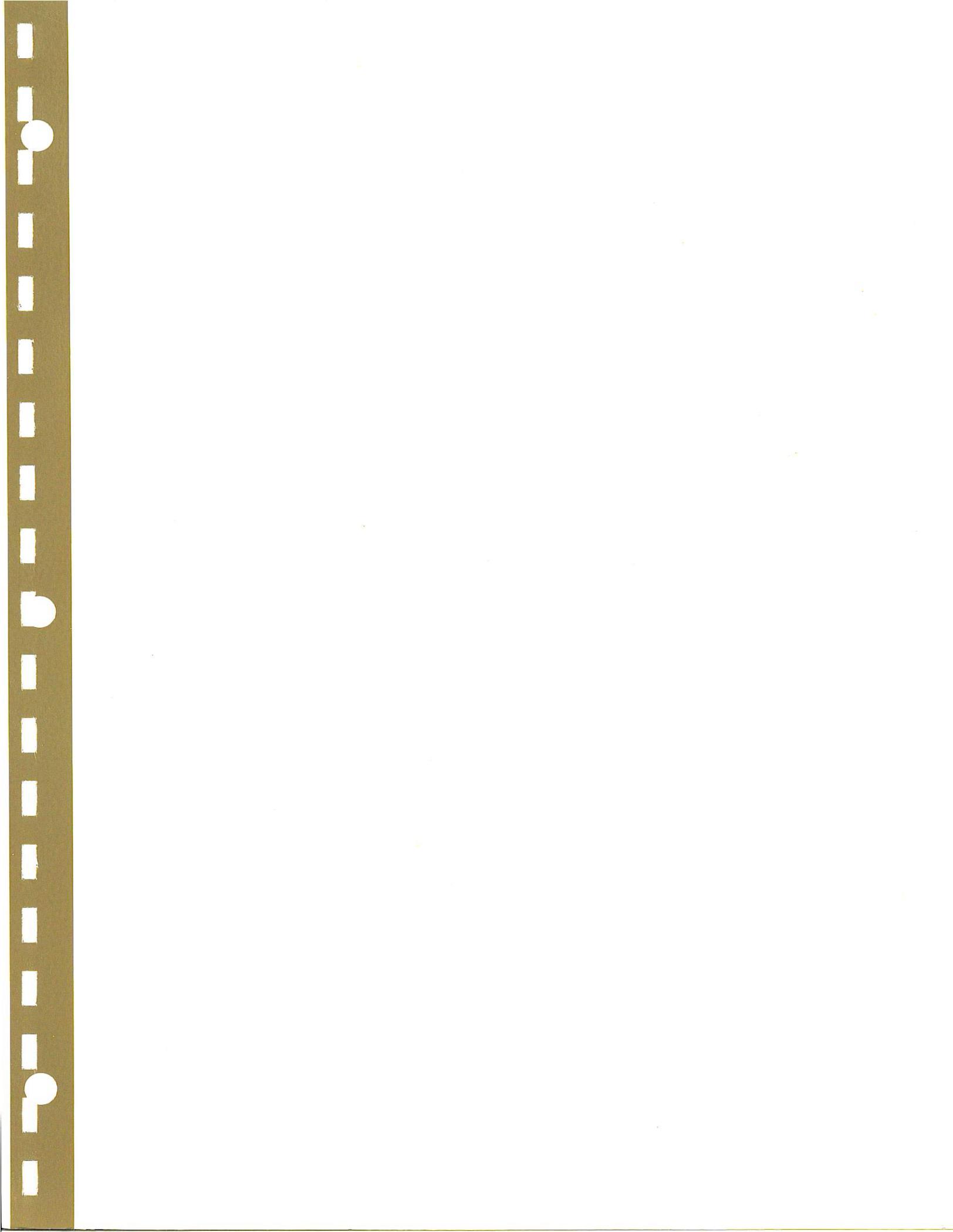
Contract No. 25085-94-02

November 19, 1993
Revised: March 31, 1994

Prepared For

LOUISIANA DEPARTMENT OF NATURAL RESOURCES

T. BAKER SMITH & SON, INC.
Civil Engineers, Land Surveyors &
Environmental Services



c: Arthur Long
Verlie Wims

CYB/KYL
Enclosure

Contracts and Grants Administrator
Cheryl Y. Bennett

Cheryl Y. Bennett
Sincerely,

Should you have any questions, please contact Karen Lewis at (504) 342-4566.

DNR-PR (Appendix C of the contract).
is necessary for project monitoring and shall be submitted on Form
expiration date of the contract. Prompt invoicing and reporting
accordance with Article 28 entitled Amendments prior to the
No amendment shall be effective unless it is in writing in
to Arthur Long, the DNR Project Manager assigned to the contract.
need for additional time to complete the project must be reported
expiration date of the contract. Anticipated cost overruns or the
the contract except through written amendment prior to the
amount or for work to be performed after the expiration date of
not consider, payments which exceed the approved maximum contract
the contract Please note that no authority exists for, and the Department will

Enclosed for your records is a fully executed copy of the contract
pertaining to the above referenced project reflecting the approval
of the Division of Administration's Office of Contractual Review.
This serves as your official notice to proceed under the terms of
the contract. The insurance certificate submitted meets all the
requirements of Article 12 of the contract. Please note that
certificates must be submitted by all subcontractors prior to
beginning work on the project.

Dear Mr. Smith:

RE: DNR Contract No. 25085-94-02
OCR Contract No. 435-4003
"Isles Dernieres Restoration Project: Phase 0 - East Isles
Dernieres and Phase 1 - Trinity Island"

William Clifford Smith, P.E., P.L.S.
T. Baker Smith & Son, Inc.
P. O. Box 2266
Houma, LA 70361

October 11, 1993

DEPARTMENT OF NATURAL RESOURCES



State of Louisiana

EDWIN W. EDWARDS
GOVERNOR

JOHN F. ALES
SECRETARY

Enclosures
CYB/mmb

Contracts & Grants Administrator
Cheryl Y. Bennett

Sincerely,
Cheryl Y. Bennett

Should you have any questions, please call Karen Lewis at (504) 342-4566.

Please submit a formal, dated Board Resolution using the enclosed form, indicating the signatory is authorized to sign this agreement. If you are unable to obtain the Board Resolution in time to return the signed agreement, please send the signed agreement and submit the Board Resolution as soon thereafter as possible. Please submit original certificates of insurance to meet the requirements of Article 12. The certificate of insurance must include the DNR contract number for which it is being submitted.

Enclosed is one (1) complete copy of the above referenced contract and two (2) additional signature pages. Please have the complete copy and two (2) additional signature pages signed, witnessed, and returned to this office as soon as possible. Also, please initial the corrections on pages 28 and 30 of the three (3) copies of Appendix B (Technical Proposal). An executed copy will be returned to you upon completion of the approval process.

Dear Mr. Smith :

RE: DNR Contract No. 25085-94-02
"Isles Dernieres Restoration Project: Phase 0 - East Isles Dernieres and Phase 1 - Trinity Island"

William C. Smith
T. Baker Smith & Son, Inc.
P. O. Box 2266
Houma, LA 70361

September 24, 1993

DEPARTMENT OF NATURAL RESOURCES

JOHN F. ALES
SECRETARY

EDWIN W. EDWARDS
GOVERNOR



JFA/CYB/KY1

Sincerely,
John F. Ales

Thank you for submitting an excellent proposal. The Department looks forward to working with your firm toward the successful completion of this project.

The Louisiana Department of Natural Resources is pleased to inform you that your firm has been tentatively selected to be the Contracting Party for the above referenced project. The proposal you submitted to us will be used as the basis for a contract which is subject to approval by the Louisiana Office of Contractual Review and the Louisiana Department of Civil Service. A member of my staff, Cheryl Y. Bennett, will be contacting you shortly regarding execution of the contract.

Dear Mr. Smith:

RE: RFP No. 25085-94-02
Request for Proposals for "Isles Dernieres Restoration Project: Phase 0 - East Isles Dernieres and Phase 1 - Trinity Island"

William Clifford Smith
T. Baker Smith & Son, Inc.
P.O. Box 2266
Houma, LA 70361

September 13, 1993

DEPARTMENT OF NATURAL RESOURCES

JOHN F. ALES
SECRETARY

EDWIN W. EDWARDS
GOVERNOR



APPENDIX B

JH



PROJECT COMMENCEMENT NOTIFICATION
COASTAL MANAGEMENT DIVISION
LA. DEPT. OF NATURAL RESOURCES
P.O. BOX 44487
BATON ROUGE, LA. 70804-4487

COASTAL USE PERMIT # 0930335
APPLICANT South Terr. Tidewater Mgmt and Conservation Dist.
DATE PERMITTED WORK STARTED ON SITE _____ MONTH _____ DAY _____ YEAR

Please enter in space provided the date on which approved work under your permit number began, sign and return to this office within 3 working days after that date.

IF YOU HAVE ANY QUESTIONS, PLEASE WRITE OR TELEPHONE THIS OFFICE, (504)342-7591.

Signature _____

9/84



**DEPARTMENT OF NATURAL RESOURCES
COASTAL MANAGEMENT DIVISION**

P. O. BOX 44487
BATON ROUGE, LOUISIANA 70804-4487
(504) 342-7591

D32

COASTAL USE PERMIT/CONSISTENCY DETERMINATION

C.U.P. No. P930335

C.O.E. No. LMNOD-SW(Lake Pelto)48

NAME AND ADDRESS: SOUTH TERREBONNE TIDEWATER MANAGEMENT AND CONSERVATION DISTRICT: Attn: Mr. Oscar F. Pena, c/o Coastal Engineering & Environmental Consultants, Inc., P.O. Box 370, Bourg, LA 70343

LOCATION: TERREBONNE PARISH, LA: East Island (Lat. 29°03'41", Long. 90°39'35") and Trinity Island (Lat. 29°02'46", Long. 90°43'48") in Lake Pelto/Gulf of Mexico. Oyster area.

PROJECT DESCRIPTION: Dredge +9,000,000 cu. yds. of waterbottom material from Lake Pelto to increase the height and width of East and Trinity Islands. Objectives are to close existing breaches, prevent new breaches, prevent island overwash, and construct new and enhance existing back island marshes. Phases 0 and 1 of the Isle Dernieres Restoration Project.

In accordance with the rules and regulations of the Louisiana Coastal Resources Program and Louisiana R.S. 49, Sections 213.1 to 213.21, the State and Local Coastal Resources Management Act of 1978, as amended, the permittee agrees to:

1. Carry out or perform the use in accordance with the plans and specifications approved by Department of Natural Resources.
2. Comply with any permit conditions imposed by the Department of Natural Resources.
3. Adjust, alter, or remove any structure or other physical evidence of the permitted use if, in the opinion of the Department of Natural Resources, it proves to be beyond the scope of the use as approved or is abandoned.
4. Provide, if required by the Department of Natural Resources, an acceptable surety bond in an appropriate amount to ensure adjustment, alteration, or removal should the Department of Natural Resources determine it necessary.
5. Hold and save the State of Louisiana, the local government, the department, and their officers and employees harmless from any damage to persons or property which might result from the use, including the work, activity, or structure permitted.
6. Certify that the use has been completed in an acceptable and satisfactory manner and in accordance with the plans and specifications approved by the Department of Natural Resources. The Department of Natural Resources may, when appropriate, require such certification be given by a registered professional engineer.
7. All terms of the permit shall be subject to all applicable federal and state laws and regulations.
8. This permit, or a copy thereof, shall be available for inspection at the site of work at all times during operations.
9. The applicant will notify the Coastal Management Division of the date on which initiation of the permitted activity described under the "Coastal Use Description" began. The applicant shall notify the Coastal Management Division by mailing the enclosed green initiation card on the date of initiation of the coastal use.
10. Unless specified elsewhere in this permit, this permit authorizes the initiation of the coastal use described under "Coastal Use Description" for two years from the date of the signature of the Secretary or his designee. If the coastal use is not initiated within this two year period, then this permit will expire and the applicant will be required to submit a new application. Initiation of the coastal use, for purposes of this permit, means the actual physical beginning of the use activity for which the permit is required. Initiation does not include preparatory activities, such as movement of equipment onto the coastal use site, expenditure of funds, contracting out of work, or performing activities which by themselves do not require a permit. In addition, the permittee must, in good faith and with due diligence, reasonably progress toward completion of the project once the coastal use has been initiated.
11. This Coastal Use Permit authorizes periodic maintenance, but such maintenance activities must be conducted pursuant to the specifications and conditions of this permit.
12. The following special conditions must also be met in order for the use to meet the guidelines of the Coastal Resources Program:

C.U.P. No.

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C.O.E. No.

LMNOD-SW(Lake Pelto)48

- a. All logs and stumps unearthed during dredging shall be buried beneath the bottom of the waterway or removed to a disposal site on land.
- b. All structures built under the authorization and conditions of this permit shall be removed from the site upon abandonment of the facilities for the herein permitted use, or when these structures fall into a state of disrepair such that they can no longer function as intended. This condition does not preclude the necessity for revising the current permit or obtaining a separate Coastal Use Permit, should one be required, for such removal activities.
- c. The permittee shall provide notification of the proposed activity to any oyster lease holder who may be affected by it prior to commencement of the activity. Copies of notification letters sent to the oyster lease holder(s) shall be provided to the Coastal Management Division prior to commencement of the activity.
- d. Applicant is subject to all applicable state laws related to damages which are demonstrated to have been caused by this action.
- e. (i) This permit authorizes the initiation of the Coastal Use described under "Coastal Use Description" for two years from the date of the signature of the Secretary or his designee. Initiation of the Coastal Use, for purposes of this permit, means the actual physical beginning of the use or activity for which the permit is required. Initiation does not include preparatory activities, such as movement of equipment onto the Coastal Use site, expenditure of funds, contracting out of work, or performing activities which by themselves do not require a permit. In addition, the permittee must, in good faith and with due diligence, reasonably progress toward completion of the project once the Coastal Use has been initiated. If the Coastal Use is not initiated within this two year period, an extension may be granted pursuant to the requirements contained in the Rules and Procedures for Coastal Use Permits (Title 43:I.723.D.). Please note that a request for permit extension MUST be made no sooner than 180 days and no later than 60 days prior to the expiration of the permit.

(ii) The expiration date of this permit is five (5) years from the date of the signature of the Secretary or his designee.

(iii) Upon expiration of this permit, a new Coastal Use Permit will be required for completion of any unfinished or uncommenced work items and for any maintenance activities involving dredging or fill that may become necessary. Other types of maintenance activities may also require a new Coastal Use Permit.



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C.U.P. No.

P930335

C.O.E. No.

LMNOD-SW(Lake Pelto)48

- f. The permittee shall allow representatives of the Coastal Management Division or authorized agents to make periodic, unannounced inspections to assure the activity being performed is in accordance with the conditions of this permit.
- g. The permittee shall comply with all applicable state laws regarding the need to contact the DOTTIE System (1-800-272-3020) to locate any buried cables and pipelines.
- h. Construction activities will not commence until the area has been surveyed for waterbird colonies and appropriate measures taken to insure that any colonies present would not be impacted by the proposed activities. The survey(s) will be coordinated with the Louisiana Department of Wildlife and Fisheries and the Fish and Wildlife Service.
- i. The permittee shall conduct pre- and post-construction surveys of the project area. These surveys shall be maintained in a permanent file and made available for inspection by the Division of State Lands upon request.
- j. Prior to the beginning of construction activities, the permittee shall provide a plat(s) to the Coastal Management Division and the Corps of Engineers showing the specific locations of the control structures used to direct flow of dredged material. The final structure locations are subject to interagency approval.

By accepting this permit the applicant agrees to its terms and conditions.

I affix my signature and issue this permit this 4th day of February, 19 94.

DEPARTMENT OF NATURAL RESOURCES

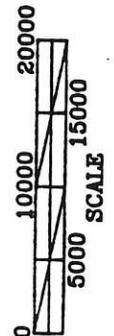
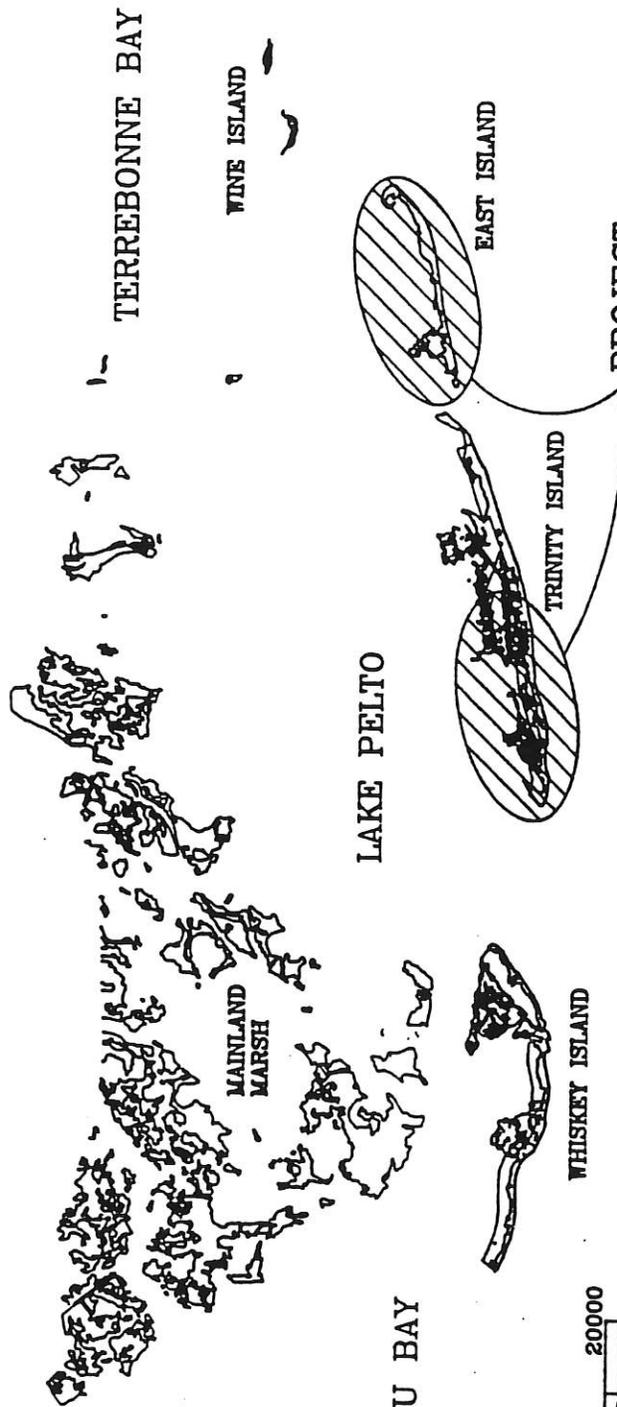
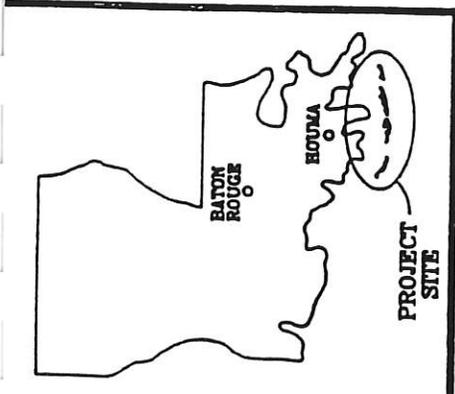
Terry W. Howey
TERRY W. HOWEY, DIRECTOR
Coastal Management Division



This agreement becomes binding when signed by the Director of the Coastal Management Division, Department of Natural Resources.

0930335

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THIS PLAN HAS BEEN APPROVED BY
 COASTAL RESTORATION LOUISIANA
 DEPARTMENT OF NATURAL RESOURCES.
 SPONSOR:
 UNITED STATES ENVIRONMENTAL
 PROTECTION AGENCY.
 FUNDS HAS BEEN APPROPRIATED THROUGH
 C.W.P.P.A. (BREAUX BILL).

**ISLE DERNIERES RESTORATION PROJECT
 VICINITY PLAN**

PROJECT CENTERED AT
 LONG. 90° 48' W.
 LATT. 29° 03' N.

APPLICATION BY:
 ORTH TERREBONNE PARISH TIDEWATER
 ANAGEMENT & CONSERVATION DISTRICT
 AND
 TERREBONNE PARISH CONSOLIDATED
 GOVERNMENT

PREPARED BY: COASTAL ENGINEERING &
 ENVIRONMENTAL CONSULTANTS
 HOUMA, LOUISIANA

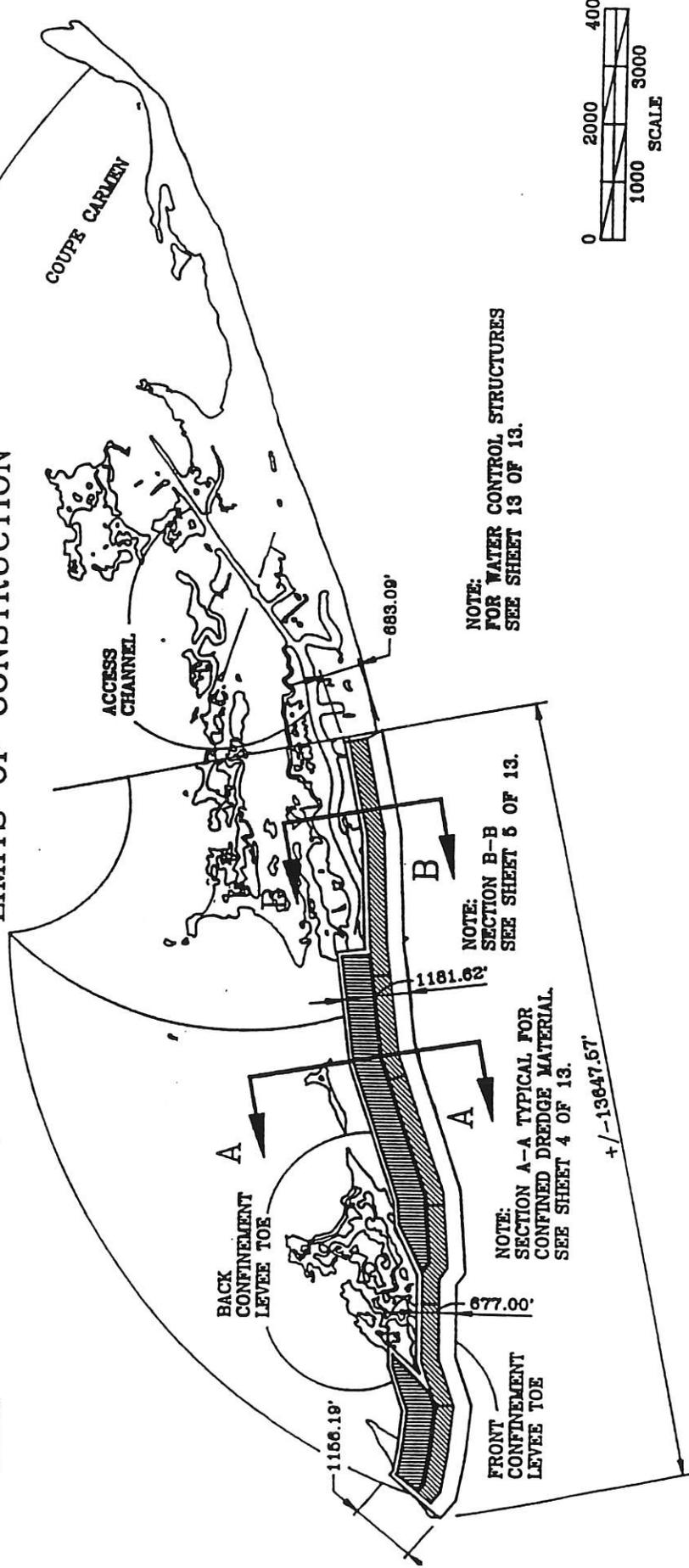
P930339



1992 SHORELINE

-  CONFINED DREDGE FRONT DUNE
-  CONFINED DREDGE MARSH

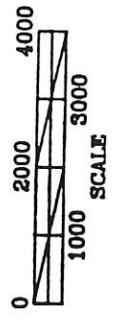
LIMITS OF CONSTRUCTION



NOTE:
FOR WATER CONTROL STRUCTURES
SEE SHEET 13 OF 13.

NOTE:
SECTION B-B
SEE SHEET 5 OF 13.

NOTE:
SECTION A-A TYPICAL FOR
CONFINED DREDGE MATERIAL
SEE SHEET 4 OF 13.



ISLE DERNIERES RESTORATION PROJECT
TRINITY ISLAND

APPLICATION BY:
SOUTH TERREBONNE PARISH TIDEWATER
MANAGEMENT & CONSERVATION DISTRICT
AND
TERREBONNE PARISH CONSOLIDATED
GOVERNMENT

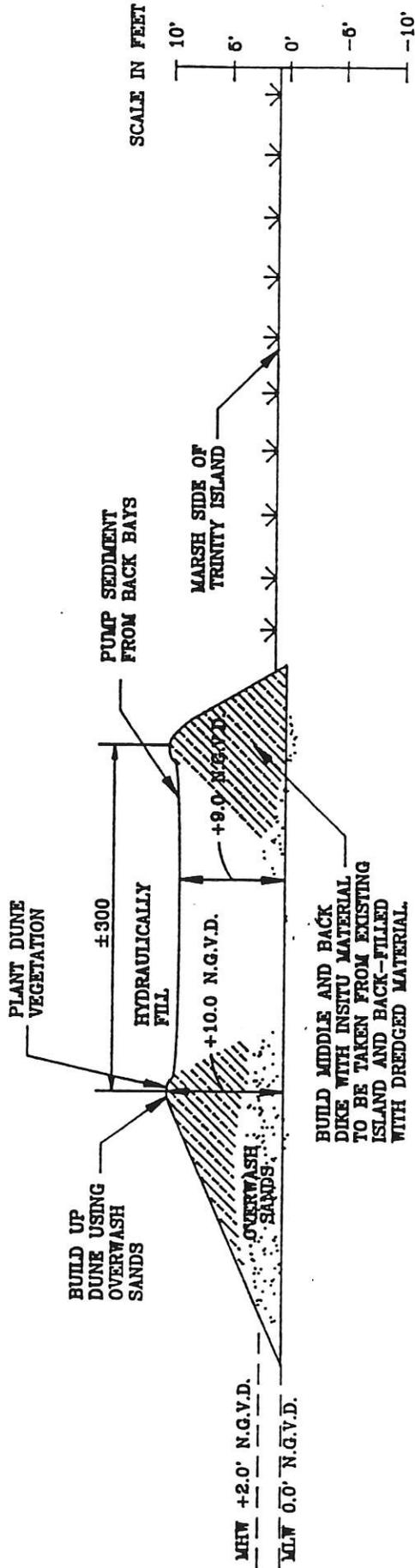
PROJECT LOCATION
LONG. 90° 43' 48" W.
LATT. 29° 02' 46" N.

P. 6

PREPARED BY: COASTAL ENGINEERING &
ENVIRONMENTAL CONSULTANTS
HOUMA, LOUISIANA

SHEET 3 OF 13

DATE: March 1993; April 1993



- * SHORELINE EROSION REDUCED
- * DUNES RESTORED
- * ISLAND WIDTH AND HEIGHT INCREASED
- * BREACHES SEALED

SECTION B-B
TYPICAL SECTION

ISLE DERNIERES RESTORATION PROJECT
TYPICAL SECTION FOR CONFINED
DREDGE MATERIAL

APPLICATION BY:
SOUTH TERREBONNE PARISH TIDEWATER
MANAGEMENT & CONSERVATION DISTRICT
AND
SOUTH TERREBONNE PARISH CONSOLIDATED
GOVERNMENT

PROJECT LOCATION
LONG. 90° 48' W.
LATT. 29° 03' N.

PREPARED BY: COASTAL ENGINEERING &
ENVIRONMENTAL CONSULTANTS
HOUMA, LOUISIANA

093033

P. B.

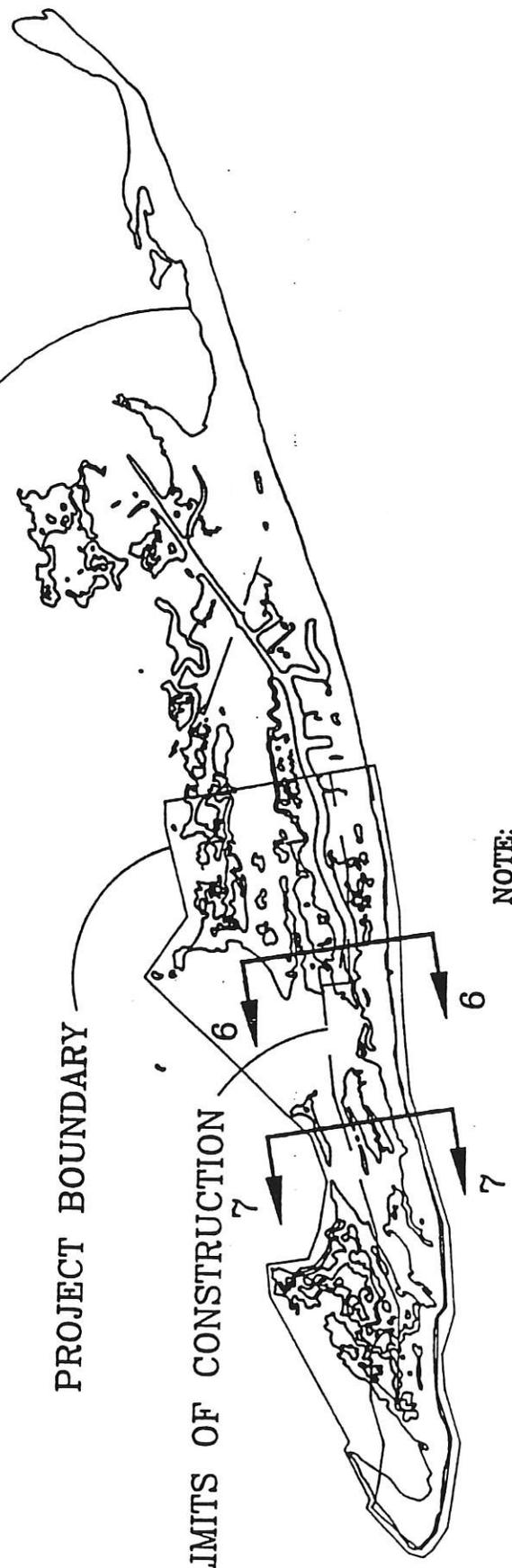
P.930335



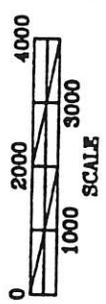
1992 SHORELINE

PROJECT BOUNDARY

LIMITS OF CONSTRUCTION



NOTE:
SECTIONS 6-6 & 7-7
SEE SHEET 11 OF 13.



ISLE DERNIERES RESTORATION PROJECT
TRINITY ISLAND
EXISTING CROSS-SECTIONS

PROJECT LOCATION
LONG. 90° 43' 48" W.
LATT. 29° 02' 46" N.

P.D

APPLICATION BY:
LOUISIANA TERREBONNE PARISH TIDEWATER
MANAGEMENT & CONSERVATION DISTRICT
AND
TERREBONNE PARISH CONSOLIDATED
VERMENT

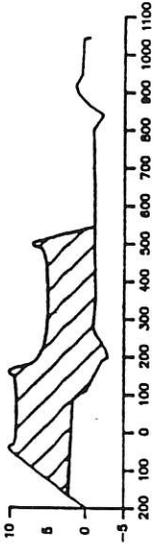
PREPARED BY: COASTAL ENGINEERING &
ENVIRONMENTAL CONSULTANTS
HOUMA, LOUISIANA

DATE: March 1993; April 1993

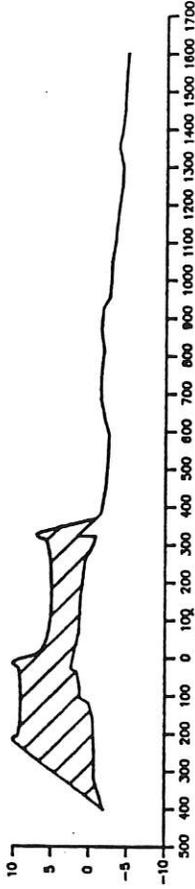
SHEET 7 OF 13

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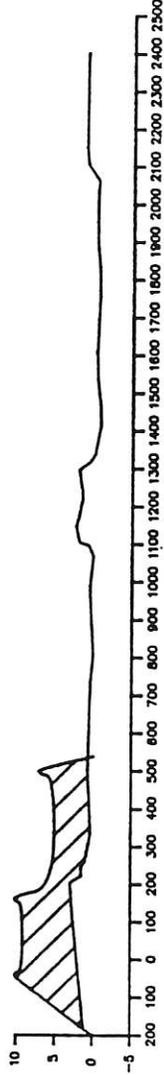
P. W.



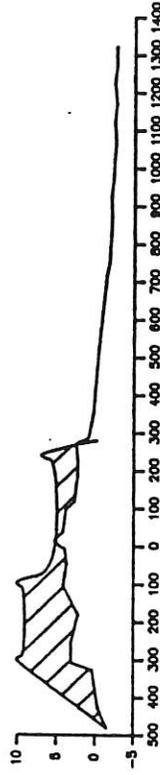
SECTION 4-4



SECTION 3-3



SECTION 2-2



SECTION 1-1

+/-3,000,000 CUBIC YARDS
OF DREDGED MATERIALS.

ISLE DERNIERES RESTORATION PROJECT
EAST ISLAND
CROSS-SECTIONS

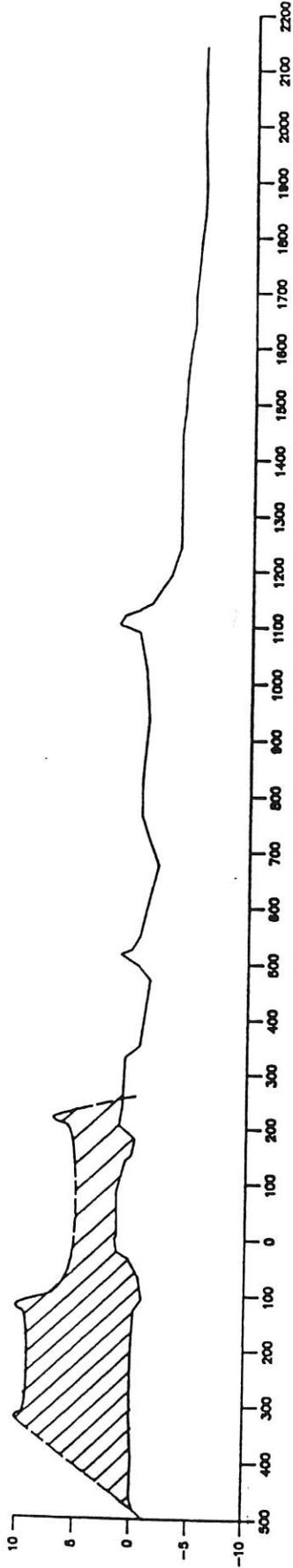
PROJECT LOCATION
LONG. 90° 48' W.
LATT. 29° 03' N.

APPLICATION BY:
SOUTH TERREBONNE PARISH TIDEWATER
MANAGEMENT & CONSERVATION DISTRICT
AND
TERREBONNE PARISH CONSOLIDATED
GOVERNMENT

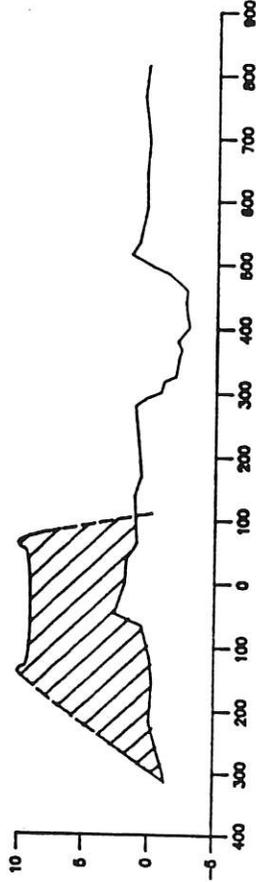
PREPARED BY: COASTAL ENGINEERING &
ENVIRONMENTAL CONSULTANTS
HOUMA, LOUISIANA

P930335

P. 14



SECTION 7-7



SECTION 6-6

+/-6,000,000 CUBIC YARDS OF DREDGED MATERIALS.

ISLE DERNIERES RESTORATION PROJECT
 TRINITY ISLAND
 CROSS-SECTIONS

PROJECT LOCATION
 LONG. 90° 48' W.
 LATT. 29° 03' N.

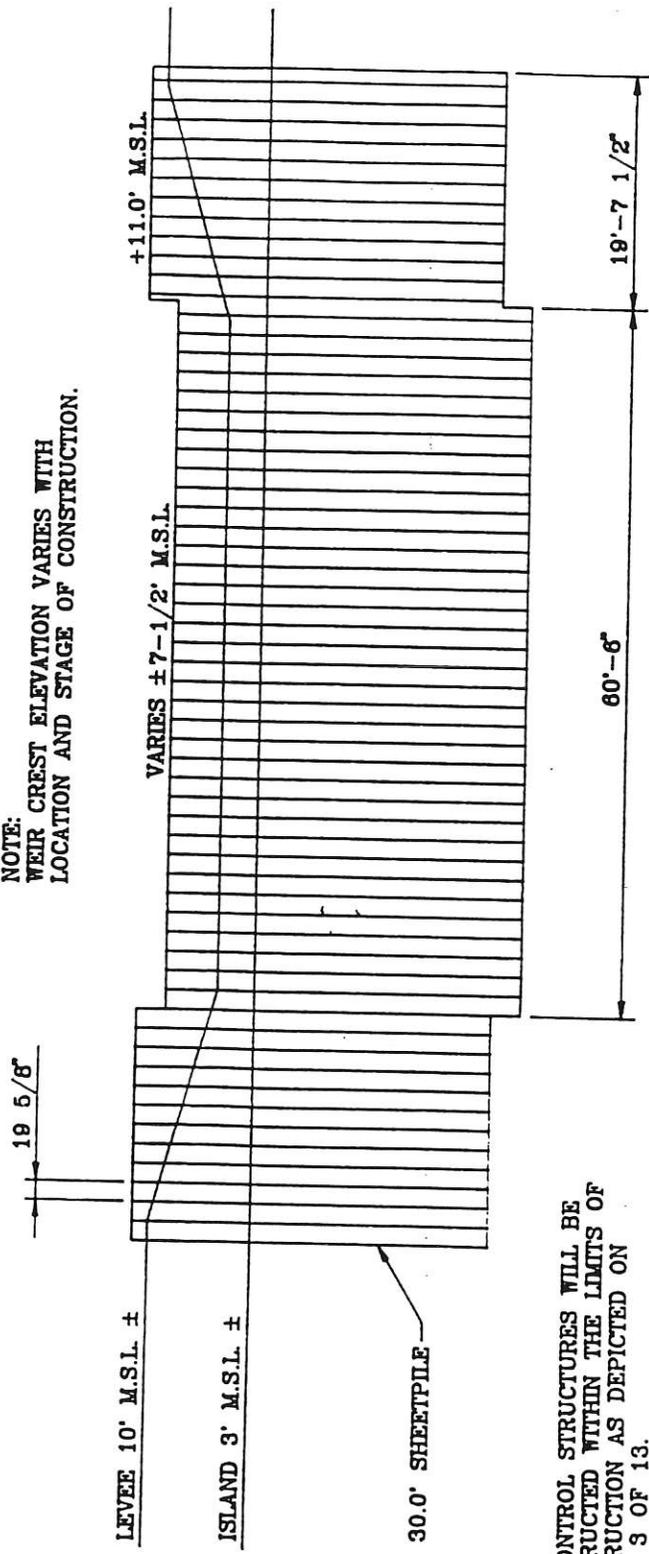
APPLICATION BY:
 SOUTH TERREBONNE PARISH TIDEWATER
 MANAGEMENT & CONSERVATION DISTRICT
 AND
 TERREBONNE PARISH CONSOLIDATED
 GOVERNMENT

PREPARED BY: COASTAL ENGINEERING &
 ENVIRONMENTAL CONSULTANTS
 HOUMA, LOUISIANA

D930335

P 16

NOTE:
WEIR CREST ELEVATION VARIES WITH
LOCATION AND STAGE OF CONSTRUCTION.



NOTE:
ALL CONTROL STRUCTURES WILL BE
CONSTRUCTED WITHIN THE LIMITS OF
CONSTRUCTION AS DEPICTED ON
SHEET 3 OF 13.

6 CONTROL STRUCTURES IN EACH PHASE

STRUCTURE USED TO DIRECT FLOW OF
DREDGED MATERIAL, TO BE USED DURING
CONSTRUCTION, STRUCTURES WILL BE
REMOVED ON COMPLETION OF PROJECT.
LOCATION OF STRUCTURES WILL BE
DETERMINED BY THE DESIGN ENGINEER
AND/OR DREDGE CONTRACTOR.

PLICATION BY:
TH TERREBONNE PARISH TIDEWATER
AGEMENT & CONSERVATION DISTRICT
AND
REBONNE PARISH CONSOLIDATED
ERNMENT

ISLE DERNIERES RESTORATION PROJECT TYPICAL SHEETPILE WATER CONTROL STRUCTURE

PROJECT CENTERED AT
LONG. 90° 48' W.
LATT. 29° 03' N.

PREPARED BY: COASTAL ENGINEERING &
ENVIRONMENTAL CONSULTANTS
HOUMA, LOUISIANA



DEPARTMENT OF THE ARMY

NEW ORLEANS DISTRICT, CORPS OF ENGINEERS

P.O. BOX 60267

NEW ORLEANS, LOUISIANA 70160-0267

REPLY TO
ATTENTION OF:

MAR 4 1994

Operations and Readiness Division
Western Evaluation Section

SUBJECT: SW(Lake Pelto)48

South Terrebonne Tidewater
Management & Conservation District
Post Office Box 370
Chauvin, Louisiana 70344

Gentlemen:

Enclosed is a permit dated this date authorizing construction and maintenance of containment dikes and temporary overflow weirs on East Island and Trinity Island, hydraulic dredging of a maximum of 9,000,000 cubic yards of material from Lake Pelto and deposition of dredged material within the contained disposal areas to restore barrier island dune and marsh habitat, in Lake Pelto and on portions of the Isle Dernieres Barrier Islands, approximately 13 miles south of Cocodrie, Louisiana, in Terrebonne Parish.

You are again reminded of the information in the following paragraphs.

Work not in accordance with the plans is subject to removal regardless of the expense and the inconvenience that such removal may involve and regardless of the date when the discrepancy is discovered.

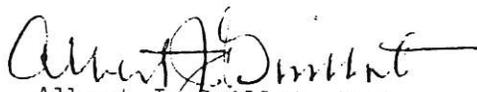
I am directed by the Department of the Army to caution you that if any material changes in the location or plans of the work are found necessary on account of unforeseen or altered conditions or otherwise, revised plans should be submitted promptly to the District Engineer. These revised plans will be reviewed, and, if found unobjectionable from the viewpoint of navigation and other public interest factors, will receive the approval required by Federal law before the work is begun. Public interest factors considered include, but are not limited to, fish and wildlife, water quality, economics, conservation, esthetics, recreation, water supply, flood damage prevention, ecosystems, and, in general, the needs and welfare of the people.

Your attention is directed to all the terms and conditions of the approval, especially those conditions relative to supervision and approval of work by the District Engineer. In order to have the work finally approved and declared legal, all terms and conditions of the permit and plans shown on the drawings attached thereto must be rigidly adhered to.

LMN FL 215-1
26 Oct 93

It is necessary that you notify the District Engineer, Attention: Surveillance and Enforcement Section, in writing, prior to commencement of work and also upon its completion. The enclosed Notice of Authorization, ENG Form 4336, is to be conspicuously displayed at the site of work.

Sincerely,



Albert J. Guillot, P.E.
Assistant Chief, Operations and
Readiness Division

Enclosure

DEPARTMENT OF THE ARMY PERMIT

South Terrebonne Tidewater Management & Conservation District
Permittee and Terrebonne Parish Consolidated Government

Permit No. SW(Lake Pelto)48

Issuing Office New Orleans District

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description:

Construct and maintain containment dikes and temporary overflow weirs on East Island and Trinity Island, hydraulically dredge a maximum of 9,000,000 cubic yards of material from Lake Pelto and deposit dredged material within the contained disposal areas to restore barrier island dune and marsh habitat, in accordance with the drawings attached in 13 sheets, dated March, 1993, and revised April, 1993.

Project Location:

In Lake Pelto and on portions of the Isle Dernieres Barrier Islands, approximately 13 miles south of Cocodrie, Louisiana, in Terrebonne Parish.

Permit Conditions:

General Conditions:

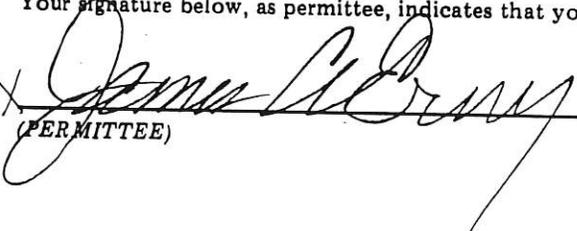
1. The time limit for completing the work authorized ends on 28 February 1999. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.
3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

- e. Damage claims associated with any future modification, suspension, or revocation of this permit.
4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.
 5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:
 - a. You fail to comply with the terms and conditions of this permit.
 - b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).
 - c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

 2-21-94
 (PERMITTEE) (DATE)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

 March 4, 1994
 (DISTRICT ENGINEER) (DATE)
 Albert J. Guillot, P.E., Assistant Chief, Operations and Readiness Division
 for Michael Diffley, District Engineer

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

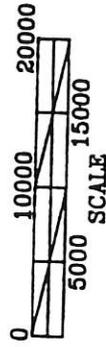
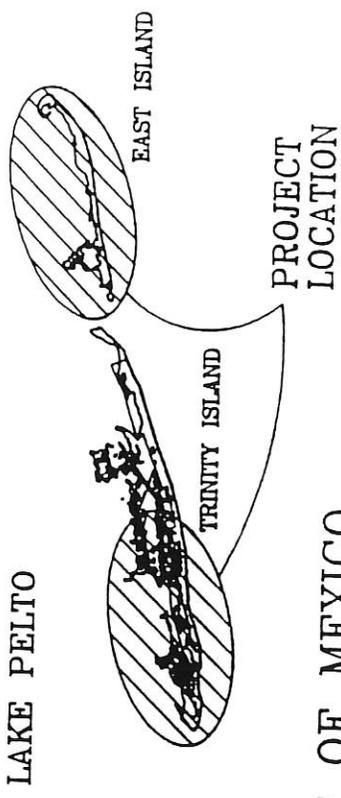
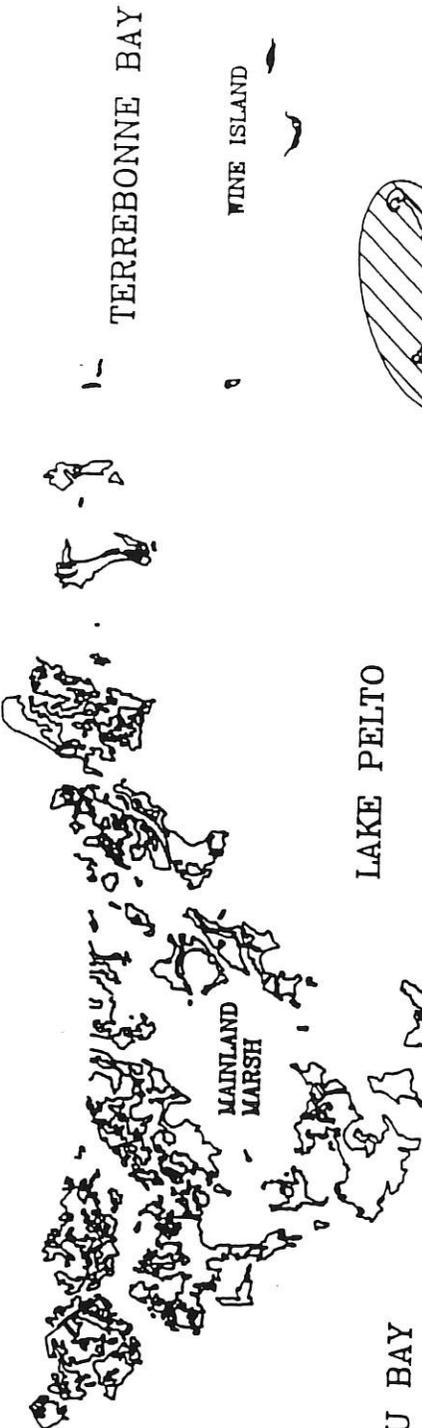
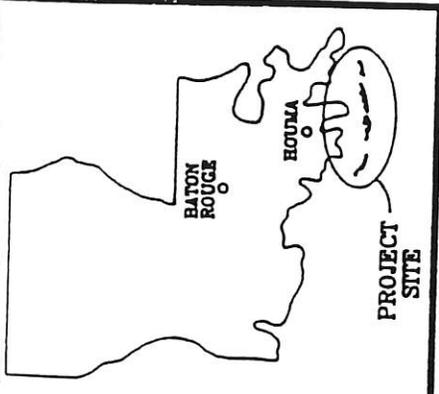
 (TRANSFEE) (DATE)

Special Conditions continued.

9. Prior to construction, the permittee shall perform a survey of waterbird colonies on East and Trinity Islands and take appropriate measures to avoid impacting any colonies which may be present. The survey shall be coordinated with the U.S. Fish and Wildlife Service and the Louisiana Department of Wildlife and Fisheries.

10. To the maximum extent practicable, dredging operations in Lake Pelto shall commence at the northern end of the designated borrow areas and progress toward the islands only as necessary to obtain the required volume of material.

11. Retention dikes shall be constructed using in-situ material obtained from within the proposed disposal areas. The use of limestone, shell or other similar materials to construct "hard" dikes may be allowed if specifically approved by the U.S. Army Corps of Engineers, Regulatory Functions Branch. In order to obtain this approval, the permittee must conduct a geotechnical investigation demonstrating the need for "hard" dikes and submit the results of this investigation to the U.S. Army Corps of Engineers for review.



THIS PLAN HAS BEEN APPROVED BY
 COASTAL RESTORATION LOUISIANA
 DEPARTMENT OF NATURAL RESOURCES.
 SPONSOR:
 UNITED STATES ENVIRONMENTAL
 PROTECTION AGENCY.
 FUNDS HAS BEEN APPROPRIATED THROUGH
 C.W.P.A. (BREAUX BILL).

GULF OF MEXICO

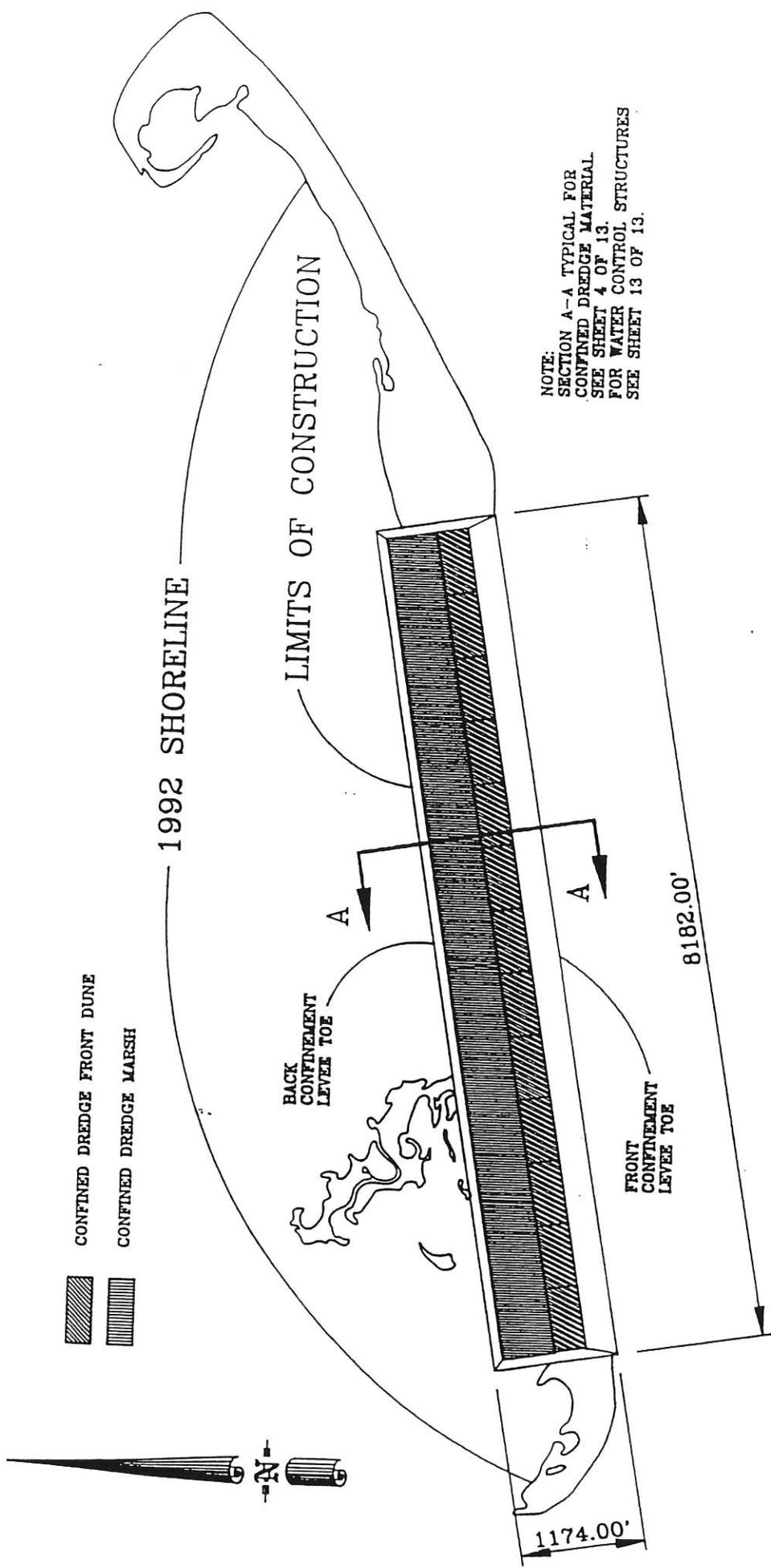
ISLE DERNIERES RESTORATION
 ISLE DERNIERES, LOUISIANA

ISLE DERNIERES RESTORATION PROJECT
 VICINITY PLAN

APPLICATION BY:
 SOUTH TERREBONNE PARISH TIDEWATER
 MANAGEMENT & CONSERVATION DISTRICT
 AND
 TERREBONNE PARISH CONSOLIDATED
 GOVERNMENT

PROJECT CENTERED AT
 LONG. 90° 48' W.
 LATT. 29° 03' N.

PREPARED BY: COASTAL ENGINEERING &
 ENVIRONMENTAL CONSULTANTS
 HOUMA, LOUISIANA



ISLE DERNIERES RESTORATION PROJECT
EAST ISLAND

APPLICATION BY:
SOUTH TERREBONNE PARISH TIDEWATER
MANAGEMENT & CONSERVATION DISTRICT
AND
TERREBONNE PARISH CONSOLIDATED
GOVERNMENT

PROJECT LOCATION:
LONG. 90° 39' 35" W.
LATT. 29° 05' 41" N.

PREPARED BY: COASTAL ENGINEERING &
ENVIRONMENTAL CONSULTANTS
HOUMA, LOUISIANA

1992 SHORELINE

LIMITS OF CONSTRUCTION

-  CONFINED DREDGE FRONT DUNE
-  CONFINED DREDGE MARSH

ACCESS CHANNEL

COUPE CARRE

BACK CONFINEMENT LEVEE TOE

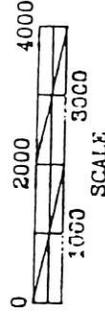
FRONT CONFINEMENT LEVEE TOE

NOTE:
SECTION A-A TYPICAL FOR
CONFINED DREDGE MATERIAL.
SEE SHEET 4 OF 13.

NOTE:
SECTION B-B
SEE SHEET 5 OF 13.

NOTE:
FOR WATER CONTROL STRUCTURES
SEE SHEET 13 OF 13.

+/-13647.57'

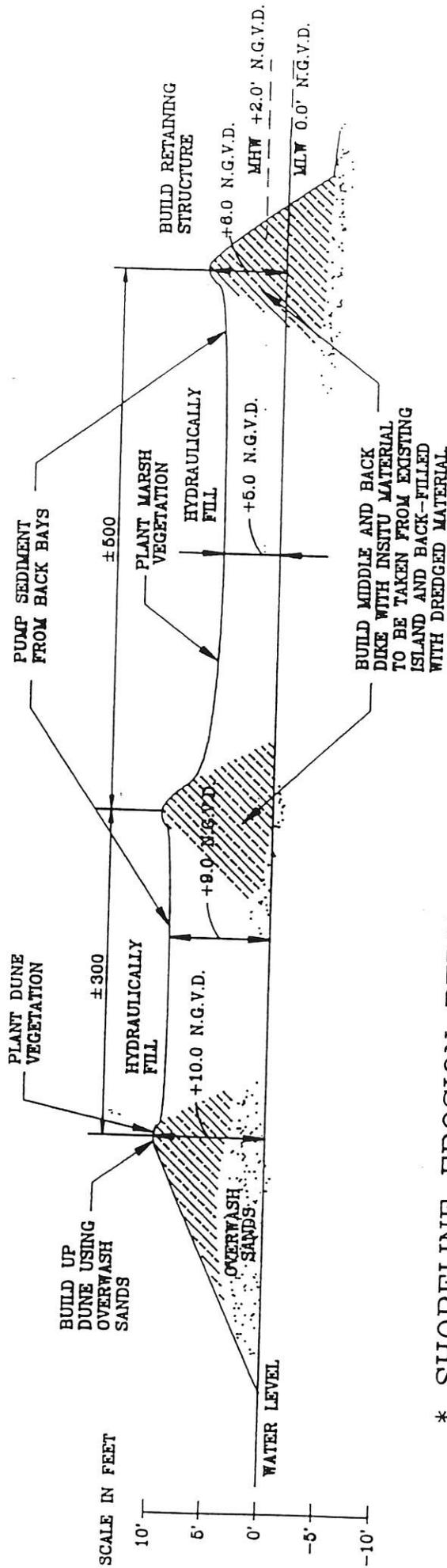


ISLE DERNIERES RESTORATION PROJECT
TRINITY ISLAND

APPLICATION BY:
SOUTH TERREBONNE PARISH TIDEWATER
MANAGEMENT & CONSERVATION DISTRICT
AND
TERREBONNE PARISH CONSOLIDATED
GOVERNMENT

PROJECT LOCATION
LONG. 90° 43' 48" W.
LATT. 29° 02' 46" N.

PREPARED BY:
COASTAL ENGINEERING &
ENVIRONMENTAL CONSULTANTS
HOUMA, LOUISIANA



- * SHORELINE EROSION REDUCED
- * DUNES RESTORED
- * ISLAND WIDTH AND HEIGHT INCREASED
- * BACK BARRIER MARSH CREATED
- * BREACHES SEALED

NOTE:
 DUE TO POTENTIAL WAVE ACTION AND
 DESIGN REQUIREMENTS, BACK DIKE MAY
 BE CONSTRUCTED OF LIME STONE,
 RIP-RAP OR SHELL MATERIAL.

SECTION A-A
 TYPICAL SECTION

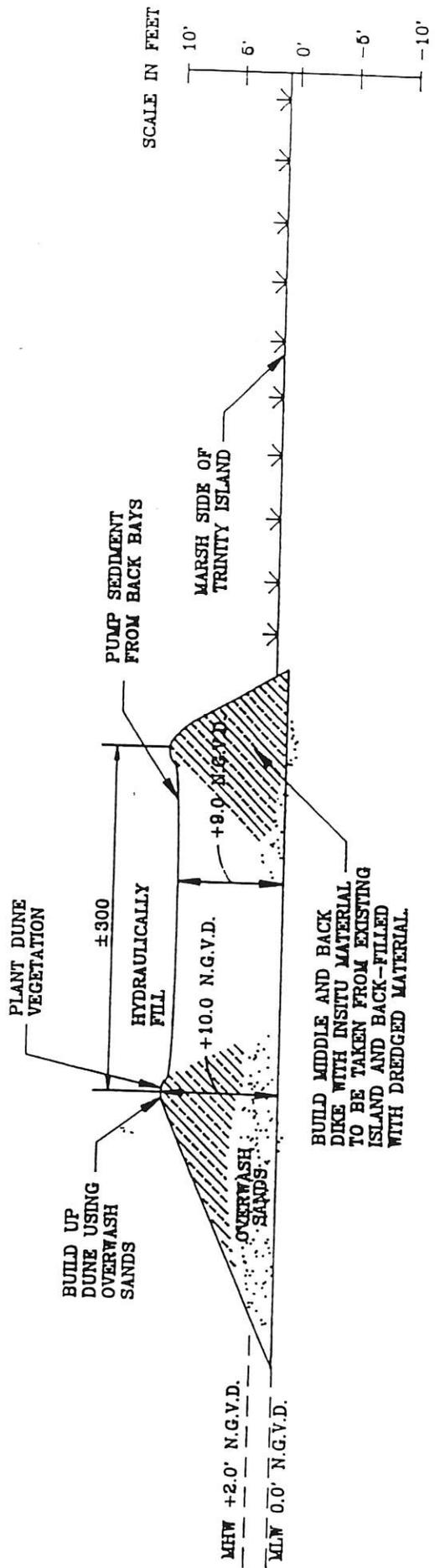
ISLE DERNIERES RESTORATION PROJECT
 TYPICAL SECTION FOR CONFINED
 DREDGE MATERIAL

APPLICATION BY:
 SOUTH TERREBONNE PARISH TIDEWATER
 MANAGEMENT & CONSERVATION DISTRICT
 AND
 TERREBONNE PARISH CONSOLIDATED
 GOVERNMENT

PROJECT LOCATION
 LONG. 90° 48' W.
 LATT. 29° 03' N.

PREPARED BY: COASTAL ENGINEERING &
 ENVIRONMENTAL CONSULTANTS
 HOUMA, LOUISIANA

DATE: March 1993; April 1993



- * SHORELINE EROSION REDUCED
- * DUNES RESTORED
- * ISLAND WIDTH AND HEIGHT INCREASED
- * BREACHES SEALED

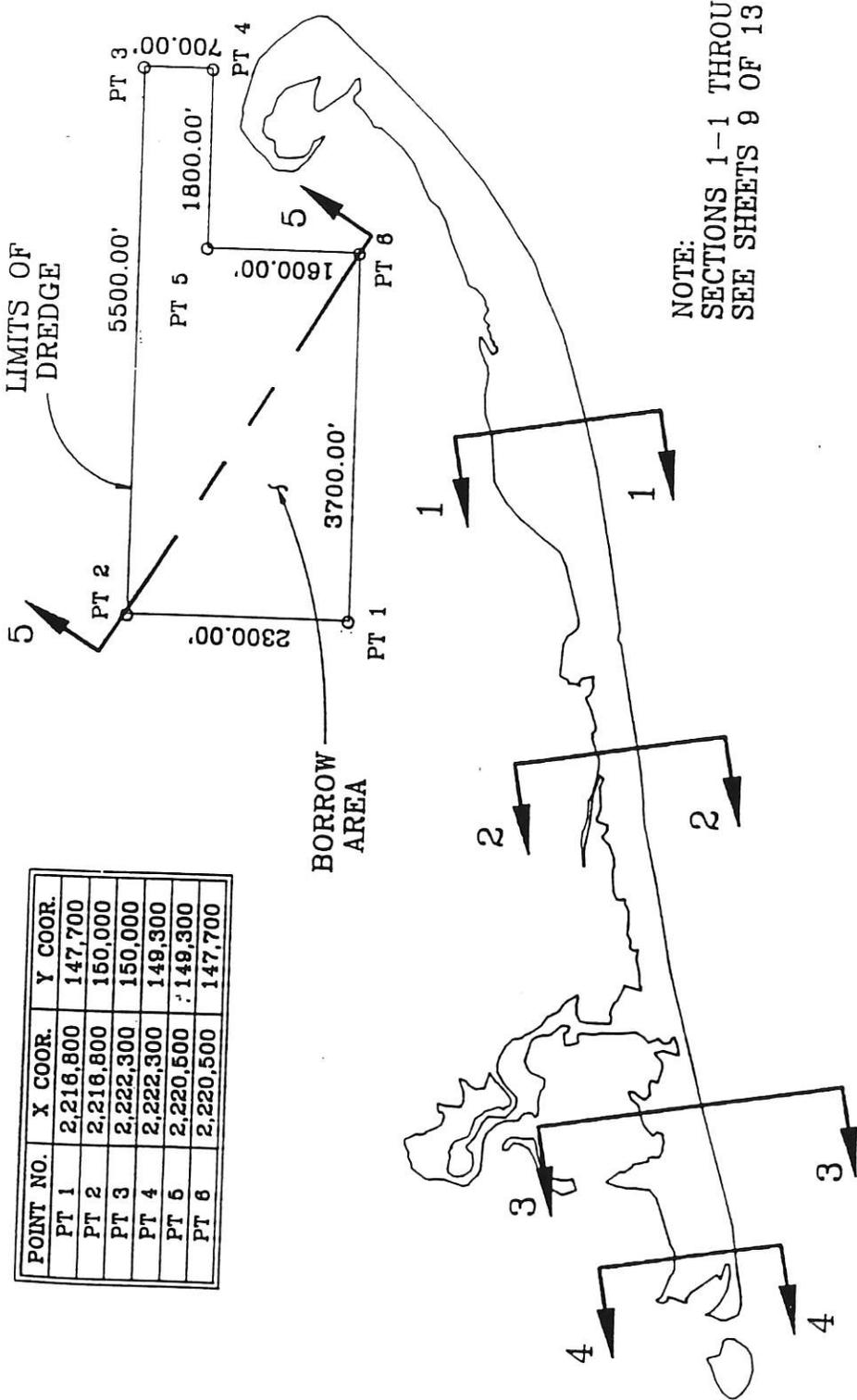
SECTION B-B
TYPICAL SECTION

ISLE DERNIERES RESTORATION PROJECT
TYPICAL SECTION FOR CONFINED
DREDGE MATERIAL

APPLICATION BY:
SOUTH TERREBONNE PARISH TIDEWATER
MANAGEMENT & CONSERVATION DISTRICT
AND
TERREBONNE PARISH CONSOLIDATED
GOVERNMENT

PROJECT LOCATION:
LONG. 90° 48' W.
LAT. 29° 03' N.

PREPARED BY: COASTAL ENGINEERING &
ENVIRONMENTAL CONSULTANTS
HOUMA, LOUISIANA



POINT NO.	X COOR.	Y COOR.
PT 1	2,216,800	147,700
PT 2	2,216,800	150,000
PT 3	2,222,300	150,000
PT 4	2,222,300	149,300
PT 5	2,220,500	149,300
PT 6	2,220,500	147,700

NOTE:
SECTIONS 1-1 THROUGH 5-5
SEE SHEETS 9 OF 13 & 10 OF 13.

APPLICATION BY: SOUTH TERREBONNE PARISH TIDEWATER MANAGEMENT & CONSERVATION DISTRICT AND TERREBONNE PARISH CONSOLIDATED GOVERNMENT

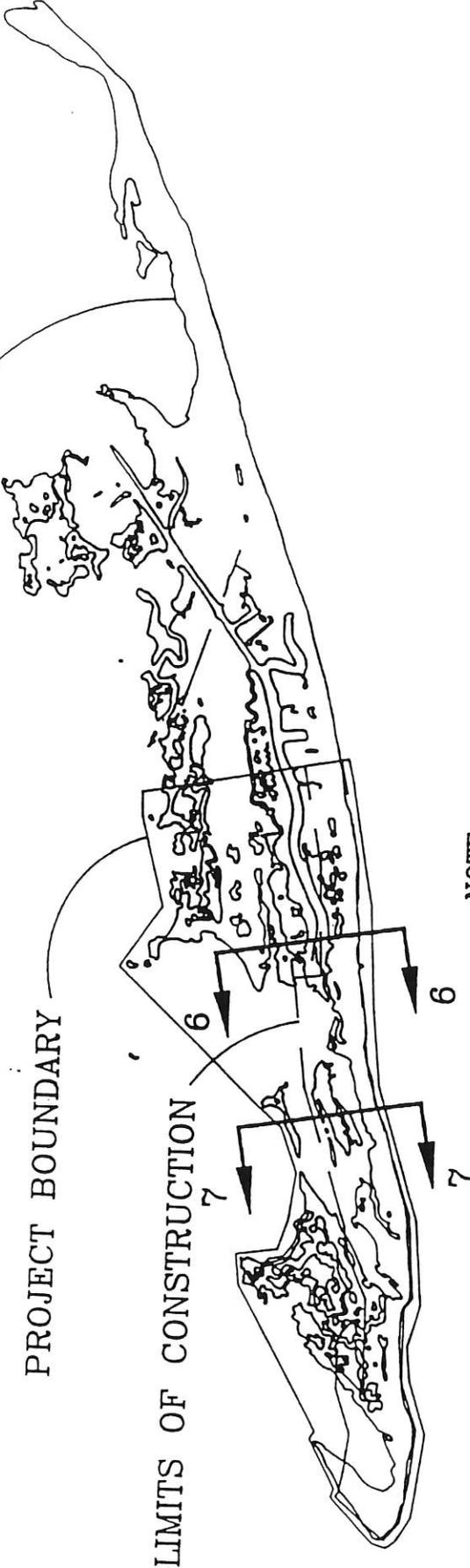
ISLE DERNIERES RESTORATION PROJECT
EAST ISLAND
BORROW AREA AND EXISTING CROSS-SECTIONS

PROJECT LOCATION:
LONG. 90° 39' 35" W.
LAT. 29° 03' 41" N.

PREPARED BY: COASTAL ENGINEERING & ENVIRONMENTAL CONSULTANTS
HOUMA, LOUISIANA



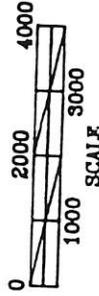
1992 SHORELINE



PROJECT BOUNDARY

LIMITS OF CONSTRUCTION

NOTE:
SECTIONS 6-6 & 7-7
SEE SHEET 11 OF 13.



ISLE DERNIERES RESTORATION PROJECT
TRINITY ISLAND
EXISTING CROSS-SECTIONS

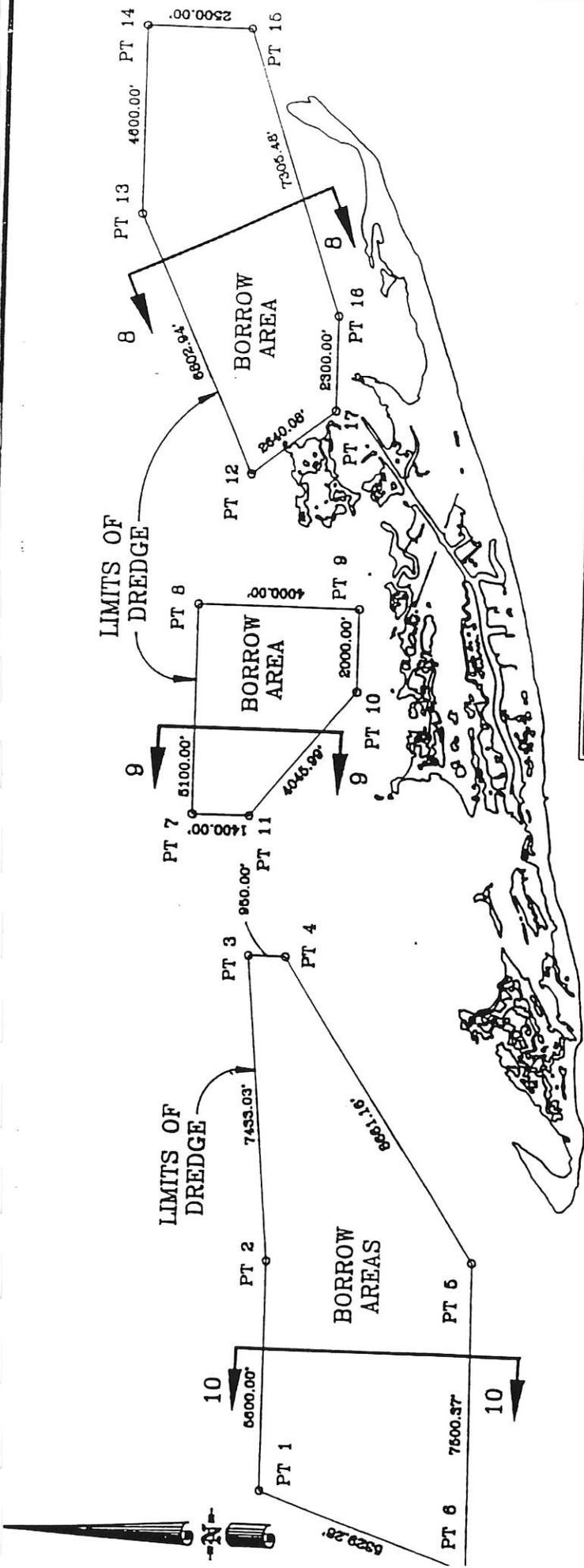
APPLICATION BY:
SOUTH TERREBONNE PARISH TIDEWATER
MANAGEMENT & CONSERVATION DISTRICT
AND
TERREBONNE PARISH CONSOLIDATED
GOVERNMENT

PROJECT LOCATION:
LONG. 90° 43' 48" W.
LATT. 29° 02' 46" N.

PREPARED BY: COASTAL ENGINEERING &
ENVIRONMENTAL CONSULTANTS
HOUMA, LOUISIANA

SHEET 7 OF 13

DATE: March 1993; April 1993



NOTE:
SECTION 8-8, 9-9, & 10-10
SEE SHEET 12 OF 13.

POINT NO.	X COOR.	Y COOR.
PT 1	2,173,500	144,700
PT 2	2,179,100	144,700
PT 3	2,186,500	145,400
PT 4	2,186,500	144,450
PT 5	2,179,225	139,750
PT 6	2,171,725	138,675
PT 7	2,189,900	146,900
PT 8	2,195,000	146,900
PT 9	2,195,000	142,900
PT 10	2,193,000	142,900

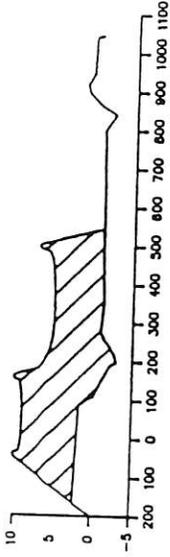
POINT NO.	X COOR.	Y COOR.
PT 11	2,189,900	145,500
PT 12	2,198,200	145,700
PT 13	2,204,400	148,500
PT 14	2,209,000	148,500
PT 15	2,209,000	148,000
PT 16	2,202,100	143,600
PT 17	2,199,800	143,600

ISLE DERNIERES RESTORATION PROJECT
TRINITY ISLAND
BORROW AREA AND EXISTING
CROSS-SECTIONS

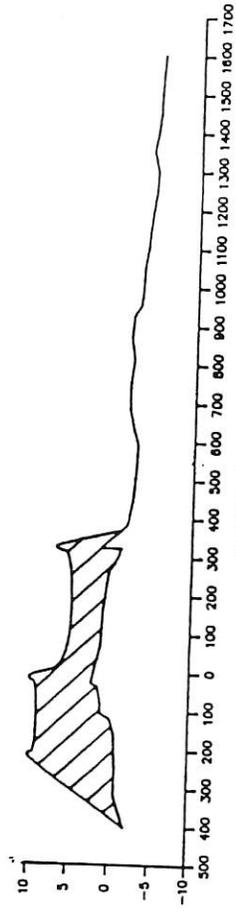
APPLICATION BY:
SOUTH TERREBONNE PARISH TIDEWATER
MANAGEMENT & CONSERVATION DISTRICT
AND
TERREBONNE PARISH CONSOLIDATED
GOVERNMENT

PROJECT LOCATION:
LONG. 90° 43' 48" W.
LATT. 29° 02' 46" N.

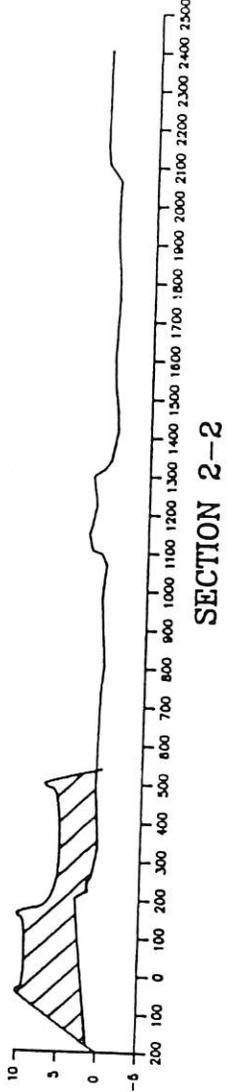
PREPARED BY: COASTAL ENGINEERING &
ENVIRONMENTAL CONSULTANTS
HOUMA, LOUISIANA



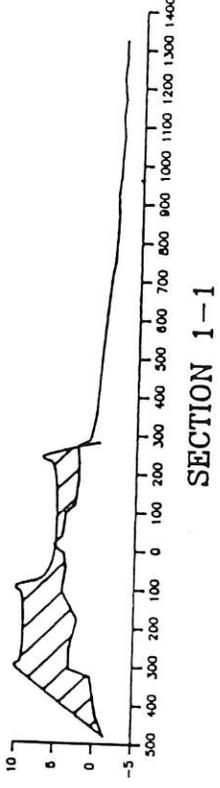
SECTION 4-4



SECTION 3-3



SECTION 2-2



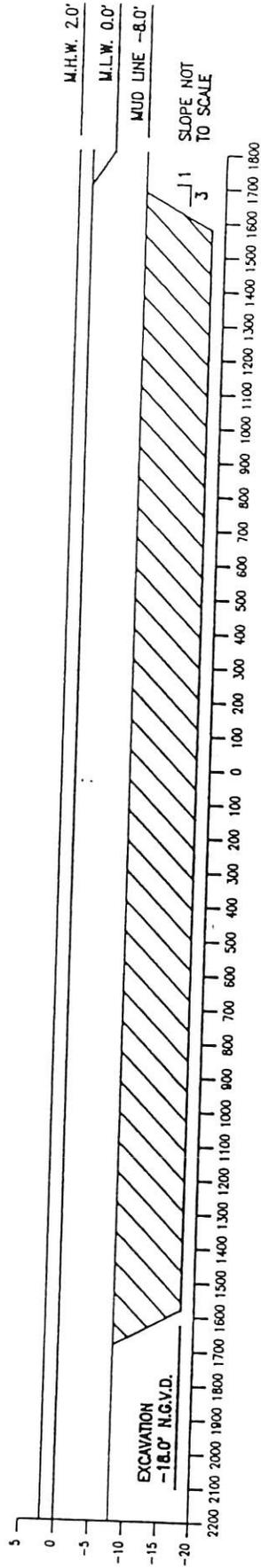
SECTION 1-1

+/-3,000,000 CUBIC YARDS
OF DREDGED MATERIALS.

APPLICATION BY:
SOUTH TERREBONNE PARISH TIDEWATER
MANAGEMENT & CONSERVATION DISTRICT
AND
TERREBONNE PARISH CONSOLIDATED
GOVERNMENT

ISLE DERNIERES RESTORATION PROJECT
EAST ISLAND
CROSS-SECTIONS

PROJECT LOCATION
LONG. 90° 48' W.
LATT. 29° 03' N.



SECTION 5-5
(BORROW AREA)

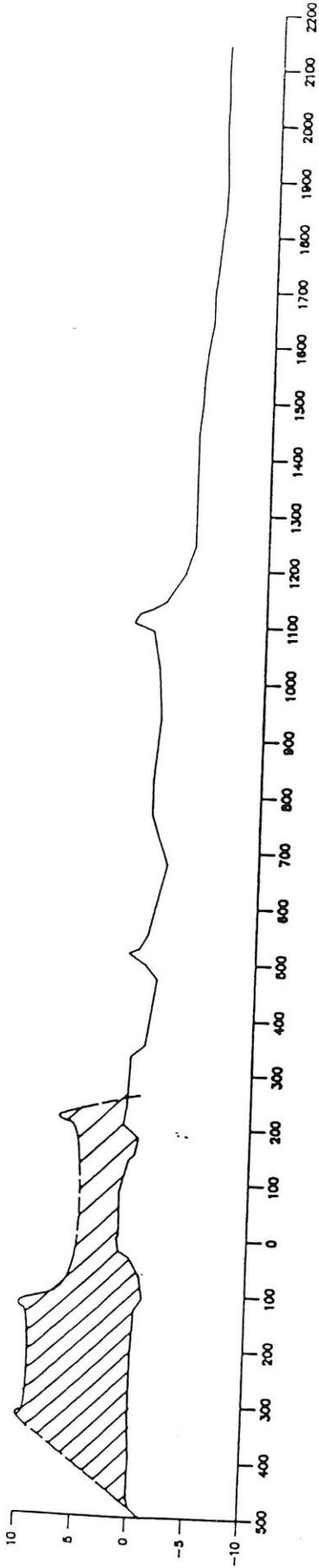
+/-3,000,000 CUBIC YARDS
OF DREDGED MATERIALS.

ISLE DERNIERES RESTORATION PROJECT
EAST ISLAND
BORROW AREA CROSS-SECTION

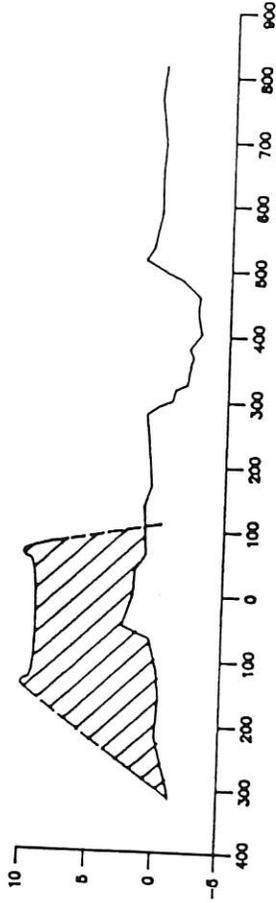
APPLICATION BY:
SOUTH TERREBONNE PARISH TIDEWATER
MANAGEMENT & CONSERVATION DISTRICT
AND
TERREBONNE PARISH CONSOLIDATED
GOVERNMENT

PROJECT LOCATION:
LONG. 90° 48' W.
LATT. 29° 05' N.

PREPARED BY: COASTAL ENGINEERING &
ENVIRONMENTAL CONSULTANTS
HOUMA, LOUISIANA



SECTION 7-7



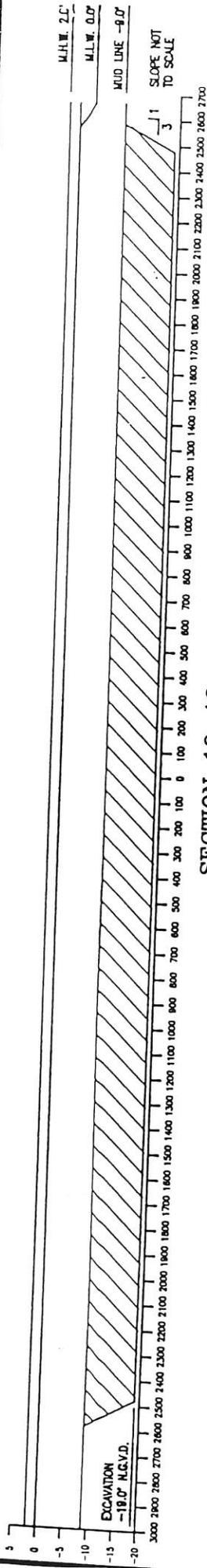
SECTION 6-6

+/- 6,000,000 CUBIC YARDS
OF DREDGED MATERIALS.

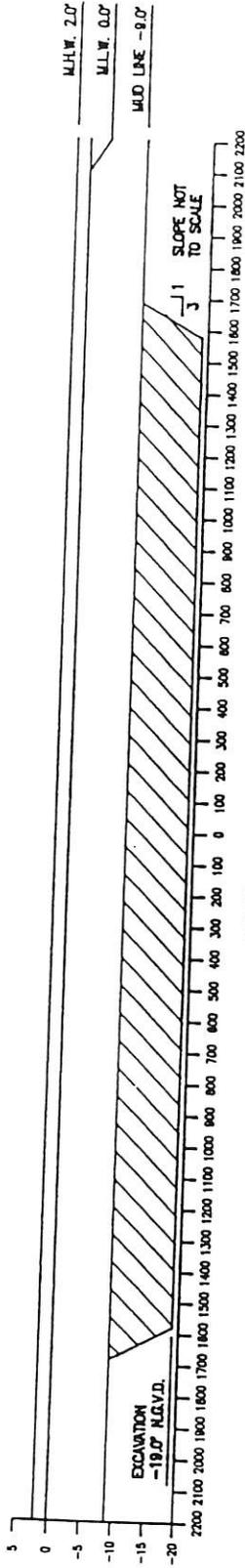
ISLE DERNIERES RESTORATION PROJECT
TRINITY ISLAND
CROSS-SECTIONS

APPLICATION BY:
SOUTH TERREBONNE PARISH TIDEWATER
MANAGEMENT & CONSERVATION DISTRICT
AND
TERREBONNE PARISH CONSOLIDATED
GOVERNMENT

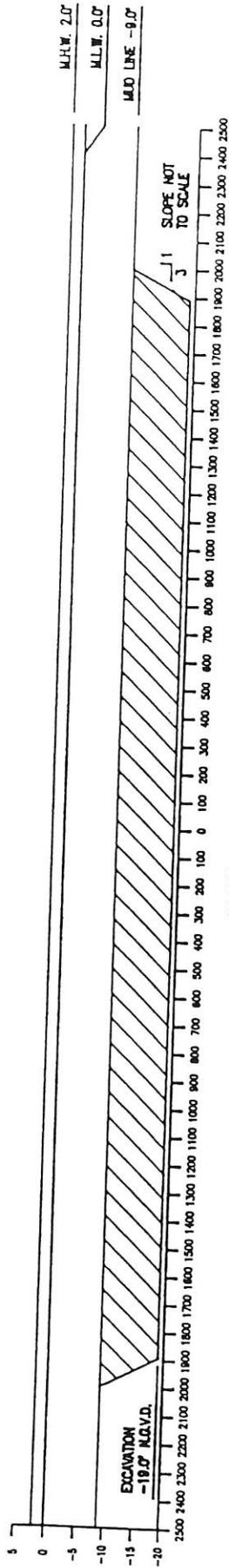
PROJECT LOCATION
LONG. 90° 48' W.
LATT. 29° 03' N.



SECTION 10-10
(BORROW AREA)



SECTION 9-9
(BORROW AREA)



SECTION 8-8
(BORROW AREA)

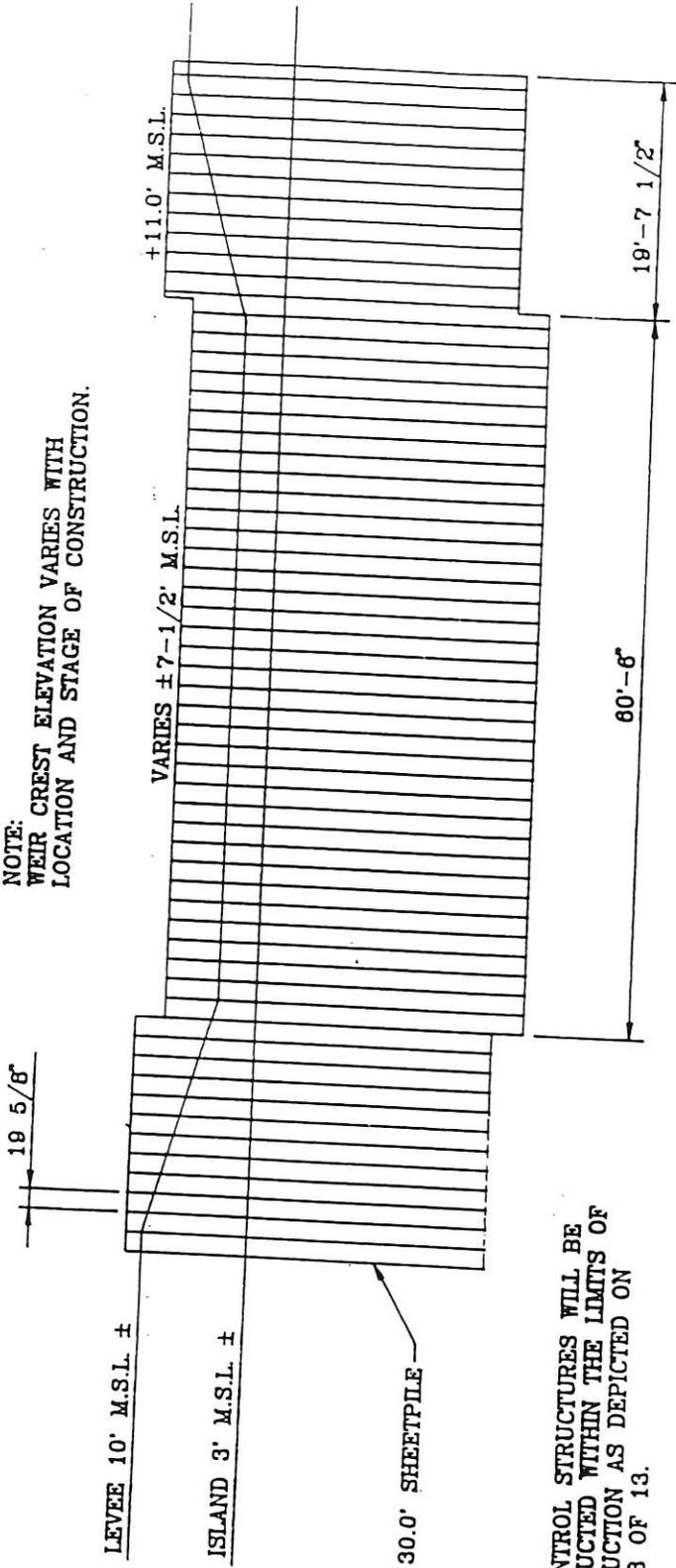
+/- 9,000,000 CUBIC YARDS
OF DREDGED MATERIALS.

ISLE DERNIERES RESTORATION PROJECT
EAST ISLAND
BORROW AREA CROSS-SECTION

APPLICATION BY:
SOUTH TERREBONNE PARISH TIDEWATER
MANAGEMENT & CONSERVATION DISTRICT
AND
TERREBONNE PARISH CONSOLIDATED
GOVERNMENT

PROJECT LOCATION
LONG. 90° 48' W.
LATT. 29° 03' N.

NOTE:
WEIR CREST ELEVATION VARIES WITH
LOCATION AND STAGE OF CONSTRUCTION.



NOTE:
ALL CONTROL STRUCTURES WILL BE
CONSTRUCTED WITHIN THE LIMITS OF
CONSTRUCTION AS DEPICTED ON
SHEET 3 OF 13.

6 CONTROL STRUCTURES IN EACH PHASE

STRUCTURE USED TO DIRECT FLOW OF
DREDGED MATERIAL, TO BE USED DURING
CONSTRUCTION, STRUCTURES WILL BE
REMOVED ON COMPLETION OF PROJECT.
LOCATION OF STRUCTURES WILL BE
DETERMINED BY THE DESIGN ENGINEER
AND/OR DREDGE CONTRACTOR.

ISLE DERNIERES RESTORATION PROJECT TYPICAL SHEETPILE WATER CONTROL STRUCTURE

APPLICATION BY:
SOUTH TERREBONNE PARISH TIDEWATER
MANAGEMENT & CONSERVATION DISTRICT
AND
TERREBONNE PARISH CONSOLIDATED
GOVERNMENT

PROJECT CENTERED AT
LONG. 90° 48' W.
LATT. 29° 03' N.



This notice of authorization must be conspicuously displayed at the site of work.

United States Army Corps of Engineers

Mar 4, 19 94

A permit to construct and maintain containment dikes and temporary overflow weirs on East Island and Trinity Island, hydraulically dredge a maximum of 9,000,000 cubic yards of material from Lake Pelto and deposit dredged material within the contained disposal areas to restore ~~the barrier island dune and marsh habitat, in Lake Pelto and on portions of the Isle Dernieres Barrier Island, approximately 13 miles south of Cocodrie, Louisiana, in Terrebonne Parish,~~
at Terrebonne Parish,

South Terrebonne Tidewater Management & Conservation District and Terrebonne
has been issued to Consolidated Government on Mar 4. 19 94

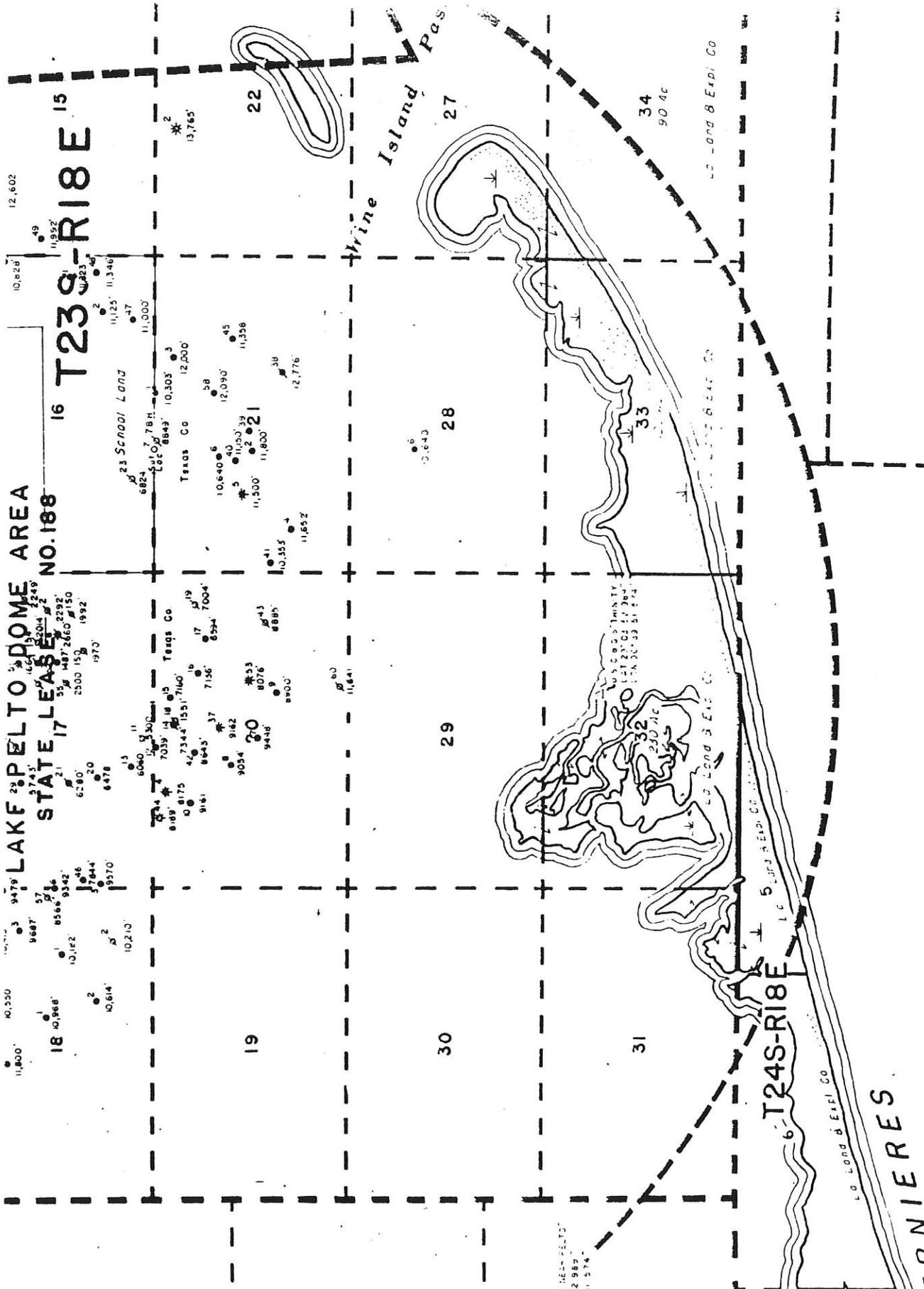
Address of Permittee Post Office Box 370, Chauvin, Louisiana 70344

Permit Number

SW(Lake Pelto)48


Albert J. Guillot, P.E.
For the District Commander

APPENDIX C



PARISH OF TERREBOURNE
 TOWNSHIP (23) SOUTH, RANGE (16) EAST

Section 32, all fractional 330.00
 Section 33, all fractional 190.00
 Section 34, all fractional 90.00

Also all the unsurveyed area in township except
 Section 16 525.00

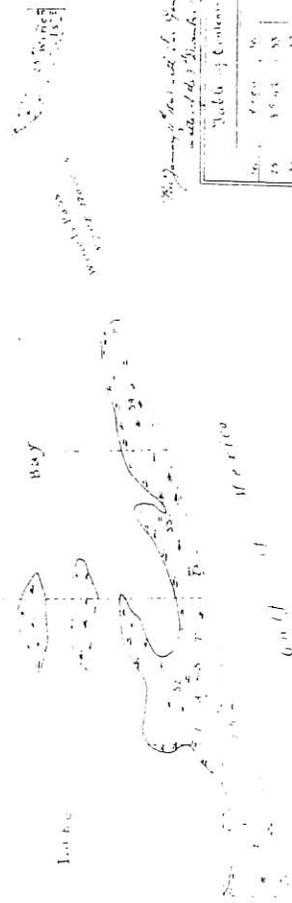
CAPTION "B"

1. The above land was selected by the State of Louisiana on August 9, 1850, and was approved to the State by the Secretary of the Interior on May 6, 1852. (List No. 1.)
2. State of Louisiana
 to
 B. C. A. B. L. D.
 NOTE: Also recorded in COB 129 Follio 315 on 4-3-1941.
 Transfer
 Dated: 4-26-1901
 COB "VV" Follio 563
 Recd: 5-11-1901
3. B. C. A. B. L. D.
 to
 South La. Land Co.
 Quitclaim
 Dated: 3-25-1901
 COB "VV" Follio 245
 Recd: 4-25-1901
4. South La. Land Co.
 to
 Pelican Land Co.
 Sale
 Dated: 8-18-1913
 COB 62 Follio 418
 Recd: 9-23-1913
5. Wisner Estates, Inc.
 to
 State of Louisiana
 CONVEYS: All except Section 16 in T. 23 S., R. 18 E.
 Tax Adjudication
 Dated: 6-29-1920
 COB 73 Follio 167
 Recd: 6-30-1920
6. State of Louisiana
 to
 Wisner Estates, Inc.
 REDEEMS: Property adjudicated in Link No. 5.
 Redemption
 Dated: 6-11-1921
 COB 75 Follio 442
 Recd: 10-21-1921
7. Wisner Estates, Inc.
 to
 H. H. Timken
 Sheriff's Sale
 Dated: 11-9-1923
 COB 79 Follio 254
 Recd: 11-9-1923
8. H. H. Timken
 to
 Border Research Corp.
 Sale
 Dated: 2-2-1926
 COB 85 Follio 100
 Recd: 5-13-1926

11/3
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T 23 and C 4 B 13 E
South Eastern Dist

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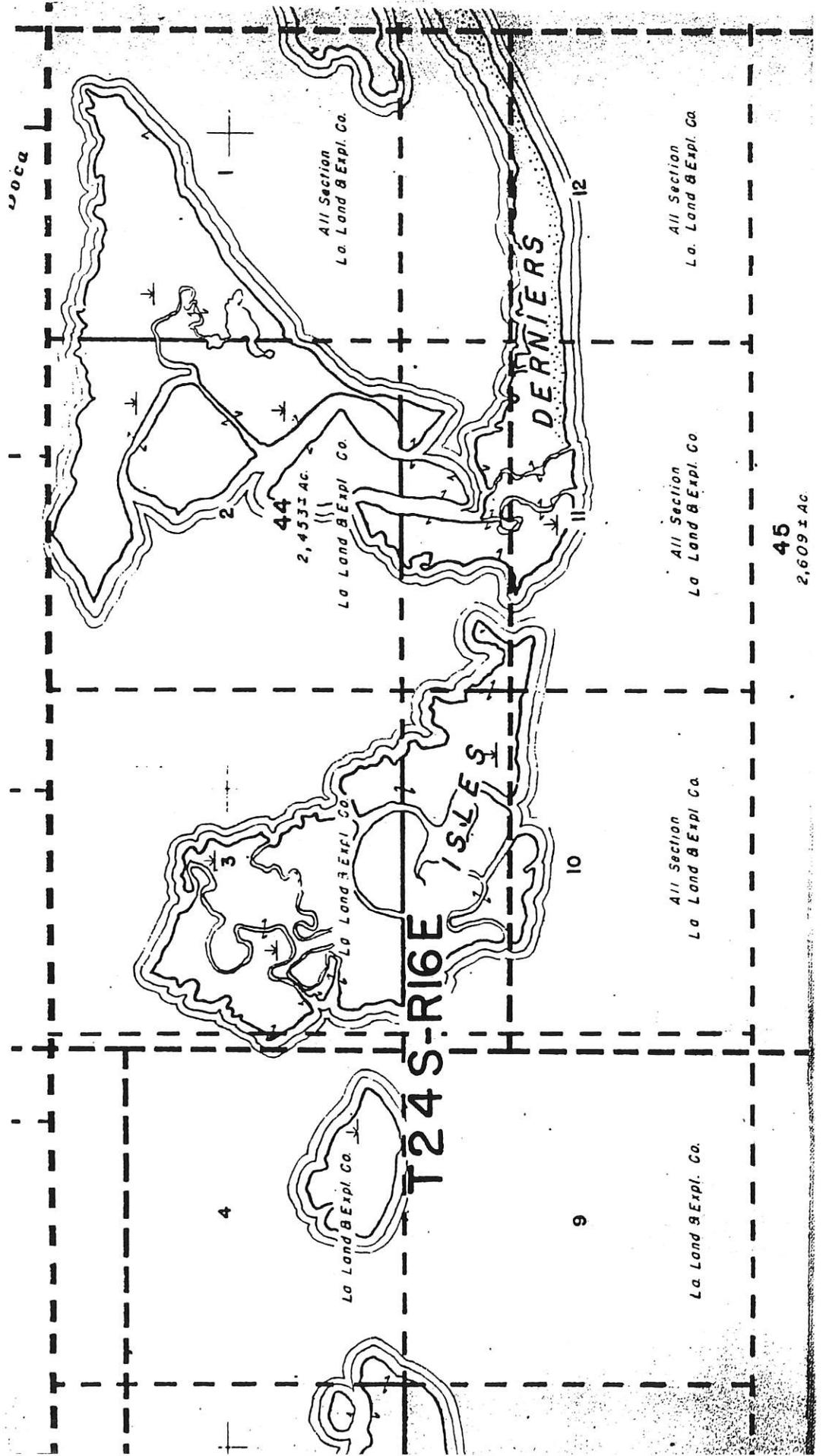


The boundary between the
Municipal and the
County of
the
Municipal and the
County of

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The boundary between the
Municipal and the
County of
the
Municipal and the
County of

The
Municipal and the
County of
the
Municipal and the
County of



Loca

All Section
La. Land & Expl. Co.

2,453 ± AC.
La Land & Expl. Co.

All Section
La. Land & Expl. Co.

All Section
La Land & Expl. Co.

All Section
La Land & Expl. Co.

La. Land & Expl. Co.

T24S-R16E

RIGGS ISLES

DERNIERS

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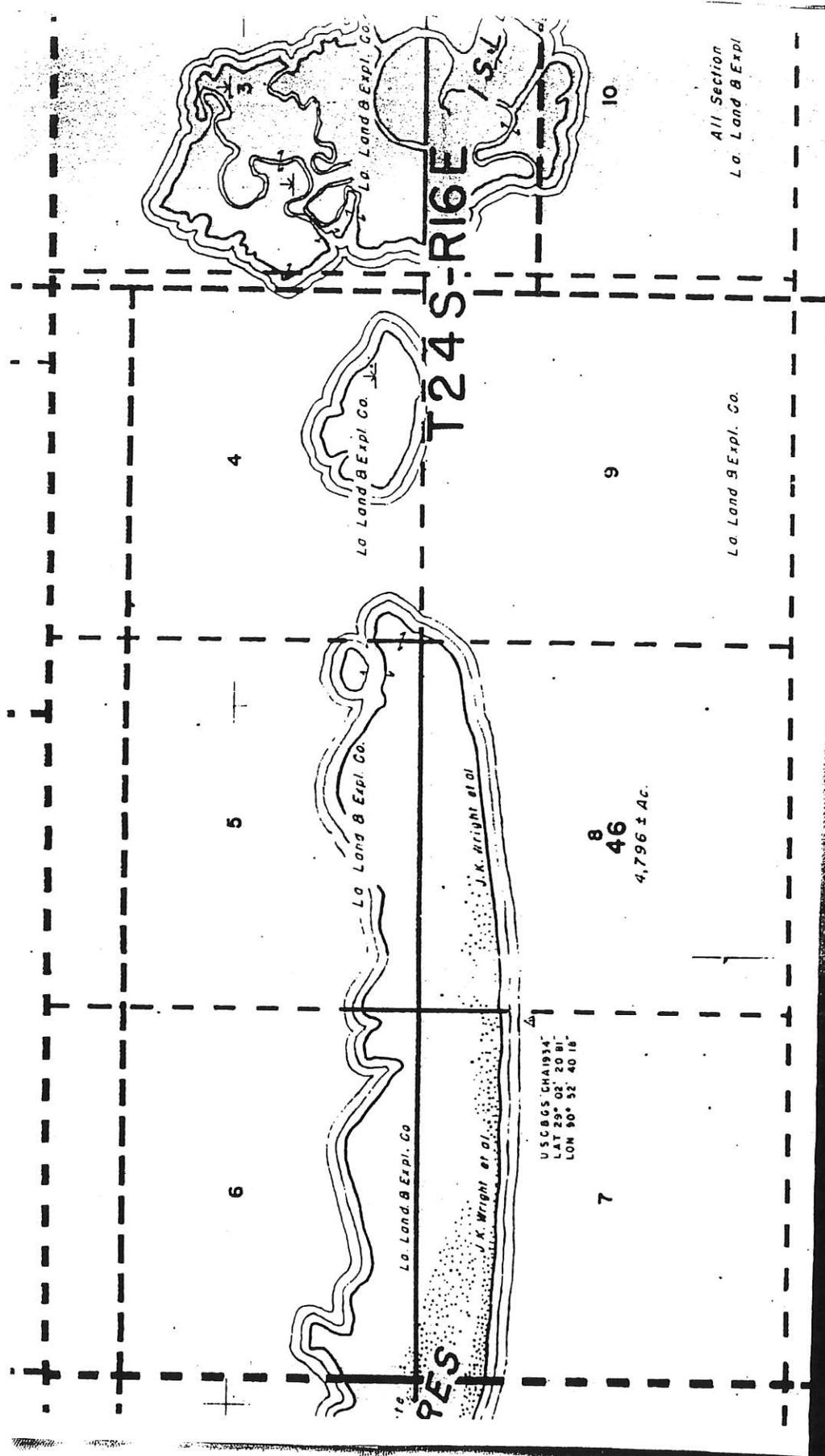
9

10

12

45

2,609 ± AC



3
La. Land & Expl. Co.

4
La. Land & Expl. Co.

5
La. Land & Expl. Co.
J.K. Wright et al.

6
La. Land & Expl. Co.
J.K. Wright et al.

7
USCGS CHAIB34
LAT 29° 02' 20.01"
LON 90° 52' 40.18"

8
46
4,796 ± Ac.

9

10

T24 S-RIGE 1 S. 1

All Section
La. Land & Expl.

PARISH OF TERREBONNE

TOWNSHIP (24) SOUTH, RANGE (16) EAST

Section 1, all fractional 50.00
 Section 2, all fractional 360.00
 Section 3, all fractional 500.00
 Section 4, all fractional 430.00
 Section 5, all fractional 240.00
 Section 6, all fractional 40.00
 Section 9, N/2 fractional 280.00
 Section 10, all fractional 420.00
 Section 11, all fractional 460.00
 Section 12, all fractional 390.00

1. All of the above described lands were selected by the State of Louisiana on August 9, 1850, and were approved to the State by the Secretary of the Interior on August 1, 1854. (List No. 1, Supplemental.)

2. State of Louisiana
 to
 B. C. A. B. L. D.
 Transfer
 Dated: 4-26-1901
 COB "VV" Folio 583
 Recd: 5-11-1901
 NOTE: Also recorded in COB 129
 Folio 315 on 4-3-1941.

3. B. C. A. B. L. D.
 to
 South La. Land Co.
 Quitclaim
 Dated: 3-25-1901
 COB "VV" Folio 245
 Recd: 4-25-1901

4. South La. Land Co.
 to
 Pelican Land Co.
 Sale
 Dated: 8-18-1913
 COB 62 Folio 418
 Recd: 9-23-1913

5. Wisner Estates, Inc.
 to
 State of Louisiana
 Tax Adjudication
 Dated: 6-29-1920
 COB 73 Folio 167
 Recd: 6-30-1920

6. State of Louisiana
 to
 Wisner Estates, Inc.
 REDEEMS: Link No. 5.
 Redemption
 Dated: 6-11-1921
 COB 75 Folio 442
 Recd: 10-21-1921

7. Wisner Estates, Inc.
 to
 H. H. Timken
 Sheriff's Sale
 Dated: 11-9-1923
 COB 79 Folio 254
 Recd: 11-9-1923

8. H. H. Timken
 to
 Border Research Corp.
 Sale
 Dated: 2-2-1926
 COB 85 Folio 100
 Recd: 5-13-1926

South Eastern Dist
La

(River Survey of 1894 and the River Survey
of 1902)

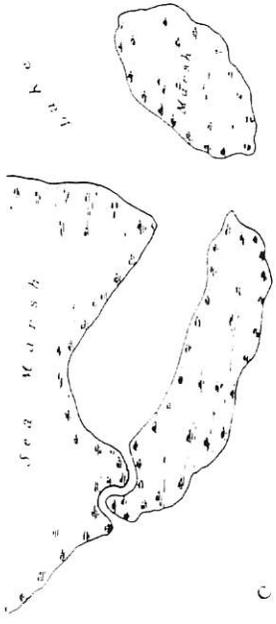
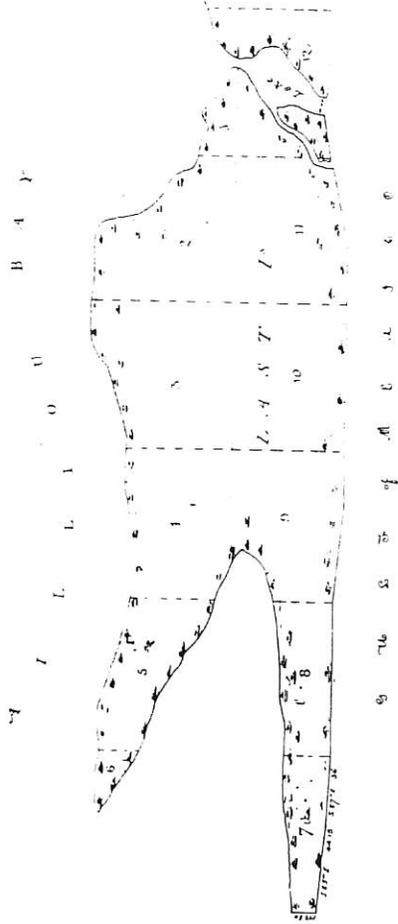


Table of Contents

No.	Area	Area
1	7	
2	8	
3	9	
4	10	
5	11	
6	12	



The West Marshes and Marsh
was surveyed by J. F. Conolly, with
under contract of 13th Dec 1897 and out
from the 1297 of 1898 amounting to 6
mils 14 ch and 6 linc

Changes made after
the 1897 and 1898 surveys
The West Marshes was surveyed
and compared with the 1897
survey in this (the same survey)
W. Conolly
1898

v13 A

PARISH OF TERREBONNE
TOWNSHIP (24) SOUTH, RANGE (17) EAST

Section 1, all fractional	320.00
Section 2, all fractional	490.00
Section 3, all fractional	580.00
Section 4, all fractional	560.00
Section 5, all fractional	70.00
Section 6, all fractional	370.00
Section 7, all fractional	290.00
Section 8, all fractional	165.00
Section 9, all fractional	40.00
Section 10, all fractional	

1. All of the above described lands were selected by the State of Louisiana on August 9, 1850, and were approved to the State by the Secretary of the Interior on August 1, 1854. (List No. 1, Supplemental.)

2. State of Louisiana
to
B. C. A. B. L. D.
NOTE: Also recorded in COB 129 Folio 315 on 4-3-1941.
Transfer
Dated: 4-26-1901
COB "VV" Folio 583
Recd: 5-11-1901

3. B. C. A. B. L. D.
to
South La. Land Co.
Quitclaim
Dated: 3-25-1901
COB "VV" Folio 245
Recd: 4-25-1901

4. South La. Land Co.
to
Pelican Land Co.
Sale
Dated: 8-18-1913
COB 62 Folio 418
Recd: 9-23-1913

5. Wisner Estates, Inc.
to
State of Louisiana
Tax Adjudication
Dated: 6-29-1920
COB 73 Folio 167
Recd: 6-30-1920

6. State of Louisiana
to
Wisner Estates, Inc.
REDEEMS: Link No. 5.
Redemption
Dated: 6-11-1921
COB 75 Folio 442
Recd: 10-21-1921

7. Wisner Estates, Inc.
to
H. H. Timken
Sheriff's Sale
Dated: 11-9-1923
COB 79 Folio 254
Recd: 11-9-1923

8. H. H. Timken
to
Border Research Corp.
Sale
Dated: 2-2-1926
COB 85 Folio 100
Recd: 5-13-1926

T. Z. 4, B. 17 E.
 South Eastern Post
 La

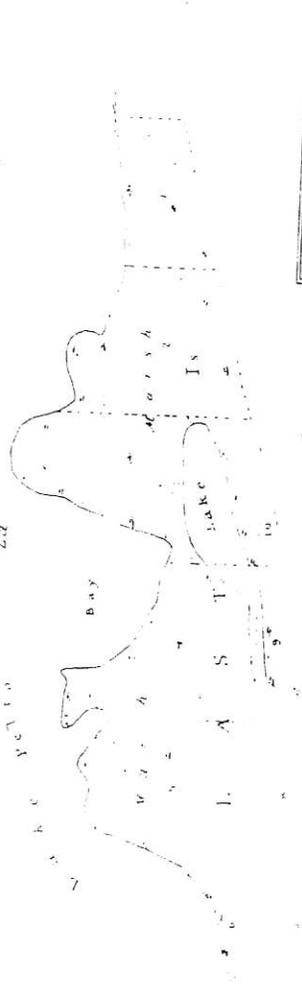


Table of Contents

No.	Area	Per. Area
1		0
2		7
3		8
4		9
5		10

The Journal of the Gulf of Mexico in the Journal was made
 at General 1837 in the 2d Qr of 1837 with Contract of 13th Oct
 1837 and put in the 1st Qr 1838 amounting to 6 with 10 chains
 15 links

Surveyor General Office
 March 24 1838 - San Francisco
 The above Journal was compared
 with the notes on file in this Office and is
 approved
 J. J. Johnston
 Surveyor General

Survey of the
 Boundary of the
 State of California

5" HOUSE NEAR FELTO
03' 52 989"
39' 51 574"

6

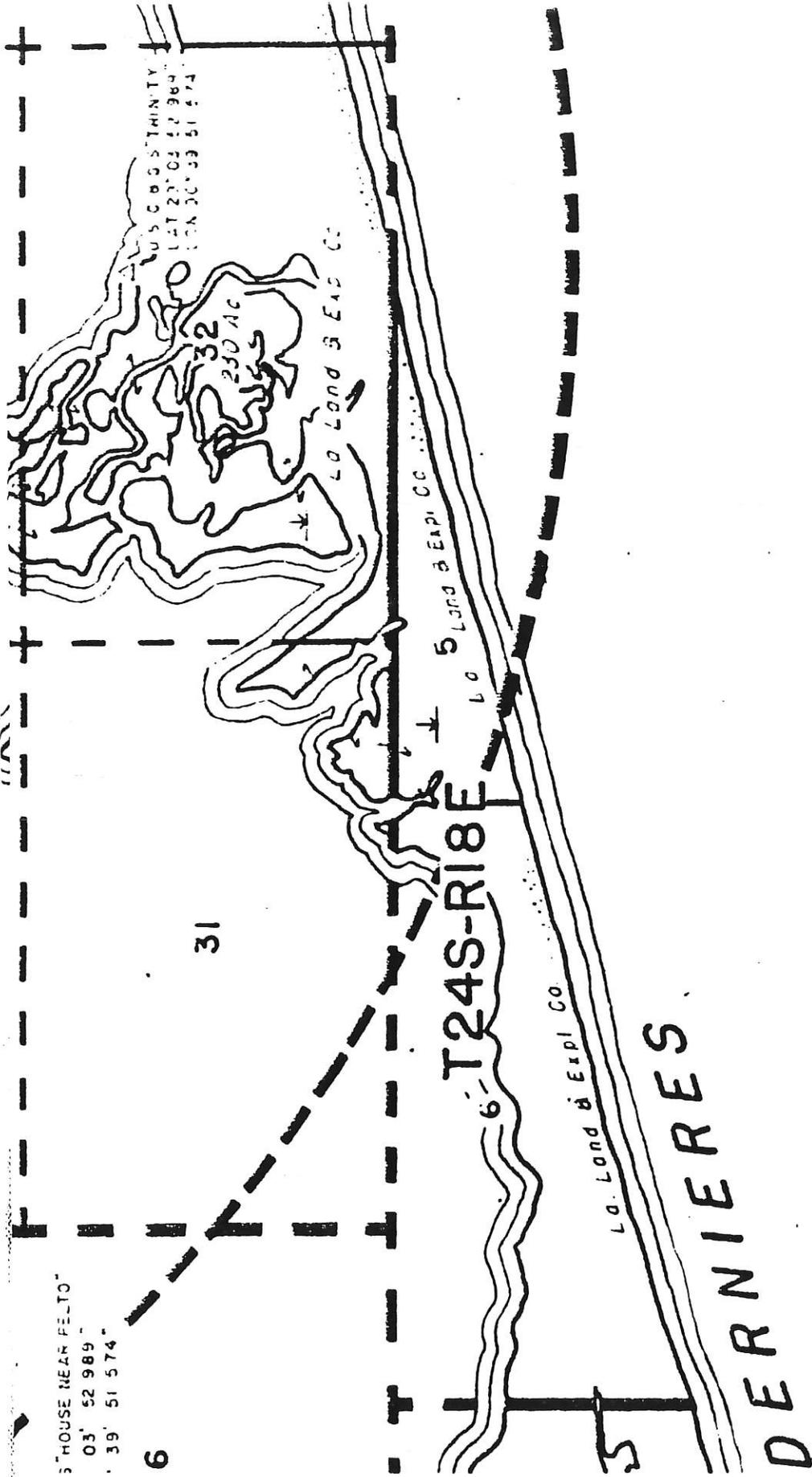
31

T24S-R18E

6

La. Land & Exp. Co.

DERNIERES



PARISH OF TERREBORNE

TOWNSHIP (24) SOUTH, RANGE (18) EAST

Section 5, all fractional 25.00
Section 6, all fractional 160.00

1. All of the above described land was selected by the State of Louisiana on August 9, 1850, and was approved to the State by the Secretary of the Interior on May 6, 1852. (List No. 1.)

2. State of Louisiana
to
B. C. A. B. L. D.
NOTE: Also recorded in COB 129 Folio 315 on 4-3-1941.
Transfer
Dated: 4-26-1901
COB "VV" Folio 583
Recd: 5-11-1901

3. B. C. A. B. L. D.
to
South La. Land Co.
Quitclaim
Dated: 3-25-1901
COB "VV" Folio 245
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to
Pelican Land Co.
Sale
Dated: 8-18-1913
COB 62 Folio 418
Recd: 9-23-1913

5. Wisner Estates, Inc.
to
State of Louisiana
Tax Adjudication
Dated: 6-29-1920
COB 73 Folio 167
Recd: 6-30-1920

6. State of Louisiana
to
Wisner Estates, Inc.
REDEMS: Link No. 5.
Redemption
Dated: 6-11-1921
COB 75 Folio 442
Recd: 10-21-1921

7. Wisner Estates, Inc.
H. H. to Timken
Sheriff's Sale
Dated: 11-8-1923
COB 79 Folio 254
Recd: 11-9-1923

8. H. H. to Timken
Border Research Corp.
Sale
Dated: 2-2-1926
COB 85 Folio 108
Recd: 5-13-1926

T 23 and 24 B 13 E

South Eastern Dist

L.A.



The following was with the General
order of the 30th March 1915

Table of Contents

Page	Section	Page
25	8342	33
34		32
TOTAL		6

1. Location 9' 6"
The 2000th Anniversary of Bonaparte 23 R 1815 was marked by
50 barrels of fireworks on 23 R 1915 26. The fireworks
were in the Bay of Bonaparte, 23 under contract of 12th Oct 1837 and
paid for on the final 30th of 1838. amounting to 14th 450 barrels

Surveyor General's Office
Washington, D.C.
The above Bonaparte map has copies and is open
under the office and is open.

The Surveyor
General's Office

Vol 73 a

STATE OF Ohio
 COUNTY OF Stark

SS:

141

BE IT KNOWN AND REMEMBERED that HENRY H. TINKER
 of full age and majority, who is a married man, whose wife
 by his first and only marriage is named Mrs.

Edith Kitzmiller Tinker
 a resident of the City of Canton, County of Stark, State
 of Ohio, has granted, bargained, sold, conveyed, trans-
 ferred, assigned, set over and delivered, and by these
 presents does grant, bargain, sell, convey, transfer,
 assign, set over and deliver unto

BORDER RESEARCH CORPORATION

A corporation organized under the laws of the State of
 Maryland, with its principal office in the City of New
 York, State of New York, which said Corporation is herein
 represented by and through its President, Mr. Walter

Van Busck
 who appears herein and represents said Corporation under
 and by virtue of the authority vested in him by a reso-
 lution of the Board of Directors of said Corporation,
 adopted at a meeting duly and regularly called and held
 on the 13th day of February, 1926

a copy of which resolution is hereto attached and made
 a part hereof, the following described property:

In Township Twenty-Three (23) South, Range Eighteen
(18) East.

Section 27, lots 3 & 4.
And all unsurveyed area except Section 18.

In Township Twenty-three (23) South, Range Nineteen
(19) East.

Section 4, all.
Section 5, all.
Section 6, all.
Section 7, all.
Section 8, all.
Section 9, all.
Section 17, all.
Section 18, all.

In Township Twenty-Three (23) South, Range Twenty (20)
East.

Section 3, lots 2, 3, & 7
Section 4, lots 1 & 2.

In Township Twenty-Four (24) South, Range Fifteen (15)
East.

Section 1, all.
Section 2, all.
Section 3, all.
Section 4, all.
Section 5, all.
Section 6, all.
Section 9, all.
Section 10, all.
Section 11, all.
Section 12, all.

In Township Twenty-Four (24) South, Range Sixteen (16)
East.

Section 1, all.
Section 2, all.
Section 3, all.
Section 4, all.
Section 5, all.
Section 6, all.
Section 7, all.
Section 8, all.
Section 9, all.
Section 10, all.

In Township Twenty-Four (24) South, Range Seventeen
(17) East.
Section 5, all.
Section 6, all.

In Township Twenty-Four (24) South, Range Eighteen
(18) East.

(F.)

The following described lands in the Parish of St. John The Baptist, State of Louisiana, and described as follows:

Section 1, NE $\frac{1}{4}$ & S $\frac{1}{4}$
Section 12, NE $\frac{1}{4}$ & W $\frac{1}{4}$

In Township Thirteen (13) South, Range Eighteen (18) East.

Section 5, S $\frac{1}{4}$
Section 6, SE $\frac{1}{4}$
Section 8, all fractional.
Section 9, all fractional.
Section 21, all fractional.
Section 28, all fractional.
Section 33, all fractional.

In Township Thirteen (13) South, Range Nineteen (19) East.

II.

The following lands situated in the Parishes of Terrebonne and Lafourche:

(A.) The following lands in the Parish of Terrebonne, State of Louisiana, described as follows:

Tract of Manuel Delerno, being 65 acres on Bayou Little Caillou, bounded above by Michel Hebert and below by Eugene Maguin; T. 19 S., R. 18 E., containing 65 acres marsh land, Class B.

Tract of Joseph Delerno, containing 300 acres, being rear portions of Sections 22 and 23, T. 19 S., R. 18 E., being sea marsh land, Class B.

Tract of J. A. Shaw, containing 53 acres in Sec. 8, T. 19 S., R. 18 E., being sea marsh land, Class B.

Tract of Leonce P. Boudreau on Bayou Little Caillou, containing 40 acres, bounded above by Auguste Authement and below by A. M. Duplantis.

Tract on Bayou Little Caillou, containing 130 acres, bounded above by Oame Helleguin and below by Vincent Delerno, containing 170 acres, sea marsh land, Class B.

Tract of Marcelin Boudreau on Bayou Little Caillou, containing 50 acres, bounded above by A. M. Duplantis and below by Paul Forest, containing 50 acres, being sea marsh land, Class B.

N

VII.

Along with said lands above described, and as part thereof, the said Timken does also sell, transfer and convey all claims, demands, choses in action, and other rights against all persons, firms, corporations, partnerships and associations, whomsoever and whatsoever, including claims against the State of Louisiana or any political subdivision thereof, vested in and belonging to him, arising out of or connected with said lands, and/or from the payment of taxes thereon, including all rights or actions in damages which he, the said Timken, may have or hold against any and all third persons and/or corporations, associations and partnerships, whomsoever and whatsoever, for trespassing upon or depredating said lands, whether by cutting timber, trapping or otherwise; the intent being to vest in the said Border Research Corporation all such rights and claims as the said Timken may have and enjoy, and to substitute and subrogate the said Border Research Corporation in and to all such rights and actions, thereby vesting in it the right to resort to the courts and to institute such actions, suits and proceedings as he, the said Timken, might have instituted insofar as concerns lands and property herein conveyed; and, the said Timken hereby subrogates the said Border Research Corporation in and to all the liens, privileges and mortgages arising out of, connected with and/or securing the payment of said rights and claims; this assignment and subrogation to apply to all claims whether now known or unknown, and to operate to the fullest extent allowed by the laws of Louisiana.

VIII.

Along with the above-described property and as a part thereof, there is included all buildings, improvements, rights, ways, privileges, appurtenances, servitudes and prescriptions, as well as all batture, and batture and

riparian rights, including all rights of a riparious nature, also all accretions to said lands as well as land created by dereliction, bottoms of all bays, bayous, lakes, streams, as well as all other water bottoms, now vested in the said Timken, ~~or his vendors by virtue of the ownership of said lands.~~

IX.

The intent is that the said Timken shall and does transfer and assign to the said Border Research Corporation all of the lands which he owns in the above mentioned Parishes in the State of Louisiana, other than the lands herein excepted, and, should there be any errors of descriptions in this Act, then the said Timken agrees to execute such other and further Acts of Sale as are necessary to completely divest him of his interest in and to said lands, and invest the title thereof in and to the said Border Research Corporation; all such deeds to be without warranty, ~~except as against the acts and deeds of the said Timken~~ but with full substitution and subrogation in and to all actions of warranty. The failure of the said Corporation to request, or of the said Timken to execute such additional deeds and assurances shall not be deemed to impair the title of the said Border Research Corporation in and to the property not herein specifically or correctly described, the intent being to presently vest in said Border Research Corporation the title to all such lands, now owned by Timken, together with all other rights and choses in action appertaining thereto, as above set forth.

X.

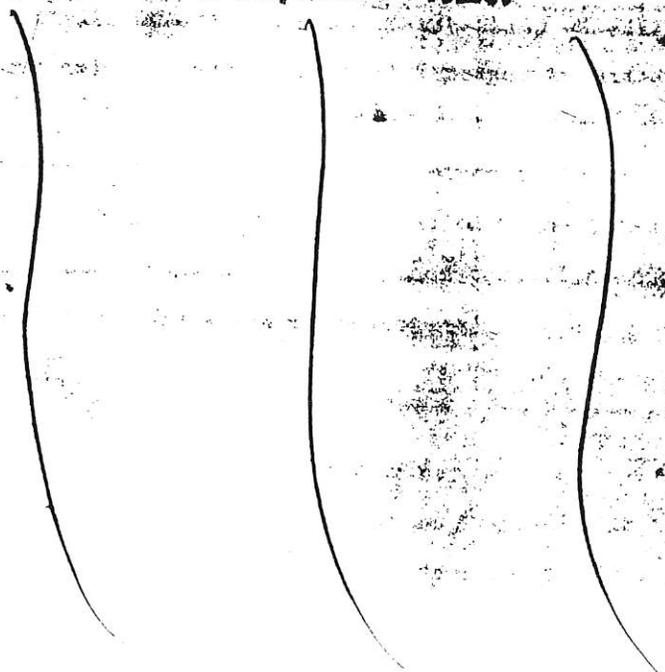
This sale and transfer of said lands is made subject to a certain trapping lease entered into between the said Timken and the Delaware-Louisiana Fur Trapping Company, Inc., of date the 3rd day of January, 1925

P V

the original of which said lease is recorded in the above mentioned Parishes and has been exhibited to the said purchaser herein, and the said purchaser accepts this said sale subject to the terms and conditions of said lease contract. The said Border Research Corporation, however, does not by this acknowledgment waive or abandon any rights that it or the said Timken might have to annul said contract because of any breach thereof, and if any such right of annulment does exist, then the said Timken transfers said right to the said Border Research Corporation and subrogates it fully to all such claims and demands, and his right to institute such action of annulment.

XI. 4

It is agreed that there is not included herein Lot 17, of Subdrainage District No. 3, of Lafourche Drainage District No. 12, which the said Timken has sold or agreed to sell to one, Antoine Folse.



5

TO HAVE AND TO HOLD said property unto the said purchaser its successors, transferees and assignees, in full property forever, without any warranty, even for the return of the purchase price, except as against any acts or deeds of the said Timken subsequent to the date of this conveyance, but with full substitution and subrogation in and to all the rights and actions of warranty which the said Timken may have against all preceding owners and vendors.

Said Timken agrees that all taxes assessed against said property and due and payable up to and including those for the year 1925 shall be paid by him. All taxes subsequent to the year 1925 shall be paid by the said Border Research Corporation.

This said sale is made and accepted for and in consideration of the issuance by the said Border Research Corporation and delivery to said Timken of 250,000 shares of the fully paid non-assessable capital stock without par value of said Border Research Corporation, which said stock has been duly issued by the said Corporation and delivered to the said Timken, receipt of which is hereby acknowledged, and due acquittance and discharge given therefor.

The parties hereto dispense with the production of the usual mortgage and conveyance certificates required by the laws of the State of Louisiana.

IN FAITH WHEREOF the said Timken has executed this act of conveyance in the City of Canton, County of Stark, State of Ohio, on this the Second day of February, 1926, and the said Border Research Corporation, through its President, has executed and accepted this conveyance at the City of *Franklin*

P A

County of Hudson State of New Jersey

on this 13th day of February 1926, both

in the presence of the undersigned subscribing witnesses.
This act is executed in 7 originals

WITNESS (Signature)
of H. H. Timken.

W. H. Timken

Arthur Lynch

J. Mills

BORDER RESEARCH CORPORATION

by Walter de Buyck
President.

Witness the signature of
Border Research Corporation.

[Signature]
Alfred H. McCall

United States Internal Revenue stamps to the amount of one thousand dollars have been attached to one of the seven original copies of this deed and cancelled as required by law.

Harry W. [Signature]
Notary Public.
C.M.G.

EXHIBIT 4

5448

BORDER RESEARCH CORPORATION

CHANGE OF NAME TO

THE LOUISIANA LAND AND EXPLORATION COMPANY

ACT OF DEPOSIT.

UNITED STATES OF AMERICA

STATE OF LOUISIANA

PARISH OF ORLEANS

CITY OF NEW ORLEANS

BE IT KNOWN, that of this the 19th day of the month of January, in the year of our Lord, one thousand nine hundred and twenty eight, and of the Independence of the United States of America, the one hundred and fifty-first,

Before me, ROBERT M. MILLING, JR., a Notary Public duly commissioned and qualified in and for the Parish of Orleans, State of Louisiana, therein residing, and in the presence of the witnesses hereinafter named and undersigned, personally came and appeared;

ROBERTS G. MILLING, a person of the full age of majority and a resident of and domiciled in the City of New Orleans, Parish of Orleans, State of Louisiana, herein appearing as Attorney for THE LOUISIANA LAND AND EXPLORATION COMPANY, formerly Border Research Corporation, who presented to me, Notary, a certified copy of a certain instrument, being "Articles of Amendment to the Charter of Border Research Corporation" changing the name of the Corporation to "The Louisiana Land and Exploration Company" dated May 4, 1927, acknowledged by W. C. Hardcastle, Vice-President, before Vera E. Schotta, Notary Public of the City of Baltimore, State of Maryland, on the same date, which said certified copy of Amendment to Charter is in the words and figures following, to-wit:

STATE OF LOUISIANA,

I, the undersigned Assistant Secretary of State, of the State of Louisiana, do hereby certify that the annexed and following three pages contain a true and correct copy of amendment to charter of the BORDER RESEARCH CORPORATION, changing its name to THE LOUISIANA LAND AND EXPLORATION COMPANY, domiciled at Baltimore, Maryland, as is shown by comparison with the document filed and recorded in the archives of this office on the nineteenth day of May, 1927.

(S E A L)

Given under my signature, authenticated with the impress of my Seal of Office, at the City of Baton Rouge, this 11th day of January, A. D. 1928.

(signed) R. H. FLOWER
Assistant Secretary of State.

ARTICLES OF AMENDMENT TO THE CHARTER

OF
BORDER RESEARCH CORPORATION.

The undersigned, Border Research Corporation, a corporation duly incorporated under the laws of the State of Maryland, and W. C. Hurdcastle, Vice-President, and Sidney P. Allen, Secretary, of said Corporation, in the name and on behalf of said Corporation, do hereby certify:

1. That at a meeting of the Board of Directors of Border Research Corporation at 45 Exchange Place, New York, N. Y., on the 3rd day of May, 1927, notice of the time, place and purpose of which had been duly waived, in writing filed with the records of the meeting, by each of the absent directors, resolutions were duly passed declaring that the amendment of the charter of said Corporation, hereinafter set forth, is advisable, and calling an extraordinary meeting of the stockholders of said corporation to be held at its office, Calvert Building, Baltimore, Maryland, at 4 o'clock P. M.,

312

on the 4th day of May, 1927, for the purpose of considering and acting upon said amendment thereby proposed and advised.

2. That thereafter at an extraordinary meeting of the stockholders of Border Research Corporation thus called by the Board of Directors of said Corporation, and duly held at the office of said Corporation, Calvert Building, Baltimore, Maryland, at 4 o'clock P. M., on the 4th day of May, 1927, notice of the time, place and purpose of which had been duly waived, in writing filed with the records of the meeting, by every stockholder not present in person at the meeting, the complete form of these present Articles of Amendment was submitted and certain resolutions were adopted by the affirmative vote of 1,500,000 shares of common stock, being all the shares of stock of said corporation outstanding, adopting the amendment of the charter of said Corporation hereinafter set forth and approving the form of these Articles of Amendment, which resolutions were as follows:

RESOLVED that the charter of this corporation be and it hereby is amended so as to change the name of the corporation to "The Louisiana Land and Exploration Company;"

RESOLVED that the officers of this corporation and the Chairman or the Secretary of this meeting be and they are hereby authorized and directed to cause to be executed, acknowledged, verified and recorded, the proper Articles of Amendment of the charter of this Corporation, to carry into effect and make valid and effectual the foregoing amendment to said Charter and to take all such other steps as may be deemed necessary or proper for the purpose of carrying out these resolutions; and

RESOLVE FURTHER, that the form of such Articles of Amendment which has been submitted to this meeting be and it is hereby approved.

3. That the foregoing amendment of the charter of the Border Research Corporation has been, as hereinabove recited, duly advised by the Board of Directors, and duly adopted by the stockholders of said corporation and that the charter of Border Research Corporation has been, as hereinbefore recited, and is hereby amended to accomplish each and all of the objects aforesaid.

In Testimony Whereof, BORDER RESEARCH CORPORATION has caused these Articles of Amendment to be signed in its corporate name by its Vice - President, and its corporate seal to be hereunto attached, duly attested by its Secretary, on the 4th day of May, 1927.

BORDER RESEARCH CORPORATION,

By: W. C. Hardscastle,
Vice - President.

(SEAL:-

Attest:

Mandy P. Allen,
Secretary.

State of Maryland,)
City of Baltimore,) ss:

I hereby certify that on this 4th day of May, 1927, before me the underscriber, a Notary Public of the State of Maryland, in and for the City of Baltimore aforesaid, personally appeared W. C. Hardscastle, the Vice-President of Border Research Corporation, and in the name and on behalf of Border Research Corporation he acknowledged the foregoing instrument in writing to be the act and deed of said corporation.

As witness my hand and notarial seal,

(Notarial Seal)

Gera H. Schotta,
Notary Public.

State of Maryland,)
City of Baltimore,) ss:

I hereby certify that on this 4th day of May, 1927, before me the underscriber, a Notary Public of the State of Maryland, in and for the City of Baltimore, aforesaid, personally appeared W. C. Hardscastle, and made oath in the form of law as follows:

I was Chairman of the meeting of stockholders of Border Research Corporation mentioned in the foregoing Articles of Amendment at which meeting the amendment of the charter of said corporation set forth in the foregoing Articles of Amendment was adopted. I have read the foregoing Articles of Amendment and know the contents thereof and have personal knowledge of the truth and facts therein set forth. The matters and facts set forth in the foregoing Articles of Amendment are true as stated.

W. C. Hardscastle,

Subscribed and sworn to before me this 4th day of May, 1927.

As witness my hand and notarial seal,

(Notarial Seal)

Gera H. Schotta,
Notary Public.

Articles of Amendment of "Border Research Corporation" changing its name to "The Louisiana Land and Exploration Company" received for record May 5, 1927, at 9:45 o'clock A. M., and approved by the State Tax Commission of Maryland May 5, 1927, as in conformity with law and ordered recorded.

(signed) J. Enos Day,
Jesse D. Price,
Commissioners.

State Tax Commission of Maryland:

It is hereby certified, that the within instrument, is a true copy, as received, approved and recorded by the State Tax Commission of Maryland.

As witness my hand and the seal of the said Commission at Baltimore, this 5th day of May, 1927.

Thomas A. Murray, Jr.,
Secretary.

SEAL :

And the said Roberts C. Milling did, in the presence of the undersigned witnesses, request me, Notary, to deposit said Certified Copy of said instrument among my Notarial records for safe-keeping.

WHEREUPON I, said Notary, have made and caused to be signed by the said Roberts C. Milling, and the said witnesses, this Act of Deposit after having paraphrased the said instrument "In Veritatem" for identification with this Act, all of the same being hereto attached to serve and avail as action may require.

THIS DONE AND PASSED in my office in the City of New Orleans, on the day and date first hereinabove written, in the presence of Mildred Emerson and Marguerite Dillmann, competent witnesses, who herewith subscribed their names with the said appearer and me, Notary, after due reading of the whole.

WITNESSES:

MILDRED EMERSON

MARGUERITE DILLMANN

(original signed) R. C. MILLING

R. E. MILLING, JR.,
NOTARY PUBLIC. Not. Pub.

A TRUE COPY OF THE ORIGINAL
New Orleans, La. 19th January 1928.
R. E. Milling
NOTARY PUBLIC

of
Border Research
Corporation
to
Louisiana Land
& Exploration
Company

Filed January 20th 1928
at 5 o'clock P. M. and duly
recorded on same day and date in
Record of Conveyances
No. 88 Folio 276 et seq.
[Signature]
Clerk of Court



APPENDIX D

SURFACE LEASE

No. T-2496

THIS LEASE entered into as of April 19, 1993, between THE LOUISIANA LAND AND EXPLORATION COMPANY, a Maryland corporation, whose address for purposes of this lease is Post Office Box 7097, Houma, Louisiana 70361 (herein called "Lessor"), and Dr. Albert Ellender

of this lease is 102 Ramey Rd., Houma, LA 70360 (herein called "Lessee")

WITNESSETH

1. In consideration of the rental herein provided and the obligations assumed by Lessee herein, but subject to the conditions hereinafter set forth, Lessor does hereby lease and let unto Lessee, for a term beginning on the effective date hereof and terminating one (1) year from such date, for the sole and only purpose of Campsite the surface of the following described property, which Lessee acknowledges to be owned by Lessor, to-wit:

A certain tract of land, measuring 200' front along the West bank of Trinity Bayou, by a depth of 200', bounded on the Southeast by that certain surface lease granted to Ulysse P. Fanguy (T-1198), bounded on the West and North by other property of Lessor, being located approximately South 77°00' West, a distance of 1,600'± from USC&GS Triangulation Station "PELTO, 1928", said tract being that same tract formerly leased to W. R. Ellender and Son (T-480-R), as being situated in the South 1/2 of Section 3, Township 24 South - Range 17 East,

EXAMPLE Surface Lease

2. Upon the execution hereof, Lessee has paid Lessor, as rent for the term hereof, the sum of \$150.00. Lessee shall have the option to renew this lease from year to year, for a maximum period not to exceed a total of ten (10) years from the effective date hereof, upon the same terms and conditions and for the same rental hereinabove set forth unless Lessor shall have notified Lessee, at least ten days prior to the expiration of the then current term, of amended terms and conditions, including an increase or decrease in rental, in which event the option to renew shall be upon the terms and conditions, including rental, as so amended by said notice. If Lessor has not received the renewal rent prior to the expiration of the then current term, Lessee shall be deemed to have elected not to renew this lease for the succeeding year, and this lease will immediately and automatically terminate.

3. This lease is granted by Lessor and accepted by Lessee subject to all of the further terms and conditions which appear on the reverse hereof, all of which are hereby made part of this agreement to the same extent and with the same effect as if same had been copied in full in this paragraph.

IN WITNESS WHEREOF this instrument is executed in multiple originals in the presence of the undersigned witnesses.

WITNESSES:

Witness signatures: Baird McElroy, Kimila A. Hebert

THE LOUISIANA LAND AND EXPLORATION COMPANY

By Kermit J. Coulon, Jr. Dr. Albert Ellender Lessee

STATE OF LOUISIANA, PARISH OF TERREBONNE

BEFORE ME, on this 16th day of August, 1993, personally came and appeared Kermit J. Coulon, Jr. to me personally known, who being by me duly sworn did depose and say that he is Manager, Houma District, of THE LOUISIANA LAND AND EXPLORATION COMPANY, and that the above and foregoing instrument was signed in behalf of said corporation by authority of its Board of Directors, and the said appearer acknowledged said instrument to be the free act and deed of said corporation.

Notary Public signature

STATE OF LOUISIANA, PARISH OF Terrebonne

BEFORE ME, on this day, personally appeared Baird McElroy to me personally known to be the identical person whose name is subscribed to the foregoing instrument as an attesting witness, who, being first duly sworn, says that he subscribed his name to the foregoing instrument as a witness and that he knows Dr. Albert Ellender

named in said instrument to be the identical person(s) described therein and who executed the same as (his) (their) voluntary act(s) and deed(s) in his presence and in the presence of the other subscribing witness.

Witness signature Baird McElroy Sworn to and subscribed before me, this 16th day of August, 1993 Notary Public

FURTHER TERMS AND CONDITIONS to which the lease appearing on the reverse hereof is subject:

4. All of the rights granted Lessee in this agreement are solely for the benefit of Lessee and Lessee's guests and invitees, and Lessee shall be and remain entirely responsible for such guests and invitees and all actions by any of them; provided, however, that Lessee shall not permit any person to exercise of such rights or even to go upon the leased premises unless such person is accompanied on the leased premises at all times by a party named as Lessee a member of such Lessee's immediate family (which shall consist of only Lessee's spouse, parents and children), or unless such person holds written authorization from Lessor; and Lessee shall conduct no commercial operations on the leased premises nor make any charge for the exercise of any of the privileges herein granted.
5. Lessee may maintain existing ditches and ponds on the leased premises and any existing buildings and facilities owned or placed on the leased premises by Lessee, but, except as may otherwise be provided herein, Lessee shall not construct any additional buildings, levees, dams, fences, or other structures or facilities on the leased premises, nor dredge or dig any additional canals, ditches or ponds thereon, nor otherwise change or alter the leased premises in any manner without first submitting plans and specifications therefor to Lessor and obtaining Lessor's prior written consent thereto. Lessee shall not use or permit the use of air boats or marsh buggies upon the leased premises without the prior written consent of Lessor; nor shall Lessee create any nuisance or disturbance on the leased premises.
6. Lessee accepts the leased premises and all canals and waterways leading thereto in their present conditions, and Lessor shall not be responsible for damage of any kind to any person or property upon the leased premises or upon any other property of Lessor, however occasioned. Lessee further agrees that it will, during the term hereof and thereafter, pay Lessor for and indemnify and hold Lessor harmless against any and all loss, damage, liability, cost or expense, including fines, penalties and reasonable attorneys' fees, on account of injuries to or death of persons or damage to property of any kind or the violation of any law or regulation, arising wholly or partially out of or in connection with or resulting from the use of the leased premises or the canals and waterways leading thereto by Lessee or its guests, invitees or visitors, or the exercise of any of the rights granted herein or any action hereunder, or the breach of any provision of this lease, irrespective of any negligence of Lessor; and in the event of any suit or other proceeding against Lessor on account thereof, Lessee shall, at Lessor's request, appear and defend same, and Lessee shall pay any assessment or judgment which may be rendered against Lessor therein.
7. Lessee shall obey and comply with all valid applicable laws and regulations, shall occupy the leased premises as a prudent caretaker and tenant, shall maintain same at all times in a presentable condition without litter or unsightly debris, shall maintain possession thereof for Lessor, and shall use the leased premises in such a manner as not to interfere with other parties operating thereon or on adjacent property with authorization from Lessor.
8. This lease is granted subject to all existing surface leases, mineral leases, servitudes, rights of way, permits and other contracts of whatsoever kind, whether recorded or unrecorded, affecting the leased premises, and Lessor reserves the full use and enjoyment and the right to grant to others the full use and enjoyment of the property leased herein, both surface and subsurface, for any and all purposes except those granted and to the extent granted herein. Without limiting the foregoing, Lessor reserves the right to explore, drill and mine for, and produce, remove, treat, store and transport any and all minerals and other natural resources; to hunt, fish, trap, farm, graze, dredge, fill, reclaim and improve said property; and to construct canals, roads, ditches, ponds, levees, dams, fences, buildings, pipelines, telephone and power lines, and other structures, facilities and improvements. All of the rights herein reserved by Lessor may be exercised to the fullest extent, without notice to Lessee and without Lessee's consent, it being understood, and Lessee hereby agrees and declares, that the rights herein granted Lessee are and shall be subject to any use (other than for the purposes and to the extent granted herein) to which Lessor, or those now or hereafter holding under Lessor, may have made or may in the future make of either surface or subsurface of said property, and neither Lessor nor any party now or hereafter holding under Lessor shall have any liability to Lessee on account of any such use.
9. This lease is granted without any warranty by or recourse on Lessor whatsoever, not even for the return of the consideration. Lessor does not warrant the possession of said property as against trespassers or poachers nor will Lessor be required to undertake any action or proceeding to maintain Lessee in possession of said property. Lessee shall, however, upon obtaining the prior written consent of Lessor, have the right, as Lessee and in Lessee's name, to proceed against trespassers or poachers and to eject them by legal means, all such proceedings to be at the sole cost and expense of Lessee and without liability to Lessor. Lessee shall furnish Lessor copies of all pleadings, documents and correspondence concerning such proceedings, and in the event a party to such proceedings contests the title or possession of Lessor, Lessee shall notify Lessor immediately. Nothing herein contained, however, shall be construed as prohibiting or preventing Lessor from instituting or defending, in its own name, all such actions and other proceedings as it may desire or deem to be to its best interest, against trespassers, poachers, or other parties; and in the event of any such proceedings, Lessee shall not be deemed a necessary or indispensable party, either as plaintiff or defendant, it being understood, however, that any benefit (other than any money judgments) derived from any such proceedings or actions shall inure to Lessee hereunder insofar as concerns the rights and privileges granted Lessee herein.
10. Either party hereto may, with or without cause, cancel this lease at any time by giving ten (10) days written notice to the other party; provided, however, that should Lessor cancel this lease without cause, then Lessor shall refund to Lessee a pro rata portion of the rental received for the then current term based on the unexpired portion of said term. In the event of the death of any party named as a Lessee herein, this lease shall terminate immediately as to such party. The breach of any of the terms, conditions or provisions of this lease by Lessee shall be cause for immediate cancellation thereof, said cancellation to be effective immediately upon Lessor's giving Lessee written notice thereof. Upon cancellation or termination of this lease, all of Lessee's rights hereunder shall cease; and Lessee shall, within thirty (30) days thereafter, remove any and all buildings, structures, facilities and other property placed or owned by Lessee upon the leased premises, in default of which the same and all contents thereof shall automatically, without further action of either party, and without the payment of any consideration therefor, become the property of Lessor, together with all other improvements on the leased premises, to be removed, destroyed or retained by Lessor as Lessor may deem desirable; and Lessee shall reimburse Lessor for the cost of any such removal or destruction as well as the cost of restoring the premises. The waiver of a breach of any of the terms or conditions of this lease shall be limited to the act or acts constituting such breach, and shall never be construed as being a continuing or permanent waiver of any of such terms or conditions or as a waiver of any other terms and conditions hereof, all of which shall be and remain in full force and effect notwithstanding any such waiver.
11. This lease shall supersede and replace any other surface lease between Lessor and any of the parties named as Lessee covering the leased premises for the same purposes, and such other lease shall be deemed cancelled by virtue of the execution of this lease.
12. Lessee shall not assign, sublease, transfer or encumber this lease or any rights therein in whole or in part.
13. If more than one party is named as Lessee herein, the party herein first named as Lessee is hereby irrevocably constituted and appointed by all other parties named Lessee to be their lawful agent and attorney in fact for the purposes of carrying out all of the terms and conditions of this lease, but for this lease only, including, but without limitation, for the purposes of receiving and giving all notices hereunder and for service of process concerning all matters arising hereunder. Any notice or other communication required or permitted under the terms and provisions hereof shall be sent to the parties hereto at the addresses hereinabove first set forth, and such notice or communication shall be deemed to have been received by the addressee upon deposit of same in the United States mail, postpaid.

ENERGY ASSETS INTERNATIONAL
CORPORATION
1221 LAMAR, SUITE 1600
HOUSTON, TEXAS 77010

D T-568

TEL 713 • 759-0336
FAX 713 • 655-1866

November 30, 1990

The Louisiana Land and Exploration
Company
Suite 1200 Brookhollow 3
2950 N. Loop West
Houston, Texas 77092

Attention: Mr. C. M. Van Zandt, III

Re: South Timbalier Block 8 Field,
Terrebonne Parish, Louisiana

Gentlemen:

Reference is made to that certain letter agreement dated January 24, 1990 by The Louisiana Land and Exploration Company ("LL&E"), Chevron U.S.A. Inc. and Energy Assets IV-A, Ltd. in which LL&E granted consent to the assignment of certain rights in the following instruments:

- (1) State Surface Lease No. 681 dated March 20, 1968, by and between the State of Louisiana and Chevron Oil Company (now Chevron U.S.A. Inc.) recorded at COB 455, Entry No. 338934. In connection with said Surface Lease, LL&E, as a mineral interest owner of State Lease No. 188, by Letter Agreement dated February 1, 1968, consented to the installation of facilities in Lake Pelto within the acreage included in the Surface Lease from the State of Louisiana (hereinafter referred to as the "Letter Agreement").
- (2) Surface Lease dated April 27, 1966, by and between LL&E and Chevron Oil Company recorded at COB 418, Entry No. 298427 (hereinafter referred to as the "LL&E Surface Lease").

- (3) Right-of-Way No. 1817, Pipeline Permit dated April 27, 1966, by and between LL&E and Chevron Oil Company recorded at COB 418, Entry No. 298428 as amended by that certain Amendment to Pipeline Permit filed of record on March 28, 1968 in Terrebonne Parish, Louisiana in COB 455, Entry No. 338805 (hereinafter referred to as the "Pipeline Permit").

In connection with the closing, other Energy Assets entities and The Stone Petroleum Corporation were intended to be parties to the sale; thus, the following additional transfers are necessary.

A Sale and Assignment by Chevron U.S.A. Inc., as Assignor, assigning all of its interest in, to and under the above instruments unto Hutton/Energy Assets 2nd Oil & Gas Completion & Equipping Partnership "A" Ltd., Hutton/Energy Assets 2nd Oil & Gas Completion & Equipping Partnership "B" Ltd., Hutton/Energy Assets 3rd Energy Partnership-A, Ltd. and Energy Assets IV-A, Ltd. (hereinafter referred to as the "Energy Assets Partnerships") and Energy Assets International Corporation, as Assignees.

A Sale and Assignment by Energy Assets International Corporation, as Assignor, assigning all of its interest in the LL&E Surface Lease and the Pipeline Permit unto the Energy Assets Partnerships, as Assignees.

A Sale and Assignment by the Energy Assets Partnerships, as Assignors, assigning a portion of the Energy Assets Partnerships' interests in the LL&E Surface Lease and the Pipeline Permit unto The Stone Petroleum Corporation, as Assignee.

In addition to said transfers, the Energy Assets Partnerships, as Assignors, will enter into a Sale and Assignment in favor of Nuevo Energy Company, as Assignee, assigning all of the Energy Assets Partnerships' interests in the LL&E Surface Lease and the Pipeline Permit. For your information, Nuevo Energy Company is an affiliate of

The Louisiana Land and Exploration
Company
November 30, 1990
Page -3-

the Energy Assets entities. The end result of the
aforementioned transfers would be that Nuevo Energy
Company and The Stone Petroleum Corporation would own
interests in State Lease Nos. 4237 and 4238, the LL&E
Surface Lease and the Pipeline Permit.

Within the context of the Letter Agreement and
the Pipeline Permit, the above conveyances of rights would
not require your approval; however, in order to avoid any
questions or misunderstandings, we are informing you of
said transfers.

This letter will serve as evidence of the fact
that LL&E does hereby consent to the above described
instruments, subject, however, to the following terms and
conditions, to wit:

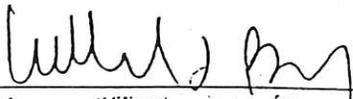
1. Assignees shall furnish LL&E with an
executed or photostatic copy of such
assignments or subleases.
2. Assignees do hereby declare that they are
familiar with all of the terms and
provisions of said Letter Agreement and
Assignees agree to comply with all of the
obligations of Assignors thereunder and to
be bound by all of the terms and provisions
thereof.

By the execution of this letter we request that
the January 24, 1990 letter agreement be amended to
include all parties in interest.

Please evidence your acceptance of this letter by
the execution of same in the space provided below and
returning two (2) executed copies thereof to us.

Very truly yours,

ENERGY ASSETS INTERNATIONAL
CORPORATION

By: 
Name: William B. Jr.
Title: Vice President

The Louisiana Land and Exploration
Company
November 30, 1990
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HUTTON/ENERGY ASSETS 2ND OIL
& GAS COMPLETION & EQUIPPING
PARTNERSHIP "A" LTD.

BY: ENERGY ASSETS INTERNATIONAL
CORPORATION, General Partner

By: William I. Bass, Jr.
Name: William I. Bass, Jr.
Title: Vice President

HUTTON/ENERGY ASSETS 2ND OIL
& GAS COMPLETION & EQUIPPING
PARTNERSHIP "B" LTD.

BY: ENERGY ASSETS INTERNATIONAL
CORPORATION, General Partner

By: William I. Bass, Jr.
Name: William I. Bass, Jr.
Title: Vice President

HUTTON/ENERGY ASSETS 3RD
ENERGY PARTNERSHIP-A, LTD.

BY: ENERGY ASSETS INTERNATIONAL
CORPORATION, General Partner

By: William I. Bass, Jr.
Name: William I. Bass, Jr.
Title: Vice President

ENERGY ASSETS IV-A, LTD.

BY: ENERGY ASSETS INTERNATIONAL
CORPORATION, General Partner

By: William I. Bass, Jr.
Name: William I. Bass, Jr.
Title: Vice President

The Louisiana Land and Exploration
Company
November 30, 1990
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THE STONE PETROLEUM CORPORATION

By: [Signature]
Name: HOWARD B. McMICHAEL
Title: VICE PRESIDENT

NUEVO ENERGY COMPANY

By: [Signature]
Name: SUE ANN CRADDOCK
Title: Vice President

ACCEPTED AND AGREED TO THIS
29th DAY OF March, 1991.

THE LOUISIANA LAND AND EXPLORATION COMPANY

By: [Signature]
Name: Kevin W. McMichael
Title: Exploration Manager
New Orleans Division

1506j

SURFACE LEASE

THIS AGREEMENT made and entered into this 27th day of April, 1966, by and between THE LOUISIANA LAND AND EXPLORATION COMPANY, a Maryland corporation duly qualified in Louisiana (hereinafter called "Lessor"), and CHEVRON OIL COMPANY, a California corporation duly qualified in Louisiana (hereinafter called "Lessee"),

W I T N E S S E T H:

I.

In consideration of the rental hereinafter set forth and of the obligations of Lessee herein contained, Lessor has, and does hereby lease, let and demise unto Lessee, for the term and for the purposes hereinafter set forth, that certain tract of land situated in Terrebonne Parish, Louisiana, which is more particularly described as follows, to-wit:

A tract of land comprising that portion of Section 33, Township 23 South, Range 18 East, Terrebonne Parish, Louisiana, as lies within the following described boundary lines:

Beginning at a point having Lambert Grid Coordinate values of X = 2,221,268.87 and Y = 147,844.78; thence, North 38°06'10" East a distance of 513.65 feet to a point; thence, South 54°03'20" East a distance of 818.71 feet to a point; thence, South 35°54'50" West a distance of 511.00 feet to a point; thence, North 54°12'40" West a distance of 838.36 feet to the point of beginning.

All bearings and all coordinates set forth herein are based on State Plane Lambert Grid, Louisiana, South Zone.

II.

Lessor hereby grants to Lessee exclusive possession and use of the leased premises only for the purpose of erecting, using,

maintaining and operating thereon platforms, pumps, compressor stations, tanks, pipe lines, valves, meters, equipment, buildings, structures or works as may be necessary, useful or expedient in the conduct of Lessee's operations in connection with that certain Pipe Line Permit granted by Lessor to Lessee dated April 27, 1966, and affecting portions of the leased premises and other property belonging to Lessor.

III.

Lessee shall not have the right to dredge or excavate any portion of the leased premises, except as necessary for the construction of a burning pit for the disposal of petroleum waste material. Such pit excavation shall have dimensions not exceeding one hundred (100) feet in width and length and five (5) feet in depth and shall be situated on the leased premises.

IV.

This instrument is executed and all rights herein are granted expressly subject to and shall at all times be held by Lessee subordinate and inferior to any presently existing servitude, pipe line or canal permit or right of way, oil and gas lease, trapping lease, or other contract affecting the premises; and this instrument shall not vest in, or ever be construed to vest in, Lessee any right, title, or interest in or to the fee ownership of, or any minerals or mineral rights in, on, under or in respect to, the property above described, nor as requiring the consent of Lessee to any lease, grant, or other contract affecting either minerals, or mineral rights in, on, under or in respect to the above described property; nor shall this instrument vest in, or ever be construed to vest in, Lessee any right to hunt, fish, trap, or otherwise take or capture wildlife, game or fish from or on said property; provided, however, that no operations under any oil and gas lease or other contract hereinafter granted by Lessor shall be conducted upon the surface of the leased premises, but Lessor expressly reserves for itself, its transferees, lessees, sub-lessees, successors and assigns, and is hereby granted the right to drill directional wells under the leased premises.

V.

Lessee assumes and agrees to pay for all loss or damage to Lessor's property, except for damages necessarily caused the surface of the property herein leased by exercise of the rights herein granted, and further agrees to indemnify and hold Lessor harmless against any loss or liability on account of injuries to, including death of, persons or damage to property of others, including costs and expenses incident thereto, arising wholly or in part from or in connection with this agreement, or Lessee's operations hereunder; and in the event any suit is brought against Lessor to recover for or on account of any such damages, injuries, or death, Lessee will, at Lessor's request, appear and defend said suit at its sole cost and expense, and will pay any judgment that may be entered against Lessor therein when said suit is finally determined.

VI.

This grant and lease shall be for a term of ten (10) years from date hereof; provided, however, that Lessee shall have the right, at its option, to renew and extend this grant and lease upon notifying Lessor in writing sixty (60) days prior to lease expiration that it wishes to exercise said option and extend the lease for an additional ten (10) year period. Any extension shall be upon the same terms and conditions and consideration for additional ten-year periods as long as Lessee's rights under the aforesaid Pipe Line Permit granted by Lessor unto Lessee are in full force and effect.

VII.

As consideration for this grant and lease, and all rights herein conveyed, Lessee has paid to Lessor the sum of TWO THOUSAND AND NO/100 DOLLARS (\$2,000.00), the receipt of which is hereby acknowledged and full acquittance and discharge granted therefor, and Lessee further agrees to pay to Lessor the sum of TWO THOUSAND AND NO/100 DOLLARS (\$2,000.00) at the beginning of each five (5)

year period during the term hereof, the first such payment being due and payable on or before the expiration of five (5) years from the date hereof, and in the event the option set forth above shall have been exercised, then on or before the expiration of each succeeding five (5) year period during the term hereof.

VIII.

Lessee is hereby given the right and privilege of surrendering and terminating the grant and lease by giving Lessor written notice of its desire to do so and by paying to Lessor the sum of ONE HUNDRED AND NO/100 DOLLARS (\$100.00).

IX.

Any notice or payment required or permitted to be given by Lessee to Lessor shall be given by mailing same postpaid registered mail addressed to The Louisiana Land and Exploration Company, P. O. Box 231, Houma, Louisiana, unless and until notice of change of address is given to Lessee in writing. Any notice required or permitted to be given by Lessor shall be given by mailing same postpaid registered mail addressed to Chevron Oil Company, The California Company Division, 1111 Tulane Avenue, New Orleans, Louisiana, unless and until notice of change of address is given Lessor in writing.

X.

All installations and facilities placed by Lessee shall be and remain the property of Lessee, and upon termination or cancellation of this lease, Lessee shall, within six (6) months thereafter, remove from the leased premises all property, equipment, fixtures, structures, pipes and facilities placed thereon or thereunder by Lessee in its operations on and the use of said premises, and shall restore the surface of the leased premises to its present condition insofar as practicable, Lessee to have the right of ingress and egress for the purpose of carrying out the provisions of this paragraph.

XI.

This agreement is executed by Lessor without any warranty whatsoever, not even for the return of the consideration above recited.

XII.

This agreement shall be binding in all of its terms upon Lessor and Lessee, their respective successors and assigns; it being agreed, however, that Lessee shall not have the right to assign or sublease this agreement or any of the rights acquired by it hereunder without first obtaining the written consent of the Lessor.

IN WITNESS WHEREOF this instrument has been executed in six (6) original counterparts as of the date hereinabove first mentioned.

WITNESSES:

Louise G. Boudreau

Hinda B. Brunet

THE LOUISIANA LAND AND EXPLORATION COMPANY

By [Signature]
Senior Vice President

CHEVRON OIL COMPANY

By R. D. King

Its ATTORNEY IN FACT

By [Signature]

Its ATTORNEY IN FACT

Mary Janet Tate
Mary Janet Tate

Johnnie L. Boozer
Johnnie L. Boozer

STATE OF LOUISIANA
PARISH OF TERREBONNE

On this 28th day of April, 1966, before me appeared FRANK M. RITCHIE, to me personally known, who, being by me duly sworn, did say that he is a Senior Vice President of THE LOUISIANA LAND AND EXPLORATION COMPANY, a Maryland corporation, and that the seal affixed to said instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its Board of Directors, and said appearer acknowledged said instrument to be the free act and deed of said corporation.

Ray B. Theriot
NOTARY PUBLIC

DEPUTY CLERK OF COURT
AND EX-OFFICIO NOTARY PUBLIC
PARISH OF TERREBONNE, LA.

STATE OF LOUISIANA
PARISH OF ORLEANS

On this 3rd day of May, 1966, before me appeared R. D. KING and F. J. RATHKE, to me personally known, who, being by me duly sworn, did say that they are the ATTORNEYS IN FACT of CHEVRON OIL COMPANY, a California corporation, and that the seal affixed to the foregoing instrument is the corporate seal of said corporation, and that said instrument was signed and sealed on behalf of said corporation by authority of its Board of Directors, and said appearers acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my official hand and seal on the date hereinabove written.

Philip John Bush
NOTARY PUBLIC

APPENDIX E

SURFACE LEASE

BE IT KNOWN, that on this 1st Day of July, 1992, THE LOUISIANA LAND AND EXPLORATION COMPANY, a Maryland corporation, qualified to do business in Louisiana, with its principal Louisiana office in New Orleans, Louisiana, herein represented by H. Leighton Steward, its Chairman, Chief Executive Officer and President, hereinafter called "Lessor" and the State of Louisiana through the LOUISIANA DEPARTMENT OF WILDLIFE AND FISHERIES, acting herein through its Secretary, Joe L. Herring, thereof, duly authorized, hereinafter called "Lessee", does hereby make and enter into this contract of Surface Lease, as follows, to-wit:

I.

Lessor is the owner of the following described land situated in the Parish of Terrebonne, State of Louisiana, to-wit:

TRACT I

A certain tract of land more particularly described as follows:

Section 32, Lots 1 and 2

In Township 23 South - Range 15 East

Section 3, Lots 2, 3 and 7

Section 4, Lots 1 and 2

In Township 24 South - Range 15 East

As more fully shown outlined in red on a plat marked "Exhibit A" attached hereto and made a part hereof.

TRACT II

A certain tract of land more particularly described as follows:

Section 34, fractional.

In Township 23 South - Range 16 East

Section 1, fractional

Section 2, fractional

Section 3, fractional

Section 4, fractional

Section 5, fractional

Section 9, N 1/2 fractional

Section 10, Fractional
Section 11, fractional
Section 12, fractional

In Township 24 South - Range 16 East

As more fully shown outlined in red on a plat marked "Exhibit B" attached hereto and made a part hereof.

TRACT III

A certain tract of land situated in Township 23 South - Range 18 East, Terrebonne Parish, Louisiana. Said tract being a portion of that unsurveyed 525 acres of Barrier Islands and being more commonly referred to as Wine Island.

Subject to that certain Servitude granted to Terrebonne Parish Police Jury, dated November 4, 1959, recorded in COB 251, Folio 172224.

As more fully shown outlined in red on a plat marked "Exhibit C" attached hereto and made a part hereof.

II.

Lessor, in consideration of the advantages accruing to Lessor by reason of the Lessee establishing and maintaining a wildlife refuge area on the above described land under and in accordance with Louisiana Revised Statutes 56.783, and other applicable laws, and by reason of the development, improvement, preservation and protection of the said above lands for the propagation of wildlife and fish at the expense of the Lessee, all without expense to Lessor, does hereby lease, let and hire unto Lessee the surface of said above described lands for the purpose of creating the "Timbalier Barrier Islands Refuge" upon and subject to the terms, provisions and conditions hereinafter set forth.

III.

The term of this lease is for **Twenty-Five (25) Years**, commencing on the **1st Day of July, 1992** and ending on the **30th Day of June, 2017**, for good and valuable consideration.

IV.

It is agreed, as a further consideration for this lease, that Lessee shall, without cost to Lessor:

- (a) Post and maintain signs to designate the boundaries of said

wildlife refuge area;

- (b) Patrol and supervise said leased land through duly authorized agents and representatives;
- (c) Manage and regulate all recreational activity upon the said leased lands;
- (d) Erect no structures and neither perform nor suffer or permit the performance of any act which interferes with Lessor's use of the leased land for any purpose not herein authorized to Lessee;
- (e) Exercise exclusively, through its duly authorized agents and representatives, the supervision, management and removal of any wildlife and fish upon and from the lease lands; and
- (f) Make, through the Department of Wildlife and Fisheries, and enforce such rules and regulations not inconsistent with the provisions of this lease as may be necessary for the conservation, protection and propagation of game and fish upon, and the government, regulation and control of the preserve.

V.

It is recognized that the Lessor does not transfer, relinquish, or dispose of Lessor's fee ownership of the leased lands or of Lessor's minerals or mineral rights with respect thereto, and Lessor, its successors, lessees and assigns, shall always have the right to use said leased lands for all purposes except those specifically authorized to Lessee herein. Without limiting the foregoing, Lessor, its successors, lessees and assigns, shall have the unrestricted right to investigate, explore for, drill and mine for, produce, own, store and remove oil, gas, salt, sulphur and other liquid, gaseous and solid minerals, or any of them whether similar or not, in, on, under and from the leased lands, and the exclusive right to lay pipe lines, build tanks, levees, dams, power stations, telephone, telegraph and power lines, roads, railroads and to excavate canals and other artificial waterbodies and water courses, and to build and maintain houses and other structures, whether similar or not, necessary, useful or convenient in connection with any lawful operations of Lessor, its successors, lessees and assigns, upon said property, with full right of ingress and egress to the leased lands, and with the right to enter

into any and all contracts, leases and other agreements for any or all of such purposes and to receive and retain all income and benefits derived therefrom. Lessee shall not adopt any rules or regulations interfering with or restricting Lessor or its successors, lessees and assigns in the exercise of any operations above referred to. Should any operations by Lessor, its successors, lessees and assigns interfere with Lessee's rights hereunder, Lessee shall have the right (which shall be exclusive of all other rights) to cancel and terminate this lease as to the lands affected by such operations.

VI.

It is further agreed by and between Lessor and Lessee that:

- (a) Nothing herein contained shall be construed as limiting in any manner the authority of the Lessor, its successors, lessees and assigns in the use and/or operation of the above described lands for any purpose in addition to those reserved in paragraph V above, and to enter into any and all contracts, leases and other agreements for such purposes, provided such use or operation does not unreasonably interfere with Lessee's use of the leased lands for the purpose expressly leased to Lessee as above stated;
- (b) Lessor shall not be obligated in any way for any act or omission of Lessee, its representatives, employees, agents or licensees; and Lessee assumes responsibility for the condition of the leased premises and Lessor shall have no liability for injury caused by any defect therein to Lessee or anyone on the premises who derives his right to be thereon from the Lessee. Additionally, and without limiting the foregoing, Lessee shall indemnify Lessor against and shall protect, defend and hold Lessor harmless from any and all losses, costs, damages, claims, suits, causes of action, judgments and expenses (including attorneys' fees and expenses of investigation) arising out of or resulting from injury to or the death of any person and/or damage to or loss of any property caused by or in any manner arising out of or incident to Lessee's use of Lessor's property or the exercise or enjoyment by anyone of any of the rights herein granted to Lessee.
- (c) Upon the termination of this lease, Lessee shall have the right (for a period of Ninety (90) days after termination) to remove any improvement installed by Lessee (of a movable nature) on the leased lands, failing which it shall become the property of Lessor, without compensation to Lessee; and
- (d) This lease is subject to all existing rights of way, permits, leases and servitudes and is otherwise made without any warranty or recourse of any kind upon Lessor.

VII.

Except for the rights herein reserved by Lessor for itself, its

successors, lessees and assigns, it is agreed that Lessee shall not:

- (a) Grant anyone any permit to use the leased lands, in whole or in part, for any commercial, industrial or business purpose, or
- (b) Assign or cede this lease or grant any sublease, in whole or in part, without Lessor's prior written consent. Otherwise this agreement and all of its terms shall be binding upon, and inure to the benefit of, the parties hereto, their successors and assigns.

VIII.

It is further agreed that:

- (a) In the event Lessee, for any reason, is unable to continue the operation and maintenance of the leased land as a wildlife refuge area, Lessee may terminate this lease by giving Sixty (60) days written notice to Lessor, by registered mail at Lessor's last known address; and
- (b) In the event Lessee should default in the performance of any of its obligations hereunder and such default shall continue for Sixty (60) days after written notice from Lessor to Lessee by registered mail addressed to Lessee at: Department of Wildlife and Fisheries, P. O. Box 98000, Baton Rouge, La. 70898, this lease shall, at Lessor's option, ipso facto cease and terminate and Lessee shall immediately surrender possession of the leased land to Lessor.
- (c) This lease agreement, shall not be admissible or construed or deemed for any purpose as an acknowledgment or recognition by either the State of Louisiana or LL&E of the title of the other in and to the area or any part thereof.

IN WITNESS WHEREOF, the parties hereto have signed these presents through their accredited representatives, the Lessor on the 24th day of July, 1992, and the Lessee on the 22^d day of July, 1992, in the presence of the undersigned competent witnesses who have signed said agreement in quintuplicate originals opposite the names of the said respective parties after due reading of the whole.

WITNESSES:

[Signature]
[Signature]

[Signature]
[Signature]

/kln
wlf/IX

THE LOUISIANA LAND AND
EXPLORATION COMPANY

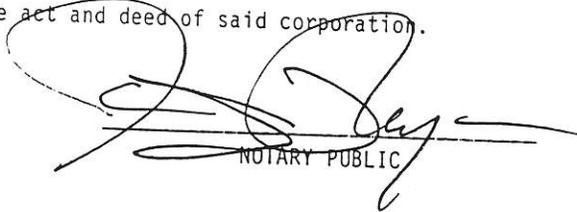
BY: [Signature]
H. Leighton Steward
Chairman, Chief Executive
Officer and President

LOUISIANA DEPARTMENT OF
WILDLIFE AND FISHERIES

BY: [Signature]
Joe L. Herring
Secretary

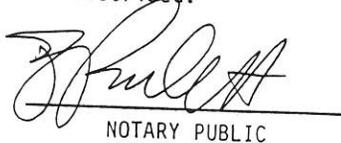
STATE OF LOUISIANA
PARISH OF TERREBONNE

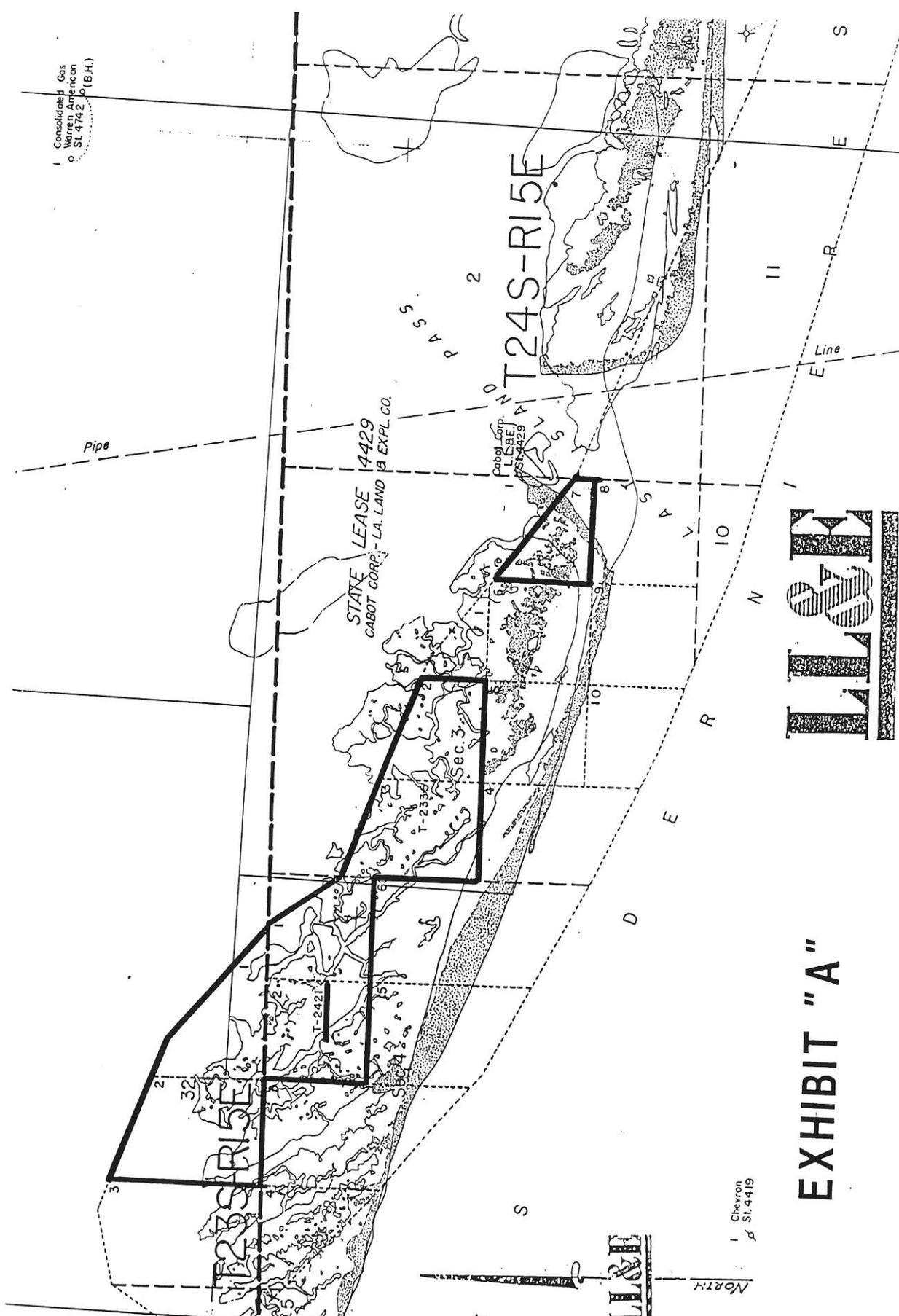
BEFORE ME, the undersigned authority, on this 24TH day of July, 1997 personally came and appeared H. LEIGHTON STEWARD, to me personally known, who, being by me duly sworn, deposed and said that he is the Chairman, Chief Executive Officer and President of THE LOUISIANA LAND AND EXPLORATION COMPANY and that the above and foregoing instrument was signed in behalf of said corporation by authority of its Board of Directors, and the said appearer acknowledged said instrument to be the free act and deed of said corporation.


NOTARY PUBLIC

STATE OF LOUISIANA
PARISH OF East Baton Rouge

BEFORE ME, the undersigned authority, on this 22^d day of July, 1992 personally came and appeared JOE L. HERRING, to me personally known, who, being by me duly sworn, deposed and said that he is Secretary of LOUISIANA DEPARTMENT OF WILDLIFE AND FISHERIES; that as such duly authorized officer of the LOUISIANA DEPARTMENT OF WILDLIFE AND FISHERIES, he signed and executed the foregoing instrument for and on behalf of LOUISIANA DEPARTMENT OF WILDLIFE AND FISHERIES, for the objects, purposes and uses therein expressed, and in the presence of the witnesses whose names are thereunto subscribed.


NOTARY PUBLIC



Consolidated Gas
Warren American
SL 4742
(B.H.)

STATE LEASE 14429
CABOT CORP. - LA. LAND EXPL. CO.

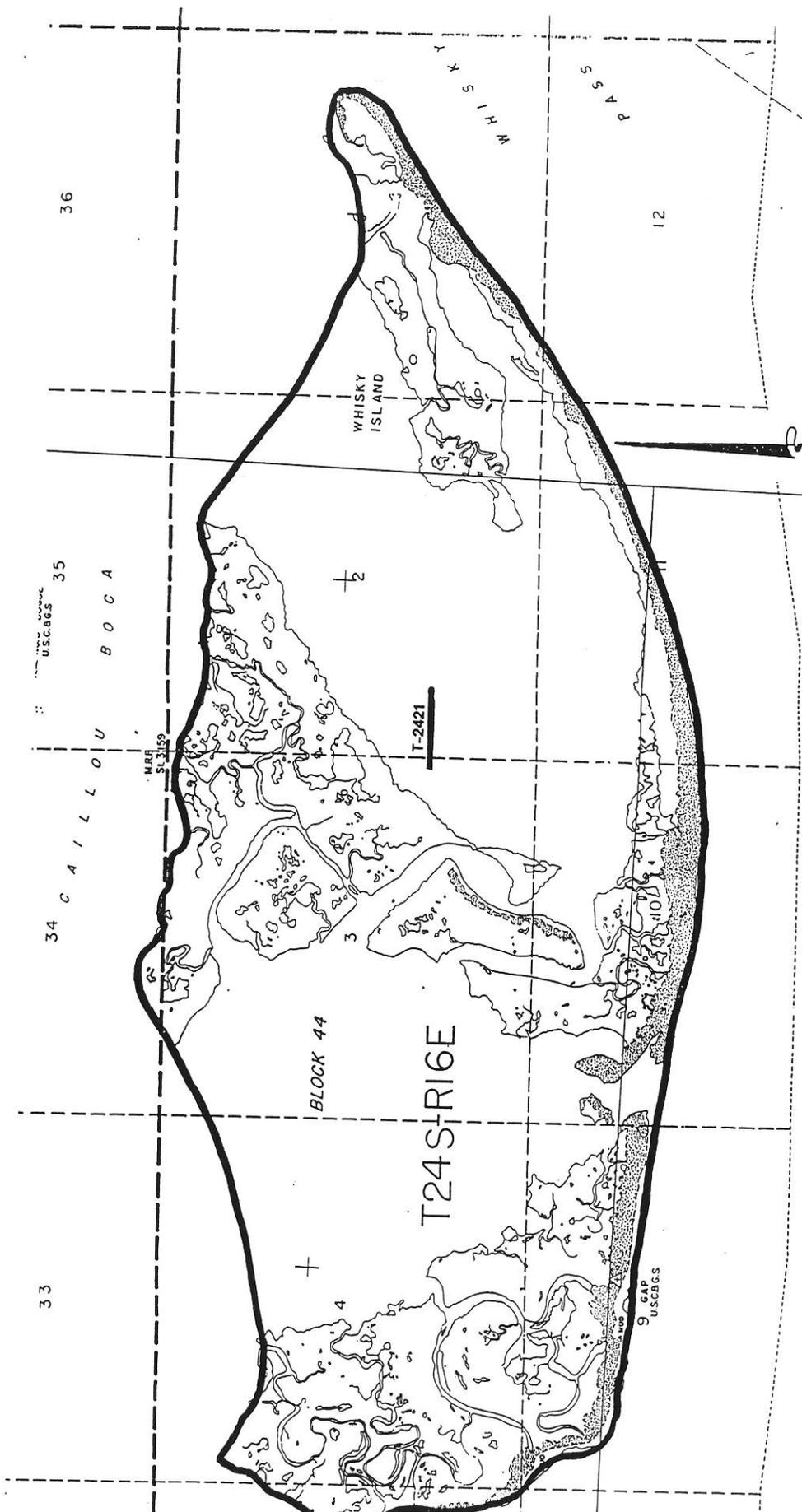
Cabot Corp.
L.C.S.E.
157514429

Chevron
SL 4419

EXHIBIT "A"



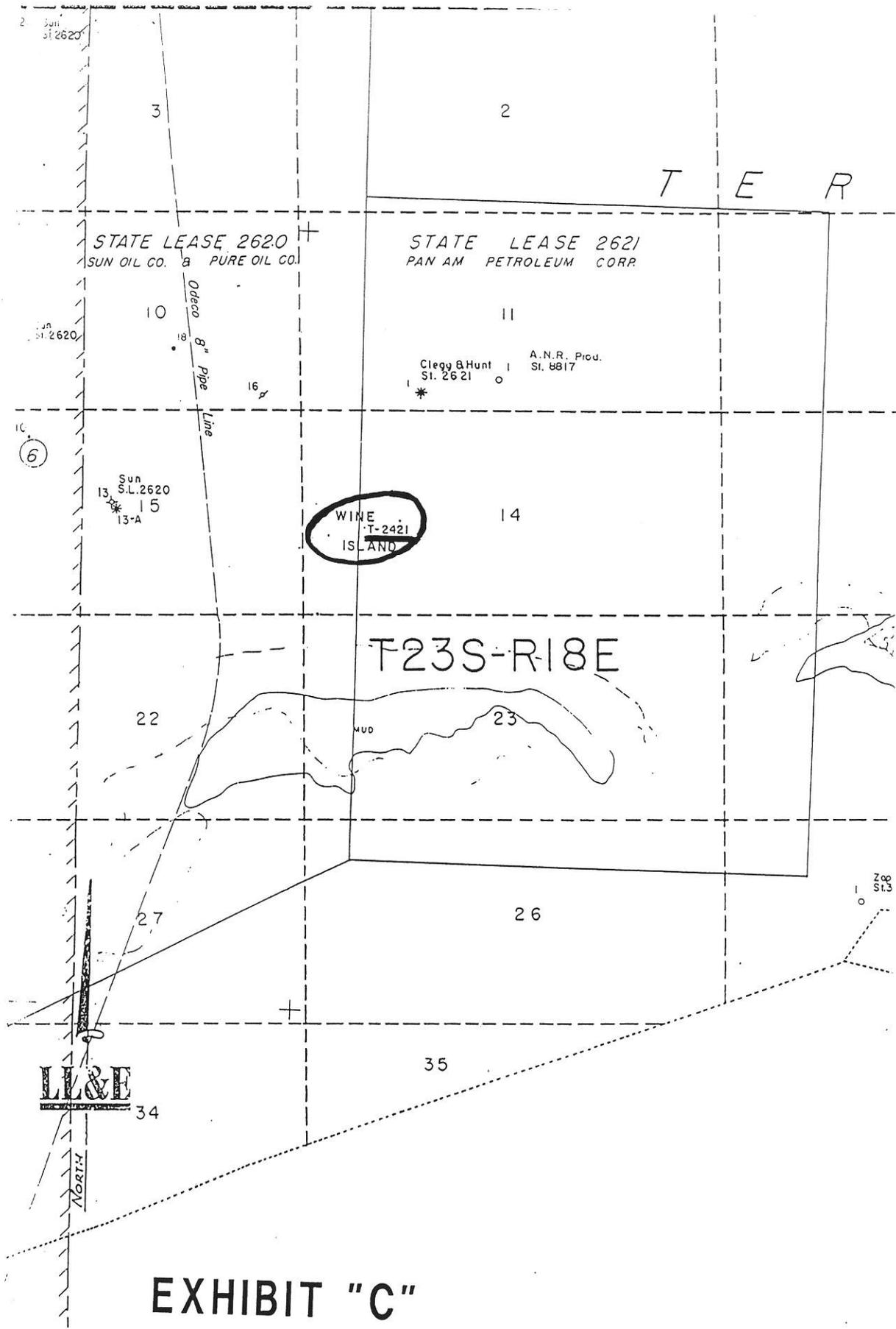
North



L&E

L&E

EXHIBIT "B"



T E R

STATE LEASE 2620
SUN OIL CO. & PURE OIL CO.

STATE LEASE 2621
PAN AM PETROLEUM CORP.

Clegg & Hunt
St. 2621

A.N.R., Prod.
St. 8817

WINE
T-2421
ISLAND

T23S-R18E

LL&E

34

NORTH

EXHIBIT "C"

LL&E

APPENDIX F

State of Louisiana,
Parish of East Baton Rouge.

LEASE NO. 188-

WHEREAS, under the provisions of Act No. 30 of the Extra Legislative Session of 1915, as amended by Act No. 315 of 1926, application was made to the Governor for a lease of the hereinafter described lands, and a report thereon having been made by the Register of the State Land Office, and,

WHEREAS, the Governor caused advertisements of the proposed lease of said lands to be published in the official journal of the Parish of Terrebonne wherein said lands lie, and in the State-Times, the official journal of the State of Louisiana, as required by law, and,

WHEREAS, in response to said advertisements, bids were received at the State Capitol on the 3rd day of Jan. 1928 in the presence of Fred J. Grace and Carl Campbell and,

WHEREAS, it appeared that the bid of The La. Land & Exploration Co. was the most advantageous;

NOW BE IT KNOWN AND REMEMBERED, that the said O. H. SIMPSON, acting under the authority of the said Act No. 30 of the Extra Session of 1915, as amended by Act No. 315 of 1926, and in accordance with the terms thereof, and in behalf of the State of Louisiana, does hereby let and lease unto the said The Louisiana Land & Exploration Co. heirs and assigns, the hereinafter described property, for the purpose of exploiting the same for, and producing therefrom, oil, gas or other minerals, in and under said lands, as also the exclusive right to investigate with and to operate thereon with seismographs and other geophysical instruments, and also the exclusive right of drilling and operating thereon, for oil or gas, together with a right of way for, and a right to lay pipe-lines to convey water, oil, steam and gas, and a right to have sufficient water, oil and gas from the premises, to drill and operate any wells that the said lessee may bore thereon, and also such other privileges as are reasonably requisite for the conduct of said operations, and the right to remove at any time from said premises, any and all property which may be placed thereon by said lessee, provided that the said lessee is not at the time indebted to the State of Louisiana under the provisions of this lease.

The said premises as to which this instrument does apply, are described as follows:

All the lands, beds and bottoms belonging to the State of Louisiana, comprised within the area extending from the land or shore line of the Parish of Terrebonne, La., which land or shore line begins at Point au Fer, and runs in a southeasterly direction until it intersects the dividing line between the Parishes of Terrebonne and Lafourche, Louisiana, into the marginal or maritime belt of the Gulf of Mexico to the extreme limit or boundary of the domain, territory and sovereignty of the State of Louisiana, including the beds and bottoms underlying the waters of Caillou Bay, Lake Pelto and that portion of Timbalier Bay embraced in the Parish of Terrebonne.

TO HAVE AND TO HOLD unto the said lessee, its heirs and assigns, for the term and under the provisions as hereinafter specified as follows, to-wit:

1.

There is expressly granted to the said The La. Land & Exploration Co. the right at any time before the expiration of twelve months to begin operations of drilling a well or wells for oil or gas on the premises hereby leased, and if the said lessee shall within said term begin such operations, it shall continue same with reasonable diligence until the completion of such well, and the said well, when begun, shall be completed to a depth of twenty-six hundred feet, unless oil or gas be found in paying quantities at a lesser depth, or unless salt or gypsum be found at a lesser depth.

Upon the beginning of operations of drilling a well within the period specified by the lease, the lessee shall have the right to make as many attempts to find oil, gas or other minerals as it please.

at any time from a...
lessee, provided that the said lessee...
provisions of this lease.

The said premises as to which this instrument does apply, are described as follows:
All the lands, beds and bottoms belonging to the State of Louisiana, the Parish of Terrebonne, La., which land or shore line of Point au Fer, and runs in a southeasterly direction until it intersects the dividing line between the Parishes of Terrebonne and Lafourche, Louisiana, into the marginal or maritime belt of the Gulf of Mexico to the extreme limit or boundary of the domain, territory and sovereignty of the State of Louisiana, including the beds and bottoms underlying the waters of Caillou Bay, Lake Pelto and that portion of Timbalier Bay embraced in the Parish of Terrebonne.

TO HAVE AND TO HOLD unto the said lessee, its heirs and assigns, for the term and under the provisions as hereinafter specified as follows, to-wit:

I.

There is expressly granted to the said The La. Land & Exploration Co. the right at any time before the expiration of twelve months to begin operations of drilling a well or wells for oil or gas on the premises hereby leased, and if the said lessee shall within said term begin such operations, it shall continue same with reasonable diligence until the completion of such well and the said well, when begun, shall be completed to a depth of twenty-six hundred feet, unless oil or gas be found in paying quantities at a lesser depth, or unless salt or gypsum be found at a lesser depth.

Upon the beginning of operations of drilling a well within the period specified by the lease, the lessee shall have the right to make as many attempts to find oil, gas or other minerals as it please s, and to continue the exercises of such right as long as it please s, provided, however, that such attempts shall be successive in the sense, that until oil, gas or other minerals shall be found, not more than sixty days shall elapse between the cessation or abandonment of work on one well and the beginning of work on another.

II.

If in the exercise of the right granted by this lease, the first well proves to be a paying oil or gas well, the said lessee binds itself that thereafter it will proceed to further develop the said property with reasonable diligence and will so continue until such number of wells have been drilled upon the said property as to constitute a reasonable development thereof.

III.

If in the exercise of the right herein granted, oil be produced on said premises in paying quantities, then the said lessee shall deliver to the lessor as royalty, free of expense:

One-eighth of the oil produced and saved from all wells. In estimating the royalty payments, the average daily production for the calendar month shall be taken as a basis; delivery to be made in tanks with connections by the lessor provided, or into any pipe line that may be connected to the well or wells.

One-eighth of the net proceeds derived from the sale of gas, provided, however, that the minimum royalty on each gas well shall be not less than \$200.00 per year.

Seventy-five cents per long ton of sulphur produced and saved.

Ten cents per ton for all potash produced and saved, and one-eighth of all other minerals produced and saved.

As a further consideration of this contract, the Lessee herewith pays to the Lessor a cash bonus of Twenty Seven Thousand (\$27,000.00) Dollars, receipt of which is hereby acknowledged.

It is further understood and agreed that the provisions of this contract may be extended from year to year by the payment in advance of the sum of Thirteen Thousand Five Hundred (\$13,500.00) Dollars, such extension periods not to exceed in the aggregate four (4) years.

IV.

If any of the oil produced from said premises, be found to contain water or sediment in such quantities as not to be suitable for pipe-line run, then the lessee obligates **itself** to treat the said oil free of expense to the lessor, so that the royalty to the State, shall be marketable oil.

V.

It is expressly understood and agreed, that if oil, gas or other minerals be produced from said property, this lease shall be thereby continued in full force and effect as long as the oil, gas or other minerals may be produced from said property, subject only to the express stipulations contained in this contract.

And if for any cause beyond the control of the lessee, any well or wells on the said property should cease to produce, such cessation shall not affect the lease; provided the lessee proceed with reasonable diligence to work on the said wells so as to cause them to produce further.

But if the lessee fails to comply with such stipulations after having drilled wells on said property, which produce oil, gas or other minerals, then and in that event, surrender of this lease as to the undeveloped portion may be demanded and becomes effective having formally put lessee in default by sixty (60) days' notice to comply with such stipulation.

It is understood that at the end of ~~twenty~~ ^{five (5)} years, the lessee shall declare in writing, what portion or portions of the leased premises, are not at such time in **its** judgment developed, and whether the same be by **it** judged capable of development as herein contemplated; and if there shall be such portions undeveloped and capable of development, the lessee shall proceed to further develop the property, locating a sufficient number of wells at such reasonably close intervals as consistent with the interest of both parties as to accomplish a reasonably profitable development of the entire tract as herein contemplated.

VI.

If there should be drilled on the adjacent property, within one hundred and fifty (150) feet of the line, a well or wells producing as much as two hundred (200) barrels of oil per day for thirty consecutive days, the lessee herein agrees that **it** will with all reasonable diligence begin and prosecute the drilling of an equal number of wells within approximately the same distance of the line, on the said premises, in a faithful effort to find and produce thereon, oil in paying quantities, under penalty, upon failure of said lessee so to do, after thirty (30) days' notice by lessor, such notice to be given any time after the thirty consecutive days above referred to, that this lease shall be cancelled as to ten acres immediately adjacent and opposite to such producing well or wells on the adjacent property; the said ten acres to be contained within parallel lines four acres distant from each other, and running as nearly as may be, perpendicular to the adjacent line and which said parallel lines if projected into the adjacent property shall be equi-distant from said producing well or wells; except that such ten acre block shall not include or be any nearer to any existing well or wells on said premises than one hundred (100) feet.

VII.

It is agreed and understood that neither all nor any part of the land herein leased shall be sub-
leased unless agreed to by the Governor.

undeveloped premises by default by sixty (60) days' notice to comply with such stipulation.

It is understood that at the end of ^{five (5)} ~~three~~ years, the lessee shall declare in writing, what portion or portions of the leased premises, are not at such time in **its** judgment developed, and whether the same be by **it** judged capable of development as herein contemplated; and if there shall be such portions undeveloped and capable of development, the lessee shall proceed to further develop the property, locating a sufficient number of wells at such reasonably close intervals as consistent with the interest of both parties as to accomplish a reasonably profitable development of the entire tract as herein contemplated.

VI.

If there should be drilled on the adjacent property, within one hundred and fifty (150) feet of the line, a well or wells producing as much as two hundred (200) barrels of oil per day for thirty consecutive days, the lessee herein agrees that **it** will with all reasonable diligence begin and prosecute the drilling of an equal number of wells within approximately the same distance of the line, on the said premises, in a faithful effort to find and produce thereon, oil in paying quantities, under penalty, upon failure of said lessee so to do, after thirty (30) days' notice by lessor, such notice to be given any time after the thirty consecutive days above referred to, that this lease shall be cancelled as to ten acres immediately adjacent and opposite to such producing well or wells on the adjacent property; the said ten acres to be contained within parallel lines four acres distant from each other, and running as nearly as may be, perpendicular to the adjacent line, and which said parallel lines if projected into the adjacent property shall be equi-distant from said producing well or wells; except that such ten acre block shall not include or be any nearer to any existing well or wells on said premises than one hundred (100) feet.

VII.

It is agreed and understood that neither all nor any part of the land herein leased shall be sub-leased unless agreed to by the Governor.

VIII.

It is further agreed and understood that operating the leased property herein, shall not impede navigation.

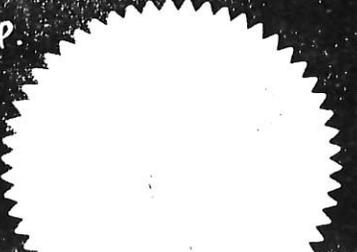
THIS DONE, ACCEPTED, READ AND SIGNED by the parties hereto, the lessor, the State of Louisiana, herein represented by **O. H. SIMPSON**, Governor, and the lessee, **The La. Land & Exploration Co.** in the presence of **Fred J. Grace** and **Carl Campbell**, and before me, **R. H. Flower**, Assistant Secretary of State, on this **9th** day of **February**, A. D. 192**8**.

O. H. Simpson Governor
For the State of Louisiana, Lessor.

Witnesses to Lessor's Signature
W. C. Mills

The Louisiana Land & Exploration Co.
By *F. W. DeWitt* Lessee.
R. H. Flower
Assistant Secretary of State.

WITNESSES: *To Governor's Signature*
Fred J. Grace
Carl Campbell



the premises, to drill and operate the same, and to use all other premises as are reasonably requisite for the conduct of said operations, and the right to remove at any time from said premises, any and all property which may be placed thereon by said lessee, provided that the said lessee is not at the time indebted to the State of Louisiana under the provisions of this lease.

The said premises as to which this instrument does apply, are described as follows:
"All of the property now or formerly constituting the beds & other bottoms belonging to the State of Louisiana of rivers, streams, creeks, bayous, lagoons, bays, coves, sounds and inlets and not under lease from the State on the date of the application, namely - Mar. 7, 1928, and being situated in Ts 21 & 22 S., Rs. 19 & 20 E., C. E. Land District of La., W. of the Mississippi River. There are excluded from this adjudication only such parts of Lake Felicite, Terrebonne Bay & Lake Racourci, as are located within said area. All the remainder of such property now or formerly constituting the beds or other bottoms belonging to the State of Louisiana, and comprised within said area being expressly included and particularly that known by name as Bay Sainte Elaine, Bay Coon Road, Bayou Little Millon, Bay Trois Cent Biquette, Tambour Bay, Oyster Bay, Couteau Bay, Bay Long, Bay Cedric, Wine Lake, Lake Farre, Bay Chalaud, Lake Lagraisse, Bayou Terrebonne, Little Lake and Lake Trois Jean, this particularization, however, not being or intended to be all-inclusive."

TO HAVE AND TO HOLD unto the said lessee, its heirs and assigns, for the term and under the provisions as hereinafter specified as follows, to-wit:

I.

There is expressly granted to the said The La. Land & Exploration Co. the right at any time before the expiration of twelve months to begin operations of drilling a well or wells for oil or gas on the premises hereby leased, and if the said lessee shall within said term begin such operations, it shall continue same with reasonable diligence until the completion of such well, and the said well, when begun, shall be completed to a depth of twenty-six hundred feet, unless oil or gas be found in paying quantities at a lesser depth, or unless salt or gypsum be found at a lesser depth.

Upon the beginning of operations of drilling a well within the period specified by the lease, the lessee shall have the right to make as many attempts to find oil, gas or other minerals as it pleases, and to continue the exercise of such right as long as it pleases, provided, however, that such attempts shall be successive in the sense, that until oil, gas or other minerals shall be found, not more than sixty days shall elapse between the cessation or abandonment of work on one well and the beginning of work on another.

II.

If in the exercise of the right granted by this lease, the first well proves to be a paying oil or gas well, the said lessee binds itself that thereafter it will proceed to further develop the said property with reasonable diligence and will so continue until such number of wells have been drilled upon the said property as to constitute a reasonable development thereof.

III.

If in the exercise of the right herein granted, oil be produced on said premises in paying quantities, then the said lessee shall deliver to the lessor as royalty, free of expense:

One-eighth of the oil produced and saved from all wells. In estimating the royalty payments, the average daily production for the calendar month shall be taken as a basis; delivery to be made in tanks with connections by the lessor provided, or into any pipe line that may be connected to the well or wells.

One-eighth of the net proceeds derived from the sale of gas, provided however, that the minimum royalty on each gas well shall be not less than \$200.00 per year.

Seventy-five cents per long ton of sulphur produced and saved.

Ten cents per ton for all potash produced and saved, and one-eighth of all other minerals produced and saved.

As a further consideration of this contract, the Lessee herewith pays to the Lessor a cash lump sum of Fifty-One Thousand (\$51,000.00) Dollars, receipt of which is hereby acknowledged.

It is further understood and agreed that the provisions of this contract may be extended from year to year by the payment in advance of the sum of Twenty-Five Thousand Five Hundred (\$25,500.00) Dollars, such extension periods not to exceed in the aggregate four (4) years.

IV.

If any of the oil produced from said premises, be found to contain water or sediment in such quantities as not to be suitable for pipe-line run, then the lessee obligates itself to treat the said oil free of expense to the lessor, so that the royalty to the State, shall be marketable oil.

V.

It is expressly understood and agreed, that if oil, gas or other minerals be produced from said property, this lease shall be thereby continued in full force and effect as long as the oil, gas or other minerals may be produced from said property, subject only to the express stipulations contained in this contract.

And if for any cause beyond the control of the lessee, any well or wells on the said property should cease to produce, such cessation shall not affect the lease; provided the lessee proceed with reasonable diligence to work on the said wells so as to cause them to produce further.

But if the lessee fails to comply with such stipulations after having drilled wells on said property, which produce oil, gas or other minerals, then and in that event, surrender of this lease as to the undeveloped portion may be demanded and becomes effective having formally put lessee in default by sixty (60) days' notice to comply with such stipulation.

It is understood that at the end of five (5) years, the lessee shall declare in writing, what portion or portions of the leased premises, are not at such time in its judgment developed, and whether the same be by it judged capable of development as herein contemplated; and if there shall be such portions undeveloped and capable of development, the lessee shall proceed to further develop the property, locating a sufficient number of wells at such reasonably close intervals as consistent with the interest of both parties as to accomplish a reasonably profitable development of the entire tract as herein contemplated.

VI.

If there should be drilled on the adjacent property, within one hundred and fifty (150) feet of the line, a well or wells producing as much as two hundred (200) barrels of oil per day for thirty consecutive days, the lessee herein agrees that it will with all reasonable diligence begin and prosecute the drilling of an equal number of wells within approximately the same distance of the line, on the said premises, in a faithful effort to find and produce thereon, oil in paying quantities, under penalty, upon failure of said lessee so to do, after thirty (30) days' notice by lessor, such notice to be given any time after the thirty consecutive days above referred to, that this lease shall be cancelled as to ten acres immediately adjacent and opposite to such producing well or wells on the adjacent property; the said ten acres to be contained within parallel lines four acres distant from each other, and running as nearly as may be, perpendicular to the adjacent line, and which said parallel lines if projected into the adjacent property shall be equi-distant from said producing well or wells; except that such ten-acre block shall not include or be any nearer to any existing well or wells on said premises than one hundred (100) feet.

It is agreed and understood that

portions or portions of the leased premises, at such time in its judgment developed, and whether the same be by it judged capable of development as herein contemplated; and if there shall be such portions undeveloped and capable of development, the lessee shall proceed to further develop the property, locating a sufficient number of wells at such reasonably close intervals as consistent with the interest of both parties as to accomplish a reasonably profitable development of the entire tract as herein contemplated.

VI.

If there should be drilled on the adjacent property, within one hundred and fifty (150) feet of the line, a well or wells producing as much as two hundred (200) barrels of oil per day for thirty consecutive days, the lessee herein agrees that it will with all reasonable diligence begin and prosecute the drilling of an equal number of wells within approximately the same distance of the line, on the said premises, in a faithful effort to find and produce thereon, oil in paying quantities, under penalty, upon failure of said lessee so to do, after thirty (30) days' notice by lessor, such notice to be given any time after the thirty consecutive days above referred to, that this lease shall be cancelled as to ten acres immediately adjacent and opposite to such producing well or wells on the adjacent property; the said ten acres to be contained within parallel lines four acres distant from each other, and running as nearly as may be, perpendicular to the adjacent line, and which said parallel lines if projected into the adjacent property shall be equi-distant from said producing well or wells; except that such ten-acre block shall not include or be any nearer to any existing well or wells on said premises than one hundred (100) feet.

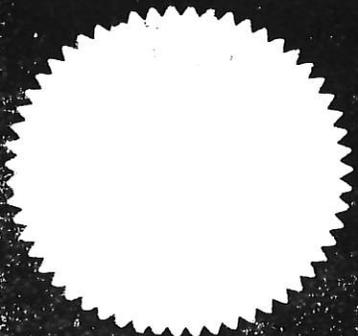
VII.

It is agreed and understood that neither all nor any part of the land herein leased shall be sub-leased unless agreed to by the Governor.

VIII.

It is further agreed and understood that operating the leased property herein, shall not impede navigation.

THUS DONE, ACCEPTED, READ AND SIGNED by the parties hereto, the lessor, the State of Louisiana, herein represented by C. H. SIMPSON, Governor, and the lessee, The Louisiana Land & Exploration Co. in the presence of Fred J. Grace and Carl Campbell, and before me, R. H. Flower, Assistant Secretary of State, on this 26th day of March, A. D. 1928.



C. H. Simpson, Governor
For the State of Louisiana, Lessor.

The Louisiana Land & Exploration Co.,
By *Fred J. Grace* Lessee.
R. H. Flower
Assistant Secretary of State.

WITNESSES:
Fred J. Grace
Carl Campbell

4. On any rental paying date there be neither actual drilling, mining nor reworking operations in progress on the leased premises, nor production therefrom, this lease shall not terminate if Lessee, on or before said date, shall make or resume the payment of rental as herein set forth; provided, if drilling, reworking or mining operations be abandoned at any time within a period of ninety (90) days prior to any rental paying date, or if production ceases within such ninety (90) days, Lessee shall have a period of ninety (90) days after the date of such abandonment of operations or cessation of production within which to commence reworking or mining operations or actual drilling of another well on the leased premises, or within which to make said rental payment, and the commencement of such operations or the payment of such rental within said ninety (90) days' period shall have the same effect as though commenced or paid on or before said rental paying date. Wherever used in this lease, "reworking operations" shall be defined as reconditioning, deepening, plugging back, cleaning out or otherwise attempting in good faith to increase or restore production.

If at the expiration of the primary term sulphur, potash, oil, gas or any other liquid or gaseous hydrocarbon mineral is not being produced hereunder but on or before that date (or on or before the end of ninety (90) days following cessation of production or abandonment of a well, if a well be abandoned or production should cease within ninety (90) days prior to the expiration of the primary term), Lessee commences actual drilling, mining or reworking operations on the leased premises in search of such products, then this lease shall continue in force so long as such operations are being conducted in good faith without lapse of more than ninety (90) days between cessation of operations and their recommencement, whether on the same well or mine or on different wells or mines successively. If, after the expiration of the primary term, production hereunder should for any reason cease or terminate, Lessee shall have the right at any time within ninety (90) days from cessation of such production to resume actual drilling, mining or reworking operations in an effort to make the leased premises again produce any of such products, in which event this lease shall remain in force so long as such operations are continued as above provided. If as a result of any such operations, sulphur, potash, oil, gas or any other liquid or gaseous hydrocarbon mineral be found and produced, or the production of any of the same be restored, this lease shall continue in force so long as any of them is produced hereunder in paying quantities.

This lease may be maintained in force by directional drilling operations (deviation from vertical) in which event actual drilling shall be considered to have commenced on the leased premises when the drill stem penetrates beneath the surface of the leased premises. Lessee shall have the right and privilege to set up any necessary surface equipment and installations on the property covered by this lease for the purpose of drilling a directional well or wells in search of sulphur, potash, oil, gas or any other liquid or gaseous hydrocarbon mineral under a mineral lease or leases covering adjoining or adjacent property granted by the State and owned in whole or in part by Lessee, and to erect, construct and use such additional installations as are necessary or convenient in connection with the development, production, transporting and marketing of any and all said minerals from such adjoining or adjacent property. Such rights and privileges shall remain in full force and effect so long as this lease, or any such adjacent or adjoining lease is in force.

5. Lessee further agrees that should a well capable of producing oil or gas or other liquid hydrocarbon mineral in paying quantities be brought in within six hundred sixty (660) feet (or within any spacing or pooling unit distance as established by the Department of Conservation) of, and draining, the leased premises, on property not owned by Lessor, Lessee will begin the drilling of a well on said leased premises within ninety (90) days of the date on which said well so qualifies as a well capable of producing oil or gas or other liquid or gaseous hydrocarbon mineral in paying quantities, and in addition to the specific offset drilling obligation above provided, will drill any and all wells necessary on the premises to prevent drainage of oil, gas or other liquid or gaseous hydrocarbon mineral by a well or wells on adjacent property not owned by Lessor.

6. Lessee shall deliver to Lessor as royalty, free of cost of production:

One-sixth (1/6th) of all oil, including distillate and other liquid hydrocarbons, produced and saved at the well by ordinary production methods, delivery to be understood as made when same has been received by the first purchaser thereof. Or Lessee may, in lieu of said delivery and at Lessee's option, pay to Lessor sums equal to the value thereof on the premises. The price paid Lessor shall not be less than the average posted pipe line price in the same field or loading terminal price in the same field then current for oil, including distillate or other liquid hydrocarbons, of like grade or quality.

One-sixth (1/6th)

of all gas produced and saved or utilized, delivery of said gas to be understood as made when same has been received by the first purchaser thereof. Or Lessee may, in lieu of said gas delivery, and at Lessee's option, pay to Lessor sums equal to the value thereof at the well; provided that the price paid Lessor for said gas shall not be less than the average price then current for gas of like character or quality delivered to the pipe line purchaser in that field. If there is on the leased premises a well or wells capable of producing gas and gas is not being used or marketed therefrom and this lease is not then being maintained by other production or operations, this lease shall, nevertheless, remain in full force and effect for a period of ninety (90) days after cessation of production or operations or the shutting in of said well and on or before the expiration of said ninety (90) day period, Lessee may pay or tender a sum equal to One Dollar (\$1.00) per acre for the number of acres then covered by this lease, but such sum shall not be less than Two Hundred Dollars (\$200.00), which payment shall maintain this lease in full force and effect for a period of six (6) months from the expiration of said ninety (90) day period, and it will be considered that gas is being produced hereunder, and such payments or tenders shall have the same effect as the production of gas, for all purposes hereof, especially under the provisions of Articles 2, 4 and 7 hereof. Hereafter, semi-annually in like manner, upon like payments or tenders, this lease may be maintained in force and effect for successive periods of six (6) months each so long as such payments are made, but not, however, exceeding six (6) successive periods. It is understood that the above provision or shut-in clause shall apply to any well where the gas/oil ratio is such that the Commissioner of Conservation will not permit the operation of such well without the use or sale of the gas.

Two Dollars (\$2.00)

per long ton for all sulphur produced and saved.

Twenty-five cents (25¢)

per ton for all potash produced and saved.

One-sixth (1/6th)

for any and all other liquid or gaseous hydrocarbon minerals not specifically mentioned herein, said royalties to be delivered or paid as is the accepted custom in such matter.

Additional Consideration:

7. Lessee may surrender all or any portion or portions of the leased premises at any time this lease is in effect and thereby be relieved of all obligations thereafter accruing under this lease as to the portions surrendered; provided that no partial release or surrender shall reduce, or otherwise affect, the amount of rentals provided for in Article 3 of this lease.

In the event of cancellation or forfeiture of this lease for any cause, Lessee may, nevertheless, retain hereunder 40 acres around each well producing oil and 160 acres around each well producing gas (including wells drilled under this lease by directional drilling), and in the case of any well being worked on or being drilled Lessee shall have the right to complete such operations or reworking or drilling, and in the event any such well results in a producer of oil, Lessee may retain 40 acres around such well and if any such well results in a producer of gas, Lessee may retain 160 acres around such well, such acreage to be reserved in as near a square tract as practicable with the well or wells to be as near the center of said acreage so selected as practicable; provided that if a drilling or proration unit has been assigned to any such well by the Commissioner of Conservation, Lessee may retain the acreage fixed for such drilling or proration unit.

8. It is further agreed and understood that the rights of Lessee may be assigned or transferred in whole or in part but no transfer, whether in whole or in part, of the herein leased property shall be valid unless such transfer or assignment be approved by the State Mineral Board.

9. Lessee may, with the consent and approval of the State Mineral Board, pool or combine the acreage covered by this lease, or any portion thereof, with any other property, lease or leases, or portions thereof.

10. Lessee shall have the right during or within one year after the life of this lease to remove all Lessee's property and equipment including the right to draw and remove all casing.

THUS DONE, READ, ACCEPTED AND SIGNED by the parties hereto in presence of the respective undersigned witnesses, as of the 17th day of November, 1954, which shall be the date of this lease for all purposes.

WITNESSES to the signature of Lessor:

STATE MINERAL BOARD

By: John W. Olvey Chairman
For the State of Louisiana, Lessor

WITNESSES to the signature of Lessee:

For Lessee

ACKNOWLEDGMENT FOR STATE MINERAL BOARD

STATE OF LOUISIANA
PARISH OF East Baton Rouge

Before me, the undersigned authority, personally came and appeared _____, who by me being first duly sworn, deposed and said:

That he is one of the witnesses to the execution of the foregoing instrument and that he saw John W. Olvey sign said instrument as Chairman of the State Mineral Board for and on behalf of the State of Louisiana in the presence of appearer and _____, the other subscribing witness.

Sworn to and subscribed before me on this the _____ day of _____, 1954.

Notary Public

ACKNOWLEDGMENT FOR CORPORATE LESSEE

STATE OF _____

OF _____

Before me, the undersigned authority, personally came and appeared _____, who by me being first duly sworn, deposed and said:

That he is one of the witnesses to the execution of the foregoing instrument and that he saw _____ execute said instrument as _____

_____ the corporation in the presence of appearer and other subscribing witness.

Sworn to and subscribed before me on this the _____ day of _____, 19____.

Notary Public

ACKNOWLEDGMENT FOR INDIVIDUAL LESSEE

STATE OF _____

OF _____

Before me, the undersigned authority, personally came and appeared _____, who by me being first duly sworn, deposed and said:

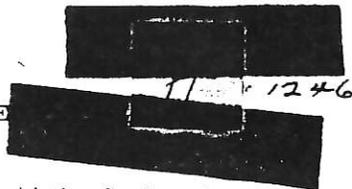
That he is one of the witnesses to the execution of the foregoing instrument and that he saw _____ execute said instrument as his own free act and deed in the presence of appearer and of _____, the other subscribing witness.

Sworn to and subscribed before me on this the _____ day of _____, 19____.

Notary Public

STATE OF LOUISIANA,
PARISH OF EAST BATON ROUGE.

STATE LEASE



WHEREAS, under the provisions of Act No. 93 of the Regular Legislative Session of 1936, as amended, application was made to the STATE MINERAL BOARD for a lease of the hereinafter described lands, and a report thereon having been made by the Register of the State Land Office, and,

WHEREAS, in response to said advertisements, bids were received at the State Capitol on the 10th day of June 1947, at a meeting of the STATE MINERAL BOARD, and,

WHEREAS, it appears that the bid of The Texas Company, a Delaware Corporation of 1501 Canal Building, New Orleans, Louisiana,

hereinafter styled "lessee", is the most advantageous to the State of Louisiana;
NOW, THEREFORE, BE IT KNOWN AND REMEMBERED, that the said STATE MINERAL BOARD, acting under the authority of the said Act No. 93 of the Regular Session of 1936, as amended, and in accordance with the terms thereof, and acting in behalf of the State of Louisiana

as "lessor", does hereby let and lease unto the said lessee, (its) heirs and assigns the hereinafter described property, for the purpose of exploiting the same by geophysical means in locating mineral bearing structure thereon, and for producing therefrom sulphur, potash, oil, gas and/or other liquid or gaseous hydro-carbon minerals, in and under said lands, and also the exclusive right of drilling and operating thereon for sulphur, potash, oil, gas and/or other liquid or gaseous hydro-carbon minerals, together with a right of way for, and the right to lay pipelines to convey water, oil, gas, steam and sulphur, and the right to have sufficient water from the premises to drill and operate any wells which the said lessee may bore thereon, and also such other privileges as are reasonably requisite for conducting such operations, and the right to remove from said premises at any time any and all property that may have been placed thereon by lessee, provided that the said lessee shall have fulfilled its obligations to lessor hereunder.

The said property to which this instrument applies is located in Terrebonne & Lafourche parish and is described as follows:

SOUTH TIMBALIER AREA REVISED MAY 12, 1947.

1246



and other lands belonging to the State of Louisiana in Terrebonne and Lafourche Parishes, Louisiana, to-wit:

Tract 2680, containing approximately 4810 acres and being also described as Block 113, shown on map entitled "Map of South Timbalier Area Revised Showing Portions of Gulf of Mexico, Terrebonne Bay and Adjoining Water Bottoms and Other Lands Belonging to the State of Louisiana, May 12, 1947" which map is on file in the State Land Office and State Mineral Board Office at Baton Rouge, Louisiana, said tract being more particularly described as follows:

TRACT 2680 (BLOCK 113, SOUTH TIMBALIER AREA REVISED MAY 12, 1947), STATE OF LOUISIANA: Beginning at a point in the East boundary of that part of State Mineral Lease No. 199, as amended, designated as "Bay St. Elaine Dome Area", said "Bay St. Elaine Dome Area" being more particularly described in that certain instrument of selection under and release dated May 20, 1943, duly recorded in Conveyance Book 136, Entry 53,053, of the Conveyance Records of Terrebonne Parish, Louisiana, said beginning point being in the West boundary of the Terrebonne Bay as established by a written description of the Terrebonne Bay and my detached thereto and made a part of the State Mineral Board adopted December 10, 1945, which description is located 3,789.88 feet South and 5,520.51 feet East of U.S. Coast and Geodetic Survey Station "ELAINE, 1926-27", said station having UTM coordinates of 1,243,754.78 feet East and 1,172,856.13 feet North; thence Northerly following the East boundary of said Terrebonne Bay as established in said written description and shown on map aforesaid, the following courses and distances:

- North 9 degrees 35 minutes 05 seconds West 240.29 feet; drilling on
- North 7 degrees 59 minutes 55 seconds East 675.00 feet; days, prior
- North 16 degrees 49 minutes 55 seconds East 996.00 feet;
- North 44 degrees 09 minutes 55 seconds East 855.00 feet;
- North 00 degrees 20 minutes 05 seconds West 1090.00 feet;
- South 54 degrees 09 minutes 55 seconds West 716.00 feet;

All of the beds and bottoms of Terrebonne Bay and adjoining waters and other lands belonging to the State of Louisiana included within the following described area in Terrebonne and Lafourche Parishes, Louisiana, to-wit:

Tract 2680, containing approximately 4810 acres and being also described as Block 113, shown on map entitled "Map of South Timbalier Area Revised Showing Portions of Gulf of Mexico, Terrebonne Bay and Adjoining Water Bottoms and Other Lands Belonging to the State of Louisiana, May 12, 1947" which map is on file in the State Land Office and State Mineral Board Office at Baton Rouge, Louisiana, said tract being more particularly described as follows:

TRACT 2680 (BLOCK 113, SOUTH TIMBALIER AREA REVISED MAY 12, 1947), STATE OF LOUISIANA: Beginning at a point in the East boundary of that part of State Mineral Lease No. 199, as amended, designated as "Bay St. Elaine Dome Area", said "Bay St. Elaine Dome Area" being more particularly described in that certain instrument of selection and release dated May 20, 1943, duly recorded in Conveyance Book 136, Entry 53,053, of the Conveyance Records of Terrebonne Parish, Louisiana, said beginning point being in the West boundary of Terrebonne Bay as established in a written description of Terrebonne Bay and map attached thereto and made a part of a Resolution by the State Mineral Board adopted December 10, 1942, which point is located 3,789.80 feet South and 5,520.04 feet East of U.S.C. & G.S. Triangulation Station "ELAINE, 1928-34", said station having Louisiana (Lambert) Plane Coordinates of $X-2,213,754.74$ feet and $Y-172,856.13$ feet; thence Northerly following on and along the East boundary of that part of State Mineral Lease No. 199, as amended, designated as "Bay St. Elaine Dome Area" which is also the Westerly boundary of said Terrebonne Bay as established in said written description and shown on map aforesaid, the following courses and distances:

North 9 degrees 35 minutes 05 seconds West 240.29 feet;
North 7 degrees 59 minutes 55 seconds East 675.00 feet;
North 16 degrees 49 minutes 55 seconds East 996.00 feet;
North 44 degrees 09 minutes 55 seconds East 855.00 feet;
North 00 degrees 20 minutes 05 seconds West 1200.00 feet;
South 54 degrees 09 minutes 55 seconds West 700.00 feet;
North 9 degrees 50 minutes 05 seconds West 425.00 feet;
North 52 degrees 09 minutes 55 seconds East 540.00 feet;
North 13 degrees 19 minutes 55 seconds East 300.00 feet;
North 13 degrees 50 minutes 05 seconds West 135.00 feet;
South 82 degrees 19 minutes 55 seconds West 510.00 feet;
North 34 degrees 20 minutes 05 seconds West 400.00 feet;
North 12 degrees 09 minutes 55 seconds East 2200.00 feet;
North 64 degrees 59 minutes 55 seconds East 1442.00 feet;
North 00 degrees 39 minutes 55 seconds East 144.00 feet;
North 7 degrees 04 minutes 55 seconds East 1200.00 feet;
North 37 degrees 39 minutes 55 seconds East 950.00 feet;
North 36 degrees 39 minutes 55 seconds East 815.00 feet;
North 2 degrees 20 minutes 05 seconds West 395.00 feet;
North 00 degrees 20 minutes 05 seconds West 1950.00 feet;
North 17 degrees 19 minutes 55 seconds East 871.00 feet;
North 57 degrees 41 minutes 55 seconds East 4053.00 feet;

to a point designated as point "B" in that certain instrument of selection and release dated May 20, 1943, entered into between the State Mineral Board and The Texas Company, duly recorded in Conveyance Book 136, Entry 53,053, of the Conveyance Records of Terrebonne Parish, Louisiana, which point "B" has Louisiana (Lambert) Plane Coordinates of $X-2,225,930.78$ feet and $Y-184,486.88$ feet, and is located in the Northwest boundary line of Terrebonne Bay as established in said written description and shown on map aforesaid, and in the East boundary line of that portion of State Mineral Lease No. 199, as amended, designated as "Bay St. Elaine Dome Area"; thence North 00 degrees 20 minutes 05 seconds West 14,267.00 feet following on and along the East boundary of that part of State Mineral Lease No. 199, as amended, designated as "Bay St. Elaine Dome Area" to its Northeast corner, the Louisiana (Lambert) Plane Coordinates of which are $X-2,225,847.42$ feet and $Y-198,753.64$ feet; thence East 4,924.3 feet; thence South 29,687.31 feet; thence West 11,496.94 feet to the place of beginning and containing approximately 4810 acres. All bearings are based on Louisiana (Lambert) Plane Coordinate System, South Zone.

TO HAVE AND TO HOLD unto the said lessee, (its) heirs and assigns, for the term and under the conditions hereinafter set forth, to-wit:

I.

Lessee has this day paid one hundred and two thousand, two hundred and fifty and sixty cents (\$102,250.60) Dollars for the right to begin the drilling of a well on the herein leased premises at any time within one (1) year from the date hereof, said sum also being part consideration for lessee's right to delay such drilling operations under the conditions hereinafter provided.

Should lessee fail to begin the actual drilling (spudding in) of a well on these premises within the one (1) year above provided, then this lease shall terminate as to both parties, lessor and lessee, unless on or before such anniversary date lessee pays to lessor the sum of one hundred and thirty and thirty cents (\$1,130.30) Dollars (herein called rental), which payment shall cover the privilege of deferring commencement of drilling operations (as above defined) for a period of twelve (12) months. In like manner, and upon like payments annually, the commencement of drilling operations may be further deferred for successive periods of twelve (12) months each, during the primary term of this lease, which primary term is hereby declared to be thirty (30) years from the date hereof.

If during the primary term of this lease as above set forth, lessee shall begin actual drilling on the premises and shall thereafter cease such drilling operations for more than sixty (60) days, prior to developing and producing sulphur, potash, oil, gas and/or other liquid or gaseous hydro-carbon mineral in paying quantities, then the said lessee may continue its rights in effect for the remainder of the primary term of this lease by resuming payments as above provided, and by paying to lessor, within sixty (60) days from the cessation of drilling operations, the payment for the current period which lessee must have paid to maintain its rights had lessee begun no such operations.

TO HAVE AND TO HOLD unto the said lessee, (its) heirs and assigns, for the term and under the conditions hereinafter set forth, to-wit:

I.

Lessee has this day paid one hundred and two thousand, two hundred and fifty and sixty cents (\$102,250.60) Dollars for the right to begin the drilling of a well on the herein leased premises at any time within one (1) year from the date hereof, said sum also being part consideration for lessee's right to delay such drilling operations under the conditions hereinafter provided.

Should lessee fail to begin the actual drilling (spudding in) of a well on these premises within the one (1) year above provided, then this lease shall terminate as to both parties, lessor and lessee, unless on or before such anniversary date lessee pays to lessor the sum of one hundred and thirty and thirty cents (\$1,130.30) Dollars (herein called rental), which payment shall cover the privilege of deferring commencement of drilling operations (as above defined) for a period of twelve (12) months. In like manner, and upon like payments annually, the commencement of drilling operations may be further deferred for successive periods of twelve (12) months each, during the primary term of this lease, which primary term is hereby declared to be thirty (30) years from the date hereof.

If during the primary term of this lease as above set forth, lessee shall begin actual drilling on the premises and shall thereafter cease such drilling operations for more than sixty (60) days, prior to developing and producing sulphur, potash, oil, gas and/or other liquid or gaseous hydro-carbon mineral in paying quantities, then the said lessee may continue its rights in effect for the remainder of the primary term of this lease by resuming payments as above provided, and by paying to lessor, within sixty (60) days from the cessation of drilling operations, the payment for the current period which lessee must have paid to maintain its rights had lessee begun no such operations.

From beginning the drilling of a well within the area specified by this lease, then lessee shall have the right to make as many attempts to develop sulphur, potash, oil, gas and/or other liquid or gaseous hydro-carbon minerals as lessee pleases, even beyond said primary term as above set forth, and to continue the exercise of such rights as long as it pleases, provided, however, that except as otherwise provided herein, such attempts shall be successive in the sense that until sulphur, potash, oil, gas and/or other liquid or gaseous hydro-carbon mineral is being produced in paying quantities, not more than sixty (60) days shall lapse from the date of cessation of work on one well and the beginning of drilling operations (as above defined) on another, or of reworking operations on the same well, and provided further, that such operations shall be carried out diligently and in good faith in an effort to develop the premises as herein contemplated.

If in the exercise of the rights herein granted, minerals be developed or produced in paying quantities in or on the premises, the said lessee binds itself to thereafter proceed to further develop the said premises with reasonable diligence and to so continue until a reasonable development of the property has been accomplished.

Lessee further agrees that should a well capable of producing oil or gas or other liquid hydro-carbon mineral in paying quantities be brought in within six hundred sixty (660) feet (or within any spacing or pooling unit distance as established by the Department of Conservation) of the leased premises, it will begin the drilling of a well on said leased premises within sixty (60) days of the date on which said well so qualifies as a well capable of producing oil or gas or other liquid or gaseous hydro-carbon mineral in paying quantities, and in addition to the specific offset drilling obligation above provided, will drill any and all wells necessary on the premises to prevent drainage of oil, gas and/or other liquid or gaseous hydro-carbon mineral by a well or wells on adjacent property.

III.

Should sulphur, potash, oil, gas and/or other liquid hydro-carbon mineral be produced in paying quantities on the premises hereunder, then the said lessee shall deliver to lessor as royalty, free of expense:

One-eighth (1/8) of all oil produced and saved, including distillate or other liquid hydro-carbons, delivery of said oil to be understood as made when same has been received by the first purchaser thereof. Or lessee may, in lieu of said oil delivery, and at its option, pay to lessor sums equal to the value thereof on the premises; provided no deductions or charges shall be made for gathering or transporting said oil to the purchaser thereof, or loading terminal, nor shall any deductions whatsoever be made chargeable to lessor; provided further, that the price paid lessor for said oil shall not be less than the average posted pipe-line or loading terminal price then current for oil of like grade or quality.

One-eighth (1/8) of all gas produced and saved or utilized, delivery of said gas to be understood as made when same has been received by the first purchaser thereof. Or lessee may, in lieu of said gas delivery, and at its option, pay to lessor sums equal to the value thereof at the well, provided no gathering or other charges are made chargeable to lessor; provided further that the price paid lessor for said gas shall not be less than the average price then current for gas of like character or quality delivered to the pipe line purchaser in that field. Lessee shall, however, when a market cannot be secured for gas and gas produced is not being utilized or sold on or off the premises, pay lessor, "lieu royalty" at the rate of Two Hundred (\$200.00) Dollars per year, payable quarterly, for each well capable of producing gas only.

One (1) Dollar and fifty cents (\$1.50) per long ton for all sulphur produced and saved.

Twenty (20) cents per ton for all potash produced and saved.

One-eighth (1/8) of any and all other liquid or gaseous hydro-carbon minerals

not specifically mentioned, said royalties to be delivered or paid as is the accepted custom in such matters.

It is expressly understood and agreed that about, (on or before) the expiration of the primary term hereof, lessee shall declare in writing that portion or portions of the property herein leased, if any, are not at such time, in lessee's judgment developed, the lessee, in so declaring, to make known to lessor the existence of any Domes, and/or other Structure favorable for accumulation of minerals

on or under the premises of which lessee may have knowledge, and to declare whether the same be by lessee deemed capable of development as herein understood (should lessee fail to make such required declaration, then this lease shall ipso facto terminate except as to acreage lessee is specifically allowed to retain as set forth in paragraphs numbered V and VI hereof), and if there shall be any portion or portions of the premises remaining undeveloped and capable of development and this lease has been kept in force and effect by production or drilling operations, then lessee shall proceed immediately to develop the remainder of said property as contemplated herein, and lessee shall then release, by proper instrument, from the effect of this lease, any portion or portions of the premises not already under active development or included within the above described declaration as being capable of further development.

V.

Should lessee, at any time after beginning to exploit the premises as understood herein, decide that it no longer desires to carry on drilling operations, then the said lessee is granted the right to cease such operations, and lessee shall, if (it) so selects, retain (its) rights in and to ten (10) acres or the size acreage unit for the field as established by a spacing or pooling order of the Department of Conservation, (in the form of a square, the well being the center, as near as practicable) of the property for each and every well (other than a gas well) which lessee shall have drilled thereon and is producing sulphur, potash, oil, or other liquid hydro-carbon mineral therefrom; provided that said well or wells shall be located on that portion or portions of the property so retained by lessee; and provided further, that lessee's rights in and to that portion of the premises so retained shall endure only so long as lessee shall continue to produce sulphur, potash, oil, or other hydro-carbon mineral from said well or wells on said tract or tracts so retained in paying quantities.

Should lessee at any time elect to abandon operations as above provided, then lessee shall notify lessor in writing of its intention to so do, and shall specify what portion or portions of the said premises the said lessee is entitled by virtue hereof to retain and operate; and lessee shall, as soon as practicable thereafter, execute an instrument or all instruments necessary to effect a proper release of the undeveloped portion of the premises.

VI.

It is agreed and understood that lessee shall not be required to drill more than one well for each forty (40) acres held hereunder where the premises shall prove to be productive of gas only, save and except where such well, or wells, are necessary to prevent drainage of gas from the said premises by wells on adjacent property; and it is further agreed that should lessee at any time elect to abandon drilling operations as provided in paragraph V hereof, then the said lessee shall be entitled to retain its rights in and to the gas production from forty (40) acres (in the form of a square as near as practicable) for each and every gas well from which it shall at such time be producing gas in paying quantities; provided also, that any well or wells so producing shall be located on and reasonably near the center of that portion or portions of the property retained by lessee; and provided further, that lessee's rights to so hold such portion or portions of the said premises shall endure only so long as lessee shall continue to produce therefrom, gas in paying quantities.

VII.

If at any time during the life of this lease, lessee elects to no longer maintain the rights herein granted in effect, then the said lessee shall have the right to release and surrender unto lessor any and all rights hereby held unto lessee, whereupon this contract shall wholly terminate, but without prejudice to rights of lessor to enforce any liability or cause of action which may have theretofore accrued hereunder in favor of lessor.

VIII.

It is agreed and understood that operations hereunder shall offer no impediment to navigation.

IX.

It is further agreed and understood that the rights of lessee may be assigned or transferred in whole or in part but no transfer, whether in whole or in part, of the herein leased property shall be valid unless such transfer or assignment be approved by the STATE MINERAL BOARD, and that said STATE MINERAL BOARD shall have supervision of this lease for the full period of its duration.

X.

Lessee may, with the consent and approval of the STATE MINERAL BOARD, pool or combine the acreage covered by this lease, or any portion thereof, with the land, lease, or leases contiguous thereto or contained in one unit. Such pooling or combining to be in strict conformity with spacing and other rules, regulations, or orders of the Department of Conservation and the STATE MINERAL BOARD; nor shall such pooling or combining agreement in any way decrease the obligations of lessee as herein stipulated.

THUS DONE, READ, ACCEPTED AND SIGNED by the parties hereto, the lessor, The State of Louisiana, herein represented by the State Mineral Board, acting through its elected Chairman

The Texas Company, duly authorized, and the lessee,

in the presence of the respective undersigned witnesses, on this the 21 day of June, A.D. 194

WITNESSES to the signature of Lessor:

M. Mc Garity
E. Davis

STATE MINERAL BOARD

By: B. A. Hardy Chairman
For the State of Louisiana, Lessor

WITNESSES to the signature of Lessee:

Norma Nubrah
Mayo Sears

[Signature]
For Lessee

The Texas Company

STATE OF LOUISIANA,

PARISH OF Cade

BE IT KNOWN that on this 21 day of June, 1947, before me Charles O. Hardy, Notary Public, duly commissioned and qualified, personally appeared the above named B. A. Hardy, Chairman, State Mineral Board,

who signed the foregoing mineral lease before me and in the presence of the two competent witnesses whose names are thereto subscribed as such, and the said appearer thereupon declared and acknowledged unto me, in the presence of said witnesses, that he signed and executed said mineral lease for the purposes and considerations therein expressed.

IN WITNESS WHEREOF the said appearer has signed these presents before me and in the presence of said witnesses, and I have hereunto set my official hand and seal with said witnesses on the day and date above written.

WITNESSES:

[Signature]
[Signature]
Notary Public

STATE OF Louisiana
Parish OF Orleans

BE IT KNOWN that on this 30th day of June, 1947, before me Geo. A. Gammill, Notary Public, duly commissioned and qualified, personally appeared the above named L. G. Hughes
Attorney-in-fact for The Texas Company

who signed the foregoing mineral lease before me and in the presence of the two competent witnesses whose names are thereto subscribed as such, and the said appearer thereupon declared and acknowledged unto me, in the presence of said witnesses, that he signed and executed said mineral lease for the purposes and considerations therein expressed.

IN WITNESS WHEREOF the said appearer has signed these presents before me and in the presence of said witnesses, and I have hereunto set my official hand and seal with said witnesses on the day and date above written.

WITNESSES:

Norma Nubrah
Mayo Sears

[Signature]

Geo. A. Gammill
Notary Public



EXHIBIT "A"

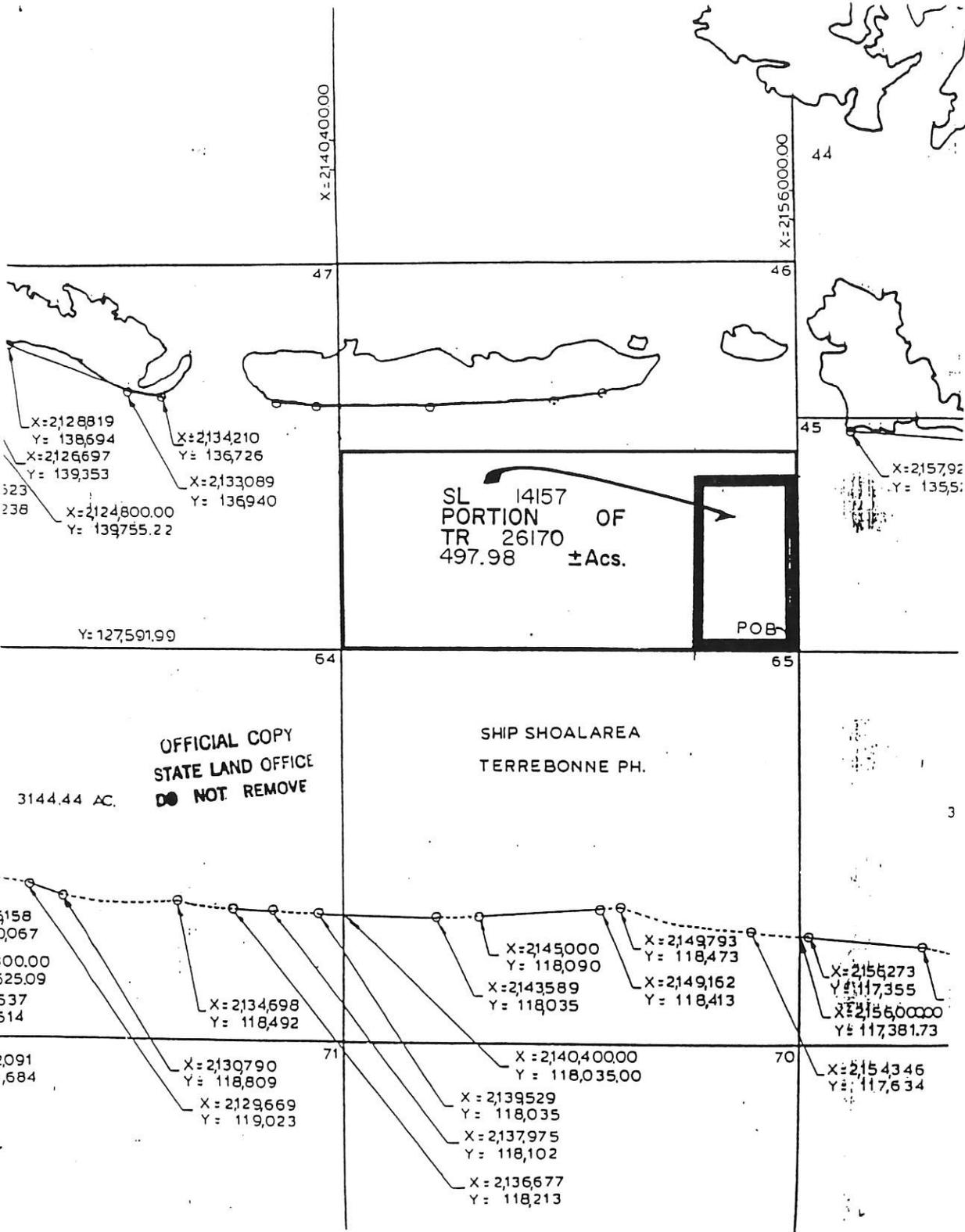
PORTION OF TRACT NO. 26170, Said Portion being more fully described as follows:

Beginning at the Southeast corner of Block 46, Ship Shoal Area, having Coordinates of X = 2,156,000.00 and Y = 127,591.99; thence West 3,518.00 feet on the South line of said Block 46 to a point; thence North 6,166.00 feet to a point having Coordinates of X = 2,152,482.00 and Y = 133,757.99; thence East 3,518.00 feet to a point on the East line of said Block 46; thence South 6,166.00 feet on the East line of said Block 46 to the point of beginning, containing approximately 497.98 acres, as shown outlined in red on a plat on file in the State Land Office, Division of Administration. All bearings, distances and coordinates are based on Louisiana Coordinate System of 1927 (South Zone).

ENTIRE TRACT NO. 26170 being described as follows:

TRACT 26170 - PORTION OF BLOCK 46, SHIP SHOAL AREA, Terrebonne Parish, Louisiana

That portion of Block 46, Ship Shoal Area, Terrebonne Parish, Louisiana, belonging to the State of Louisiana and not under mineral lease on November 13, 1991, described as follows: Beginning at the Southeast corner of Block 46, Ship Shoal Area, having Coordinates of X = 2,156,000.00 and Y = 127,591.99; thence West 15,600.00 feet on the South line of Block 46 to its Southwest corner having Coordinates of X = 2,140,400.00 and Y = 127,591.99; thence North 6,980.77 feet on the West line of Block 46 to a point having Coordinates of X = 2,140,400.00 and Y = 134,572.76; thence East 15,600.00 feet to a point on the East line of Block 46 having Coordinates of X = 2,156,000.00 and Y = 134,572.76; thence South 6,980.77 feet on the East line of Block 46 to the point of beginning, containing approximately 2,500 acres, as shown outlined in red on a plat on file in the State Land Office, Division of Administration. All bearings, distances and coordinates are based on Louisiana Coordinate System of 1927 (South Zone).



323 X=2,128819
 238 Y= 138,694
 X=2,126697
 Y= 139,353
 X=2,124800.00
 Y= 139,755.22
 X=2,134210
 Y= 136,726
 X=2,133089
 Y= 136,940

SL 14157
 PORTION OF
 TR 26170
 497.98 ± Acs.

POB

Y: 127,591.99

3144.44 AC.
 OFFICIAL COPY
 STATE LAND OFFICE
 DO NOT REMOVE

SHIP SHOAL AREA
 TERREBONNE PH.

5158
 0,067
 300.00
 525.09
 637
 514

X=2,134,698
Y= 118,492

X=2,145,000
 Y= 118,090
 X=2,143,589
 Y= 118,035

X=2,149,793
 Y= 118,473
 X=2,149,162
 Y= 118,413

X=2,156,273
 Y= 117,355
 X=2,156,000
 Y= 117,381.73

2091
 1,684

X=2,130,790
 Y= 118,809
 X=2,129,669
 Y= 119,023

X=2,140,400.00
 Y= 118,035.00

X=2,139,529
 Y= 118,035
 X=2,137,975
 Y= 118,102

X=2,136,677
 Y= 118,213

X=2,154,346
 Y= 117,634

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TR 26170
2500± ACs.
NOV, 1991

SHIP SHOAL AREA
TERREBONNE PH.

3144.44 AC.

X=2140400.00

X=2156000.00

Y=127591.99

POB

64

65

71

70

X=2128819
Y= 138,694
X=2126697
Y= 139,353
X=2134210
Y= 136,726
X=2133089
Y= 136,940
X=2124800.00
Y= 139,755.22

X=21579
Y= 135,

X=2145000
Y= 118,090
X=2143589
Y= 118,035
X=2149793
Y= 118,473
X=2149162
Y= 118,413
X=2134698
Y= 118,492
X=2130790
Y= 118,809
X=2129669
Y= 119,023
X=2139529
Y= 118,035
X=2137975
Y= 118,102
X=2136677
Y= 118,213
X=2156273
Y= 117,355
X=2156000.00
Y= 117,381.73
X=2154346
Y= 117,634

76158
10067
4800.00
0625.09
77,637
514

122,091
121,684

EXHIBIT "A"

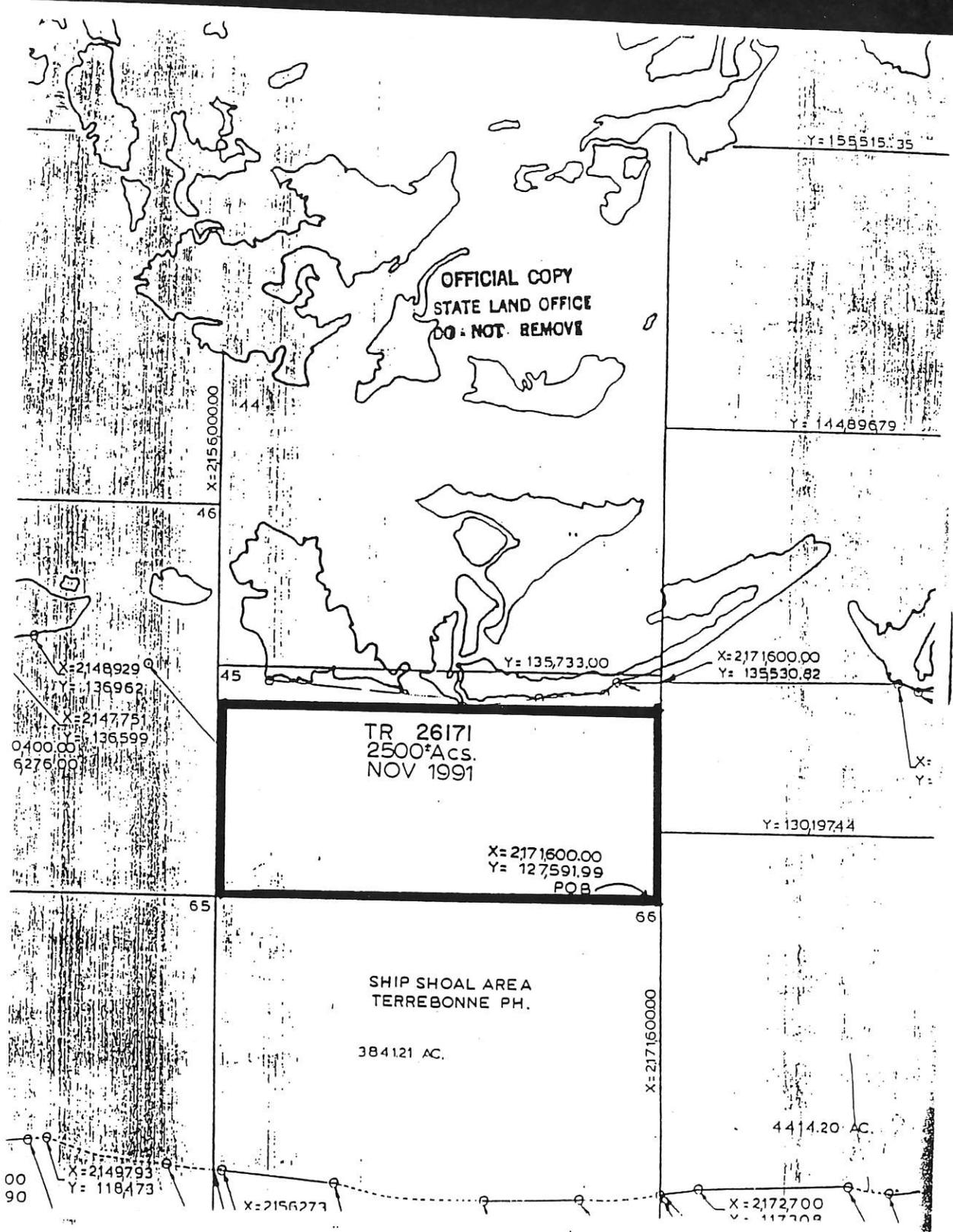
PORTION OF TRACT NO. 26171, Said Portion being more fully described as follows:

Beginning at the Southwest corner of Block 45, Ship Shoal Area, having Coordinates of X = 2,156,000.00 and Y = 127,591.99; thence North 6,166.00 feet on the West line of said Block 45 to a point; thence East 1,536.00 feet to a point having Coordinates of X = 2,157,536.00 and Y = 133,757.99; thence South 46 degrees 38 minutes 11 seconds East 2,288.82 feet to a point having Coordinates of X = 2,159,200.00 and Y = 132,186.43; thence South 4,594.44 feet to a point on the South line of said Block 45; thence West 3,200.00 feet on the South line of said Block 45 to the point of beginning, containing approximately 422.95 acres, as shown outlined in red on a plat on file in the State Land Office, Division of Administration. All bearings, distances and coordinates are based on Louisiana Coordinate System of 1927 (South Zone).

ENTIRE TRACT NO. 26171 being described as follows:

TRACT 26171 - PORTION OF BLOCK 45, SHIP SHOAL AREA, Terrebonne Parish, Louisiana

That portion of Block 45, Ship Shoal Area, Terrebonne Parish, Louisiana, belonging to the State of Louisiana and not under mineral lease on November 13, 1991, described as follows: Beginning at the Southeast corner of Block 45, Ship Shoal Area, having Coordinates of X = 2,171,600.00 and Y = 127,591.99; thence West 15,600.00 feet on the South line of said Block 45 to its Southwest corner having Coordinates of X = 2,156,000.00 and Y = 127,591.99; thence North 6,980.77 feet on the West line of said Block 45 to a point having Coordinates of X = 2,156,000.00 and Y = 134,572.76; thence East 15,600.00 feet to a point on the East line of said Block 45, having Coordinates of X = 2,171,600.00 and Y = 134,572.76; thence South 6,980.77 feet on the East line of said Block 45 to the point of beginning, containing approximately 2,500 acres, as shown outlined in red on a plat on file in the State Land Office, Division of Administration. All bearings, distances and coordinates are based on Louisiana Coordinate System of 1927 (South Zone).



Y = 155515.35

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Y = 14489679

X = 215600000

46

X = 2148929
Y = 136962
X = 214775
Y = 136599
0400.05
6276.00

45

Y = 135733.00

X = 2171600.00
Y = 135530.82

TR 26171
2500+Ac.
NOV 1991

X = 2171600.00
Y = 127591.99
POB

Y = 13019744

65

66

SHIP SHOAL AREA
TERREBONNE PH.

384121 AC.

X = 217160000

4414.20 AC.

00
90

X = 2149793
Y = 118473

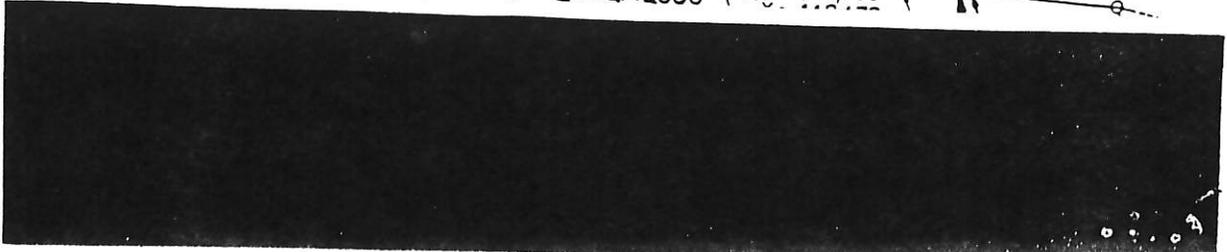
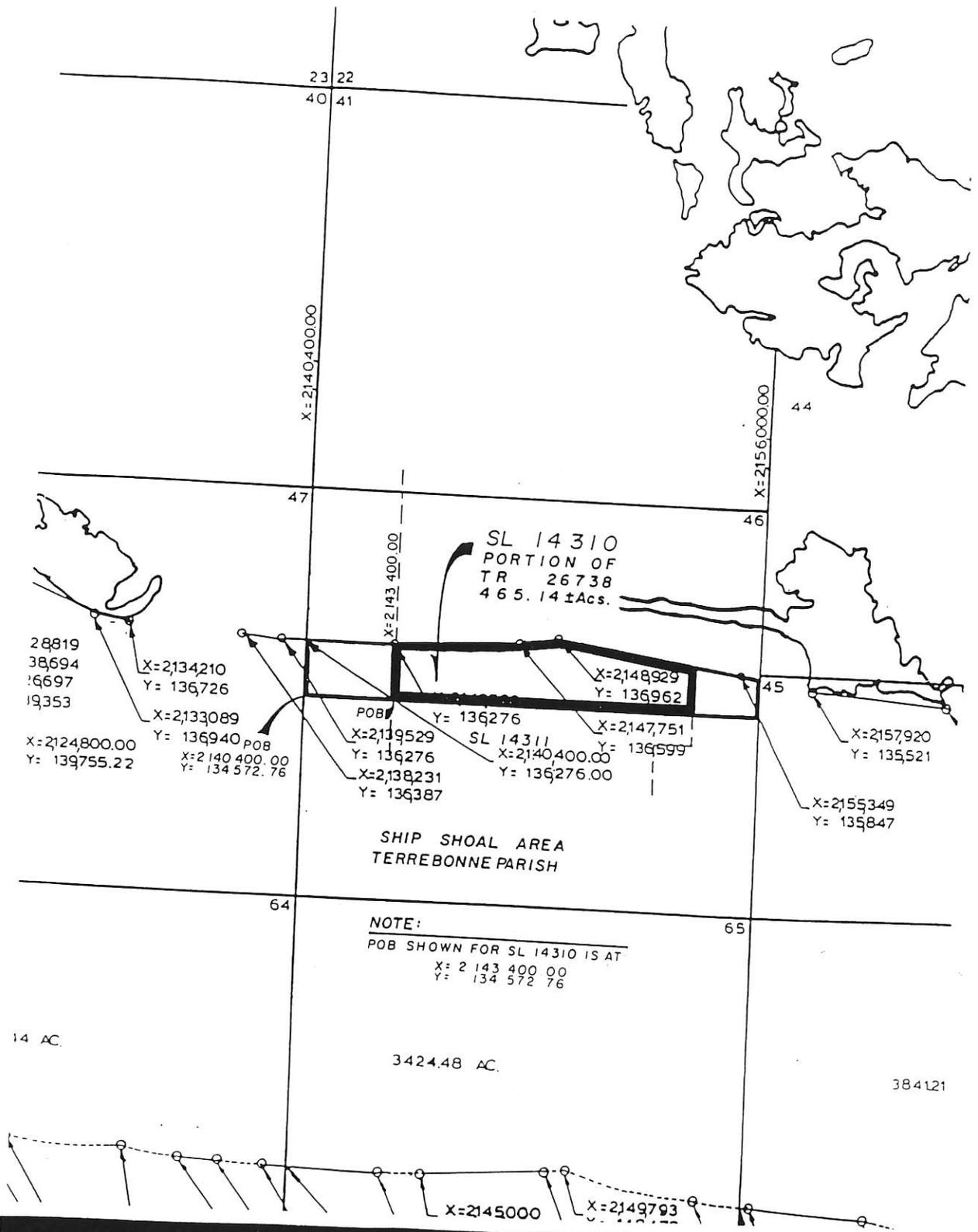
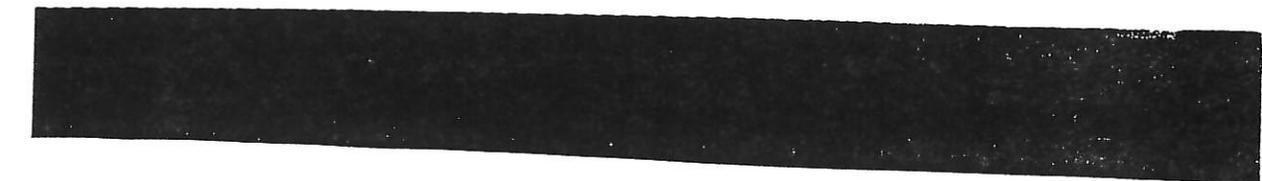
X = 2156273

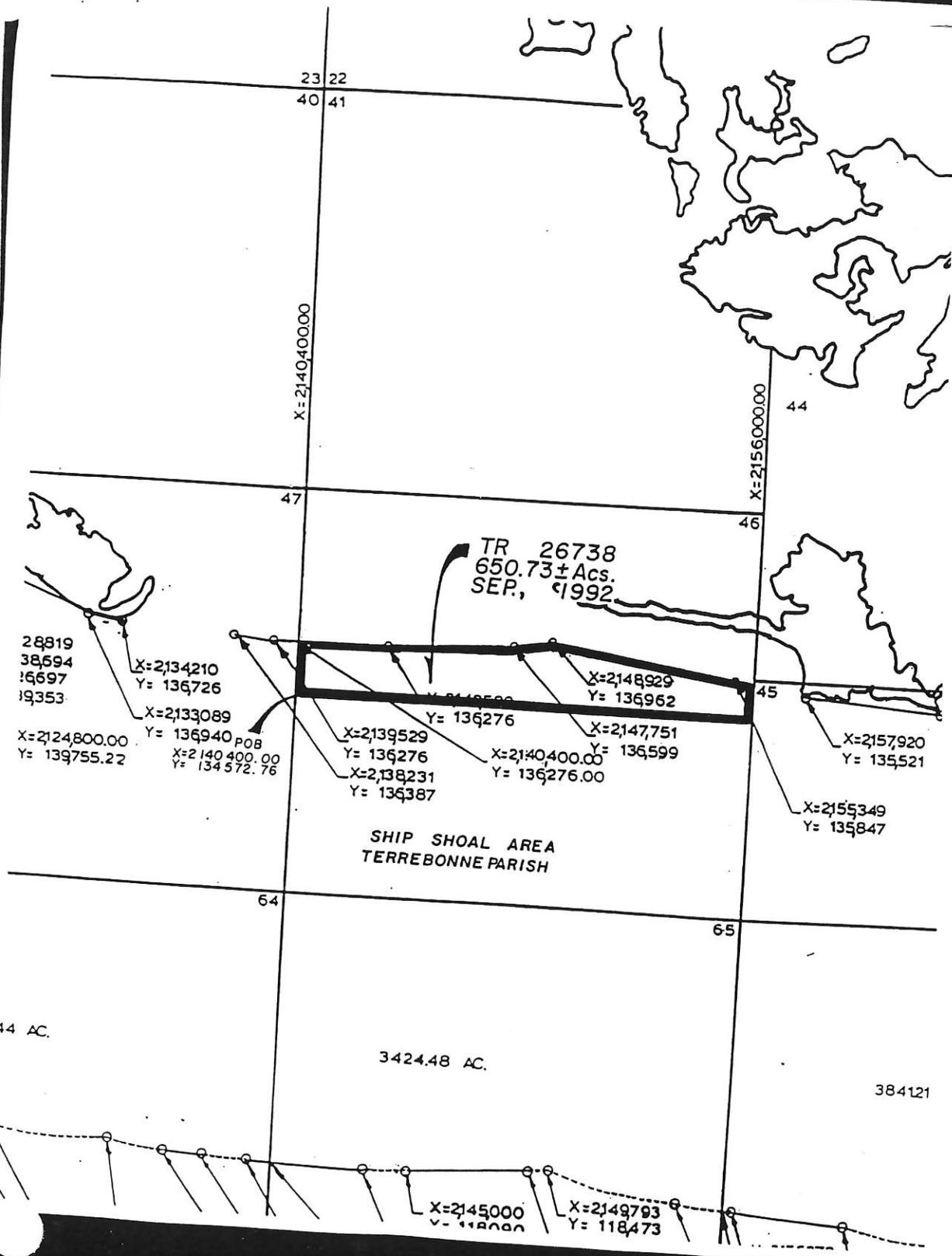
X = 2172700
Y = 117300

EXHIBIT "A"

PORTION OF TRACT NO. 26738, Said Portion being more fully described as follows:
That portion of Tract No. 26738 being more fully described as follows: Beginning at a point within Block 46, Ship Shoal Area, being the Northwest corner of State Lease No. 14311, having Coordinates of X = 2,143,400.00 and Y = 134,572.76; thence North 1,703.24 feet to a point having Coordinates of X = 2,143,400.00 and Y = 136,276.00; thence the following courses: Easterly on a straight line to a point having Coordinates of X = 2,143,589 and Y = 136,276, Northeasterly on a straight line to a point having Coordinates of X = 2,147,751 and Y = 136,599, Northeasterly on a straight line to a point having Coordinates of X = 2,148,929 and Y = 136,962 and Southeasterly on a straight line to a point having Coordinates of X = 2,153,800.00 and Y = 136,116.03; thence South 1,543.27 feet to the Northeast corner of said State Lease No. 14311; thence West 10,400.00 feet on the North line of said State Lease No. 14311 to the point of beginning, containing approximately 465.14 acres, as shown outlined in red on a plat on file in the State Land Office, Division of Administration. All bearings, distances and coordinates are based on Louisiana Coordinate System of 1927 (South Zone).

ENTIRE TRACT NO. 26738 being described as follows:
TRACT 26738- PORTION OF BLOCK 46, SHIP SHOAL AREA, Terrebonne Parish, Louisiana
That portion of Block 46, Ship Shoal Area, Terrebonne Parish, Louisiana, belonging to the State of Louisiana and not under mineral lease on September 9, 1992, described as follows: Beginning at a point on the West line of Block 46, Ship Shoal Area, having Coordinates of X = 2,140,400.00 and Y = 134,572.76; thence North 1,703.24 feet on the West line of said Block 46 to a point on the Coast Line as established by the 1975 Court Decree, having Coordinates of X = 2,140,400.00 and Y = 136,276.00; thence East in a straight line to a point having Coordinates of X = 2,143,589 and Y = 136,276; thence Northeasterly in a straight line to a point having Coordinates of X = 2,147,751 and Y = 136,599; thence Northeasterly in a straight line to a point having Coordinates of X = 2,148,929 and Y = 136,962; thence Southeasterly to a point having Coordinates of X = 2,155,349 and Y = 135,847; thence Southeasterly to a point on the East line of said Block 46 having Coordinates of X = 2,156,000.00 and Y = 135,733.00; thence South 1,160.24 feet on the East line of said Block 46 to a point having Coordinates of X = 2,156,000.00 and Y = 134,572.76; thence West 15,600.00 feet to the point of beginning, containing approximately 650.73 acres, as shown outlined in red on a plat on file in the State Land Office, Division of Administration. All bearings, distances and coordinates are based on Louisiana Coordinate System of 1927 (South Zone).





TR 26738
 650.73 ± Ac.
 SEP, 1992

SHIP SHOAL AREA
 TERREBONNE PARISH

3424.48 AC.

28819
 38694
 16697
 19353

X=2134210
 Y= 136726

X=2133089
 Y= 136940

X=2124800.00
 Y= 139755.22

X=2140400.00
 Y= 134572.76

X=2139529
 Y= 136276
 X=2138231
 Y= 136387

X=2140500
 Y= 136276

X=2140400.00
 Y= 136276.00

X=2148929
 Y= 136962

X=2147751
 Y= 136599

X=2157920
 Y= 135521

X=2155349
 Y= 135847

X=2140400.00

X=2156000.00

23 22
 40 41

47

46

44

45

64

65

14 AC.

384121

X=2145000
 Y= 118000

X=2149793
 Y= 118473

EXHIBIT "A"

PORTION OF TRACT NO. 26739, Said Portion being more fully described as follows:

That portion of Tract No. 26739 being more fully described as follows: Beginning at a point within Block 46, Ship Shoal Area, being the Northwest corner of State Lease No. 14157, having Coordinates of X = 2,152,482.00 and Y = 133,757.99; thence South 3,083.00 feet on the West line of said State Lease No. 14157; thence North 72 degrees 11 minutes, 37 seconds West 9,538.96 feet to a point having Coordinates of X = 2,143,400.00 and Y = 133,592.00; thence North 980.76 feet to the Southwest corner of State Lease No. 14310; thence East 10,400.00 feet on the South line of said State Lease No. 14310 to its Southeast corner having Coordinates of X = 2,153,800.00 and Y = 134,572.76; thence South 814.77 feet to a point on the North line of said State Lease No. 14157; thence West 1,318.00 feet on the North line of said State Lease No. 14157 to the point of beginning, containing approximately 533.22 acres, as shown outlined in red on a plat on file in the State Land Office, Division of Administration. All bearings, distances and coordinates are based on Louisiana Coordinate System of 1927 (South Zone).

ENTIRE TRACT NO. 26739 being described as follows:

TRACT 26739- PORTION OF BLOCK 46, SHIP SHOAL AREA, Terrebonne Parish, Louisiana

That portion of Block 46, Ship Shoal Area, Terrebonne Parish, Louisiana, belonging to the State of Louisiana and not under mineral lease on September 9, 1992, described as follows: Beginning at the Southwest corner of Block 46, Ship Shoal Area, having Coordinates of X = 140,400.00 and Y = 127,591.99; thence North 6,980.77 feet on the West line of said Block to a point having Coordinates of X = 2,140,400.00 and Y = 134,572.76; thence East 15,600.00 feet to a point on the East line of said Block 46; thence South 814.77 feet on the East line of said Block 46 to the Northeast corner of State Lease No. 14157 having Coordinates of X = 2,156,000.00 and Y = 133,757.99; thence West 3,518.00 feet on the North line of said State Lease No. 14157 to its Northwest corner; thence South 6,166.00 feet on the West line of said State Lease No. 14157 to its Southwest corner having Coordinates of X = 2,152,482.00 and Y = 127,591.99; thence West 12,082.00 feet on the South line of said Block 46 to the point of beginning, containing approximately 2,002.02 acres, as shown outlined in red on a plat on file in the State Land Office, Division of Administration. All bearings, distances and coordinates are based on Louisiana Coordinate System of 1927 (South Zone).

23 22
40 41



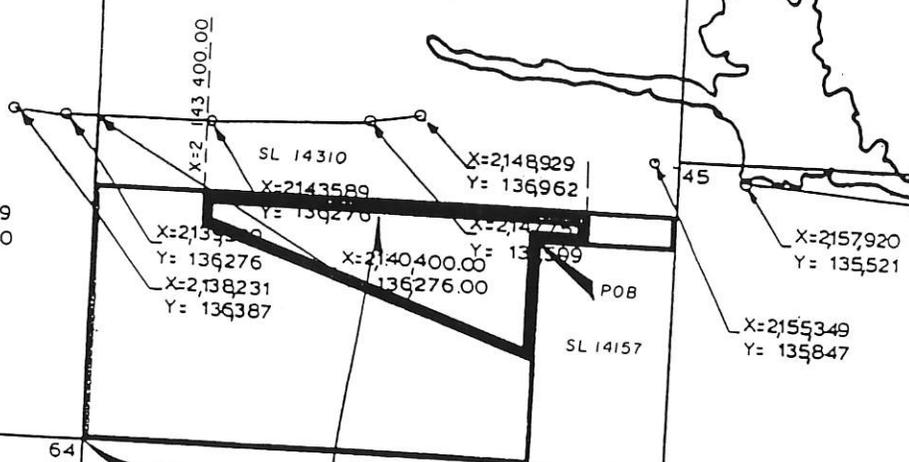
NOTE:
POB SHOWN FOR SL 14311 IS AT
X: 2 152 482.00
Y: 133 757.99

SHIP SHOAL AREA

47 46
TERREBONNE PH.



28819
38694
16697
19353
X=2134210
Y= 136726
X=2133089
Y= 136940
X=2124800.00
Y: 139755.22



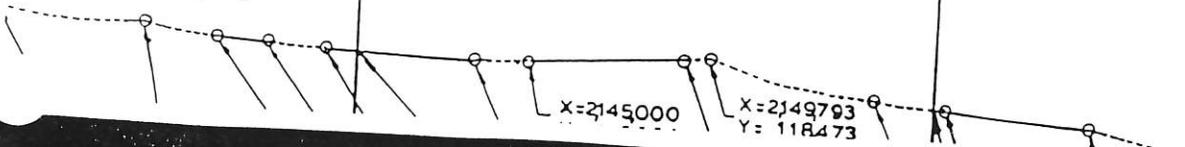
64 POB
X: 2 140 400 00
Y: 127 591 99

SL 14311
PORTION OF
TR 26739
533.22 ± Acs.

3424.48 AC.

14 AC.

38412



X=2145000
X=2149793
Y= 118473

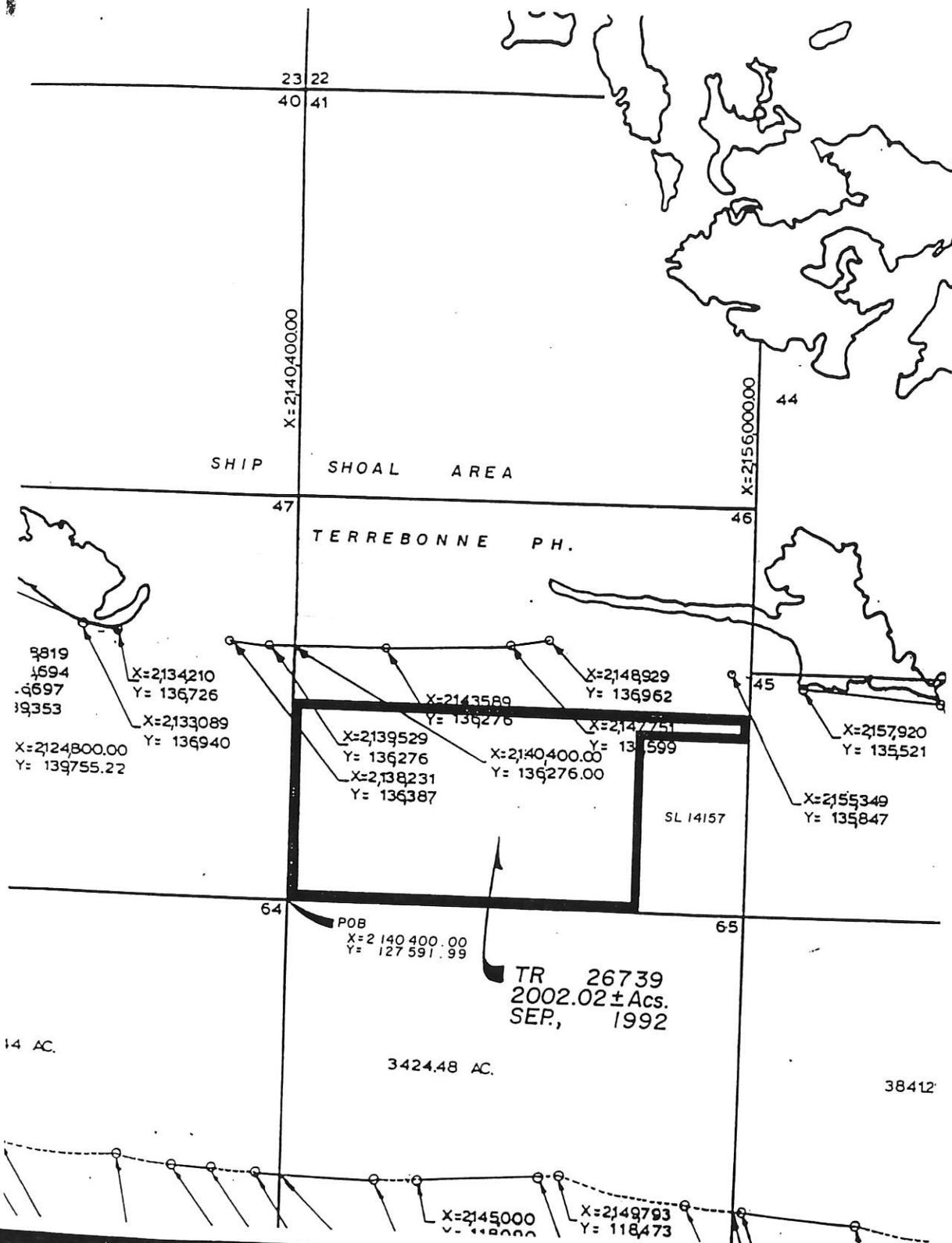


EXHIBIT "A"

PORTION OF TRACT NO. 26765, Said Portion being more fully described as follows:

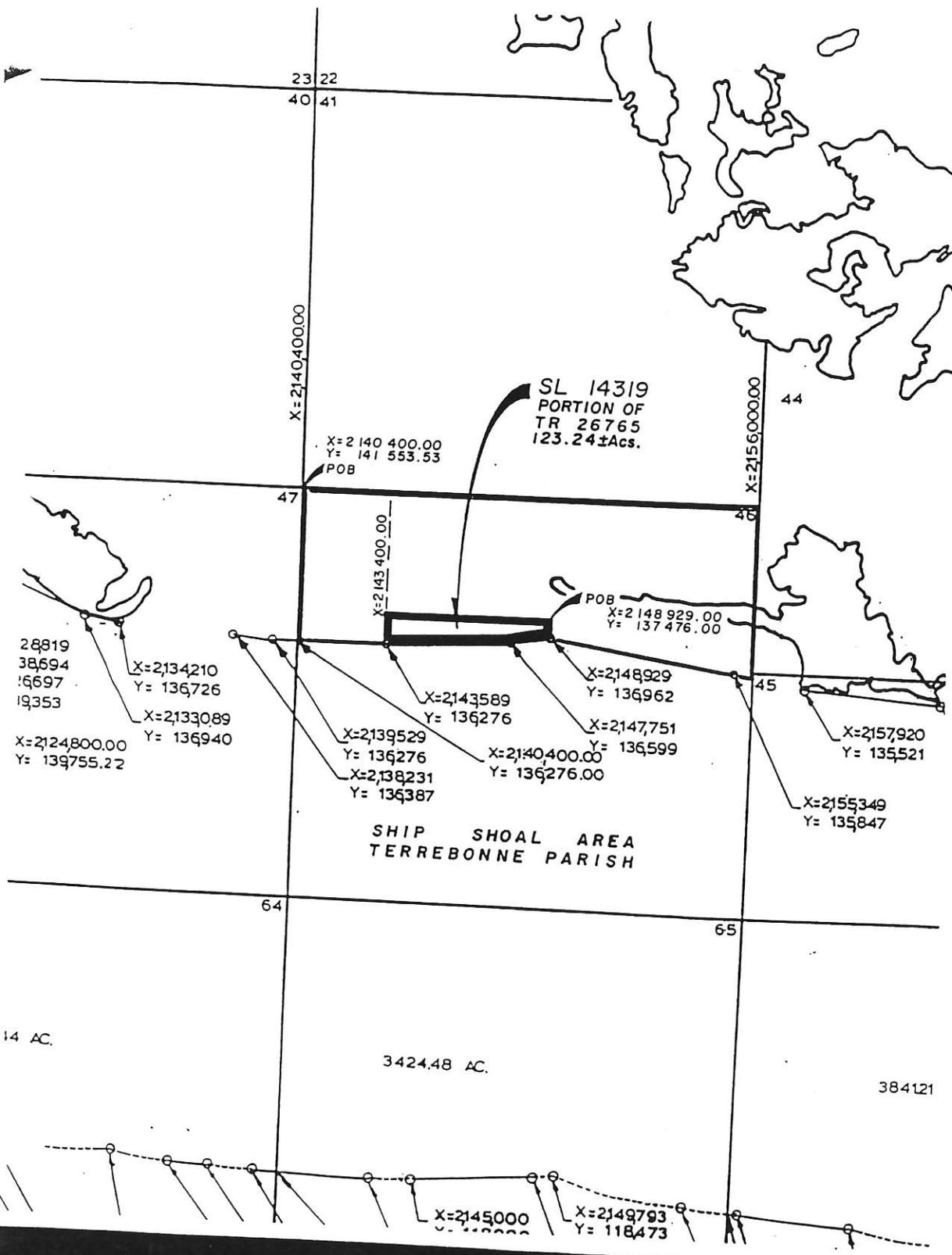
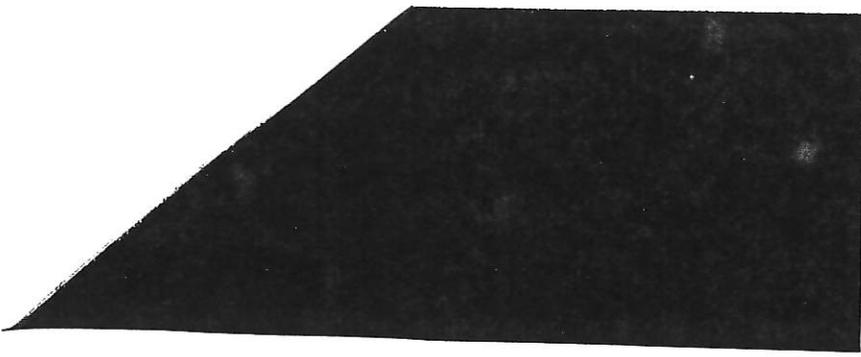
That portion of Tract No. 26765 being more fully described as follows: Beginning at a point within Block 46, Ship Shoal Area, having Coordinates of X = 2,148,929.00 and Y = 137,476.00; thence South 514.00 feet to a point having Coordinates of X = 2,148,929 and Y = 136,962; thence the following courses: Southwesterly on a straight line to a point having Coordinates of X = 2,147,751 and Y = 136,599, Southwesterly on a straight line to a point having Coordinates of X = 2,143,589 and Y = 136,276 and Westerly on a straight line to a point having Coordinates of X = 2,143,400.00 and Y = 136,276.00; thence North 1,200.00 feet; thence East 5,529.00 feet to the point of beginning, containing approximately 123.24 acres, as shown outlined in red on a plat on file in the State Land Office, Division of Administration. All bearings, distances and coordinates are based on Louisiana Coordinate System of 1927 (South Zone).

ENTIRE TRACT NO. 26765 being described as follows:

TRACT 26765- PORTION OF BLOCK 46, SHIP SHOAL AREA, Terrebonne Parish, Louisiana

All of the lands now or formerly constituting the beds and bottoms of all water bodies of every nature and description and all islands and other lands formed by accretion or reliction, except tax lands, belonging to the State of Louisiana and not under mineral lease on September 9, 1992, situated in Terrebonne Parish, Louisiana, and more particularly described as follows: Beginning at the Northwest corner of Block 46, Ship Shoal Area, having Coordinates of X = 2,140,400.00 and Y = 141,553.53; thence East 15,600.00 feet on the North line of said Block 46 to its Northeast corner having Coordinates of X = 2,156,000.00 and Y = 141,553.53; thence South 5,820.53 feet on the East line of said Block 46 to a point having Coordinates of X = 2,156,000.00 and Y = 135,733.00; thence Northwesterly to a point on the Coast Line as established by the 1975 Court Decree having Coordinates of X = 2,155,349 and Y = 135,847; thence Northwesterly to a point having Coordinates of X = 2,148,929 and Y = 136,962; thence Southwesterly in a straight line to a point having Coordinates of X = 2,147,751 and Y = 136,599; thence Southwesterly in a straight line to a point having Coordinates of X = 2,143,589 and Y = 136,276; thence West in a straight line to a point on the West line of said Block 46 having Coordinates of X = 2,140,400.00 and Y = 136,276.00; thence North 5,277.53 feet to the point of beginning, containing approximately 1,794 acres, as shown outlined in red on a plat on file in the State Land Office, Division of Administration. All bearings, distances and coordinates are based on Louisiana Coordinate System of 1927 (South Zone).

NOTE: The above tract is located in an oyster restricted area and all operations in such area must be conducted in strict conformity with the regulations of the Louisiana Wildlife and Fisheries Commission.



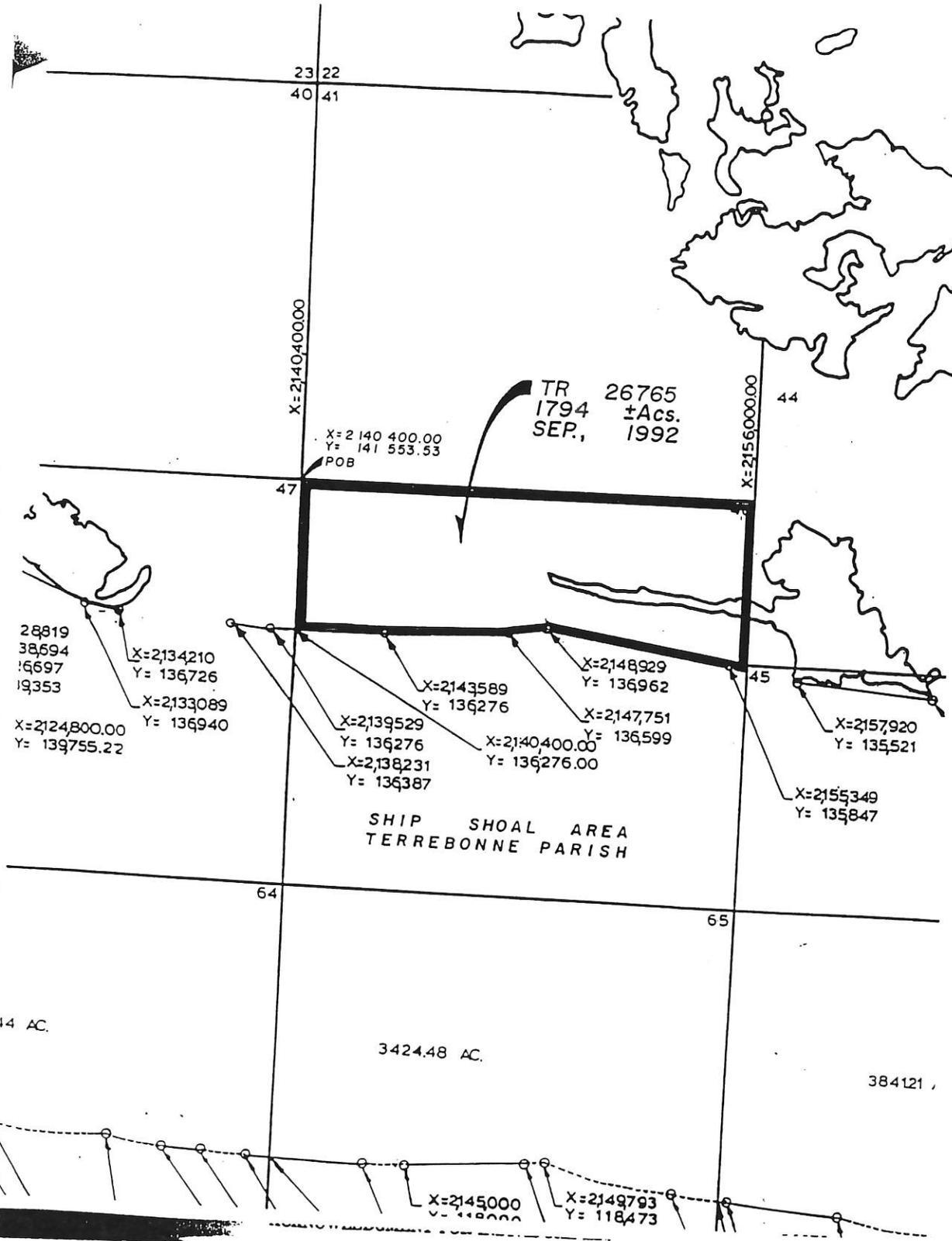
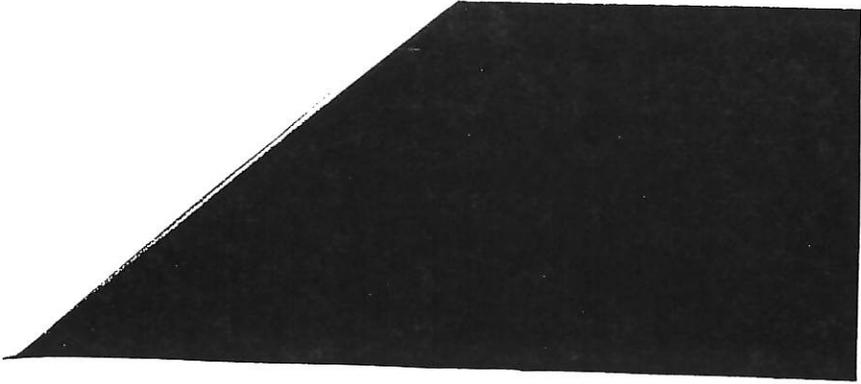


EXHIBIT "A"

PORTION OF TRACT NO. 27166, Said Portion being more fully described as follows:

That portion of Tract No. 27166 being more fully described as follows: Beginning at a point on the South line of Block 46, Ship Shoal Area, being the Southwest corner of State Lease No. 14157, having Coordinates of X = 2,152,482.00 and Y = 127,591.99; thence North 69 degrees 49 minutes 51 seconds West 6,500.01 feet to a point having Coordinates of X = 2,146,380.58 and Y = 129,833.15; thence North 35 degrees 30 minutes 54 seconds East 2,800.01 feet to a point on the Southern boundary of State Lease No. 14311 having Coordinates of X = 2,148,007.15 and Y = 132,112.26; thence South 72 degrees 11 minutes 37 seconds East 4,700.00 feet on the Southern boundary of said State Lease No. 14311 to its Southernmost Southeast corner on the West line of said State Lease No. 14157 having Coordinates of X = 2,152,482.00 and Y = 130,674.99; thence South 3,083.00 feet on the West line of said State Lease No. 14157 to the point of beginning, containing approximately 359.82 acres, as shown outlined in red on a plat on file in the State Land Office, Division of Administration. All bearings, distances and coordinates are based on Louisiana Coordinate System of 1927 (South Zone).

ENTIRE TRACT NO. 27166 being described as follows:

TRACT 27166 - PORTION OF BLOCK 46, SHIP SHOAL AREA, Terrebonne Parish, Louisiana

That portion of Block 46, Ship Shoal Area, Terrebonne Parish, Louisiana, belonging to the State of Louisiana and not under mineral lease on August 11, 1993, described as follows: Beginning at the Southwest corner of Block 46, Ship Shoal Area, having Coordinates of X = 2,140,400.00 and Y = 127,591.99; thence North 8,684.01 feet on the West line of said Block 46 to a point having Coordinates of X = 2,140,400.00 and Y = 136,276.00; thence Easterly to the Northwest corner of State Lease No. 14310 having Coordinates of X = 2,143,400.00 and Y = 136,276.00; thence South 1,703.24 feet on the West line of said State Lease No. 14310 to its Southwest corner also being the Northwest corner of State Lease No. 14311 having Coordinates of X = 2,143,400.00 and Y = 134,572.76; thence on the boundaries of said State Lease No. 14311 the following courses: South 980.76 feet and South 72 degrees 11 minutes 37 seconds East 9,538.96 feet to a point on the West line of State Lease No. 14157 having Coordinates of X = 2,152,482.00 and Y = 130,674.99; thence South 3,083.00 feet on the West line of said State Lease No. 14157 to its Southwest corner having Coordinates of X = 2,152,482.00 and Y = 127,591.99 also being a point on the South line of said Block 46; thence West 12,082.00 feet on the South line of said Block 46 to the point of beginning, containing approximately 1,544.95 acres, as shown outlined in red on a plat on file in the State Land Office, Division of Administration. All bearings, distances and coordinates are based on Louisiana Coordinate System of 1927 (South Zone).

SHIP SHOAL AREA

Shoeline (As per June 1975 Decree)

S. L. 14319

S. L. 14310

S. L. 14311

S. L. 14157

S. L. 14159

BLK. 47

BLK. 46

BLK. 64

BLK. 65

SL 14493
PORTION OF
TR 27166
359.82 ± Acs.

P.O.B.

X=2 140 400.00
Y= 127 591.99

X=2 152 482.00
Y= 127 591.99

P.O.B.

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TERREBONNE PARISH, LOUISIANA

SCALE : 1" = 2000'

SHIP SHOAL AREA

Shoreline (As per June 1975 Decree)

S. L. 14319

S. L. 14310

S. L. 14311

S. L. 14157

S.L. 14159

TR 27166
1544.95 ± Acs.
AUG., 1993

BLK. 47

BLK. 46

BLK. 64

BLK. 65

P.O.B.
X = 2 140 400.00
Y = 127 591.99

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TERREBONNE PARISH, LOUISIANA

SCALE : 1" = 2000'

EXHIBIT "A"

PORTION OF TRACT NO. 27166, Said Portion being more fully described as follows:

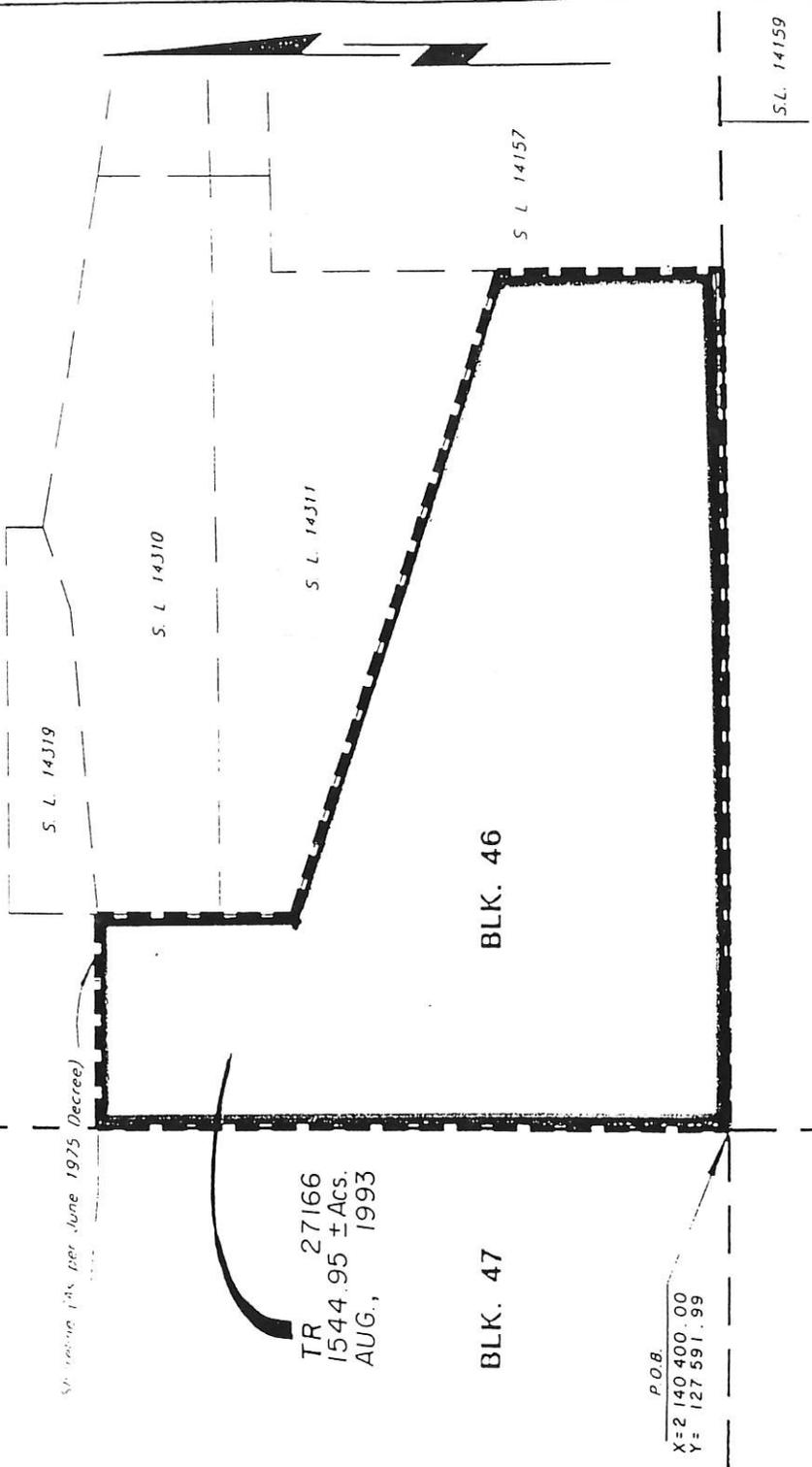
That portion of Tract No. 27166 being more fully described as follows: Beginning at a point within Block 46, Ship Shoal Area, being the Southwest corner of State Lease No. 14310 and the Northwest corner of State Lease No. 14311, having Coordinates of X = 2,143,400.00 and Y = 134,572.76; thence on the boundaries of said State Lease No. 14311 the following courses: South 980.76 feet and South 72 degrees 11 minutes 37 seconds East 2,515.50 feet to a point on its Southern boundary having Coordinates of X = 2,145,795.00 and Y = 132,822.76; thence West 5,395.00 feet to a point on the West line of said Block 46; thence North 1,750.00 feet on the West line of said Block 46 to a point having Coordinates of X = 2,140,400.00 and Y = 134,572.76; thence East 3,000.00 feet to the point of beginning, containing approximately 141.67 acres, as shown outlined in red on a plat on file in the State Land Office, Division of Administration. All bearings, distances and coordinates are based on Louisiana Coordinate System of 1927 (South Zone).

ENTIRE TRACT NO. 27166 being described as follows:

TRACT 27166 - PORTION OF BLOCK 46, SHIP SHOAL AREA, Terrebonne Parish, Louisiana

That portion of Block 46, Ship Shoal Area, Terrebonne Parish, Louisiana, belonging to the State of Louisiana and not under mineral lease on August 11, 1993, described as follows: Beginning at the Southwest corner of Block 46, Ship Shoal Area, having Coordinates of X = 2,140,400.00 and Y = 127,591.99; thence North 8,684.01 feet on the West line of said Block 46 to a point having Coordinates of X = 2,140,400.00 and Y = 136,276.00; thence Easterly to the Northwest corner of State Lease No. 14310 having Coordinates of X = 2,143,400.00 and Y = 136,276.00; thence South 1,703.24 feet on the West line of said State Lease No. 14310 to its Southwest corner also being the Northwest corner of State Lease No. 14311 having Coordinates of X = 2,143,400.00 and Y = 134,572.76; thence on the boundaries of said State Lease No. 14311 the following courses: South 980.76 feet and South 72 degrees 11 minutes 37 seconds East 9,538.96 feet to a point on the West line of State Lease No. 14157 having Coordinates of X = 2,152,482.00 and Y = 130,674.99; thence South 3,083.00 feet on the West line of said State Lease No. 14157 to its Southwest corner having Coordinates of X = 2,152,482.00 and Y = 127,591.99 also being a point on the South line of said Block 46; thence West 12,082.00 feet on the South line of said Block 46 to the point of beginning, containing approximately 1,544.95 acres, as shown outlined in red on a plat on file in the State Land Office, Division of Administration. All bearings, distances and coordinates are based on Louisiana Coordinate System of 1927 (South Zone).

SHIP SHOAL AREA



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TERREBONNE PARISH, LOUISIANA

SHIP SHOAL AREA

Shoreline (As per June 1975 Decree)

S. L. 14319

S. L. 14310

S. L. 14311

S. L. 14157

S. L. 14159

X= 2 143 400.00
Y= 134 572.76

P.O.B.

SL 14494
PORTION OF
TR 27166
141.67 ± Acs.

BLK. 47

BLK. 46

P.O.B.
X= 2 140 400.00
Y= 127 591.99

BLK. 64

BLK. 65

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TERREBONNE PARISH, LOUISIANA

SCALE : 1" = 2000'

EXHIBIT "A"

PORTION OF TRACT NO. 27228, Said Portion being more fully described as follows:

That portion of Tract No. 27228 being more fully described as follows: Beginning at a point having Coordinates of X = 2,196,243.96 and Y = 147,106.74; thence East 4,067.69 feet; thence South 5,512.82 feet to a point having Coordinates of X = 2,200,311.65 and Y = 141,593.92; thence West 4,067.69 feet; thence North 5,512.82 feet to the point of beginning, containing approximately 442 acres, as shown outlined in red on a plat on file in the State Land Office, Division of Administration. All bearings, distances and coordinates are based on Louisiana Coordinate System of 1927 (South Zone).

ENTIRE TRACT NO. 27228 being described as follows:
TRACT 27228 - Terrebonne Parish, Louisiana

All of the lands now or formerly constituting the beds and bottoms of all water bodies of every nature and description and all islands and other lands formed by accretion or reliction, except tax lands, owned by and not under mineral lease from the State of Louisiana on September 8, 1993, situated in Terrebonne Parish, Louisiana, within the following described boundaries: Beginning at a point having Coordinates of X = 2,193,897.71 and Y = 147,706.77; thence East 8,783.63 feet to a point on the West boundary of State Lease No. 188, Lake Pelto Field, as amended, having Coordinates of X = 2,202,681.34 and Y = 147,706.77; thence on the West boundary of said State Lease No. 188 on a curve to the left having a chord of South 34 degrees 08 minutes 30 seconds East 1,256.62 feet and a radius of 13,200.00 feet, to a southern point having Coordinates of X = 2,203,386.61 and Y = 146,666.73; thence North 1,040.00 feet on the Westernmost East boundary of said State Lease No. 188 to a point; thence East 3,880.00 feet to the Westernmost Southwest corner of said State Lease No. 188 having Coordinates of X = 2,207,266.61 and Y = 147,706.73; thence South 6,403.02 feet to a point having Coordinates of X = 2,207,266.61 and Y = 141,303.71; thence Southwesterly on a straight line to a point having Coordinates of X = 2,207,126 and Y = 141,266; thence Southwesterly on a straight line to a point having Coordinates of X = 2,199,017.00 and Y = 138,739.63; thence West 5,119.29 feet; thence North 8,967.14 feet to the point of beginning, containing approximately 1,954 acres, as shown outlined in red on a plat on file in the State Land Office, Division of Administration. All bearings, distances and coordinates are based on Louisiana Coordinate System of 1927 (South Zone).

NOTE: The above tract is located in an oyster restricted area and all operations in such area must be conducted in strict conformity with the stipulations and/or regulations of the Louisiana Department of Wildlife and Fisheries.

SL 188

TERREBONNE PH.

X=2 193 897 71
Y= 147 706 77
POB

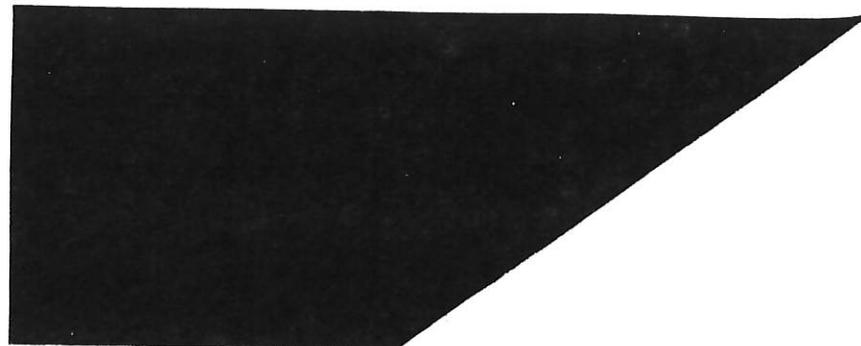
POB X=2 196 243.96
Y= 147 106.74

SL 14524
PORTION OF
TR 27228
442 ± Acs.

OFFICIAL COPY
STATE LAND OFFICE
DO NOT REMOVE

OFFICIAL COPY
STATE LAND OFFICE
DO NOT REMOVE

NO. 14524

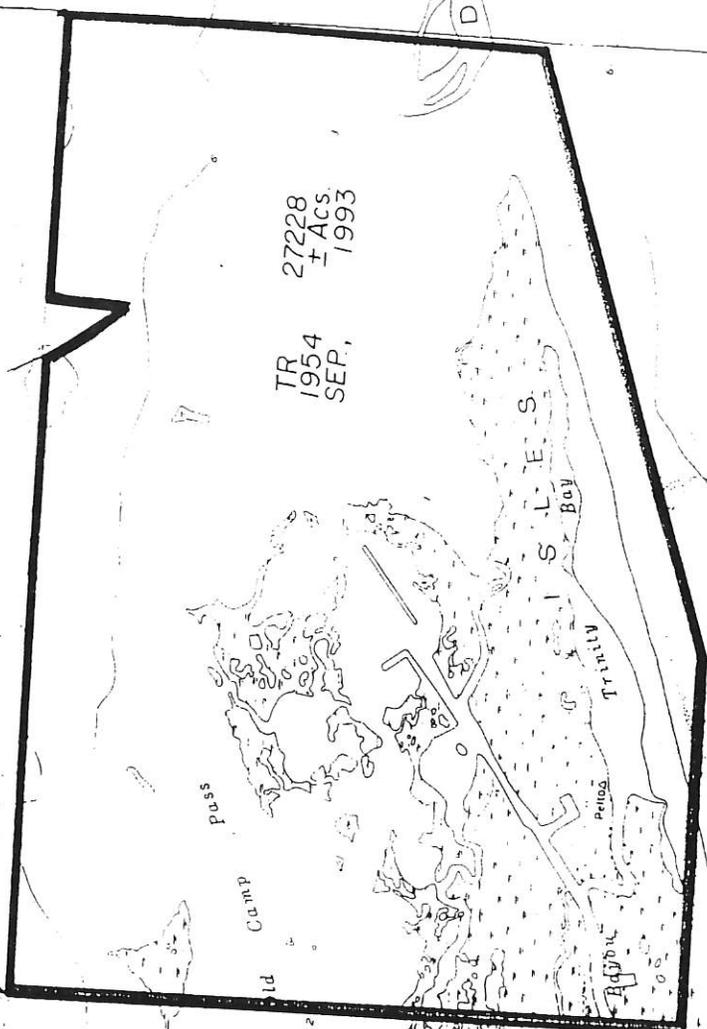


6
TERREBONNE PH.

SL 188

X: 2 193 897 . 71
Y: 147 706 . 77
POB

TR
1954
SEP,
27228
± ACS
1993



OFFICIAL COPY
STATE LAND OFFICE
DO NOT REMOVE

APPENDIX G

T. BAKER SMITH & SON, INC.

Civil Engineers – Land Surveyors
Environmental Services

P. O. Box 2266
Houma, Louisiana 70361

T. BAKER SMITH 1889 - 1962

WM. CLIFFORD SMITH, P.E., P.L.S.
KENNETH WM. SMITH, P.E.
CHARLES M. CAMP, P.L.S.
MARC J. ROGERS, SR., P.E.
EMERY R. CHAUVIN, JR., P.E.
DAVID L. MARTINEZ, P.L.S.
HORACE J. THIBODAUX, R.S., R.E.A., R.E.P., C.E.I.

MAIN OFFICE
550 SOUTH VAN AVE.
HOUMA, LA 70363
TELEPHONE (504) 868-1050
NEW ORLEANS
TELEPHONE (504) 586-8222
FACSIMILE (FAX)
(504) 868-5843
PEGGY D. BOURG, CPS
NOTARY PUBLIC

February 9, 1994

Mr. M. P. Marie
208 Howard Avenue
Houma, LA 70363

Dear Mr. Marie:

Re: L-24467

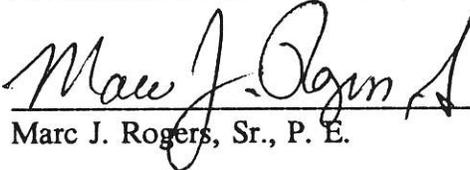
The Environmental Protection Agency (as Federal sponsor) and the La. Dept. of Natural Resources (State sponsor) are proposing a project for barrier islands restoration in Terrebonne Parish. Construction is anticipated to being as early as this summer.

Attached is Exhibit 12 showing the location of the referenced oyster lease in the vicinity of Whiskey Pass. This location was identified in a report to the South Terrebonne Parish Tidewater Management & Conservation District and Terrebonne Parish Consolidated Government prepared by Nicholls State University and La. Marine Consortium. Exhibit 12 also shows the proposed project superimposed on the island and the referenced oyster lease.

According to Louisiana Wildlife & Fisheries records, this lease expired on 1/1/93. We request your confirmation of this expiration date. If the lease has been renewed, please check off the appropriate box, sign, date both copies and return one copy in the enclosed self-addressed, stamped envelope. Retain one copy for your files. If you have any questions concerning this project, please feel free to call.

Sincerely,

T. BAKER SMITH & SON, INC.


Marc J. Rogers, Sr., P. E.

MJR/pdb

Enc.
Cert., return receipt

cc/Mr. Arthur Long, P. E.

Please check off which statement is applicable.

- I confirm that L-24467 has been renewed and I have no objections to the project.
- I confirm that L-24467 has been renewed and I object to the project.
- I confirm that L-24467 has expired. I have no objections to the project.

M. P. Marie
M. P. Marie

2/22/94
Date

Dear Sir:

Please note that this lease was released back to the state. I don't have anything to do with this lease

Thank you
M. P. Marie

T. BAKER SMITH & SON, INC.

Civil Engineers – Land Surveyors

Environmental Services

P. O. Box 2266

Houma, Louisiana 70361

February 9, 1994

T. BAKER SMITH 1889 - 1962

WM. CLIFFORD SMITH, P.E., P.L.S.

KENNETH WM. SMITH, P.E.

CHARLES M. CAMP, P.L.S.

MARC J. ROGERS, SR., P.E.

EMERY R. CHAUVIN, JR., P.E.

DAVID L. MARTINEZ, P.L.S.

HORACE J. THIBODAUX, R.S., R.E.A., R.E.P., C.E.I.

MAIN OFFICE
550 SOUTH VAN AVE.
HOUMA, LA 70363
TELEPHONE (504) 868-1050
NEW ORLEANS
TELEPHONE (504) 586-8222
FACSIMILE (FAX)
(504) 868-5843
PEGGY D. BOURG, CPS
NOTARY PUBLIC

Tideland Seafood Co., Inc.
P. O. Box 99
Houma, LA 70361

Gentlemen:

Re: L-27203, L-27199, L-27202

The Environmental Protection Agency (as Federal sponsor) and the La. Dept. of Natural Resources (State sponsor) are proposing a project for barrier islands restoration in Terrebonne Parish. Construction is anticipated to being as early as this summer.

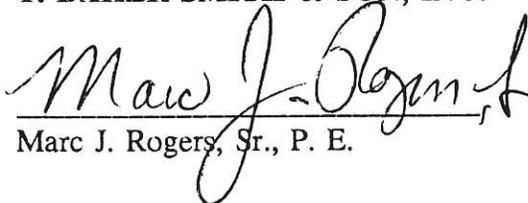
Attached is Exhibit 12 showing the location of the referenced leases in the vicinity of Whiskey Pass. This location was identified in a report to the South Terrebonne Parish Tidewater Management & Conservation District and Terrebonne Parish Consolidated Government prepared by Nicholls State University and La. Marine Consortium. Exhibit 12 also shows the proposed project superimposed on the island and the referenced oyster leases.

Furthermore, Exhibit 12 shows the location of borrow areas from which sand will be dredged and deposited on the island. Although the referenced leases will not be covered by the proposed project, dredging activities will be taking place in the vicinity. All fill deposited on the island will be contained by levees constructed on the island. Turbidity will increase only in the immediate vicinity of the dredge. We request a letter of no objections from you concerning these activities which are expected to begin as early as this summer. Please check the appropriate box indicating your approval or disapproval, sign, date, and return one copy of this letter in the enclosed self-addressed, stamped envelope. Retain one copy for your files.

If you have any questions or need additional information, please feel free to call.

Sincerely,

T. BAKER SMITH & SON, INC.


Marc J. Rogers, Sr., P. E.

MJR/pdb

Enc.

cc/Mr. Arthur Long, P. E.

bi52.let

Please check off which statement is applicable.

I have no objections to the project.

I oppose the project.

TIDELAND SEAFOOD CO., INC.

Justin B. Doherty 2/25/94
Date

Please note that Lease # 27200
is also Tideland Seafood Co's
lease, and may also be affected
by this work.

T. BAKER SMITH & SON, INC.

Civil Engineers – Land Surveyors

Environmental Services

P. O. Box 2266

Houma, Louisiana 70361

T. BAKER SMITH 1889 - 1962

MAIN OFFICE
550 SOUTH VAN AVE.
HOUMA, LA 70363
TELEPHONE (504) 868-1050
NEW ORLEANS
TELEPHONE (504) 586-8222
FACSIMILE (FAX)
(504) 868-5843
PEGGY D. BOURG, CPS
NOTARY PUBLIC

WM. CLIFFORD SMITH, P.E., P.L.S.
KENNETH WM. SMITH, P.E.
CHARLES M. CAMP, P.L.S.
MARC J. ROGERS, SR., P.E.
EMERY R. CHAUVIN, JR., P.E.
DAVID L. MARTINEZ, P.L.S.
HORACE J. THIBODAUX, R.S., R.E.A., R.E.P., C.E.I.

March 4, 1994

Mr. Willard Thibodeaux
206 Suzie Street
Chauvin, LA 70344

Dear Mr. Thibodeaux:

Re: L-27249

The Environmental Protection Agency (as Federal sponsor) and the La. Dept. of Natural Resources (State sponsor) are proposing a project for barrier islands restoration in Terrebonne Parish. Construction is anticipated to being as early as this summer.

Attached is Exhibit 12 showing the location of the referenced lease in the vicinity of Whiskey Pass. This location was identified in a report to the South Terrebonne Parish Tidewater Management & Conservation District and Terrebonne Parish Consolidated Government prepared by Nicholls State University and La. Marine Consortium. Exhibit 12 also shows the proposed project superimposed on the island and the referenced oyster lease.

According to Louisiana Wildlife & Fisheries records, this lease will expire on 1/1/99. If you have no objections to the project, please indicate your approval or disapproval of the project by checking the applicable box, sign, date, and return one copy of this letter in the enclosed self-addressed, stamped envelope. Retain one copy for your files. If you have any questions concerning this project, please feel free to call.

Sincerely,

T. BAKER SMITH & SON, INC.


Marc J. Rogers, Sr., P. E.

MJR/pdb

Enc.

Cert., return receipt

cc/Mr. Arthur Long, P. E.

Please check off which statement is applicable.

() I have no objections to the project.

() I oppose the project.

Willard Thibodeaux St. ~~March~~ 3-7-94
Willard Thibodeaux Date

unless you are willing to
buy my lease.

Willard Thibodeaux St.

No.

27203

OYSTER BEDDING GROUND LEASE

- OF -

TIDELAND SEAFOOD CO., INC.

P O BOX 909

HOUMA, LA 70360

PARISH OF

Terrebonne

RECORDED

LEASE REGISTER

No. 80

Folio 107

this 12 th of April 19 84

Application: EE-985

LEASE OF WATER BOTTOMS FOR OYSTER PURPOSES

STATE OF LOUISIANA, PARISH OF ORLEANS

THE DEPARTMENT OF WILD LIFE AND FISHERIES OF LOUISIANA, through its Secretary hereby leases unto

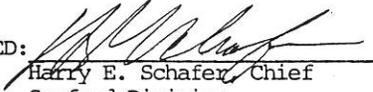
Tideland Seafood Co., Inc. P.O. Box 909

of Houma, Parish of Terrebonne qualified to lease water bottoms for oyster purposes in this State, in accordance with application No. EE-985 registered on the 5th day of December 19 83, the oyster bedding ground surveyed by _____ Surveyor, on the _____ day of _____ 19_____, and the plans of survey filed with this Department on the 12th day of April 19 84, located in the Parish of Terrebonne and described as follows, to-wit:

Thirty-six (36) acres in Lake Pelto

Recorded in C. O. B. 971 entry** Folio 731801
Parish of Terrebonne on the 7th
day of May 19 84.

APPROVED:


Harry E. Schafer, Chief
Seafood Division

This lease is issued in accordance with Act 201 of 1980 which amended and reenacted Section 426 of Title 56 of the Louisiana Revised Statutes relative to the renewal of oyster leases of Louisiana water bottoms. Resurvey and plan are required and will be made subsequent to the beginning date of this renewal lease.

This lease shall begin on the date hereof and shall expire on January 1st, 19 99.

The rent shall be Two and 00/100 Dollars (\$ 2.00) per acre, or any fraction of an acres, per annum. The receipt of the rent paid in advance at the time of the signing of this lease up to the first day of next January to wit: The sum of Seventy-two and 00/100 Dollars (\$ 72.00) is

herewith acknowledged, and annually thereafter the sum of Two and 00/100 Dollars (\$ 2.00) per acre or any fraction of an acre shall be paid in advance, on or before the first day of January in each year until the expiration of this original lease.

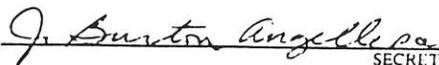
This lease is issued and the water bottoms herein leased shall be held subject to the provisions of R.S. 56:424 through 430, both inclusive, and the rules and regulations of the Department as provided in said Act.

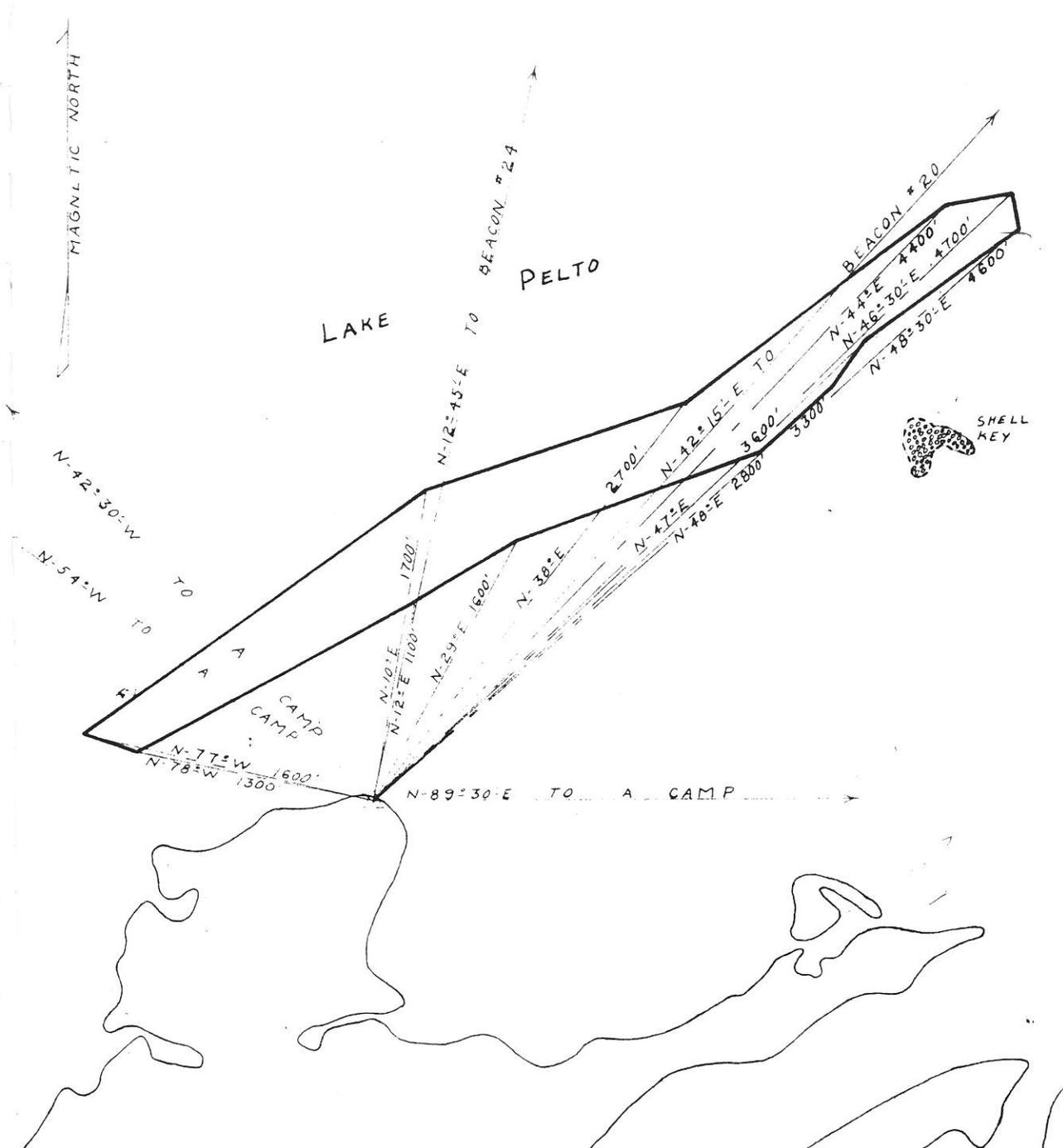
This lease is made and accepted subject to any and all changes in the laws of Louisiana or the regulations of the Department of Wild Life and Fisheries of Louisiana, on the subject of the yearly rental, the time and manner of payment, the notice of rental, delinquency, and the mode and manner of forfeiture hereof: and all such changes shall be held and considered as if written into this lease at the time of its signing.

This lease is also subject to Department policies not stipulated by regulations.

STATE OF LOUISIANA
DEPARTMENT OF WILD LIFE
AND FISHERIES OF LOUISIANA

Thus done and signed in triplicate at
New Orleans, Louisiana, this 12th
day of April 19 84

By: 
SECRETARY



SCALE 1" = 500'

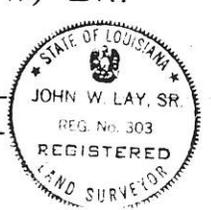
BOOK 90 PAGE 99

I certify that I have surveyed on this day AUG 20 1968, for account of BUQUET GANNING Co. the boundaries and limits of a portion of the bed or bottom of LAKE PELTO for Oyster Bedding purposes, containing - 36 - SUPERFICIAL ACRES, situated

in the parish of TERREBONNE Louisiana, and bounded as shown above.
 P. O. Address Box 909 - HOUMA, LA.

TIDEWATER SEAFOOD CO., INC.

APPL. NO. E-677 E-E-985
 REG. NO. #9170-27203



John W. Lay, Sr.
 Surveyor.

No. 27199

OYSTER BEDDING GROUND LEASE

— OF —

Tideland Seafood Co., Inc.

P.O. Box 909

Houma, LA 70360

PARISH OF

Terrebonne

RECORDED

LEASE REGISTER

No. 80 Folio 103

this 12 th of April 19 84

Application: EE-981

LEASE OF WATER BOTTOMS FOR OYSTER PURPOSES

STATE OF LOUISIANA, PARISH OF ORLEANS

THE DEPARTMENT OF WILD LIFE AND FISHERIES OF LOUISIANA, through its Secretary hereby leases unto

Tideland Seafood Co., Inc.

P.O. Box 909

of Houma, Parish of Terrebonne qualified to lease water bottoms for oyster purposes in this State, in accordance with application No. EE-981 registered on the 5th day of December 19 83, the oyster bedding ground surveyed by _____ Surveyor, on the _____ day of _____ 19 _____, and the plans of survey filed with this Department on the 12th day of April 19 84, located in the Parish of Terrebonne and described as follows, to-wit:

Two (2) acres in Lake Pelto

Recorded in C. O. B. 971 entry # Folio 731799
Parish of Terrebonne on the 7th
day of May 19 84

APPROVED: 
Harry E. Schafer, Chief
Seafood Division

This lease is issued in accordance with Act 201 of 1980 which amended and reenacted Section 426 of Title 56 of the Louisiana Revised Statutes relative to the renewal of oyster leases of Louisiana water bottoms. Resurvey and plan are required and will be made subsequent to the beginning date of this renewal lease.

This lease shall begin on the date hereof and shall expire on January 1st, 19 99.

The rent shall be Two and 00/100 Dollars (\$ 2.00) per acre, or any fraction of an acres, per annum. The receipt of the rent paid in advance at the time of the signing of this lease up to the first day of next January to wit: The sum of Four and 00/100 Dollars (\$ 4.00) is

herewith acknowledged, and annually thereafter the sum of Two and 00/100 Dollars (\$ 2.00) per acre or any fraction of an acre shall be paid in advance, on or before the first day of January in each year until the expiration of this original lease.

This lease is issued and the water bottoms herein leased shall be held subject to the provisions of R.S. 56:424 through 430, both inclusive, and the rules and regulations of the Department as provided in said Act.

This lease is made and accepted subject to any and all changes in the laws of Louisiana or the regulations of the Department of Wild Life and Fisheries of Louisiana, on the subject of the yearly rental, the time and manner of payment, the notice of rental, delinquency, and the mode and manner of forfeiture hereof; and all such changes shall be held and considered as if written into this lease at the time of its signing.

This lease is also subject to Department policies not stipulated by regulations.

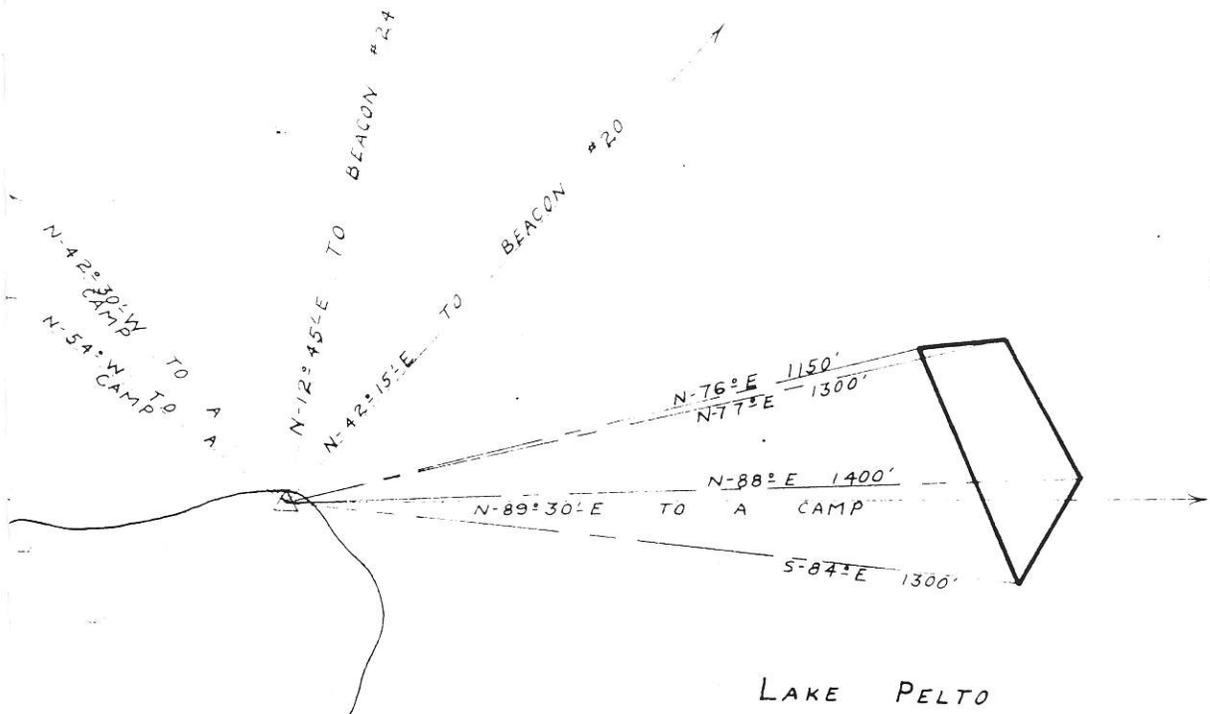
STATE OF LOUISIANA
DEPARTMENT OF WILD LIFE
AND FISHERIES OF LOUISIANA

Thus done and signed in triplicate at

New Orleans, Louisiana, this 12th
day of April 19 84

By: 
SECRETARY

MAGNETIC NORTH



SCALE 1" = 200'

BOOK 90 PAGE 100

I certify that I have surveyed on this day AUG 20 1968, for account of
TIDELAND SEAFOOD CO. INC. the boundaries and limits of a portion of the bed or bottom of
LAKE PELTO for Oyster Bedding purposes, containing **- 2 -** SUPERFICIAL
 ACRES, situated

in parish of **TERREBONNE** Louisiana, and bounded as shown above.
 P. O. Address **Box 909 - Houma, L.A.**

APP'L No E-E-981
 APP'L No. ~~K-60~~
 LEASE No. ~~19126~~
 LEASE No 27199



John W. Lay, Sr.
 Surveyor

No.

27200

OYSTER BEDDING GROUND LEASE

- OF -

TIDELAND SEAFOOD CO., INC.

P O BOX 909

HOUMA, LA 70360

PARISH OF

Terrebonne

RECORDED

LEASE REGISTER

No. 80

Folio 104

this 12 th of April 19 84

Application: EE-982

LEASE OF WATER BOTTOMS FOR OYSTER PURPOSES

STATE OF LOUISIANA, PARISH OF ORLEANS

THE DEPARTMENT OF WILD LIFE AND FISHERIES OF LOUISIANA, through its Secretary hereby leases unto
Tideland Seafood Co., Inc. P.O. Box 909

of Houma, Parish of Terrebonne qualified to lease water bottoms for oyster purposes in this State, in accordance with application No. EE-982 registered on the 5 th day of December 19 83, the oyster bedding ground surveyed by _____ Surveyor, on the _____ day of _____ 19 _____, and the plans of survey filed with this Department on the 12 th day of April 19 84, located in the Parish of Terrebonne and described as follows, to-wit:

Three (3) acres in Lake Pelto

Recorded in C. O. B. 971 entry # Folio 731800
Parish of Terrebonne on the 7th
day of May 19 84

APPROVED: 
Harry E. Schafer, Chief
Seafood Division

This lease is issued in accordance with Act 201 of 1980 which amended and reenacted Section 426 of Title 56 of the Louisiana Revised Statutes relative to the renewal of oyster leases of Louisiana water bottoms. Resurvey and plan are required and will be made subsequent to the beginning date of this renewal lease.

This lease shall begin on the date hereof and shall expire on January 1st, 19 99.

The rent shall be Two and 00/100 Dollars (\$ 2.00) per acre, or any fraction of an acres, per annum. The receipt of the rent paid in advance at the time of the signing of this lease up to the first day of next January to wit: The sum of Six and 00/100 Dollars (\$ 6.00) is

herewith acknowledged, and annually thereafter the sum of Two and 00/100 Dollars (\$ 2.00) per acre or any fraction of an acre shall be paid in advance, on or before the first day of January in each year until the expiration of this original lease.

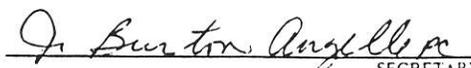
This lease is issued and the water bottoms herein leased shall be held subject to the provisions of R.S. 56:424 through 430, both inclusive, and the rules and regulations of the Department as provided in said Act.

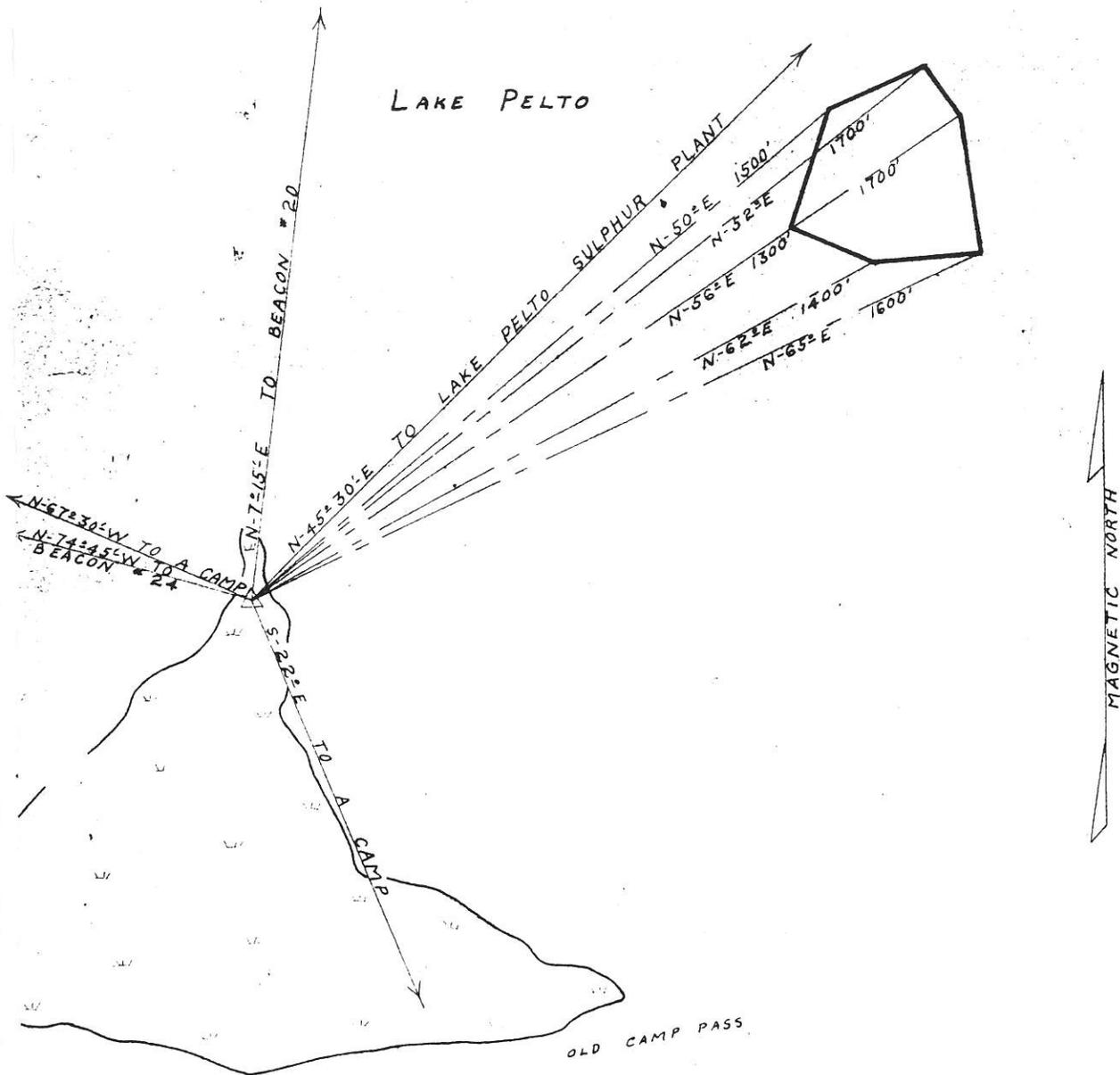
This lease is made and accepted subject to any and all changes in the laws of Louisiana or the regulations of the Department of Wild Life and Fisheries of Louisiana, on the subject of the yearly rental, the time and manner of payment, the notice of rental, delinquency, and the mode and manner of forfeiture hereof: and all such changes shall be held and considered as if written into this lease at the time of its signing.

This lease is also subject to Department policies not stipulated by regulations.

STATE OF LOUISIANA
DEPARTMENT OF WILD LIFE
AND FISHERIES OF LOUISIANA

Thus done and signed in triplicate at
New Orleans, Louisiana, this 12 th
day of April 19 84

By: 
SECRETARY



SCALE 1" = 200'

BOOK 90 PAGE 102

I certify that I have surveyed on this day AUG 20 1968, for account of
TIDELANDS SEAFOOD CO. INC. the boundaries and limits of a portion of the bed or bottom of
LAKE PELTO for Oyster Bedding purposes, containing - 3 - SUPERFICIAL
 ACRES, situated

in parish of TERREBONNE Louisiana, and bounded as shown above.

P. O. Address Box 909 - HOUMA, LA.

APPL No E-E-982

APPL No 75-61

LEASING 79127

DATE 8/27/68



John W. Lay, Sr.
 Surveyor

No. 27249

OYSTER BEDDING GROUND LEASE

- OF -

WILLARD THIBODEAUX

P O BOX 405
CHAUVIN LA 70344

PARISH OF

TERREBONNE

RECORDED

LEASE REGISTER

No. 80 Folio 153

this 23 rd of April 19 84

Application: FF-27

LEASE OF WATER BOTTOMS FOR OYSTER PURPOSES

STATE OF LOUISIANA, PARISH OF ORLEANS

THE DEPARTMENT OF WILD LIFE AND FISHERIES OF LOUISIANA, through its Secretary hereby leases unto

Willard Thibodeaux

P.O. Box 405

of Chauvin, Parish of Terrebonne qualified to lease water bottoms for oyster purposes in this State, in accordance with application No. FF-27 registered on the 12th day of December 19 83, the oyster bedding ground surveyed by _____ Surveyor, on the _____ day of _____ 19_____. and the plans of survey filed with this Department on the 23rd day of April 19 84 located in the Parish of Terrebonne and described as follows, to-wit:

Seven (7) acres in a small bayou East of Whiskey Pass

APPROVED:


Harry E. Schafer, Chief
Seafood Division

Recorded in C. O. B. 972 entry* 732536
Folio 732536
Parish of Terrebonne on the 16th
day of May 19 84

This lease is issued in accordance with Act 201 of 1980 which amended and reenacted Section 426 of Title 56 of the Louisiana Revised Statutes relative to the renewal of oyster leases of Louisiana water bottoms. Resurvey and plan are required and will be made subsequent to the beginning date of this renewal lease.

This lease shall begin on the date hereof and shall expire on January 1st, 19 99.

The rent shall be Two and 00/100 Dollars (\$ 2.00) per acre, or any fraction of an acres, per annum. The receipt of the rent paid in advance at the time of the signing of this lease up to the first day of

next January to wit: The sum of Fourteen and 00/100 Dollars (\$ 14.00) is

herewith acknowledged, and annually thereafter the sum of Two and 00/100 Dollars (\$ 2.00) per acre or any fraction of an acre shall be paid in advance, on or before the first day of January in each year until the expiration of this original lease.

This lease is issued and the water bottoms herein leased shall be held subject to the provisions of R.S. 56:424 through 430, both inclusive, and the rules and regulations of the Department as provided in said Act.

This lease is made and accepted subject to any and all changes in the laws of Louisiana or the regulations of the Department of Wild Life and Fisheries of Louisiana, on the subject of the yearly rental, the time and manner of payment, the notice of rental, delinquency, and the mode and manner of forfeiture hereof; and all such changes shall be held and considered as if written into this lease at the time of its signing.

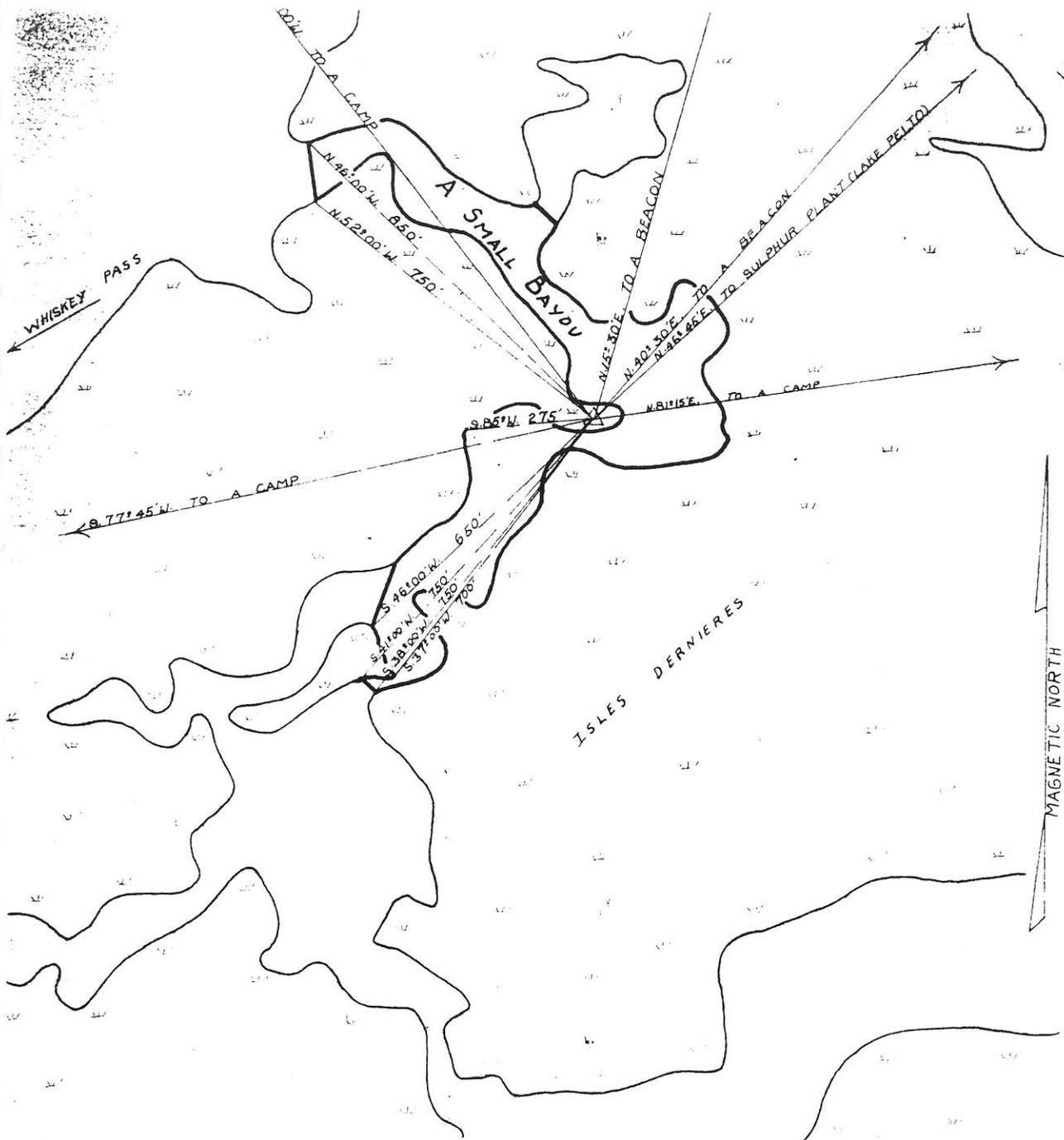
This lease is also subject to Department policies not stipulated by regulations.

STATE OF LOUISIANA
DEPARTMENT OF WILD LIFE
AND FISHERIES OF LOUISIANA

Thus done and signed in triplicate at

New Orleans, Louisiana, this 23rd
day of April 19 84

By: J. Burton Angelle
SECRETARY



SCALE 1" = 200'

BOOK 90 PAGE 64

I certify that I have surveyed on this day AUGUST 5 1968, for account of WILLARD THIBODEAUX the boundaries and limits of a portion of the bed or bottom of A SMALL BAYOU for Oyster Bedding purposes, containing - 7 - SUPERFICIAL ACRES, situated EAST OF WHISKEY PASS

in parish of TERREBONNE Louisiana, and bounded as shown above.

P. O. Address BOX 463 CHAUVIN, LA.

APPL. No F-F-27
 APPL No. ~~7-436~~
 LEASE No. 79114
 LEASE No 27249



John W. Lay, Sr.
 Surveyor.

Cancelled 7-23-85

No. 24467

OYSTER BEDDING GROUND LEASE

—OF—

Mr. M. P. Marie
208 Howard Avenue
Houma, La. 70360

PARISH OF

Terrebonne

RECORDED

LEASE REGISTER

No. 73 Folio 376

this 9th of February 1978

Application U-175

LEASE OF WATER BOTTOMS FOR OYSTER PURPOSES

STATE OF LOUISIANA, PARISH OF ORLEANS

THE WILD LIFE AND FISHERIES COMMISSION OF LOUISIANA, through its Director, hereby leases unto

M. P. Marie 208 Howard Avenue

of Houma, Parish of Terrebonne qualified to lease water

bottoms for oyster purposes in this State, in accordance with application No. U-175 registered on the

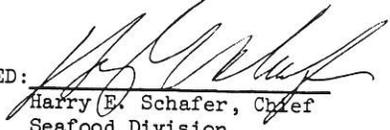
5 th day of September 19 74 the oyster bedding ground surveyed

by John W. Lay, Sr. Surveyor, on the 28 day of July 19 77 and the

plans of survey filed with this Commission on the 31 day of January 19 78 located in the

Parish of Terrebonne and described as follows, to-wit:

Five (5) acres in a Bayou East of Whiskey Pass.

APPROVED: 
Harry E. Schafer, Chief
Seafood Division

This lease shall begin on the date hereof and shall expire on January 1st, 19...93..

The rent shall be.....~~One and no/100~~ Dollars (\$.....~~1.00~~.....) per acre, or any fraction of an acre, per annum. The receipt of the rent paid in advance at the time of the signing of this lease up to the first day of next

January to wit: The sum of.....Five and 00/100 Dollars (\$.....5.00.....) is

herewith acknowledged, and annually thereafter the sum of..... One and no/100 Dollars (\$.....1.00.....) per acre or any fraction of an acre shall be paid in advance, on or before the first day of January in each year until the expiration of this original lease.

This lease is issued and the water bottoms herein leased shall be held subject to the provisions of R.S. 56:424 through 430, both inclusive, and the rules and regulations of the Commission as provided in said Act.

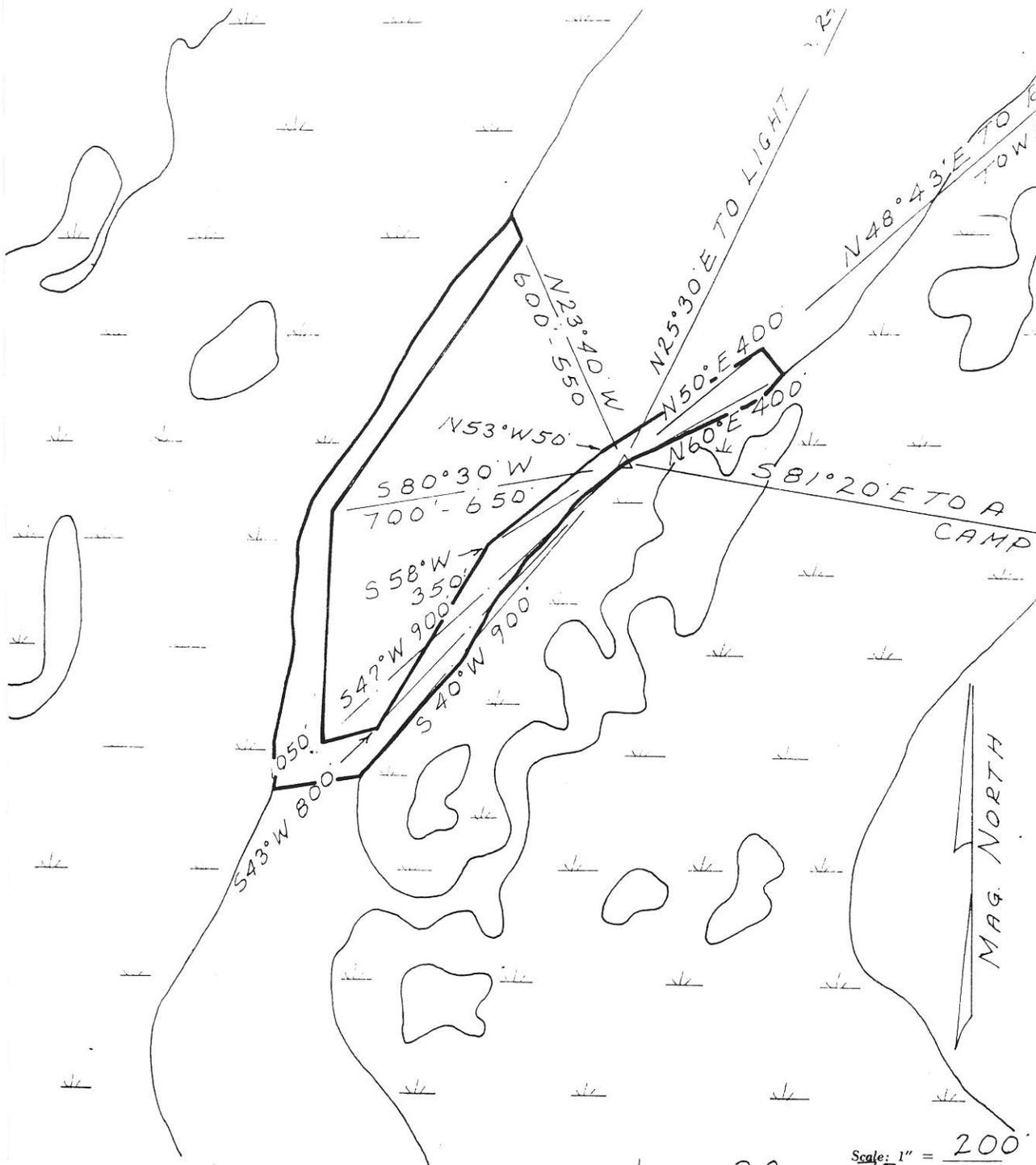
This lease is made and accepted subject to any and all changes in the laws of Louisiana or the regulations of the Wild Life and Fisheries Commission of Louisiana, on the subject of the yearly rental, the time and manner of payment, the notice of rental, delinquency, and the mode and manner of forfeiture hereof; and all such changes shall be held and considered as if written into this lease at the time of its signing.

This lease is also subject to Commission policies not stipulated by regulations.

STATE OF LOUISIANA
WILD LIFE AND FISHERIES COMMISSION OF LOUISIANA

Thus done and signed in triplicate at
New Orleans, Louisiana, this.....9 th...
day of February 19 78

By: 
DIRECTOR



Scale: 1" = 200'

I certify that I surveyed on this day JULY 28, 1977 for account of M. P. MARIE the boundaries and limits of a portion of the bed or bottom of A BAYOU for Oyster Bedding purposes, containing 5 SUPERFICIAL ACRES, situated E. OF WHISKEY PASS in Section T. S., R. E.

in the parish of TERRE BONNE, Louisiana, and bounded as shown above.

P. O. Address 208 HOWARD AVE - HOUMA, LA 70360

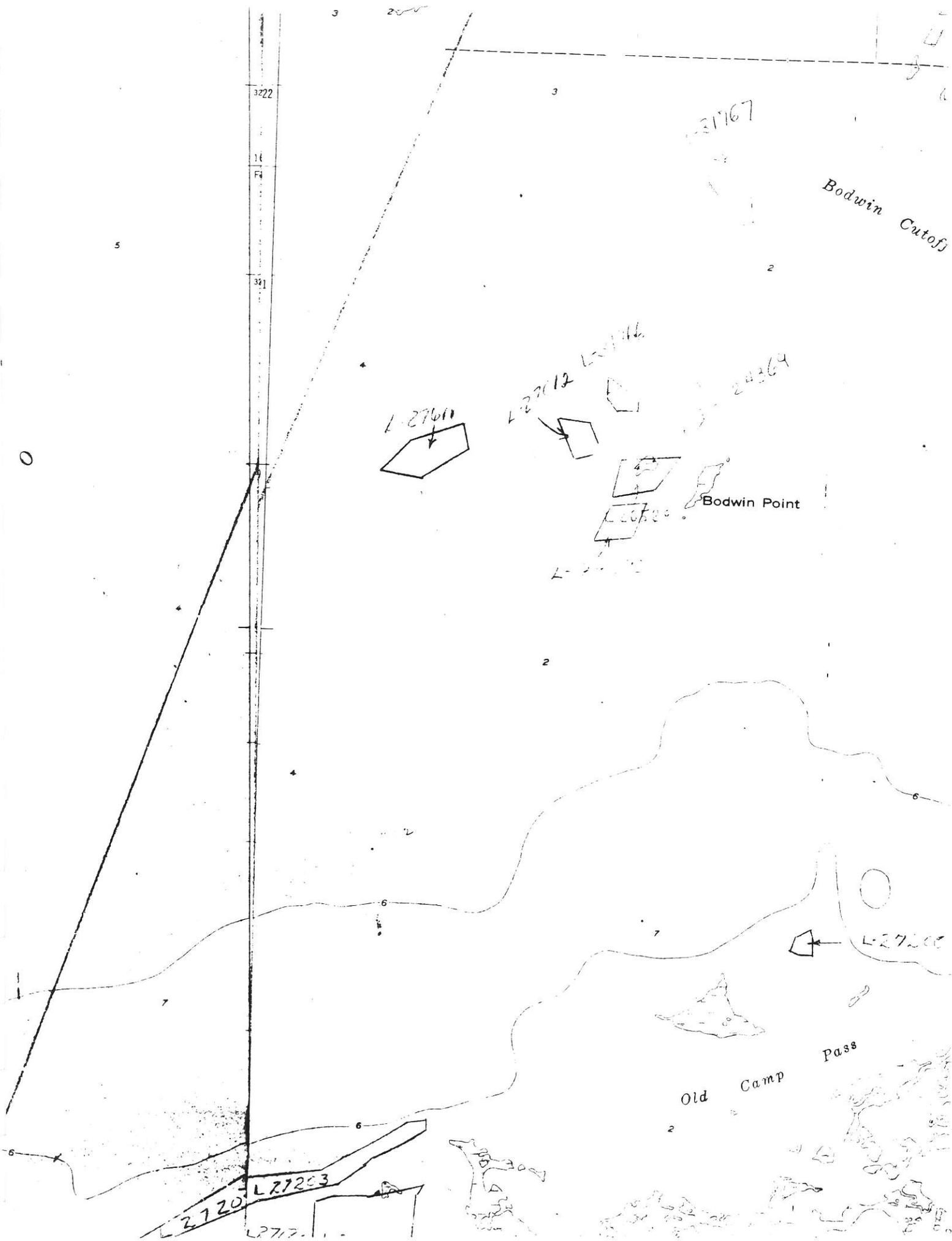
Book 142 Page 94

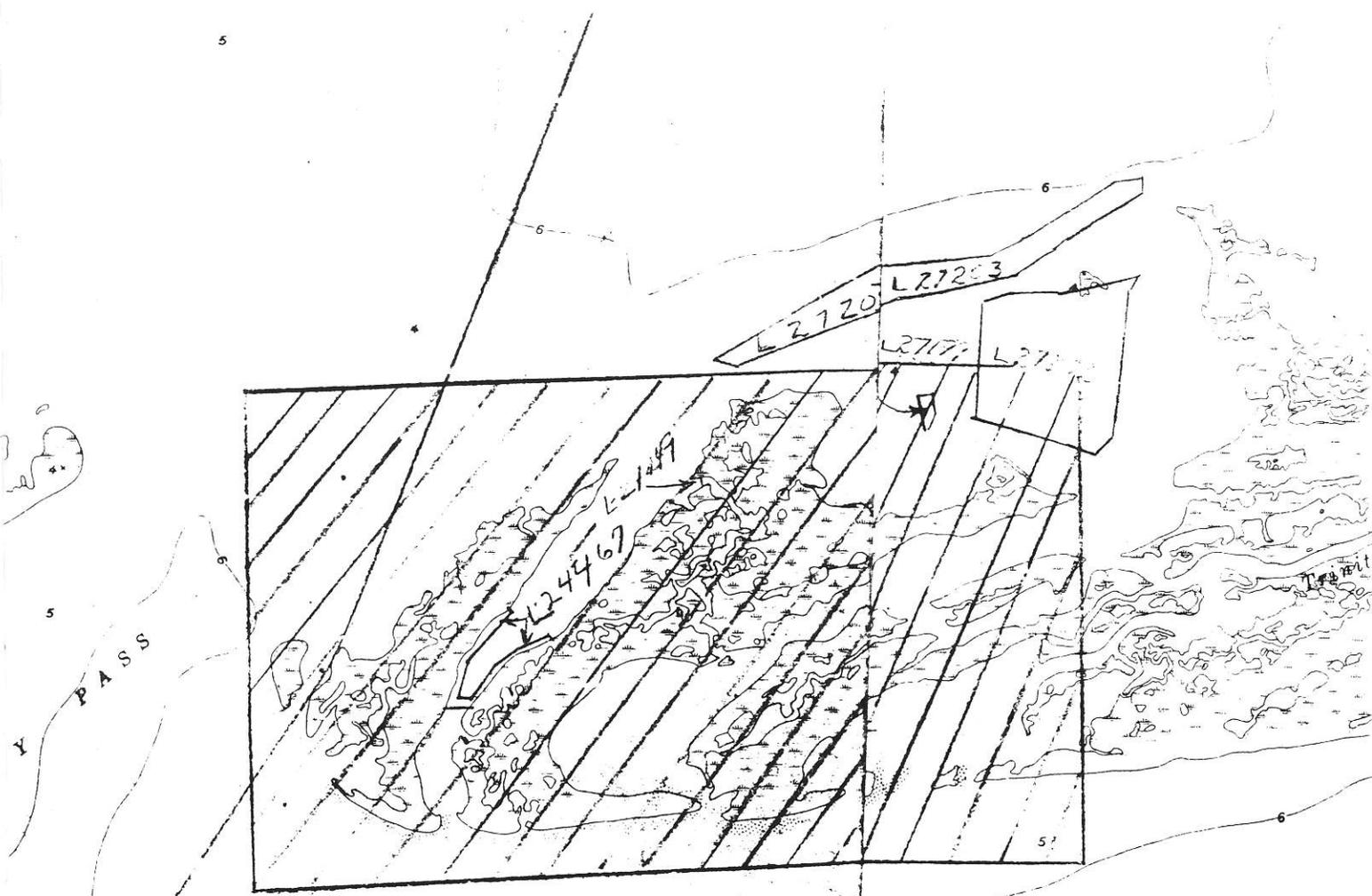
APPL No. U-175

LEASE No. 24467



[Handwritten Signature]
Chief Surveyor





11-17-87
 NO NEW APPLS IN
 THIS AREA

11-17-87
 NO NEW APPLS IN
 THIS AREA

T C O

No. CC-195

APPLICATION FOR SURVEY AND LEASE
LA WILDLIFE & FISHERIES
OYSTER DIVISION

1978 JAN 10 PM 12:37, 19__

LOUISIANA WILD LIFE AND FISHERIES COMMISSION
NEW ORLEANS, LA.

RECEIVED
BY JCB

GENTLEMEN:

The undersigned herewith applies to lease for oyster purposes for a period of Fifteen years from the acceptance of this application and the issuance of the completed lease, rent payable on receipt of the completed lease and thereafter annually in advance on or before the 1st day of January until the termination of the lease 10- acres, more or less

of water bottoms, located in the Parish of TERREBONNE, and more particularly described as follows:

LAKE PELTO - WEST OF WINE ISLAND PASS A COVE ON
THE MOST EASTERLY POINT ON ISLES DERNIERES

A survey fee of \$2000 dollars is paid herewith.

The undersigned prays that this application be registered, that the water bottoms be surveyed by a surveyor to be sent to _____, where he will be received and cared for by the undersigned, and upon completion of said plan of survey, that a lease be issued to petitioner, which lease, issued by the Louisiana Wild Life and Fisheries Commission, will be considered as an acceptance of this application and a completion and execution of the contract of lease.

This application is made and the lease is to be issued subject to the provisions of Louisiana Revised Statutes of 1950, Title 56, Sections 421-449, and of the rules and regulations of the said Commission, and your applicant hereby agrees to pay your surveyor for his services in connection herewith in accordance with the scale of charges printed on the reverse hereof, and also his expenses as hereinabove mentioned.

The undersigned certifies that _____ is qualified under the law to lease water bottoms for oyster purposes; that _____ has taken cognizance of the conditions printed on the reverse hereof and accepts the same and makes said conditions a part of this application.

Name Charlene O'Neal P. O. Address 4935 GREENFOREST DR
Parish Baton Rouge, La 70814

My residence is located at _____

CONDITIONS

The charges for surveying are as follows:

For ten acres or less.....\$20.00
 For from ten to twenty acres..... 30.00
 For the excess of over twenty acres up to two hundred acres, on the basis of 50¢ per acre
 For the excess of over two hundred acres..... 25¢ per acre

It shall be a condition in the making of this application for survey and lease of oyster bottoms that it shall be the duty of the applicant upon notification received from the surveyor to meet the surveyor at the time and place designated by said surveyor in order that said oyster bottoms shall be surveyed.

SURVEYOR'S CERTIFICATE

I hereby certify that I have complied with the within request and made the survey therein prayed for.

Surveyor, Department of Wild Life and Fisheries

No. CC-195

APPLICATION

FOR

SURVEY AND LEASE

OF

OYSTER BOTTOMS

Name Charles Neal

Address 4935 Greenwood Ave,
Baltimore, Md.

Filed 1/10/78

*Take photo - list of
wine island for a
come on the next
lastly visit in
late Division*

Surveyed _____

NO. P-784

APPLICATION FOR SURVEY AND LEASE

LOUISIANA DEPARTMENT OF WILDLIFE AND FISHERIES
New Orleans, Louisiana

LA OYSTERS SERIES
1982 MAR -9 AM 10:17
RECEIVED BY [Signature]

GENTLEMEN:

The undersigned herewith applies to lease for oyster purposes for a period of Fifteen years from the acceptance of this application and the issuance of the completed lease, rent payable on receipt of the completed lease and thereafter annually in advance on or before the 1st day of January until the termination of the lease 36 acres, more or less of water bottoms, located in the parish of TERREBONNE, and more particularly described as follows:

TWO SMALL BAYS IN ISLE DORVILLE
S. OF OLD CAMP PASS N/W. OF
L-30826

A survey fee of 306⁰⁰ dollars is paid herewith.

The undersigned prays that this application be registered, that the water bottoms be surveyed by a surveyor, and upon completion of said plan of survey, that a lease be issued to petitioner, which lease, issued by the Louisiana Department of Wildlife and Fisheries, will be considered as an acceptance of this application and a completion and execution of the contract of lease.

It shall be a condition in the making of this application for survey and lease of oyster bottoms that it shall be the duty of the applicant upon notification received from the surveyor to meet the surveyor at the time and place designated by said surveyor in order that said oyster bottoms shall be surveyed.

This application is made and the lease is to be issued subject to the provisions of Louisiana Revised Statutes of 1950, Title 56, Sections 421-449, and of the rules and regulations of the said Department, and applicant hereby agrees to pay said Department for services in connection herewith in accordance with the scale of charges printed on the reverse hereof, and all expenses as hereinabove mentioned.

The undersigned certifies that _____ is qualified under the law to lease water bottoms for oyster purposes; that _____ has taken cognizance of the conditions printed on the reverse hereof and accepts the same and makes said conditions a part of this application.

Name Lloyd J. Poire Telephone No. 872-2769
P.O. Address 35 1/6 East Park Ave City Houma La.

CONDITIC

The charges for surveying are as follows:

Survey application fees for new leases:

Acres		Dollars
10	or less	\$200.00
11-20	---	\$250.00
21-200	---	\$3.50 additional for each acre after 20
201-1000	---	\$2.00 additional for each acre after 200

An additional survey fee of \$10.00 for each shot-point in excess of 6, excluding shore shots, will be paid prior to approval of any lease.

Survey application fees on leases expiring by 15-year limitation:

Acres		Dollars
10	or less	\$150.00
11-20	---	\$250.00
21-200	---	\$2.50 additional for each acre over 20
201-1000	---	\$1.50 additional for each acre over 200

An additional survey fee of \$10.00 for each shot-point in excess of 6, excluding shore shots.

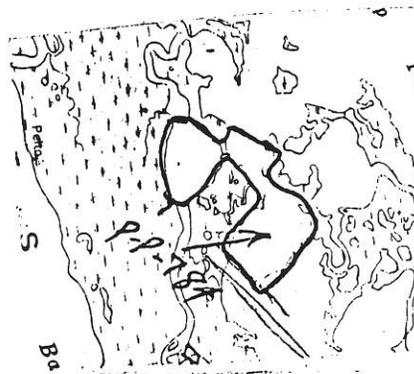
Survey application fees for RESTAKES of one's own lease:
\$25.00 PER SHOTPOINT

Survey application fees for RESTAKES of someone else's lease:
\$90.00 FOR THE FIRST TWO SHOTPOINTS
\$50.00 FOR EACH ADDITIONAL POINT THEREAFTER

SURVEYOR'S CERTIFICATE

I hereby certify that I have complied with the within request and made the survey therein prayed for.

 Surveyor



APPLICATION
FOR
SURVEY AND LEASE
OF
OYSTER BOTTOMS

Name loyd T. Price
 Address 3516 East Park Ave
Houma, La
 Filed 3-9-92
Two small bays in Isle
Derneres S. of Old
Camp Parris N.W. of
L-30826

Surveyed _____

NO. P-P-928

APPLICATION FOR SURVEY AND LEASE

LOUISIANA DEPARTMENT OF WILDLIFE AND FISHERIES

New Orleans, Louisiana

1982 JUL 27 PM 1:57
BY: G.L.G.

GENTLEMEN:

The undersigned herewith applies to lease for oyster purposes for a period of Fifteen years from the acceptance of this application and the issuance of the completed lease, rent payable on receipt of the completed lease and thereafter annually in advance on or before the 1st day of January until the termination of the lease 22 acres, more or less of water bottoms, located in the parish of TERREBONNE, and more particularly described as follows:

IN A SMALL BAY SOUTH OF OLD CAMP PASS,
NORTH OF TRINITY BAY APPL. PP-784

A survey fee of \$257.00 dollars is paid herewith.

The undersigned prays that this application be registered, that the water bottoms be surveyed by a surveyor, and upon completion of said plan of survey, that a lease be issued to petitioner, which lease, issued by the Louisiana Department of Wildlife and Fisheries, will be considered as an acceptance of this application and a completion and execution of the contract of lease.

It shall be a condition in the making of this application for survey and lease of oyster bottoms that it shall be the duty of the applicant upon notification received from the surveyor to meet the surveyor at the time and place designated by said surveyor in order that said oyster bottoms shall be surveyed.

This application is made and the lease is to be issued subject to the provisions of Louisiana Revised Statutes of 1950, Title 56, Sections 421-449, and of the rules and regulations of the said Department, and applicant hereby agrees to pay said Department for services in connection herewith in accordance with the scale of charges printed on the reverse hereof, and all expenses as hereinabove mentioned.

The undersigned certifies that _____ is qualified under the law to lease water bottoms for oyster purposes; that _____ has taken cognizance of the conditions printed on the reverse hereof and accepts the same and makes said conditions a part of this application.

Name Harold J Price Telephone No. 504-594-5531
P.O. Address 328 Lower County Dr City Bonny, La 70343

//

CONDITIO

The charges for surveying are as follows:

Survey application fees for new leases:

Acres		Dollars
10	or less	\$200.00
11-20	---	\$250.00
21-200	---	\$3.50 additional for each acre after 20
201-1000	---	\$2.00 additional for each acre after 200

An additional survey fee of \$10.00 for each shot-point in excess of 6, excluding shore shots, will be paid prior to approval of any lease.

Survey application fees on leases expiring by 15-year limitation:

Acres		Dollars
10	or less	\$150.00
11-20	---	\$250.00
21-200	---	\$2.50 additional for each acre over 20
201-1000	---	\$1.50 additional for each acre over 200

An additional survey fee of \$10.00 for each shot-point in excess of 6, excluding shore shots.

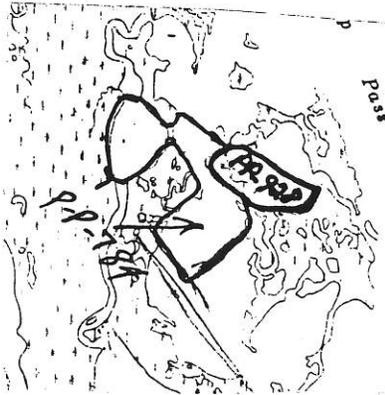
Survey application fees for RESTAKES of one's own lease:
\$25.00 PER SHOTPOINT

Survey application fees for RESTAKES of someone else's lease:
\$90.00 FOR THE FIRST TWO SHOTPOINTS
\$50.00 FOR EACH ADDITIONAL POINT THEREAFTER

SURVEYOR'S CERTIFICATE

I hereby certify that I have complied with the within request and made the survey therein prayed for.

 Surveyor



No. PP-928

APPLICATION
FOR
SURVEY AND LEASE
OF
OYSTER BOTTOMS

Name Harold J. Price
 Address 328 Lower County
Road La. 70342
 Filed 4-27-92
 In a small Bay S.
 Old Camp Pass a N.
 of Trinity Bay +
 Appl PP. 784

Surveyed _____

NO. P-P-185

APPLICATION FOR SURVEY AND LEASE
LOUISIANA DEPARTMENT OF WILDLIFE AND FISHERIES
New Orleans, Louisiana

RECEIVED
NOV 19 1953

GENTLEMEN:

The undersigned herewith applies to lease for oyster purposes for a period of Fifteen years from the acceptance of this application and the issuance of the completed lease, rent payable on receipt of the completed lease and thereafter annually in advance on or before the 1st day of January until the termination of the lease 25 acres, more or less of water bottoms, located in the parish of TERREBONNE, and more particularly described as follows:

A SMALL BAY ON THE END OF
ISLES DERNIERES SW OF A TEX

A survey fee of 267.50 dollars is paid herewith.

The undersigned prays that this application be registered, that the water bottoms be surveyed by a surveyor, and upon completion of said plan of survey, that a lease be issued to petitioner, which lease, issued by the Louisiana Department of Wildlife and Fisheries, will be considered as an acceptance of this application and a completion and execution of the contract of lease.

It shall be a condition in the making of this application for survey and lease of oyster bottoms that it shall be the duty of the applicant upon notification received from the surveyor to meet the surveyor at the time and place designated by said surveyor in order that said oyster bottoms shall be surveyed.

This application is made and the lease is to be issued subject to the provisions of Louisiana Revised Statutes of 1950, Title 56, Sections 421-449, and of the rules and regulations of the said Department, and applicant hereby agrees to pay said Department for services in connection herewith in accordance with the scale of charges printed on the reverse hereof, and all expenses as hereinabove mentioned.

The undersigned certifies that _____ is qualified under the law to lease water bottoms for oyster purposes; that _____ has taken cognizance of the conditions printed on the reverse hereof and accepts the same and makes said conditions a part of this application.

Name George J. Rice Telephone No. 594-6137
P.O. Address 4691 Bayou St. City Thibodaux, La.

CONDITIO

The charges for surveying are as follows:

Survey application fees for new leases:

Acres		Dollars
10	or less	\$200.00
11-20	---	\$250.00
21-200	---	\$3.50 additional for each acre after 20
201-1000	---	\$2.00 additional for each acre after 200

An additional survey fee of \$10.00 for each shot-point in excess of 6, excluding shore shots, will be paid prior to approval of any lease.

Survey application fees on leases expiring by 15-year limitation:

Acres		Dollars
10	or less	\$150.00
11-20	---	\$250.00
21-200	---	\$2.50 additional for each acre over 20
201-1000	---	\$1.50 additional for each acre over 200

An additional survey fee of \$10.00 for each shot-point in excess of 6, excluding shore shots.

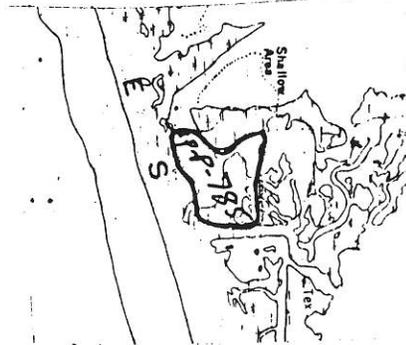
Survey application fees for RESTAKES of one's own lease:
\$25.00 PER SHOTPOINT

Survey application fees for RESTAKES of someone else's lease:
~~\$90.00 FOR THE FIRST TWO SHOTPOINTS~~
\$50.00 FOR EACH ADDITIONAL POINT THEREAFTER

SURVEYOR'S CERTIFICATE

I hereby certify that I have complied with the within request and made the survey therein prayed for.

Surveyor



No. pp-785

APPLICATION
FOR
SURVEY AND LEASE
OF
OYSTER BOTTOMS

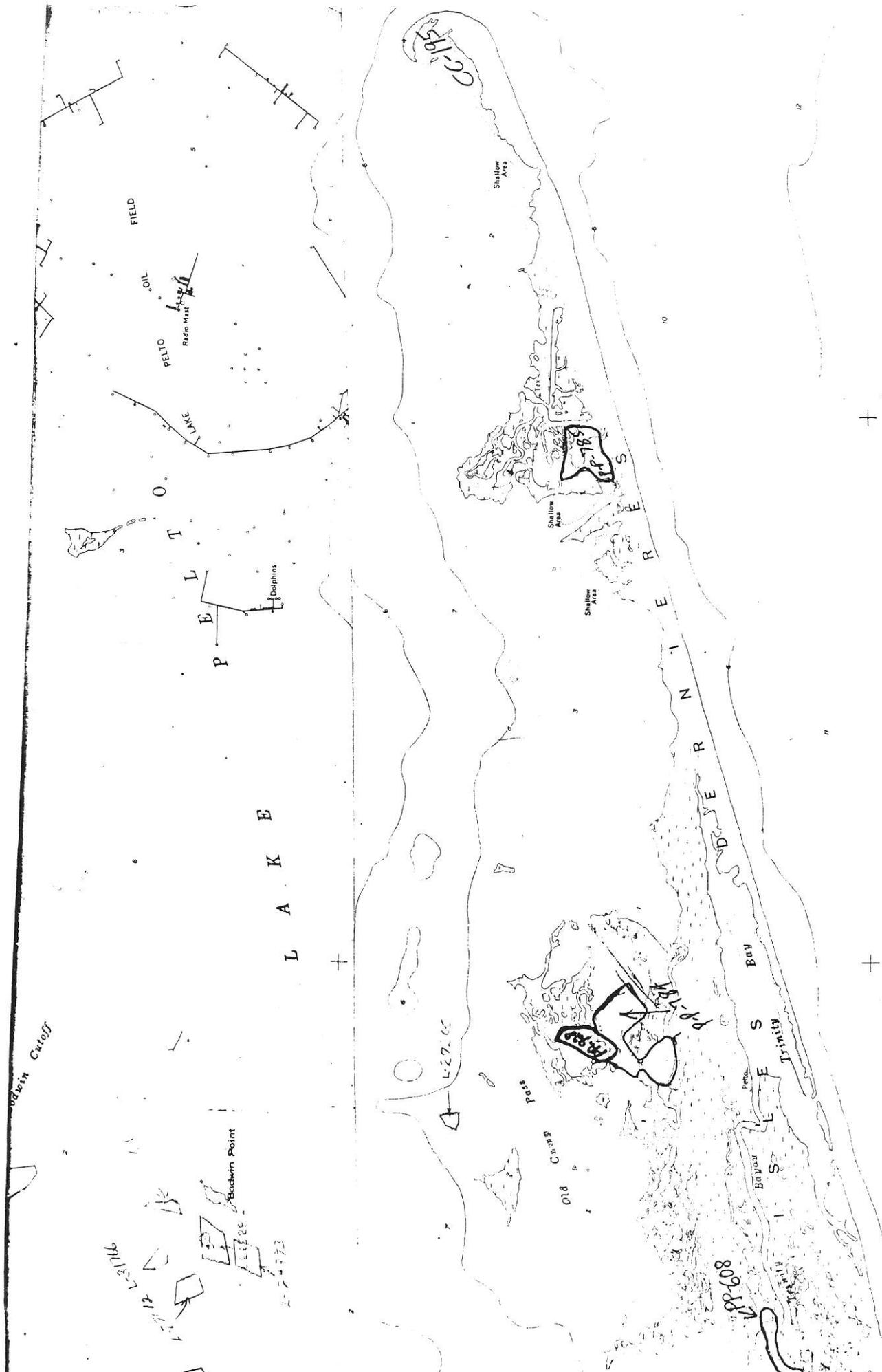
Name George J. Price

Address 4641 Bayou Dr.
Houma, La.

Filed 3-9-92

A small Bay on E. end
of Isles Derniers slw
of D Tex

Surveyed _____



**Potential Impact of Barrier Island
Restoration Activities
on Oyster Leases located near Trinity Island,
Terrebonne Parish**

Presented to:

**South Terrebonne Parish Tidewater
Management and Conservation District
&
Terrebonne Parish Consolidated Government**

Prepared by:

**Earl J. Melancon, Jr., Ph. D.
David L. Schultz, Ph. D.
Department of Biological Sciences
Nicholls State University
&
Denise J. Reed, Ph. D.
Louisiana Universities Marine Consortium**

Contractor:

**Coastal Engineering &
Environmental Consultants, Inc.
Houma, LA**

September 1993

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I. EXECUTIVE SUMMARY

I-1. Introduction

The restoration plan calls for the use of three borrow areas on the north side of Trinity Island for restoration of dune and marsh habitats on the western portion of Trinity Island. There are six oyster leases in the vicinity of the proposed dredging activities (Figure I-1). Lease L-27200 is within 800 feet of the central borrow area while all the others are at least 1,500 feet away. Leases L-24467 and L-27249 are partially located on Trinity Island.

It is well known that predation on oysters by natural enemies in the wild is considered intense in the relatively high salinity waters that generally prevail in this area. Subtidal oysters are the most vulnerable to natural predators. Naturally occurring oyster populations that can survive for an extended period of time are usually confined to intertidal areas. Subtidal areas such as on the six oyster leases in this study are generally used for commercial bedding purposes and for short periods of time. Intertidal areas with oysters are usually of little commercial value. However, intertidal oysters may play a significant role in spawning and the supply of larvae to the water column for distribution throughout the estuary.

This evaluation assumes that dominantly sandy sediments will be dredged from the designated borrow areas using a hydraulic dredge, that the sediments will be transported to the restoration sites by pipe, and that the disposal will take place within confined

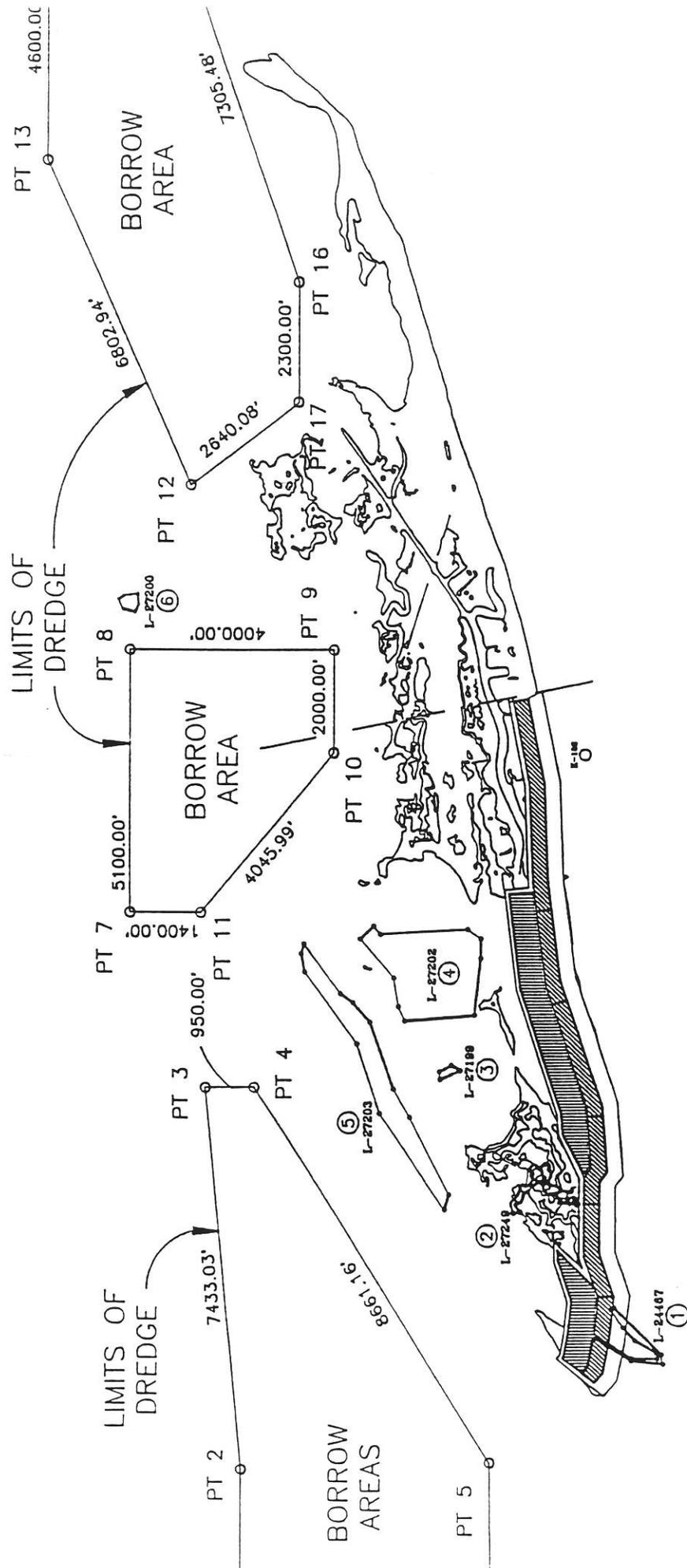


Figure I-1. Location of oyster leases on Trinity Island.

OYSTER LEASE LOCATIONS
TRINITY ISLAND

areas. Any release of sediments into the water column is assumed to take place within the borrow areas, where it is coincident with the dredging operation, and as drainage from the confined beach or marsh disposal areas on Trinity Island. Any dredging activity outside of the borrow areas has not been considered in the evaluation. This evaluation does not consider the potential release of large amounts of suspended sediments from other aspects of the dredge and fill operation, as might be expected if a pipe transporting the sediment were to fracture or break, or if the containment levees for the disposal were to be overtopped or to be breached.

I-2. Summary

L-24467.

This lease had 100% firm sand bottom. No oysters were found in the dredge samples, only 370cc of shell. There was no evidence of this lease being used in recent times for commercial oyster bedding purposes.

This lease is subject to normal nearshore and shoreface sediment transport processes. Part of this lease will be covered by restoration activities and some sand-sized sediment may be deposited on other parts of the lease. However, this will be redistributed by wave activity and normal shoreface processes as a new equilibrium beach form is developed after the restoration project.

This lease is unlikely to be impacted by sediment released by dredging of the borrow areas.

L-27249

This lease is more supportive to the development of intertidal oyster reefs than to be used as an oyster bedding area. No intertidal reefs were observed while looking and standing on the bow of the boat in the main channel inlet on the north side of the island.

This area is unlikely to be impacted by dredging processes from the borrow areas. It is too far from the borrow area for sand sediments to be transported onto the lease by normal wind and weather conditions. The main impact will be from disposal of sediments for beach creation. The southern end of the lease is immediately adjacent to the toe of the confinement levee. This lease will be impacted by the creation of the levee as well as the disposal of sediments. The lease is contained within marsh creeks and channels through which sediment laden water will move. There is some likelihood that fine sediments will be deposited in these channels, the amount diminishing to the northern end of the lease. The impact of dredged material drainage on the lease depends upon the location of the drainage pipes (see Section III).

Any natural intertidal oyster populations that may exist on the lease will be confined to shallow water along the margins of the channels and creeks. If undetected oyster populations exist in the area, they could be damaged by filling operations. However, such oysters are considered to be of limited commercial value.

L-27202

This lease had 11% reef area and 84% firm sand. Live oysters were collected from the dredge samples taken on the lease. The oysters were young and small, which is consistent with high oyster mortalities from natural sources. A total of 6,880cc of shell and oysters were collected, of which 420cc (6%) was live oysters.

The impacts to the lease from sediment suspended on the borrow area will likely be minimal. It is likely that the marsh containment area to the south of the lease will drain into the bay. The fine sediments draining from the containment areas may temporarily be deposited on the southern portion of the lease if wind and wave conditions are calm. However, any fine sediment deposited is unlikely to remain through the first period of active wave conditions.

In the long term this lease will remain as firm sand bottom and therefore dredging will have little effect on any future oyster bedding operations. There was no evidence of this lease being used in recent times for commercial oyster bedding purposes.

L-27203

This lease had 6% reef area and 57% firm sand bottom. Only one small live oyster was collected in three dredge samples. The combined volume of all three dredge samples was 7,280cc, of which 20cc (0.3%) was represented as the live oyster. There was no evidence of this lease being used in recent times for commercial oyster bedding purposes.

The lease is unlikely to be impacted by fine sediments suspended during dredging in the borrow areas. The lease is also too distant for any suspended sand to be transported in from the borrow area. Any fine sediments which are transported from the drainage of any containment area into the vicinity of the lease are unlikely to be deposited because of the high energy conditions in the bay and adjacent Whiskey Pass.

This lease will not be seriously impacted and will remain as firm sand bottom with scattered reef which can be used for oyster bedding purposes.

L-27199

This lease had no reef area and 96% firm sand. Two oyster dredge samples collected nothing, not even old shell fragments. There was no evidence of this lease being used in recent times for commercial oyster bedding purposes.

There may be some temporary impacts from sediment from the marsh containment areas to the southern portion of the lease, if weather conditions are favorable. This will not persist, however, and in the long term the lease will remain firm sand bottom.

This lease will not be seriously impacted and will remain as firm sand bottom which can be used for oyster bedding purposes.

L-27200

This lease had 4% reef area and 91% firm sand. The two oyster dredge samples indicated that live oysters do exist on the lease (7% by volume of shell collected). All oysters, however, were young and of subcommercial size. This is consistent with a high mortality rate from natural sources. There was no evidence of this lease being used in recent times for commercial oyster bedding purposes.

The main impact to this lease could be from fine sediments resuspended during dredging activities from the borrow areas. However, because the lease is in open bay waters and subjected to relatively high energy conditions from wave activity, it is unlikely that such sediment will be deposited. Dredging at the margin of the borrow area may also suspend sandy sediments which could be transported onto the lease. The deposition of any such sediments would not alter the nature of the bottom, which would remain firm sand.

This lease will not be seriously impacted and will remain as firm sand bottom which can be used for oyster bedding purposes.

I-3. Conclusions

In general, restoration activities of Trinity Island will have minimal and short term impact, if any, on the oyster leases located in its vicinity. The leases appear to have not been used for commercial oyster purposes in recent time.

II. BIOLOGICAL CHARACTERIZATION AND EVALUATION OF LEASES

by
Earl J. Melancon, Jr.
David L. Schultz
Department of Biological Sciences
Nicholls State University

II-1. General Background

There are six oyster leases in the vicinity of the proposed dredging activities and restoration plans for Trinity Island (Figure I-1). It is well known that predation, primarily by crabs, parasites and oyster drills (snail), is intense in relatively high salinity waters such as those that generally prevail in this area. Subtidal oysters are the most vulnerable to predators. Naturally occurring oyster populations that survive for an extended period of time are only in intertidal areas.

Subtidal areas on oyster leases such as the six in this study are generally used for commercial bedding purposes for short periods of time. Traditionally, commercial use of such sites involves the planting of oysters for fattening and growth followed by harvest before predation becomes too intense. Any naturally occurring oyster populations on the subtidal areas of reef would be dominated by small young oysters less than 75mm in length and therefore less than one year old.

Intertidal oyster populations along barrier islands and other land masses in these saline waters can be significant. These intertidal oysters are usually of little commercial value because of their shell shape, compactness and difficulty to harvest. However, the spawn

of intertidal oysters may play a significant role in supplying larvae to the water column for distribution to other estuarine areas.

II-2. Assessment Methods

On 15 July 1993, six oyster leases adjacent to Trinity Island were assessed for oyster populations. Permission to sample the leases was obtained by personnel with Coastal Engineering and Environmental Consultants, Inc. (CEEC).

Each lease was surveyed by sounding with a cane pole to determine bottom types. Bottom type was categorized as either soft mud, hard clay or sand, shell in soft sediment, clean oyster reef (consolidated shell and firm with no detection of mud), or buried reef (reef detected with an overlying layer of mud). All soundings were taken by Dr. Melancon while standing on the bow of a 22 foot Boston Whaler that was traveling at a relatively constant speed (Rpm's). All data was recorded by Dr. Schultz. Present on the boat with Melancon and Schultz were Edgar Koike, Ivan Gautreaux, Al Carlos and Terry Bergeron, all employees of CEEC, Inc.

Once the bottom had been sounded and categorized, locations with oysters or shell were staked with cane poles and then sampled by towing a 2 foot wide oyster dredge behind the boat for 2-4 minutes. All material collected in each dredge sample was sacked, labeled, and prepared for transport back to the Nicholls marine laboratory for analysis.

Each dredge sample taken to the marine laboratory was processed in the same way. Each sample was sorted by separating oysters from reef shell. A photograph was taken once the sample had been sorted (see Appendix, Section IV). Oysters were categorized as either live or dead. An oyster was categorized as dead if it gaped. If a gaped shell still contained meat it was noted as a recent death. The length of each live and dead oyster was measured to the nearest millimeter and then summarized in 5mm and 25mm groups for presentation and discussion (Appendix, section IV).

After sorting, photographing and measuring oyster length, separate volumes for oysters and reef shell were measured. Volume was determined as the number of cubic centimeters of water displaced. There were occasions when a living oyster was too small to be removed from the attached reef shell. When that occurred, the oyster was included in the reef shell volume. Volume was not considered to be significantly altered by the action.

The location of each transect and dredge sample was documented by latitude and longitude coordinates using a Loran C unit (Table II-1). Physical and Chemical properties of the water on the day of sampling were taken with a Hydrolab-II sonde unit. (see Appendix).

Table II-1. Location of dredge samples taken from leases near Trinity Island.

Lease number	Sample number	Date	Latitude	Longitude
24467	1	July 15, 1993	29°02.41'N	90°49.91'W
27203	4	July 15, 1993	29°03.42'N	90°44.54'W
27203	5	July 15, 1993	29°03.23'N	90°44.92'W
27203	6	July 15, 1993	29°03.10'N	90°45.38'W
27199	2	July 15, 1993	29°02.91'N	90°44.97'W
27199	3	July 15, 1993	29°02.97'N	90°44.98'W
27202	7	July 15, 1993	29°03.15'N	90°44.63'W
27202	8	July 15, 1993	29°02.99'N	90°44.48'W
27202	9	July 15, 1993	29°02.91'N	90°44.74'W
27200	10	July 15, 1993	29°03.95'N	90°43.34'W
27200	11	July 15, 1993	29°03.96'N	90°43.29'W

III-3. Current Lease Status

Lease 24467

This five acre lease is partially located in the Gulf of Mexico and partially located on the western end of Trinity Island's beach (Figure I-1). The shape of the lease reflects the past history of the island when the lease was located along the banks of a tidal channel. Its present condition is due to island erosion. It is probable that at one time intertidal oyster populations existed along the sides of this lease; they are no longer present.

All of Transsect 1 soundings taken on the eastern leg of the lease as well as those on transect 2 taken on the western leg indicated that the bottom is composed of compact sand. A total of 25 soundings were taken on the lease (Table II-2 and Appendix).

Although no shell was detected by sounding, a sample was taken by towing the oyster dredge for two minutes in a straight line down the eastern leg of the lease. The entire length of the eastern leg was crossed while towing the dredge. The dredge did not pick up any oysters, only a small number of oyster reef shells (see Appendix). At the time the soundings and dredge sample were taken, the wind was from the southeast and waves were 1-3 feet in height. A total volume of 370cc of shell was collected in the dredge. No live or dead oysters were collected.

There was no evidence of any recent (within the last year) commercial use of this lease.

Table II-2. Summary of soundings taken on lease 24467.
July 15, 1993

	Bottom Type					Total
	Clean Reef	Shell Bottom	Hard Bottom	Soft Mud	Buried Reef	
Transect 1	0	0	12	0	0	12
Transect 2	0	0	13	0	0	13
Total	0	0	25	0	0	25
Percent	0	0	100	0	0	100

Lease 27249

This seven acre irregularly-shaped lease is mostly covered by the western end of Trinity Island because of erosion and the natural process of island migration (Figure I-1). Twenty soundings were taken on the lease while moving in a straight line into an inlet on the north side of the island. The soundings did not detect any oysters or shell, only soft mud. No oysters were detected along the shores. Only one small area appeared to have what may have been a small reef at one time, but it was buried in mud and sand. Due to the location of this lease, no dredge sample was taken.

This type of lease is most conducive to having intertidal reef areas because of the adjacent marsh areas. No intertidal reefs were seen while looking from the bow of the boat at the entrance to the inlet.

There was no evidence of any recent commercial use of the lease.

Lease 27202

This relatively large lease is located behind Trinity Island (Figure I-1). Five sounding transects were taken across the lease in an east-west direction. No north-south transects were taken because of approaching storm clouds. A total of 230 soundings were taken with 25 (11%) detecting reef and 193 (84%) detecting hard sand bottom (Table II-3 and Appendix). Most of the reef area detected, 21 of 25 soundings on transect five, was on the north end of the lease near a partially exposed intertidal shell reef. Outside the southwest corner of the lease, near transect 1, was another partially exposed intertidal

Table II-3. Summary of soundings taken on lease 27202.
July 15, 1993

	Bottom Type					Total
	Clean Reef	Shell Bottom	Hard Bottom	Soft Mud	Buried Reef	
Transect 1	3	2	43	0	0	48
Transect 2	1	3	49	0	0	53
Transect 3	0	0	40	0	0	40
Transect 4	0	5	40	0	0	45
Transect 5	21	0	21	2	0	44
Total	25	10	193	2	0	230
Percent	11	4	84	1	0	100

reef. The majority of the interior of the lease had a hard sand bottom with shell occasionally detected.

Three oyster dredge samples, numbered 7, 8, and 9 in Appendix, were taken on the lease. A total of 34 live oysters were collected, 33 of which were from dredge sample number seven taken near the northeast intertidal reef. The single remaining live oyster was collected from dredge sample number nine near the other intertidal reef located just outside the southwest corner. There was a total of 26 dead oysters collected, 12 from dredge sample number seven and 14 from dredge sample number nine. Sample number eight had no live or dead oysters (see Appendix).

A composite of all three dredge samples indicates that all oysters were less than 75mm (3 in.) in length. All oysters had set during the Fall of 1992 or Spring of 1993. One dead oyster had a hole visible on top of the shell, clear evidence of oyster drill predation. Snail predation is often difficult to detect because of its boring activity usually restricted to the lip of the shell. The oysters collected in the dredge were well shaped, indicating a relatively sparse population with little crowding. All three dredge samples contained a combined volume of 6,880cc of shell and oyster, of which 420cc (6.1%) was represented by live oysters.

Although live oysters were found, there was no evidence of any recent commercial use of this lease.

Lease 27203

This a 36 acre long and narroe lease is located in Lake Pelto north of the western end of the island. Three sounding transects were taken the length of the lease. A total of 475 sounding were taken with 27 (6%) detecting hard consolidated reef and 272 (57%) detecting hard sand bottom (Table II-4 and Appendix). Most of the reef area was detected on transect 3 which ran through the middle of the lease.

Three oyster dredge samples, 4, 5 and 6 in Appendix, were spaced across the lease, each in an area where shell and reef had been detected. Only one live oyster was found in dredge sample number four (see Appendix). The one live oyster was less than 75mm in length. All three dredge samples contained a combined volume of 7,280cc of shell and oysters, of which 20cc (0.3%) was represented by the one oyster.

There was no evidence of any recent commercial use of this lease.

Lease 27199

This two acre, relatively small trapezoid-shaped lease, is located directly behind Trinity Island between leases 27203 and 27202 (Figure I-1). Six sounding transects were taken across the lease in a crisscross pattern. A total of 49 soundings were taken with no reef areas detected. Hard sand bottom was detected on 47 (96%) of the soundings (Table II-5 and Appendix).

Table II-4. Summary of soundings taken on lease 27203.
July 15, 1993

	Bottom Type					Total
	Clean Reef	Shell Bottom	Hard Bottom	Soft Mud	Buried Reef	
Transect 1	1	15	80	16	0	112
Transect 2	3	15	70	38	2	128
Transect 3	23	26	122	64	0	235
Total	27	56	272	118	2	475
Percent	6	12	57	25	<1	100

Table II-5. Summary of soundings taken on lease 27199.
July 15, 1993

	Bottom Type					Total
	Clean Reef	Shell Bottom	Hard Bottom	Soft Mud	Buried Reef	
Transect 1	0	0	9	0	0	9
Transect 2	0	1	7	0	0	8
Transect 3	0	1	6	0	0	7
Transect 4	0	0	6	0	0	6
Transect 5	0	0	6	0	0	6
Transect 6	0	0	13	0	0	13
Total	0	2	47	0	0	49
Percent	0	4	96	0	0	100

Two oyster dredge samples were taken, numbers 2 and 3 in Appendix. No live or dead oysters and no shells were collected in the dredge. The dredge was completely empty (see Appendix).

There was no evidence of any recent commercial use of this lease.

Lease 27200

This is a three acre octagon shaped lease in Lake Pelto and the most distant from Trinity Island. It is located between the northern limits of two of the sand borrow pits that will be used to repair the island (Figure I-1). Three transects were taken across the lease for a total of 57 soundings (Table II-6 and Appendix). Transect one was taken in a circular clockwise pattern around the lease whereas transects two and three were taken on diagonals through the lease. Two soundings on transect three detected reef, representing 4% of the total number of soundings. A total of 52 soundings (91%) were of hard sand bottom.

Two oyster samples, represented by dredge samples 10 and 11 in Appendix, were taken by towing in a circular pattern. This lease had the largest number of live oysters collected, 72, when compared to all the other leases in this study. The oysters were well-shaped indicating a relatively sparse population exists on the lease. The oysters were small and not of commercial size (see Appendix). All of the oysters had set in the Fall of 1992 or the Spring of 1993.

Table II-6. Summary of soundings taken on lease 27200.
July 15, 1993

	Bottom Type					Total
	Clean Reef	Shell Bottom	Hard Bottom	Soft Mud	Buried Reef	
Transect 1	0	0	36	1	0	37
Transect 2	0	1	9	0	0	10
Transect 3	2	1	7	0	0	10
Total	2	2	52	1	0	57
Percent	4	4	91	2	0	100

Although live oysters were found, there was no evidence of any recent commercial use of this lease.

II-4. Summary

- L-24467. This lease is all hard sand bottom with no oysters and few shells. There was no evidence of any commercial oyster activity.
- L-27249. This lease had no firm bottom detected in the middle of the inlet. This type of lease is more conducive to intertidal reefs; none were seen. There was no evidence of any commercial oyster activity.
- L-27202. This lease had 11% reef and 84% firm sand bottom. Most subtidal oysters were located in the northeast corner of the lease adjacent to an exposed intertidal reef. All oysters were small. There was no evidence of any commercial oyster activity.
- L-27203. This lease had 6% reef and 59% firm sand bottom. Only one live oyster was found and it was of subcommercial size. There was no evidence of any commercial oyster activity.
- L-27199. This lease had 96% firm sand and no reef bottom. No oyster or shell were found. There was no evidence of any commercial oyster activity.
- L-27200. This lease had 4% reef and 91% firm sand bottom. All oysters were small and of subcommercial size. There was no evidence of any commercial oyster activity.

All six leases were typical of an area where relatively high salinity prevails and where subtidal oyster populations can not survive for any extended length of time. This results in a population dominated by small young oysters (Figure II-2). A total of 856 soundings on all leases combined indicated that 54 (6%) were hard reef and 589 (69%) were firm sand bottom.

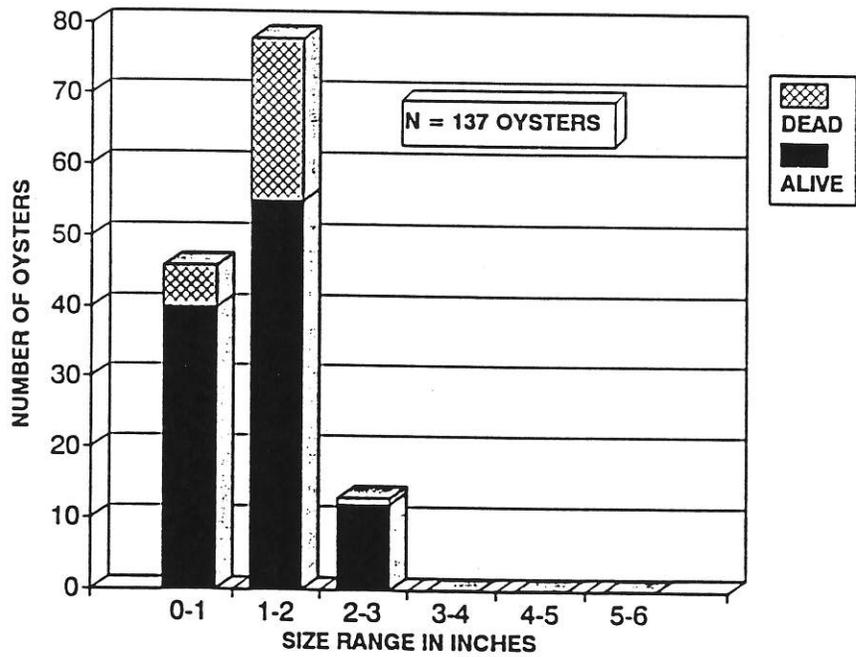


FIGURE II-2. SIZE RANGE OF ALL OYSTERS COLLECTED FROM DREDGE SAMPLES TAKEN FROM ALL LEASES NEAR TRINITY ISLAND.

III. EVALUATION OF SEDIMENT DISPERSAL

by

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III-1. General Background

The restoration plan calls for the use of three borrow areas on the north side of Trinity Island for the restoration of dune and marsh habitats on the western portion of Trinity Island. There are six oyster leases in the vicinity of the proposed dredging activities. Of these L-27200 is within 800 ft. of the central borrow area while all others are at least 1500 ft. from the borrow areas. The locations of the oyster leases and their Louisiana Department of Wildlife and Fisheries designations are shown in Figure I-1.

The information and data used in this evaluation has been provided by Coastal Engineering and Environmental Consultants Inc. and Dr. Earl Melancon, or has been obtained from previously published surveys, assessments and reports of the geology and geomorphology of the Isles Dernieres. Much of the previously published information pre-dates the impact of Hurricane Andrew on the area in August 1992. However, some consideration of any likely changes occurring in the vicinity of the oyster leases and borrow areas as a result of this storm has been made in this evaluation.

III-2. Physical Environment

The borrow areas and all oyster leases except L-24467 are located on the north side of the island in relatively protected waters. The prevailing winds in this area are from the south to south-east. However, the borrow and lease areas will be impacted by wave activity during periods of northerly winds which can be dominant during winter

months, particularly following cold front passage. Such wave activity has been the cause of considerable physical erosion of the marshes on the backside of the islands (Reed, 1991a). Such wave activity can also resuspend fine sediment from the floor of the bays behind Louisiana barrier islands (Reed, 1991b, Murray and Adams, 1991) increasing suspended sediment concentrations in the water column and ultimately redistributing bay floor sediments. Such processes are amplified during the passage of tropical storms or hurricanes. Under hurricane conditions, storm surges can submerge the entire barrier island system, as in Hurricane Andrew, the much of the islands protective role is lost. Mobile sediments, e.g., beach sands, will then be distributed from the islands into the bays behind the islands. Over time the combination of fine sediment resuspension during cold front conditions, and the contribution of coarse sediments during major storms, leads to an increase in sand content of the bay floor sediments immediately behind the islands. In addition, the relatively high energy conditions of the open bay make it unlikely that fine sediments will be deposited in the area. They are more likely to remain in suspension for transport into the more quiescent areas of the back barrier marshes.

Considerable sand deposits have been identified in the Lake Pelto area during surveys of sand resources by Penland et al. (Louisiana Geological Survey). In particular, the area behind Trinity Island is part of an abandoned and submerged beach ridge plain which developed during Holocene delta development in the area. Penland et al. estimate that in areas the sediments are over 75% sand in composition. This supports observations made from soil borings behind the islands as part of a previous Environmental Assessment for the restoration of the Isles Dernieres (Plaisance/Smith Engineers, 1988). This project will utilize these sand deposits as well as those in the flood-tide delta of Whiskey Pass.

The unconfined nature of the tidal and wind-driven currents in the bay to the north of Trinity Island means that their potential for sediment resuspension is minimal. Indeed, under fair weather conditions the shallow waters immediately north of the Isles Dernieres can be relatively clear for south Louisiana, with light penetration up to 3-4 feet. Closer to the tidal inlets, e.g., Whiskey Pass to the west of Trinity Island, the currents will increase and may allow considerable transport of already suspended fine sediments both into and out of the bay through the pass.

III-3. Current Sedimentary Status of the Oyster Leases.

L-24467

This area is characterized by a firm sandy bottom. There are a few oyster shells present. This lease is presently on the Gulf side of Trinity Island. It is subjected to normal nearshore and shoreface sediment transport processes for this area. These include the movement of sand onto or away from the beach depending upon weather conditions.

L-27249

This lease is within channels in the back barrier marshes at the western end of Trinity Island. It is believed to include areas of firm sandy bottom in the base of the channels with softer, fine sediments on the margins of the channels where any oysters are likely to occur.

L-27202

This large reef behind Trinity Island includes some areas of high shell reef which are emergent at low tide. The main area of the lease consists of firm sandy bottom with some shell debris and a few very small oysters. This lease is located behind a part of Trinity Island which suffered severely from the impacts of Hurricane Andrew. Much of the surface sand in this area was likely deposited during the hurricane, although the

beach in this area has been susceptible to overwash during major cold fronts for some years (Dingler et al., 1993).

L-27203

This lease runs sub-parallel to and approximately 300 ft. away from the back of the island. The bed in this area is mostly sand although there are some areas of shell reef and some small oysters. This lease is close to the influence of the tidal inlet Whiskey Pass and is therefore most likely to be impacted by tidal current activity through the pass.

L-27199

This area consists of a firm sand bottom with no evidence of shell debris or live oysters. It is in a similar position with respect to Trinity Island as L-27202 and the accumulation of sand is most likely due to overwash from the beach and dune environments of the main barrier island.

L-27200

This area consists of a firm sandy bottom with some shell debris and a few very small oysters. It is located behind one of the widest parts of Trinity Island and over 4000 ft. from the back barrier marshes. Consequently, it is least likely to be impacted by washover events which redistribute sands from the beach into the bay. However, it is most exposed to open bay conditions, including wave activity which can winnow fines from surface sediments, leaving predominantly sandy sediments. Such wave activity also means it is unlikely that fine sediments from other areas will be deposited in this area.

III-4. Potential Impacts of Dredging and Restoration Activities on Oyster Leases.

This evaluation assumes that dominantly sandy sediments will be dredged from the designated borrow areas using a hydraulic dredge, that the sediments will be transported to the restoration sites by pipe, and that disposal will take place within

confined areas. Any release of sediments into the water column is assumed to take place within the borrow areas, where it is coincident with the dredging operation, and as drainage from the confined beach or marsh disposal areas on Trinity Island. Any dredging activity outside of the borrow areas has not been considered in this evaluation. This evaluation does not consider the potential release of large amounts of suspended sediment from other aspects of the dredge and fill operation, as might be expected if a pipe transporting the sediment were to fracture or break, or if the containment levees for the disposal were to be overtopped or to be breached.

In addition, this evaluation is based upon the status of Trinity Island as of July 1993. Should major storm activity result in any additional breaches through the island or the widespread overwash of the island without breaching, this would alter the patterns of sediment transport and dispersal which are presently assumed to operate in the vicinity of the island. Should any of these, or other unforeseen circumstances, occur it would no longer be appropriate to apply this evaluation to consideration of the impacts of the restoration project on the adjacent oyster leases.

L-24467

This lease is located on the Gulf side of Trinity Island and is unlikely to be impacted by sediment released by dredging of the borrow areas. The restoration plan calls the beach disposal area or the confinement levee for this disposal area to cover the northern end of each of the two 'arms' of the lease. Consequently, a part of the lease will be actually covered in sediment by this restoration activity. The disposal of sediment in the immediate vicinity and over portions of the lease will cause high concentrations of suspended sediment in the overlying waters. Any sand-sized sediment will likely be deposited on the lease. However, this will be redistributed by

wave activity and normal shoreface processes as a new equilibrium beach form is developed after the restoration project.

As a result, there may be little long-term deposition of sand at the southern end of the lease, although some sand sediment will likely accumulate in this area immediately after restoration. It is unlikely that there will be any accumulation of fine sediments (silts and clays) released from the dredge and fill process on this lease because of its location in a high energy part of the barrier island system. Although there will be disruption to the lease, and some of it will be covered permanently, it is expected that much of the lease will remain as firm sandy bottom after the project has been completed.

L-27249

This lease occurs immediately to the north of a confined disposal area for beach creation. It is located at least 300 ft. from the nearest borrow area. This borrow area is that immediately north of Whiskey Pass. It is anticipated that most of the fine sediment suspended by the dredging process in this area will be entrained within currents going through the pass. Consequently, this area is unlikely to be impacted by fine sediment accumulation as a result of the dredging process. It is too far from the borrow area for sandy sediment to be transported onto the lease by normal wind and weather conditions.

The main impact to this lease will be from the disposal of sediments for beach creation. The southern end of the lease is immediately adjacent to the toe of the confinement levee. The lease will be impacted by the creation of this levee as well as the disposal of sediments. The creation of the levee will cause disturbance and resuspension of the sediments in the back barrier marshes in this part of the island. The lease is contained

within marsh creeks and channels through which the sediment laden waters will move. There is some likelihood that fine sediments will be deposited in these channels, especially at the southern end, closest to the disposal area. The amount of sediment deposited will diminish to the northern end of the lease.

The impact of actual disposal upon the lease will depend upon the location of the pipes or structures which will be used to drain the confined disposal cells. It is understood that where possible beach disposal areas will be drained into lower elevation marsh containment areas behind them. However, there are no plans for marsh creation containment areas in this part of the island as the back barrier marshes, within which the lease occurs, are relatively intact. The impact of dredged material drainage on the lease depends upon the location of the drainage pipe. If it is placed to the western end of the containment cell, it may drain into a marsh containment area and away from the lease. If it is placed in the center of the cell, adjacent to the lease it will result in a considerable accumulation of sediment on the lease. The interconnected nature of the channels within this marsh area suggest that if drainage from any disposal areas is into any of these channels, then it is very likely that fine sediments will be deposited over much of the lease area. Again, there will be a gradient in the amount of sediment deposited with the greatest amount being closest to the beach or disposal area.

L-27202

This lease is approximately 800 ft. from the toe of the confinement levee for a marsh creation disposal site and at least 300 ft. from the nearest borrow area. The impacts to this lease from sediment suspended on the borrow area will likely be minimal. Any sand suspended by the dredging process is unlikely to be carried this far. The lease is in open waters at the bay of the island with relatively high wave energy conditions - the present bed is described as firm sand. This level of energy makes it unlikely that fine

sediment will be deposited here, and any sediment which is deposited from dredging is very unlikely to persist in the area after the first wave resuspension event.

It is likely that the marsh containment area to the south of the lease will drain into the bay. The fine sediment draining from the containment area may temporarily be deposited on the southern portion of the lease if wind and wave conditions are calm. However, for the same reasons described above in relation to sediment from the borrow areas, any fine sediment deposited is unlikely to remain through the first period of active wave conditions. It appears that there may be some temporary impacts to the southern portion of the lease, if weather conditions are favorable, but these will not persist and in the long-term the area of the lease will remain as firm sand bottom.

L-27203

This lease is located in open bay waters, approximately 2500 ft. from the nearest disposal area and approximately 2000 ft. from the nearest borrow area. The lease is unlikely to be impacted by fine sediment suspended during dredging in the borrow area. The nearest borrow area is that to the north of Whiskey Pass and any fine sediments will be transported out through the pass or landward into the bay, depending upon the tide and wind-driven current through the pass. The lease is too distant for any suspended sand to be transported in from the borrow area. Although the eastern end of the lease is within 2500 ft. of the central borrow area, it is unlikely to be impacted by sediment suspended from this area because of distance and high energy conditions.

The western end of the lease is within 2500 ft. of the westernmost containment area for marsh creation. Any fine sediments which are transported from the drainage of this containment area into the vicinity of the lease are unlikely to be deposited because of

high energy conditions in the bay and adjacent to Whiskey Pass. In particular, on ebb tides this sediment will be transported out of the bay through the pass. On flood tides it will be transported into the bay and over the area of the lease but it is unlikely to be deposited in this area. The lease is presently described as having a firm sandy bottom, indicating that it is not presently an area of fine sediment accumulation. There is no reason to think that fine sediments would begin to accumulate here, even if suspended sediment concentrations were temporarily increased by restoration activities.

L-27199

This small lease is located west of L-27202. It has similar characteristics to the larger lease and is similar distances from both dredging and disposal activities. Consequently, the impacts to this lease from sediment suspended on the borrow area will likely be minimal for similar reasons to those given for L-27202. There may be some temporary impacts from sediment from the marsh containment areas to the southern portion of the lease, if weather conditions are favorable, but these will not persist and in the long-term the area of the lease will remain as firm sand bottom.

L-27200

This lease is located approximately 600 ft. from the eastern margin of the central borrow area. It is distant, more than 7500 ft. from the disposal areas on the island. The main impact to this lease could be from sediment resuspended during the dredging activities. Fine sediment will be transported in the vicinity of the lease. However, because the lease is in open bay waters and subjected to relatively high energy conditions from wave activity, it is unlikely that such sediment will be deposited. Indeed, the current status of the lease, described as a firm sand bottom, indicates that it is not presently a site of fine sediment accumulation. With high concentrations of suspended sediment in the water column, some may be deposited if wind and current

conditions permit. However, it is unlikely that any such sediments would remain on the lease after the first period of strong wave conditions.

Because of the close proximity of the lease to the borrow area, dredging at the margin of the borrow area may suspend sandy sediments which could be transported onto the reef. This would only occur if wind and tidally driven currents were strong, moving to the west, and coincident with dredging activities in the north-east corner of the borrow area. The deposition of any such sediment would not alter the nature of the bottom in this area which would remain as firm sand.

III-5. Summary

- L-24467. This lease will be partially covered by the disposal operations. Some sediment may be deposited on other parts of the lease but the area will remain as firm sand bottom.
- L-27249. This lease will likely be impacted by accumulation of fine sediment suspended by containment levee construction and/or drainage from containment areas. The degree of impact will depend upon the site on the drainage from the containment.
- L-27202. This lease is not likely to be impacted by long-term accumulations of either fine sediments or sandy sediments. There may be temporary deposits of fines but these will be naturally resuspended and removed. The lease will remain as firm sand bottom.
- L-27203. This lease is not likely to be impacted by long-term accumulations of either fine sediments or sandy sediments. There may be temporary deposits of fines at the western end of the lease but these will be naturally resuspended and removed. The lease will remain as firm sand bottom.

L-27199. This lease is not likely to be impacted by long-term accumulations of either fine sediments or sandy sediments. There may be temporary deposits of fines but these will be naturally resuspended and removed. The lease will remain as firm sand bottom.

L-27200. This lease is not likely to be impacted by long-term accumulations of fine sediments from the adjacent borrow area. It is sufficiently close, that under the correct conditions, some accumulation of sand may occur. However, the lease will remain as firm sand bottom.

III-6. Literature Cited

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IV. APPENDIX

Table IV-4. Bottom characteristics of lease 27199 obtained by sounding with pole.
July 15, 1993

transect 1 N end of lease moving W to E		transect 2 S of trans. 1 moving W to E		transect 3 middle of lease moving W to E	
H H H H H H H H		H H S H H H H		S H H H H H	
Reef	0	Reef	0	Reef	0
Shell	0	Shell	1	Shell	1
Hard	9	Hard	7	Hard	6
Mud	0	Mud	0	Mud	0
Buried reef	0	Buried reef	0	Buried reef.	0

transect 4 N of trans. 5 moving W to E		transect 5 S end of lease moving W to E		transect 6 NW end of lease moving S E	
H H H H H H		H H H H H H		H H H H H H H H H H H	
Reef	0	Reef	0	Reef	0
Shell	0	Shell	0	Shell	0
Hard	6	Hard	6	Hard	13
Muck	0	Muck	0	Muck	0
Buried reef	0	Buried reef	0	Buried reef	0

KEY:

R = reef
S = shell on bottom
H = hard bottom
M = mud bottom
B = reef under mud

Table IV-5. Bottom characteristics of lease 27200 obtained by sounding with pole.
July 15, 1993

transect 1 perimeter transect from NE moving clockwise	transect 2 diagonal transect from NE to SW corner	transect 3 diagonal transect from NW to SE corner
H H H H H H H M H H H H H H H H H H H H	H H H H H S H H H H	H R R H H H S H H
Reef 0 Shell 0 Hard 36 Mud 1 Buried reef 0	Reef 0 Shell 1 Hard 9 Mud 0 Buried reef 0	Reef 2 Shell 1 Hard 7 Mud 0 Buried reef 0

KEY:

R = reef
S = shell on bottom
H = hard bottom
M = mud bottom
B = reef under mud

Table IV-6. Physical and chemical properties of Lake Pelto
water taken on July 15, 1993.

Parameter	0.1 meter depth	2.5 meter depth
Temperature	30 C	25.1 C
Dissolved Oxygen	6.5 ppm	6.3 ppm
Conductivity	26.7 mvolts	27.9 mvolts
Salinity	16.2 ppt	16.9 ppt

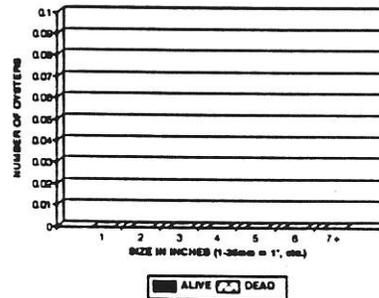
LEASE 24467 METHOD DREDGE VOLUME: (cubic centimeters)
 Live Oysters 0 cc
 SAMPLE 1 AREA Not Applicable Reefshell 370 cc
 DATE 7-15-93 % cc Oysters 0 %

SIZE(mm)	ALIVE	DEAD
1-5		
6-10		
11-15		
16-20		
21-25		
26-30		
31-35		
36-40		
41-45		
46-50		
51-55		
56-60		
61-65		
66-70		
71-75		
76-80		
81-85		
86-90		
91-95		
96-100		
101-105		
106-110		
111-115		
116-120		
121-125		
126-130		
131-135		
136-140		
141-145		
146-150		
150 +		
TOTAL	0	0

SUMMARY TABLE

SIZE(mm)	ALIVE	DEAD
1-25	0	0
26-50	0	0
51-75	0	0
76-100	0	0
101-125	0	0
126-150	0	0
150 +	0	0
TOTAL	0	0

SUMMARY GRAPH



COMMENTS:
 A 2ft wide hand operated dredge
 towed for 2 minutes in a straight
 line. No oysters; only a few
 oyster reefshells.

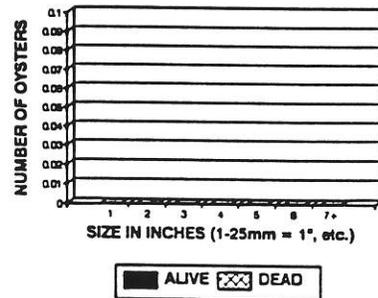
LEASE 27199 METHOD DREDGE VOLUME: (cubic centimeters)
 Live Oysters 0 cc
 SAMPLE 2 AREA Not Applicable Reefshell 0 cc
 DATE 7-15-93 % cc Oysters -

SIZE(mm)	ALIVE	DEAD
1-5		
6-10		
11-15		
16-20		
21-25		
26-30		
31-35		
36-40		
41-45		
46-50		
51-55		
56-60		
61-65		
66-70		
71-75		
76-80		
81-85		
86-90		
91-95		
96-100		
101-105		
106-110		
111-115		
116-120		
121-125		
126-130		
131-135		
136-140		
141-145		
146-150		
150 +		
TOTAL	0	0

SUMMARY TABLE

SIZE(mm)	ALIVE	DEAD
1-25	0	0
26-50	0	0
51-75	0	0
76-100	0	0
101-125	0	0
126-150	0	0
150 +	0	0
TOTAL	0	0

SUMMARY GRAPH



COMMENTS:

A 2ft wide hand operated dredge towed for 4 minutes in a random pattern across lower half of lease. No oysters; no shells; nothing picked up off bottom; empty dredge.

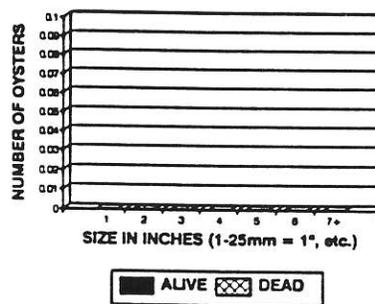
LEASE 27199 METHOD DREDGE VOLUME: (cubic centimeters)
 SAMPLE 3 AREA Not Applicable Live Oysters 0 cc
 DATE 7-15-93 Reefshell 0 cc
 % cc Oysters -

SIZE(mm)	ALIVE	DEAD
1-5		
6-10		
11-15		
16-20		
21-25		
26-30		
31-35		
36-40		
41-45		
46-50		
51-55		
56-60		
61-65		
66-70		
71-75		
76-80		
81-85		
86-90		
91-95		
96-100		
101-105		
106-110		
111-115		
116-120		
121-125		
126-130		
131-135		
136-140		
141-145		
146-150		
150 +		
TOTAL	0	0

SUMMARY TABLE

SIZE(mm)	ALIVE	DEAD
1-25	0	0
26-50	0	0
51-75	0	0
76-100	0	0
101-125	0	0
126-150	0	0
150 +	0	0
TOTAL	0	0

SUMMARY GRAPH



COMMENTS:

A 2ft wide hand operated dredge
 towed for 4 minutes in a random
 pattern across lower half of lease.
 No oyster; no shells; nothing picked
 up off bottom; empty dredge.

LEASE 27203
 SAMPLE 4
 DATE 7-15-93

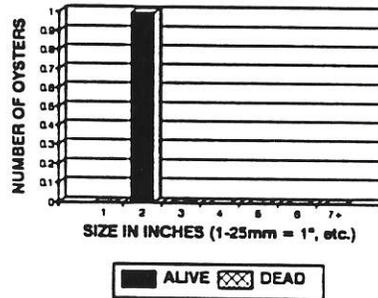
METHOD DREDGE VOLUME: (cubic centimeters)
 Live Oysters 20 cc
 AREA Not Applicable Reefshell 1,150 cc
 % cc Oysters 2 %

SIZE(mm)	ALIVE	DEAD
1-5		
6-10		
11-15		
16-20		
21-25		
26-30		
31-35		
36-40		
41-45		
46-50	1	
51-55		
56-60		
61-65		
66-70		
71-75		
76-80		
81-85		
86-90		
91-95		
96-100		
101-105		
106-110		
111-115		
116-120		
121-125		
126-130		
131-135		
136-140		
141-145		
146-150		
150 +		
TOTAL	1	0

SUMMARY TABLE

SIZE(mm)	ALIVE	DEAD
1-25	0	0
26-50	1	0
51-75	0	0
76-100	0	0
101-125	0	0
126-150	0	0
150 +	0	0
TOTAL	1	0

SUMMARY GRAPH



COMMENTS:

A 2ft wide hand operated dredge towed for 4 minutes in a circular pattern over a shell/reef area.

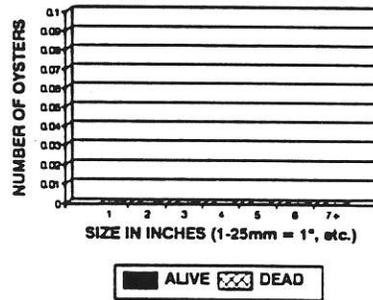
LEASE 27203 METHOD DREDGE VOLUME: (cubic centimeters)
 SAMPLE 5 AREA Not Applicable Live Oysters 0 cc
 DATE 7-15-93 Reefshell 2,840 cc
 % cc Oysters 0 %

SIZE(mm)	ALIVE	DEAD
1-5		
6-10		
11-15		
16-20		
21-25		
26-30		
31-35		
36-40		
41-45		
46-50	0	
51-55		
56-60		
61-65		
66-70		
71-75		
76-80		
81-85		
86-90		
91-95		
96-100		
101-105		
106-110		
111-115		
116-120		
121-125		
126-130		
131-135		
136-140		
141-145		
146-150		
150 +		
TOTAL	0	0

SUMMARY TABLE

SIZE(mm)	ALIVE	DEAD
1-25	0	0
26-50	0	0
51-75	0	0
76-100	0	0
101-125	0	0
126-150	0	0
150 +	0	0
TOTAL	0	0

SUMMARY GRAPH



COMMENTS:

A 2ft wide hand operated dredge towed for 4 minutes in a straight pattern over a shell/reef area. No oysters. Much shell hash (broken pieces of oyster shell). Many slipper limpets present, which could be mistaken for young oysters if not familiar with method of distinguishing difference.

LEASE 27203
 SAMPLE 6
 DATE 7-15-93

METHOD DREDGE
 AREA Not Applicable

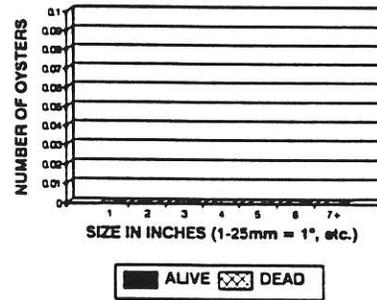
VOLUME: (cubic centimeters)
 Live Oysters 0 cc
 Reefshell 3,270 cc
 % cc Oysters 0 %

SIZE(mm)	ALIVE	DEAD
1-5		
6-10		
11-15		
16-20		
21-25		
26-30		
31-35		
36-40		
41-45		
46-50		
51-55		
56-60		
61-65		
66-70		
71-75		
76-80		
81-85		
86-90		
91-95		
96-100		
101-105		
106-110		
111-115		
116-120		
121-125		
126-130		
131-135		
136-140		
141-145		
146-150		
150 +		
TOTAL	0	0

SUMMARY TABLE

SIZE(mm)	ALIVE	DEAD
1-25	0	0
26-50	0	0
51-75	0	0
76-100	0	0
101-125	0	0
126-150	0	0
150 +	0	0
TOTAL	0	0

SUMMARY GRAPH



COMMENTS:

A 2ft wide hand operated dredge towed for 4 minutes in a circular pattern. No oysters; only a few oyster reefshells.

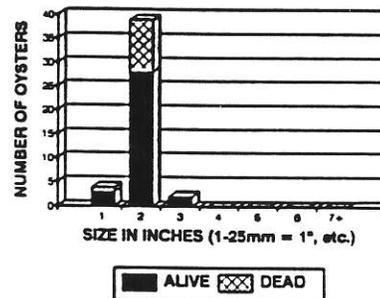
LEASE	<u>27202</u>	METHOD	<u>DREDGE</u>	VOLUME: (cubic centimeters)	
SAMPLE	<u>7</u>	AREA	<u>Not Applicable</u>	Live Oysters	<u>420 cc</u>
DATE	<u>7-15-93</u>			Reefshell	<u>530 cc</u>
				% cc Oysters	<u>44 %</u>

SIZE(mm)	ALIVE	DEAD
1-5		
6-10	1	
11-15	1	
16-20		
21-25	1	1
26-30	1	
31-35	2	3
36-40	8	3
41-45	8	3
46-50	9	2
51-55	2	
56-60		
61-65		
66-70		
71-75		
76-80		
81-85		
86-90		
91-95		
96-100		
101-105		
106-110		
111-115		
116-120		
121-125		
126-130		
131-135		
136-140		
141-145		
146-150		
150 +		
TOTAL	33	12

SUMMARY TABLE

SIZE(mm)	ALIVE	DEAD
1-25	3	1
26-50	28	11
51-75	2	0
76-100	0	0
101-125	0	0
126-150	0	0
150 +	0	0
TOTAL	33	12

SUMMARY GRAPH



COMMENTS:

A 2ft wide hand operated dredge towed for 4 minutes in a circular pattern. Oyster drill (snail) predation clearly evident on one dead oyster. Well shaped oysters, which is indicative of sparse population that set on oyster shell fragments. No commercial size oysters.

LEASE 27202
 SAMPLE 8
 DATE 7-15-93

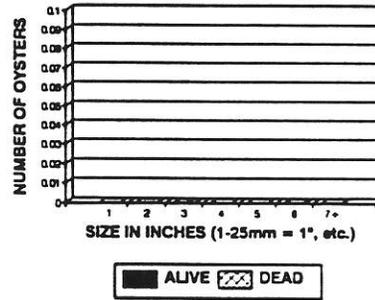
METHOD DREDGE VOLUME: (cubic centimeters)
 Live Oysters 0 cc
 AREA Not Applicable Reefshell 3,930 cc
 % cc Oysters 0 cc

SIZE(mm)	ALIVE	DEAD
1-5		
6-10		
11-15		
16-20		
21-25		
26-30		
31-35		
36-40		
41-45		
46-50		
51-55		
56-60		
61-65		
66-70		
71-75		
76-80		
81-85		
86-90		
91-95		
96-100		
101-105		
106-110		
111-115		
116-120		
121-125		
126-130		
131-135		
136-140		
141-145		
146-150		
150 +		
TOTAL	0	0

SUMMARY TABLE

SIZE(mm)	ALIVE	DEAD
1-25	0	0
26-50	0	0
51-75	0	0
76-100	0	0
101-125	0	0
126-150	0	0
150 +	0	0
TOTAL	0	0

SUMMARY GRAPH



COMMENTS:

A 2ft wide hand operated dredge towed for 4 minutes in a circular pattern.

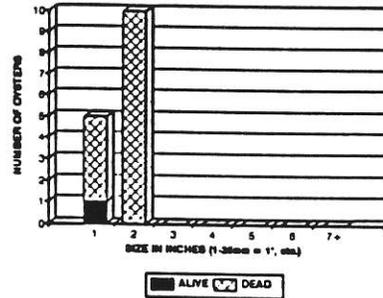
LEASE 27202 METHOD DREDGE VOLUME: (cubic centimeters)
 SAMPLE 9 AREA Not Applicable Live Oysters 0 cc
 DATE 7-15-93 Reefshell 2,000 cc
 % cc Oysters 1 cc

SIZE(mm)	ALIVE	DEAD
1-5		
6-10	1	1
11-15		2
16-20		
21-25		1
26-30		
31-35		3
36-40		
41-45		7
46-50		
51-55		
56-60		
61-65		
66-70		
71-75		
76-80		
81-85		
86-90		
91-95		
96-100		
101-105		
106-110		
111-115		
116-120		
121-125		
126-130		
131-135		
136-140		
141-145		
146-150		
150 +		
TOTAL	1	14

SUMMARY TABLE

SIZE(mm)	ALIVE	DEAD
1-25	1	4
26-50	0	10
51-75	0	0
76-100	0	0
101-125	0	0
126-150	0	0
150 +	0	0
TOTAL	1	14

SUMMARY GRAPH



COMMENTS:
 A 2ft wide hand operated dredge
 towed for 2 minutes in a circular
 pattern.

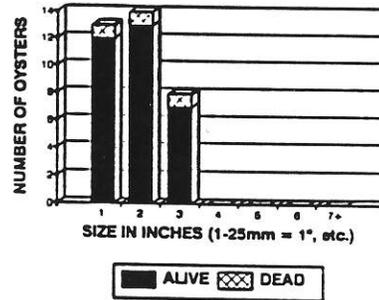
LEASE	<u>27200</u>	METHOD	<u>DREDGE</u>	VOLUME: (cubic centimeters)	
SAMPLE	<u>10</u>	AREA	<u>Not Applicable</u>	Live Oysters	<u>340 cc</u>
DATE	<u>7-15-93</u>			Reefshell	<u>2,510 cc</u>
				% cc Oysters	<u>12 %</u>

SIZE(mm)	ALIVE	DEAD
1-5		
6-10	3	
11-15	5	
16-20	3	1
21-25	1	
26-30	1	
31-35	2	1
36-40	4	
41-45	3	
46-50	3	
51-55	3	1
56-60	2	
61-65	1	
66-70		
71-75	1	
76-80		
81-85		
86-90		
91-95		
96-100		
101-105		
106-110		
111-115		
116-120		
121-125		
126-130		
131-135		
136-140		
141-145		
146-150		
150 +		
TOTAL	32	3

SUMMARY TABLE

SIZE(mm)	ALIVE	DEAD
1-25	12	1
26-50	13	1
51-75	7	1
76-100	0	0
101-125	0	0
126-150	0	0
150 +	0	0
TOTAL	32	3

SUMMARY GRAPH



COMMENTS:

A 2ft wide hand operated dredge towed for 4 minutes in a circular pattern. Well shaped oysters which is indicative of a sparse population (lack of crowding). The 75mm oyster was long and narrow (only one like that in the sample).

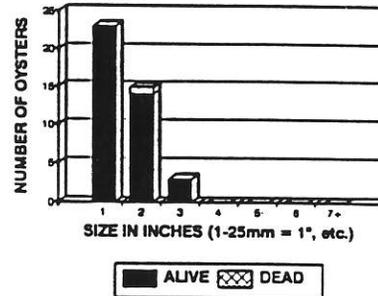
LEASE	<u>27200</u>	METHOD	<u>DREDGE</u>	VOLUME: (cubic centimeters)	
SAMPLE	<u>11</u>	AREA	<u>Not Applicable</u>	Live Oysters	<u>100 cc</u>
DATE	<u>7-15-93</u>			Reefshell	<u>3,300 cc</u>
				% cc Oysters	<u>3 %</u>

SIZE(mm)	ALIVE	DEAD
1-5	6	
6-10	12	
11-15		
16-20	3	
21-25	2	
26-30	2	
31-35	2	1
36-40		
41-45	8	
46-50	2	
51-55	2	
56-60		
61-65		
66-70	1	
71-75		
76-80		
81-85		
86-90		
91-95		
96-100		
101-105		
106-110		
111-115		
116-120		
121-125		
126-130		
131-135		
136-140		
141-145		
146-150		
150 +		
TOTAL	40	1

SUMMARY TABLE

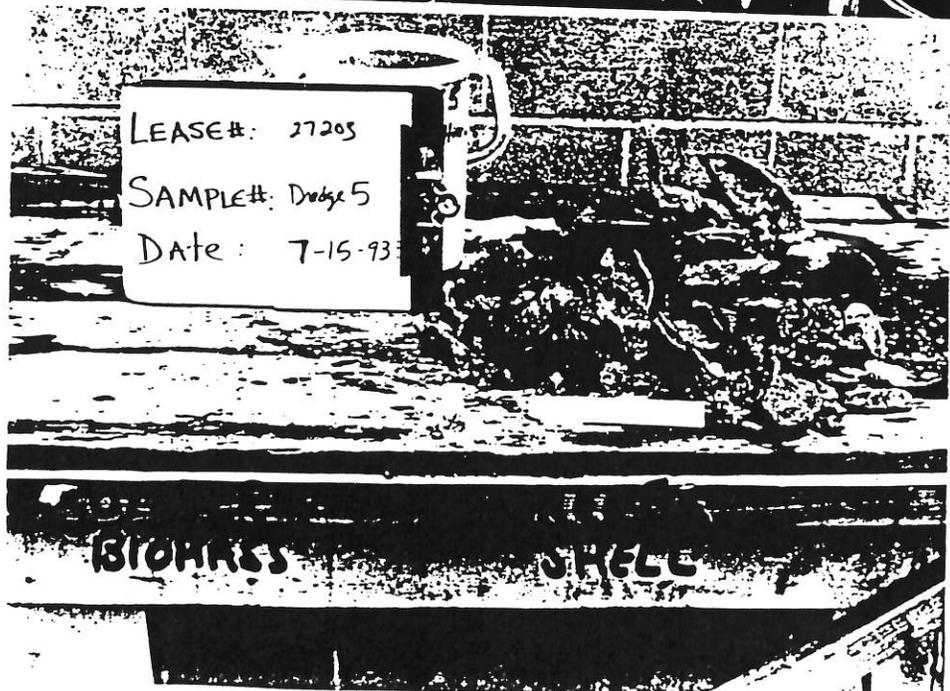
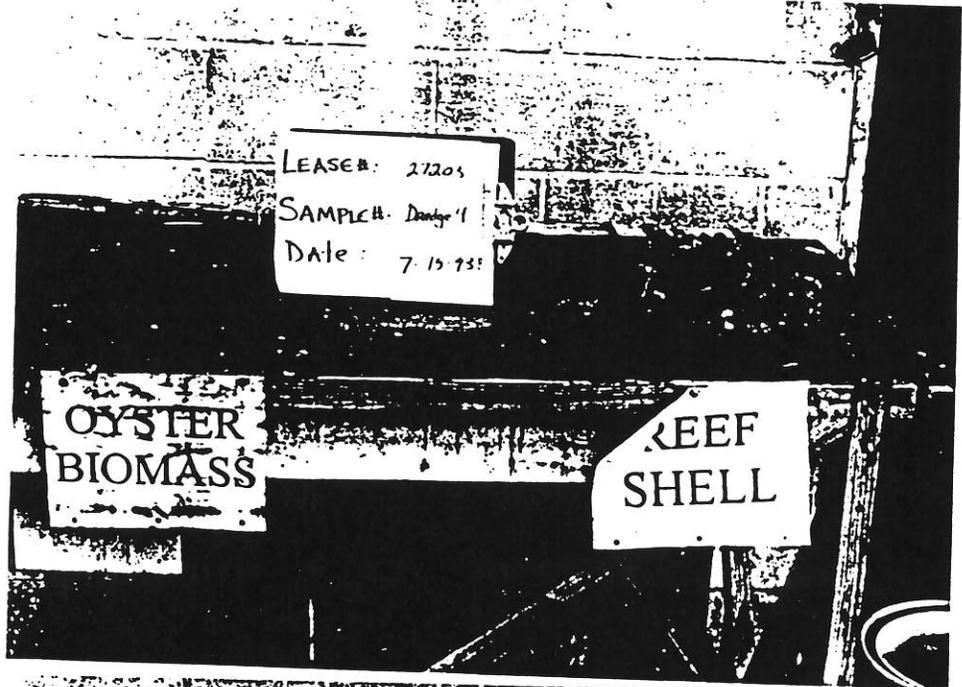
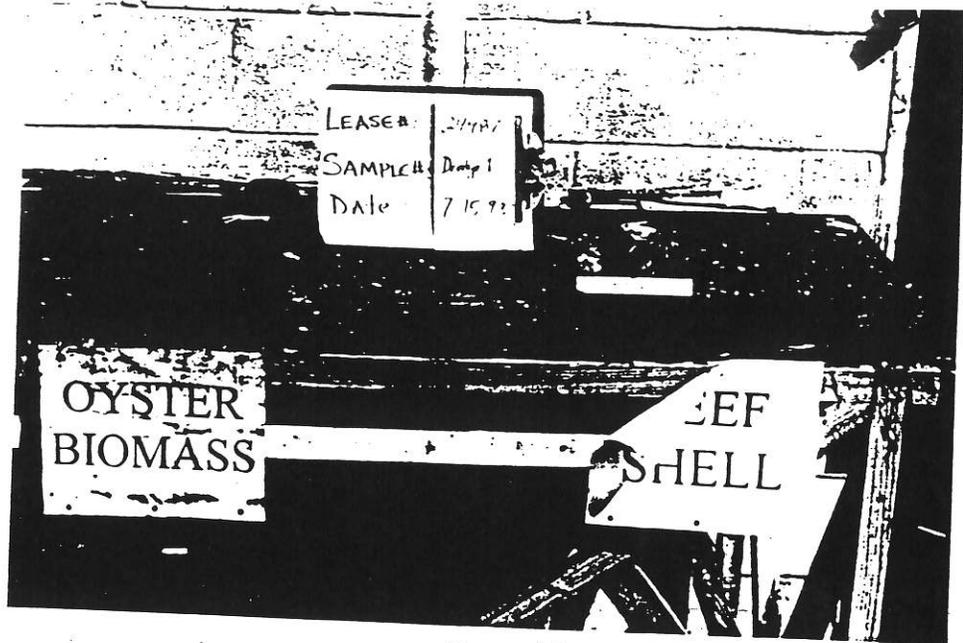
SIZE(mm)	ALIVE	DEAD
1-25	23	0
26-50	14	1
51-75	3	0
76-100	0	0
101-125	0	0
126-150	0	0
150 +	0	0
TOTAL	40	1

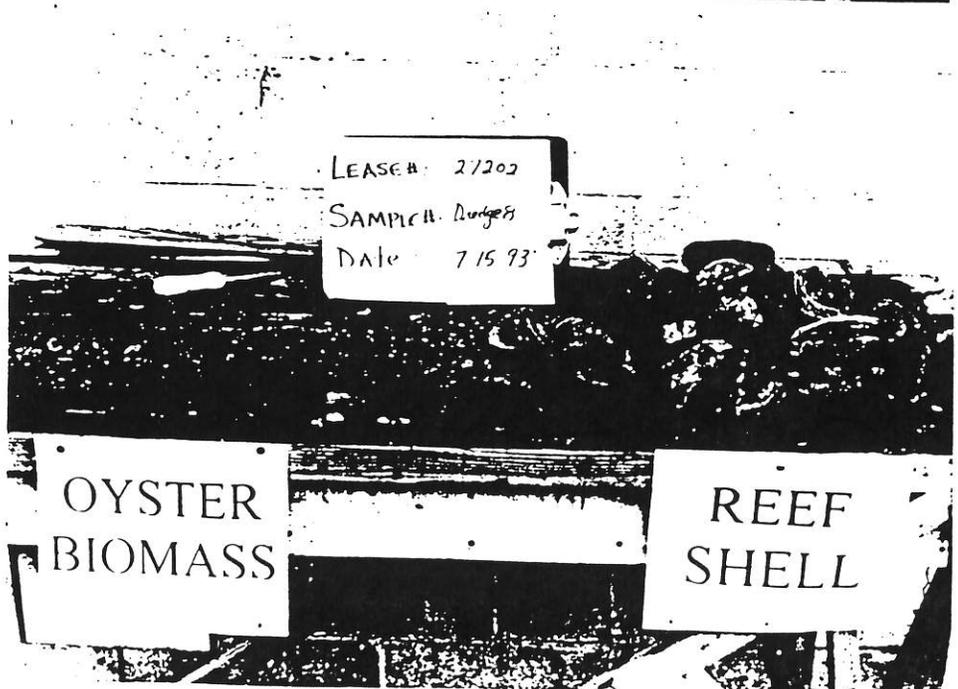
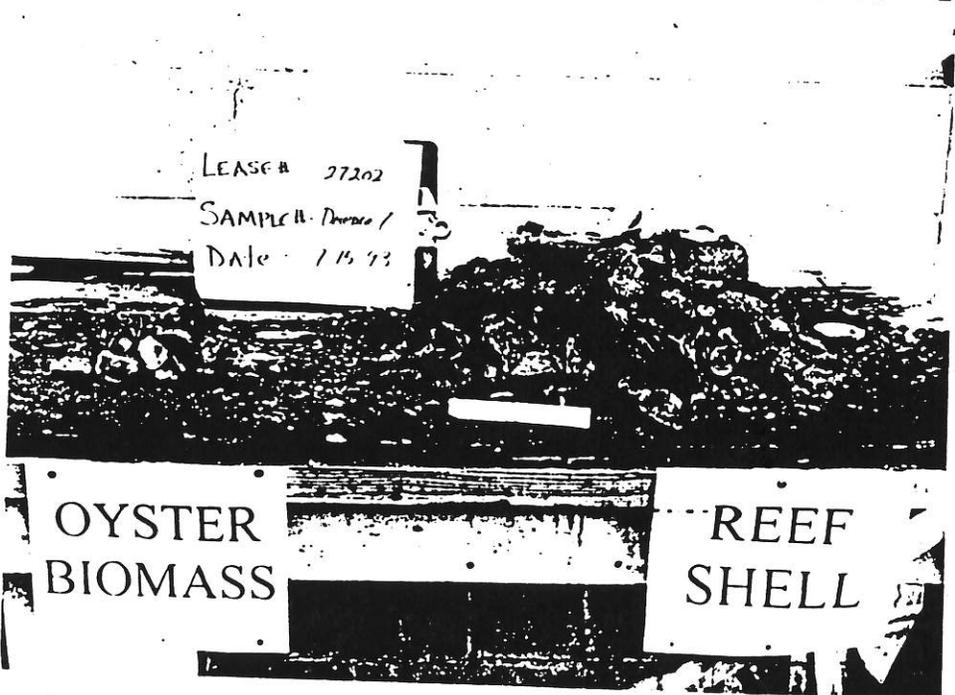
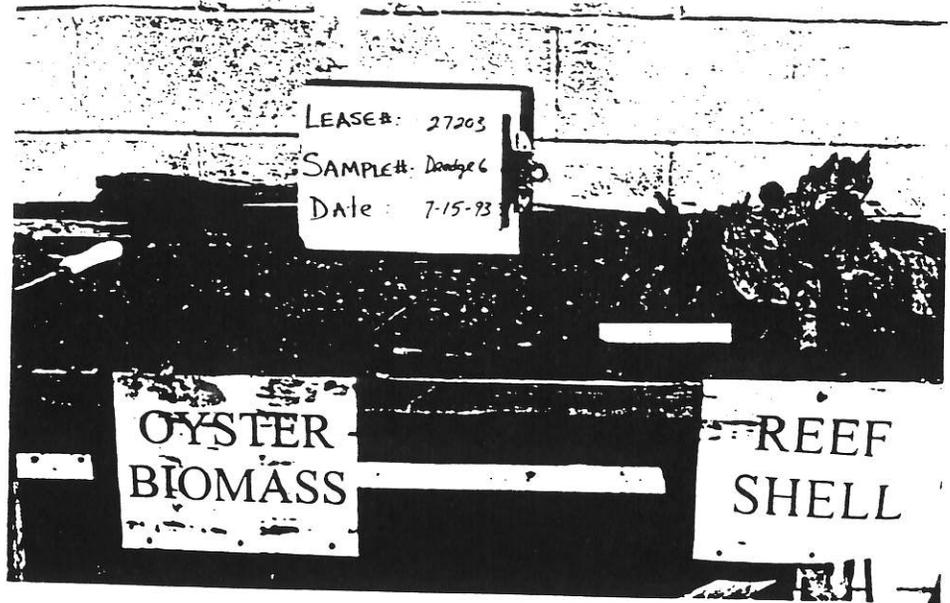
SUMMARY GRAPH

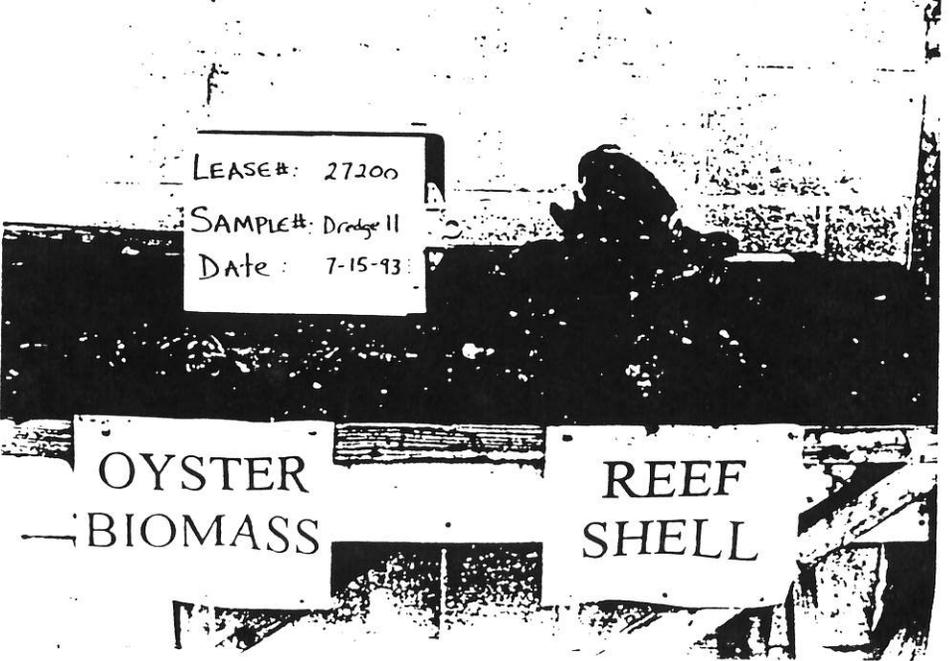
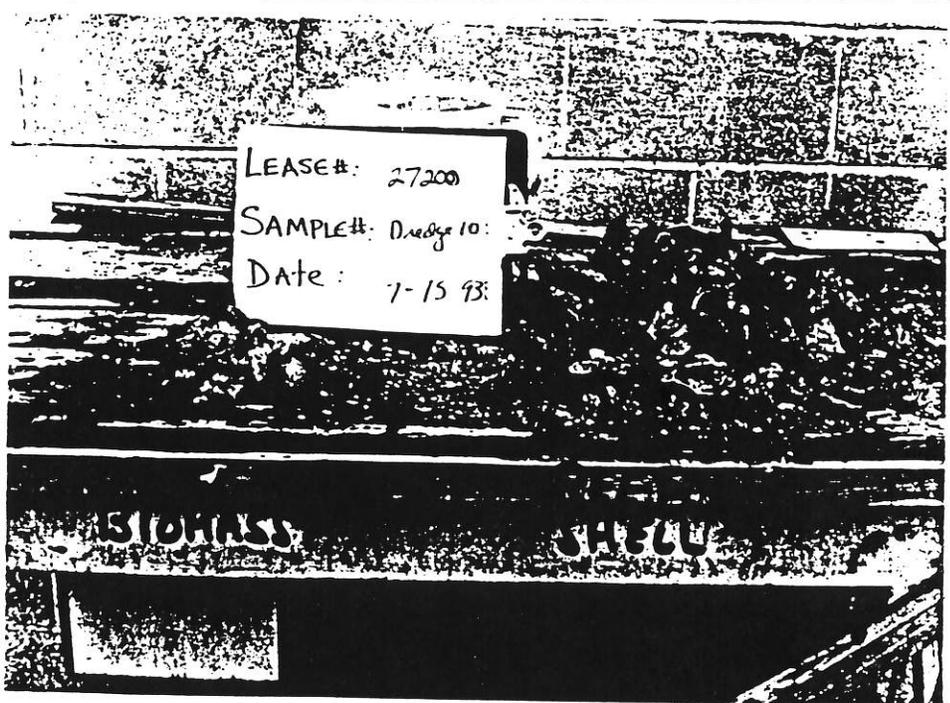
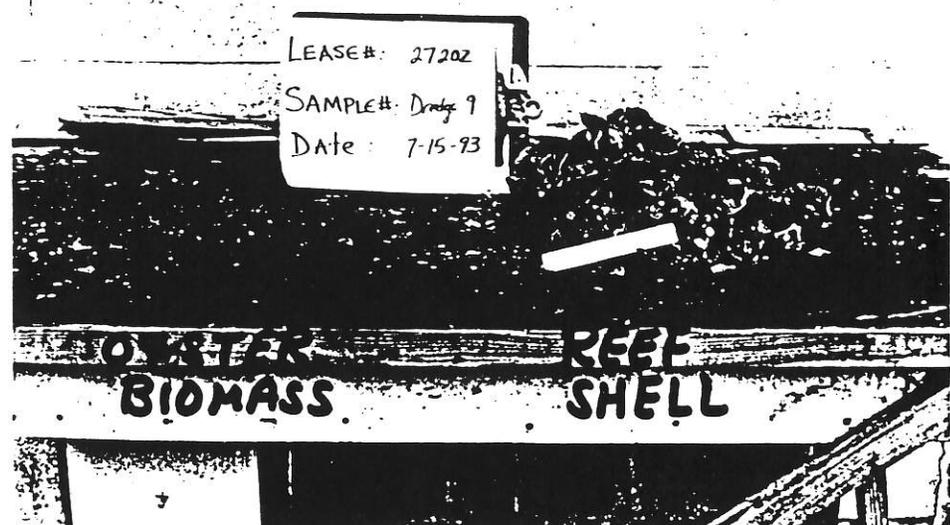


COMMENTS:

A 2ft wide hand operated dredge towed for 4 minutes in a circular pattern. Well shaped oysters which is indicative of a sparse population (lack of crowding). Less than 1 % of the reefshell volume was small live oysters that could not be removed.







APPENDIX H

TEXAS GAS TRANSMISSION CORPORATION

113 Oil Center Drive, Bldg. 19
P. O. Box 51969
Lafayette, Louisiana 70505
Phone: 318/235-9065



March 8, 1994

T. Baker Smith & Son, Inc.
P. O. Box 2266
Houma, Louisiana 70361

Attn: Mr. Marc J. Rogers, Sr., P.E.

As per your request, I am enclosing two (2) drawings LAOS G-25 and PL-11331 of the 8" pipeline involved in the proposed borrow areas for dredging on sand for the reconstruction of portions of Isles Dernieres.

We request that you contact Mr. Russell Breaux or Mr. Everett Voisin at 504-631-0186 at least 48 hours before surveying or excavating across our pipeline.

If you have any questions or need additional information, please feel free to call.

Yours very truly,

A handwritten signature in cursive script that reads "Paul J. Frederick".

Paul J. Frederick
Staff Engineering Technician

pjf:mal

encl.

c - Mr. G. A. Taylor
Mr. M. A. Stephenson
Mr. R. T. Breaux

Tennessee Gas Pipeline

A Tenneco Company

Sugar Mill Point
1115 Regal Row
Houma, Louisiana 70360
(504) 868-6785



T. Baker Smith & Son, Inc.
P. O. Box 2266
Houma, La. 70361
Attention: Mr. Marc J Rogers Sr., P.E.

February 11, 1994

We have reviewed Exhibit 12 which shows proposed borrow areas for dredging of sand for the reconstruction of portions of Isle Dernieres.

We are sending you copies of our 26" and 36" pipeline "as-constructed" plan and profile drawings denoting geographic position, curve data and bearing according to Louisiana Lambert, South Zone. These are only approximate positions - The pipelines will have to be physically located and marked.

These are high pressure (1200 psi) natural gas pipelines that are extremely dangerous. Please do not commence any construction activities, core sampling, dredging, etc. without our prior notice.

Please notify our District Superintendent:

H. S. Mills
224 Aviation Road
Houma, La. 70363-0836
(504) 879-3516

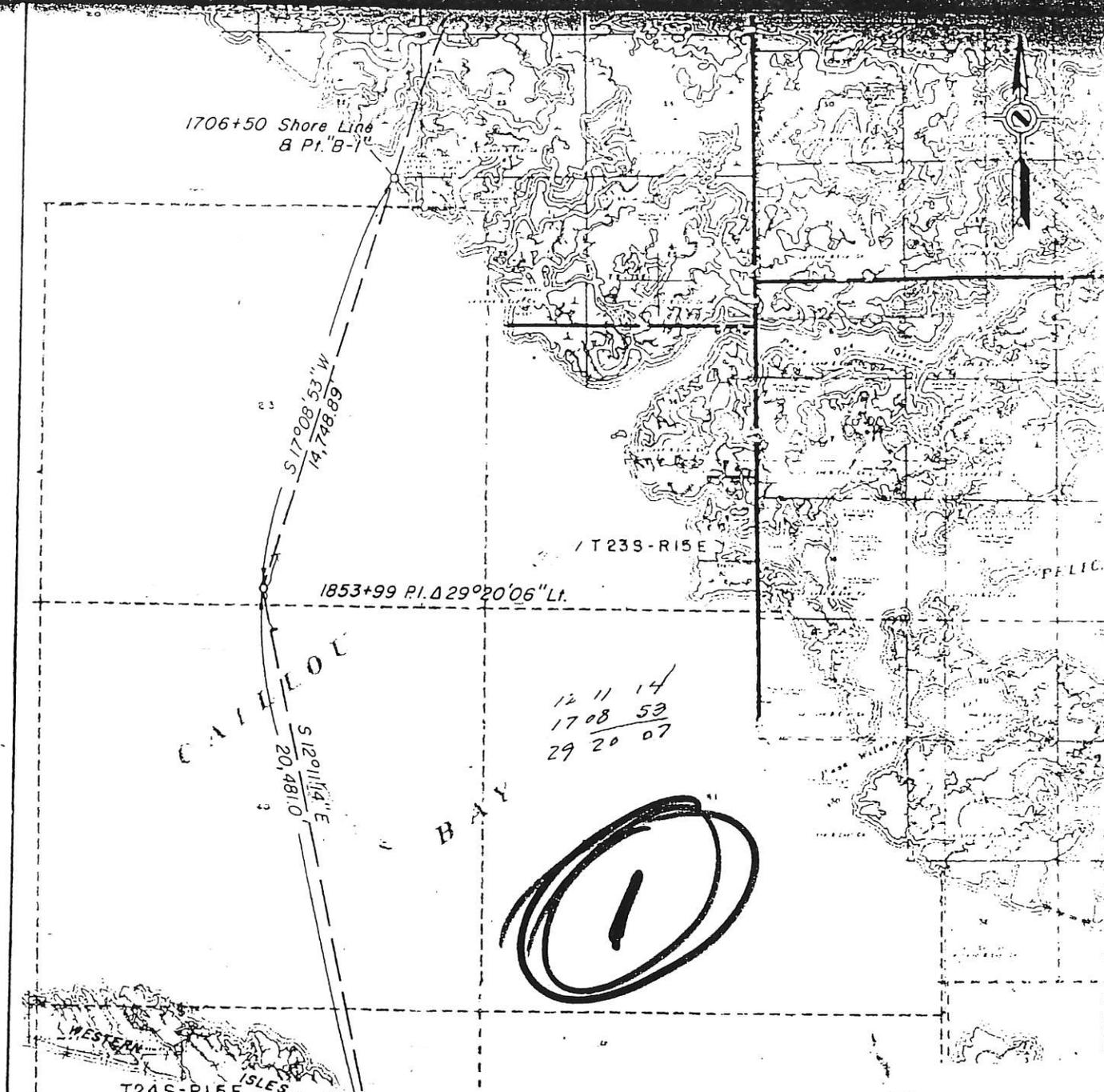
at least 48 hours prior to beginning any activities in the vicinity of our pipelines.

If you have any questions, or need additional information please feel free to call.

A handwritten signature in cursive script that reads "O. O. Jones".

O. O. Jones
Manager Marine Construction

cc: H. S. Mills w/attachment
W. M. Murray
J. M. Nunnally
C. E. Whitney
File



1706+50 Shore Line
8 Pt. "B-1"

S 17°08'53" W
14,748.89

1853+99 Pt. Δ 29°20'06" Lt.

S 12°01'14" E
20,481.0

12 11 14
17 08 53
29 20 07



PLAN & LOCATION SKETCH
SCALE: 1" = 1 MILES

REFERENCE DRAWINGS DWG. NO.

BY	TRANSCONTINENTAL GAS PIPE LINE CORP.		ENGINEERING DEPARTMENT		HOUSTON, TEXAS	
	<p>PROPOSED 26" NATURAL GAS PIPE LINE CROSSING CAILLOU BAY TERREBONNE PARISH, LOUISIANA</p>					
REVISION	DRAWN BY	T.W.G.	DATE	5-7-68	APPROVED BY	H.W.I.
	CHECKED BY	J.D.W.	DATE	5-7-68	APPROVED BY	[Signature]
DATE	APP'D. BY DRAFTING	[Signature]	DATE	5/7/68	ENGINEER	
	NO.	W.O. NO. 5259.16	SCALE	As Shown	SHEET	OF
					DWG. NO.	A-12148

L.L. NO. 48
S.E. LOUISIANA GATHERING SYSTEM

②

PIPE LINE PERMIT

THIS AGREEMENT made as of the 9th day of May, 1968, between THE LOUISIANA LAND AND EXPLORATION COMPANY, a Maryland corporation qualified to do business in Louisiana (hereinafter called "Grantor"), and TENNESSEE GAS PIPELINE COMPANY, a division of TENNECO INC., a Delaware corporation qualified to do business in Louisiana (hereinafter called "Grantee");

W I T N E S S E T H:

In consideration of the sum of THIRTY-SEVEN THOUSAND, SEVEN HUNDRED EIGHTY AND NO/100 DOLLARS (\$37,780.00), cash paid to Grantor by Grantee, and other good and valuable consideration, the receipt of which is hereby acknowledged, and of the obligations herein undertaken by Grantee, Grantor hereby grants unto Grantee, upon the terms and conditions hereinafter set forth, a license, privilege and permit (hereinafter called "permit"), to construct, maintain and operate one single pipe line, and appurtenances thereto, for the transportation of natural gas, over and across the following described property belonging to Grantor and situated in Terrebonne Parish, Louisiana, to-wit:

Section 26, all
Section 34, all
Section 35, all

In Township 21 South, Range 17 East

Section 76, all
Section 77, all
Section 78, all
Section 79, all
Tract of E. C. Lyon, Sections 80, 81 and 82

In Township 21 South, Range 18 East

Section 1, all
Section 2, all
Section 10, all
Section 11, all
Section 15, all
Section 22, all
Section 27, all
Section 28, all
Section 33, all
Section 34, all

In Township 22 South, Range 17 East

Section 4, all
Section 5, all
Section 8, all
Section 9, all
Section 17, all
Section 20, all
Section 29, all fractional
Section 30, all fractional

In Township 23 South, Range 17 East

Section 12, all fractional

In Township 24 South, Range 16 East

Section 6, all fractional
Section 7, all fractional

In Township 24 South, Range 17 East

along those portions of the following routes and courses which cross
the aforesaid property, to-wit:

Beginning at a point having Lambert Grid
Coordinate values of $X = 2,211,837.31$ and
 $Y = 207,276.68$, said point being within
the permit width of the pipe line desig-
nated as Line 500-2 in that certain Pipe Line
Permit dated February 9, 1956, granted by
The Louisiana Land and Exploration Company
to Tennessee Gas Transmission Company, re-
corded in COB 226, under Entry 150683,
Terrebonne Parish, Louisiana;

Thence, with and/or along the center line
of permit, as follows:

South $49^{\circ}49'13''$ West a distance of 5,270.81
feet to a point having Lambert Grid Co-
ordinate values of $X = 2,207,810.30$ and
 $Y = 203,876.02$, said point being the Point
of Curvature (P.C.) of a horizontal curve
based on chord definition and having the
following data: Central Angle (I.) =
 $11^{\circ}47'24''$, Radius (R.) = 5,729.65 feet,
Tangent Distance (T.) = 591.60 feet,
Length of Curve (L.) = 1,179.00 feet and
Degree of Curve (D.) = 1.000°;

Southeasterly with and/or along said horizontal
curve a distance of 1,179.00 feet (Length of Curve)
to a point having Lambert Grid Coordinate val-
ues of $X = 2,206,993.83$ and $Y = 203,028.34$, said
point being the Point of Tangency (P.T.) of said
horizontal curve;

South $38^{\circ}01'49''$ West a distance of 4,064.96 feet
to a point having Lambert Grid Coordinate val-
ues of $X = 2,204,489.49$ and $Y = 199,826.43$;

South $36^{\circ}03'54''$ West a distance of 11,005.11
feet to a point having Lambert Grid Coordinate
values of $X = 2,198,010.76$ and $Y = 190,930.46$;

South $36^{\circ}14'11''$ West a distance of 2,102.01 feet to a point having Lambert Grid Coordinate values of $X = 2,196,768.22$ and $Y = 189,235.01$, said point being the Point of Curvature (P.C.) of a horizontal curve based on chord definition and having the following data: Central Angle (I.) = $23^{\circ}50'01''$, Radius (R.) = 5,729.65 feet, Tangent Distance (T.) = 1,209.19 feet, Length of Curve (L.) = 2,383.36 feet and Degree of Curve (D.) = 1.000° ;

Southeasterly with and/or along said horizontal curve a distance of 2,383.36 feet (Length of Curve) to a point having Lambert Grid Coordinate values of $X = 2,195,793.74$ and $Y = 187,078.72$, said point being the Point of Tangency (P.T.) of said horizontal curve;

South $12^{\circ}24'10''$ West a distance of 4,835.97 feet to a point having Lambert Grid Coordinate values of $X = 2,194,755.06$ and $Y = 182,355.61$;

South $14^{\circ}48'11''$ West a distance of 8,950.47 feet to a point having Lambert Grid Coordinate values of $X = 2,192,468.24$ and $Y = 173,702.21$;

South $12^{\circ}44'07''$ West a distance of 6,641.98 feet to a point having Lambert Grid Coordinate values of $X = 2,191,004.00$ and $Y = 167,223.63$, said point being the Point of Curvature (P.C.) of a horizontal curve based on chord definition and having the following data: Central Angle (I.) = $08^{\circ}51'47''$, Radius (R.) = 5,729.65 feet, Tangent Distance (T.) = 444.03 feet, Length of Curve (L.) = 886.30 feet and Degree of Curve (D.) = 1.000° ;

Southwesterly with and/or along said horizontal curve a distance of 886.30 feet (Length of Curve) to a point having Lambert Grid Coordinate values of $X = 2,190,742.67$ and $Y = 166,377.67$, said point being the Point of Tangency (P.T.) of said horizontal curve;

South $21^{\circ}35'54''$ West a distance of 30,415.44 feet to a point having Lambert Grid Coordinate values of $X = 2,179,546.81$ and $Y = 138,097.79$, said point being the Point of Curvature (P.C.) of a horizontal curve based on chord definition and having the following data: Central Angle (I.) = $10^{\circ}50'58''$, Radius (R.) = 5,729.65 feet, Tangent Distance (T.) = 544.11 feet, Length of Curve (L.) = 1,084.94 feet and Degree of Curve (D.) = 1.000° ;

Southwesterly with and/or along said horizontal curve a distance of 1,084.94 feet (Length of Curve) to a point having Lambert Grid Coordinate values of $X = 2,179,054.59$ and $Y = 137,132.72$, said point being the Point of Tangency (P.T.) of said horizontal curve;

South 32°26'52" West to the extent of ownership of Grantor.

All bearings and all coordinates set forth herein are based on State Plane Lambert Grid, Louisiana, South Zone.

I.

This permit shall be null and void and of no effect as to any segment of said pipe line which is not constructed, completed and put into actual operation across the premises above described, on or before two (2) years from the date hereof.

II.

This permit shall include the right of ingress and egress by Grantee, its agents, representatives and employees for the construction of said pipe line, but for no other purpose, only along said pipe line and for a distance of not exceeding fifty (50) feet on each side of the center line thereof; and, after the construction of said pipe line, this permit shall then include the right of ingress by Grantee, its agents, representatives and employees, for the maintenance, operation, repair and removal of said pipe line, but for no other purpose, only along said pipe line and for a distance of not exceeding twenty (20) feet on each side of the center line thereof; all, however, subject to the following:

(a) Grantee shall have the right to dredge a canal not to exceed forty (40) feet in width along those portions of the routes and courses hereinabove described, and to lay said pipe line in said canal. Spoil from said canal shall be equally divided and deposited upon both banks of said canal in the form of continuous levees; and openings in said spoil bank will be left where said canal intersects navigable streams and at such other points as may be designated by Grantor.

(b) Grantee shall install and maintain, at Grantee's expense, and as directed by Grantor, bulkheads, plugs and dams sufficiently adequate to effectively obstruct the flow of water in said canal, at each and every point designated by Grantor; and

Grantee shall also construct and maintain, at Grantee's expense, such other protective works, structures and facilities as designated by Grantor; all of which shall be constructed at the locations and in the manner designated by Grantor. The design of said bulkheads, plugs and dams and other protective works, structures and facilities shall be mutually agreed on by Grantor and Grantee prior to the construction thereof. In the event Grantor deems that any maintenance and/or repairs to the works, structures and facilities constructed hereunder, in addition to those performed by Grantee, are necessary, then without limiting the foregoing obligations of Grantee, Grantee shall, within ninety (90) days from the date of written notice by Grantor, commence the said additional maintenance and/or repairs to said works, structures and facilities. Grantee further agrees, at Grantee's expense, to cut such openings in said spoil banks and to construct and maintain such additional works, and to remove any of these constructed hereunder, as may from time to time be directed by Grantor, in order to prevent undue erosion, drainage, flooding, infiltration of salt water or intrusion of trespassers of or upon Grantor's property, resulting from Grantee's operations hereunder.

(c) In the construction of said bulkheads, dams, plugs and other protective works, Grantee shall use only spoil dredged from said canal and shall not dredge upon or from any other portion of Grantor's land for such purposes. Grantee shall not use hydraulic dredges in dredging upon or from any portion of Grantor's land, provided that this restriction shall not apply to any dredging operations conducted on property other than that belonging to Grantor, the purpose of which is to back-fill any portion of said canal dredged hereunder.

(d) Grantee further agrees that any portion of any canal which may be dredged hereunder shall remain private, not open to the public, and that it will post and keep posted "No Trespassing"

signs along said canal at reasonable intervals, and on the dams and bulkheads hereinabove set forth, and will use reasonable diligence to prevent trespassers from entering said canal and from entering upon the land of Grantor, whether or not affected by this instrument, through said canal, and shall notify Grantor of any trespassing which comes to its attention; provided, however that Grantor shall have the right to use said canal, provided such use does not unduly interfere with the facilities and operations of Grantee hereunder.

III.

The rights of Grantee under this permit shall at all times be held by Grantee subject, subordinate and inferior to any presently existing servitude, mineral lease, trapping lease or other contract affecting said property; and this permit shall not vest in, or ever be construed to vest in, Grantee any right, title or interest in or to the fee ownership of, or any mineral or mineral rights in, on, under or in respect to, the property above described, nor as requiring the consent of Grantee to any lease, grant or other contract affecting either the surface, minerals or mineral rights in, on, under or in respect to the above described property; nor shall this permit vest in or ever be construed to vest in Grantee any rights to hunt, fish, trap or otherwise take or capture wildlife, game or fish from or on said property.

IV.

This permit is further subject to the right of Grantor, which right is hereby expressly reserved, to use, occupy and enjoy all of the property above described, for any and all purposes, in such manner and at such time as it may desire, provided that such use, occupation and enjoyment shall not unreasonably and unduly interfere with the maintenance and operation of said pipe line. It is agreed, however, that in the event said pipe line, or any

operations or facilities of Grantee hereunder, should unreasonably and unduly interfere with the full right of ingress and egress by Grantor to, from, over or across said property, the construction, use, or maintenance of waterways, canals, roads, railroads, levees, dams or other transportation, drainage or water control facilities, the exploration for, mining, production, transportation or disposition of oil, gas, sulphur, or other minerals, or shell deposits, the reclamation of land, or any other substantial commercial, industrial or agricultural use or development of said property, or any adjacent property of Grantor, then, in any such event, Grantee shall, at its own cost, risk and expense, upon sixty (60) days prior written notice from Grantor, lower, raise, or otherwise alter or modify said pipe line or facilities to the extent necessary to eliminate such unreasonable and undue interference. It is further agreed that, if said pipe line or facilities should so preclude a proposed major use or development of Grantor's property as to render it impractical of accomplishment without the relocation of a portion of said pipe line or facilities, and if the proposed use or development is then of sufficient importance to reasonably warrant such relocation and is of such magnitude that the cost or anticipated benefits thereof exceed the cost of such relocation, then Grantee shall, at its own cost, risk and expense, upon sixty (60) days prior written notice from Grantor, relocate said pipe line or facilities to the extent necessary to permit such use or development. In any of said events, Grantor shall furnish Grantee, free of cost, such additional rights, subject to the terms and provisions of this agreement, as may be necessary for Grantee to accomplish such lowering, raising, alteration, modification or relocation.

V.

Grantee shall bury said pipe line to a sufficient depth so as not to interfere with mineral operations, trapping of fur-

bearing animals or the cultivation of the soil, and shall bury said pipe line to a minimum depth of four (4) feet below the surface of the earth and a minimum depth of four (4) feet below the bottom of all canals, bayous, field ditches and trenasses which it may cross, and a permanent monument shall be placed on each side of such canals and bayous; provided that Grantee shall not be required to bury its pipe line to a depth of four (4) feet if in doing so it would violate any rules or regulations of the War Department of the United States or any other duly constituted body from whom Grantee may be required to obtain a permit.

VI.

Grantee shall repair all fences, roads, bridges, canals, ditches, trenasses and other facilities and improvements located on Grantor's property which may become worn, damaged or destroyed by Grantee in the location, construction, maintenance, use, repair or removal of said pipe line and shall remove from Grantor's land all brush and other debris caused by its operations hereunder, leaving Grantor's property at all times in a presentable condition, all to the satisfaction of Grantor.

VII.

Grantee assumes and agrees:

- (a) To pay for all loss or damage to Grantor's property, including timber, crops and fur-bearing animals thereon, and
- (b) To indemnify and hold Grantor harmless against any loss or liability on account of injuries to (including death of) persons or damage to property of others, including costs and expenses incident thereto,

arising wholly or in part from or in connection with the existence, construction, maintenance, repair, operation, use, removal, alteration, reconstruction or removal of the aforesaid pipe line or canal, or any other facility constructed hereunder, or any defect therein or failure thereof, or any of the Grantee's operations hereunder. In the event any suit is brought against Grantor to

recover for or on account of any such damage, injury or death, Grantee will, at Grantor's request, appear and defend said suit at its own sole cost and expense, and will pay any judgment that may be entered against Grantor therein when said suit is finally determined.

VIII.

In the event said pipe line should cease to be used for the purposes herein specified for a period of one (1) year or be permanently abandoned for such purposes, or in the event any rights acquired by Grantee hereunder should be used for any other purpose, then in any of such events, all rights acquired by Grantee hereunder shall, at the option of Grantor, cease and terminate without demand or putting in default; and in such event, or in the event of other termination of this permit, Grantee shall, with reasonable promptness and at its own cost and expense, remove said pipe line and all of its facilities from the hereinabove described property, and otherwise restore the premises to the same condition in which they were prior to the execution of this agreement; provided that Grantee shall not be required to fill any canal dredged hereunder, except as may be elsewhere provided herein.

IX.

The waiver of a breach of any of the terms or conditions hereof shall be limited to the act or acts constituting such breach, and shall never be construed as being a continuing or permanent waiver of any of such terms or conditions or as a waiver of any other terms and conditions hereof, all of which shall be and remain in full force and effect notwithstanding any such waiver.

X.

This permit is given without any warranty by or recourse on Grantor whatsoever, not even for the return of the consideration above recited. Grantor does not warrant or represent the

correctness of any survey purporting to show the location of Grantor's land, and nothing herein contained shall operate as an estoppel against Grantor's establishing the correct location of the boundaries of Grantor's land.

XI.

All of the provisions hereof shall inure to the benefit of and be binding upon the parties hereto, their successors and assigns.

IN TESTIMONY WHEREOF, this instrument has been executed in five (5) original counterparts in the presence of the undersigned competent witnesses.

WITNESSES:

Louise H. Boudreau

Bonnie J. Herbina

ATTEST:

Larry B. Jackson
Larry B. Jackson Assistant Secretary

Lois West

THE LOUISIANA LAND AND
EXPLORATION COMPANY

By Frank M. Little
Senior Vice President

TENNESSEE GAS PIPELINE COMPANY
A Division of Tenneco Inc.

By Edgar J. Cochrane
Edgar J. Cochrane, Vice President of
TENNESSEE GAS PIPELINE COMPANY,
a division of Tenneco Inc.

STATE OF LOUISIANA
PARISH OF TERREBONNE

On this 10th day of May, 1968, before me appeared FRANK M. RITCHIE, to me personally known, who, being by me duly sworn, did say that he is a Senior Vice President of THE LOUISIANA LAND AND EXPLORATION COMPANY, a Maryland corporation, and that the seal affixed to said instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its Board of Directors, and said appearer acknowledged said instrument to be the free act and deed of said corporation.

Ray B. Theriot
NOTARY PUBLIC

DEPUTY CLERK OF COURT
AND OFFICIAL NOTARY PUBLIC
PARISH OF TERREBONNE, LA

STATE OF TEXAS
COUNTY OF HARRIS

On this 14th day of May, 1968, before me appeared Edgar U. Cochrane, to me personally known, who, being by me duly sworn, did say that he is a Vice President of TENNESSEE GAS PIPELINE COMPANY, a Division of Tenneco Inc., a Delaware corporation, and that the seal affixed to said instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its Board of Directors, and said appearer acknowledged said instrument to be the free act and deed of said corporation.

Jacqueline Soldner
NOTARY PUBLIC

JACQUELINE SOLDNER
Notary Public in and for Harris County, Texas
My Commission Expires June 4, 1970

CURVE DATA	
I =	10°50'58"
D =	1,000'
R =	5789.65'
L =	1084.94'
T =	544.11'
E =	25.73'

T24S-R17E
SECTIONS 6, 7, 8, 12

5997.95 Feet

M₁₁ L₁ 45.88 N
281.89
X = 2,177,054.59
Y = 138,138.72
134,344.54

X = 2,178,054.59
Y = 137,138.72

2,179,546.81
X = 2,179,346.52
Y = 133,097.79

2,181,447.95
X = 2,182,481.74
Y = 145,480.69
142,897.93
N 88.02' 43" E

G. F. Connelly Survey

PASS

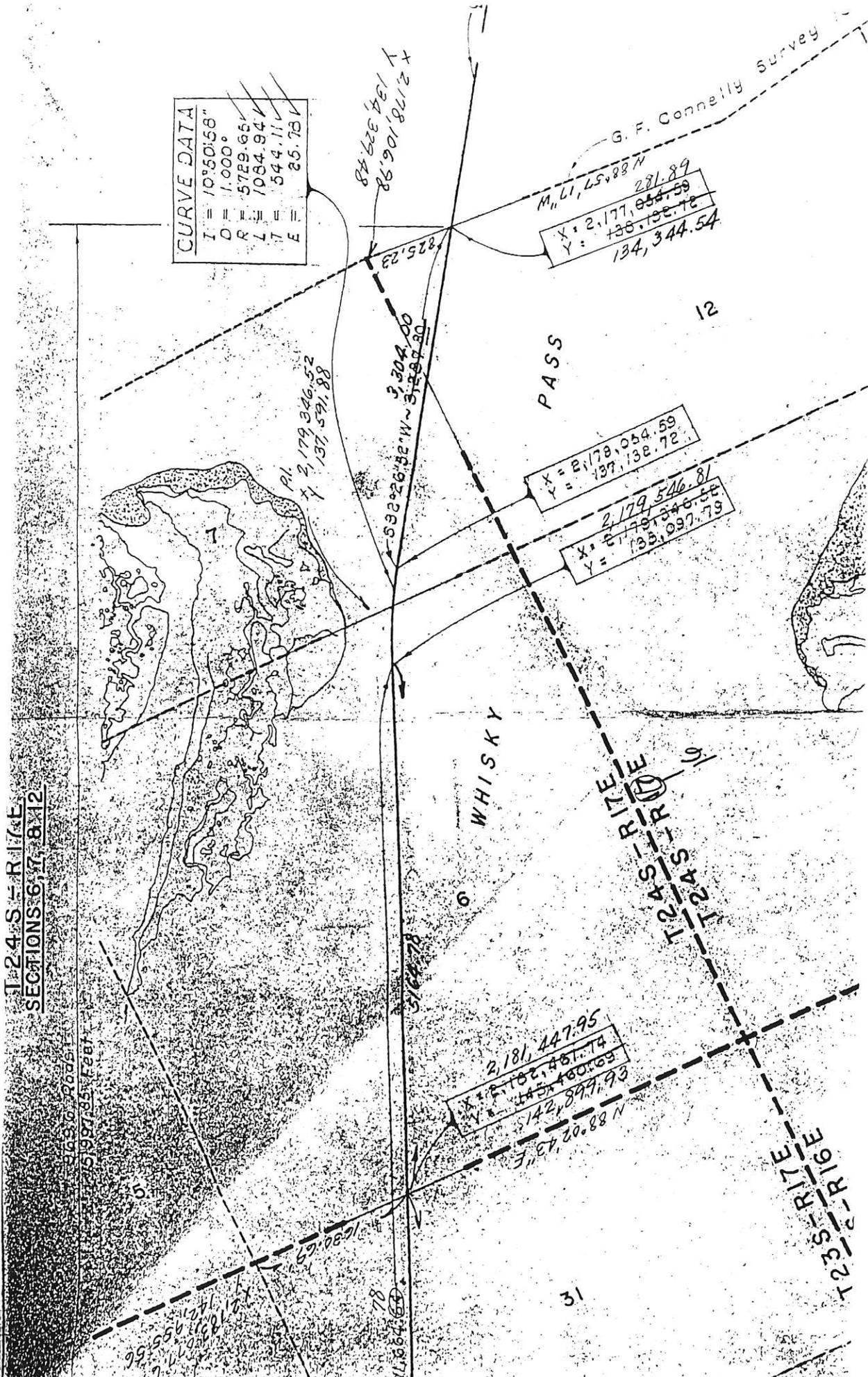
WHISKY

T24S-R17E
T24S-R17E
T24S-R17E

T23S-R17E
T23S-R17E

12

31



3

PIPE LINE PERMIT

THIS AGREEMENT made as of the 29th day of September, 1967, between THE LOUISIANA LAND AND EXPLORATION COMPANY, a Maryland corporation qualified to do business in Louisiana (hereinafter called "Grantor"), and TEXAS GAS TRANSMISSION CORPORATION, a Delaware corporation qualified to do business in Louisiana (hereinafter called "Grantee"),

W I T N E S S E T H:

In consideration of the sum of SEVEN THOUSAND, TWO HUNDRED TWENTY-FIVE AND NO/100 DOLLARS (\$7,225.00), cash paid to Grantor by Grantee, and other good and valuable consideration, the receipt of which is hereby acknowledged, and of the obligations herein undertaken by Grantee, Grantor hereby grants unto Grantee, upon the terms and conditions hereinafter set forth, a license, privilege and permit (hereinafter called "permit"), to construct, maintain and operate one single pipe line, and appurtenances thereto, for the transportation of natural gas, over and across the following described property belonging to Grantor and situated in Terrebonne Parish, Louisiana, to-wit:

Section 23, all fractional
Section 26, all fractional
Section 27, all fractional

In Township 23 South, Range 16 East

Section 30, all fractional

In Township 23 South, Range 17 East

Section 2, all fractional
Section 3, all fractional
Section 4, all fractional

In Township 24 South, Range 17 East

along those portions of the following routes and courses which cross the aforesaid property, to-wit:

Col 452
Entry No. 335861

Beginning at a point in the center line of permit, said point having Lambert Grid Coordinate values of X = 2,167,054.35 and Y = 148,375.22;

Thence with and/or along the center line of permit as follows:

North 76°21'20" East a distance of 3,242 feet to a point, said point having Lambert Grid Coordinate values of X = 2,170,205.00 and Y = 149,140.00;

South 73°17'34" East a distance of 20,937.2 feet to a point, said point having Lambert Grid Coordinate values of X = 2,190,258.40 and Y = 143,120.90;

South 71°31'20" East a distance of 30,040.30 feet to a point, said point having Lambert Grid Coordinate values of X = 2,218,750.0 and Y = 133,600.0.

All bearings and all coordinates set forth herein are based on State Plane Lambert Grid, Louisiana, South Zone.

I.

This permit shall be null and void and of no effect as to any segment of said pipe line which is not constructed, completed and put into actual operation across the premises above described on or before two (2) years from the date hereof.

II.

This permit shall include the right of ingress and egress by Grantee, its agents, representatives and employees for the construction of said pipe line, but for no other purpose, only along said pipe line and for a distance of not exceeding fifty (50) feet on each side of the center line thereof; and, after construction of said pipe line, this permit shall then include the right of ingress by Grantee, its agents, representatives, and employees, for the maintenance, operation, repair and removal of said pipe line, but for no other purpose, only along said pipe line and for a distance of not exceeding thirty (30) feet Northerly from and perpendicular

to, and twenty (20) feet Southerly from and perpendicular to, the routes and courses described hereinabove; all, however, subject to the following:

(a) Grantee shall have the right to dig only a ditch along those portions of the routes and courses hereinabove set forth which cross the aforesaid property and to lay said pipe line in said ditch; provided, however, that such ditch shall not exceed five (5) feet in depth and seven (7) feet in width, and, after construction of said pipe line, Grantee shall cover same with earth to ground level and shall fill all such excavations and diggings with earth to ground level.

(b) Grantee shall also have the right to dig a slip, for the purpose of lay barge flotation, at each navigable stream and canal crossing, during the construction of said pipe line; provided, however, that said slip shall not exceed three hundred (300) feet in length, forty (40) feet in width, and six (6) feet in depth. The spoil from said slip shall be placed equally and continuously along each bank of the slip and around the end thereof, to prevent the intrusion of additional water into the marsh.

(c) Grantee shall install and maintain, at Grantee's expense, and as directed by Grantor, bulkheads, plugs and dams sufficiently adequate to effectively obstruct the flow of water in said ditch, at each and every point designated by Grantor; and Grantee shall also construct and maintain, at Grantee's expense, such other protective works, structures and facilities as designated by Grantor; all of which shall be constructed at the locations and in the manner designated by Grantor. The design of said bulkheads, plugs, dams and other protective works, structures and facilities shall be mutually agreed on by Grantor and Grantee prior to the construction thereof. In the event Grantor deems that any maintenance and/or repairs to the works, structures and facilities

constructed hereunder, in addition to those performed by Grantee, are necessary, then, without limiting the foregoing obligations of Grantee, Grantee shall, within ninety (90) days from the date of written notice by Grantor, commence the said additional maintenance and/or repairs to said works, structures and facilities. Grantee further agrees, at Grantee's expense, to cut such openings in said spoil banks and to construct and maintain such additional works, and to remove any of these constructed hereunder as may from time to time be directed by Grantor, in order to prevent undue erosion, drainage, flooding, infiltration of salt water or intrusion of trespassers of or upon Grantor's property, resulting from Grantee's operations hereunder.

(d) In the construction of said bulkheads, plugs, dams and other protective works, Grantee shall use only spoil dredged from said ditch and shall not dredge upon or from any other portion of Grantor's land for such purposes. Grantee shall not use hydraulic dredges in dredging upon or from any portion of Grantor's land, provided that this restriction shall not apply to any dredging operations conducted on property other than that belonging to Grantor, the purpose of which is to back-fill any portion of the said ditch dredged hereunder.

III.

The rights of Grantee under this permit shall at all times be held by Grantee subject, subordinate and inferior to any presently existing servitude, mineral lease, trapping lease, or other contract affecting said property; and this permit shall not vest in, or ever be construed to vest in, Grantee, any right, title or interest in or to the fee ownership of, or any mineral or mineral rights in, on, under or in respect to the above described property; nor as requiring the consent of Grantee to any lease, grant or other

contract affecting either the surface, minerals or mineral rights in, on, under or in respect to the above described property; nor shall this permit vest in or ever be construed to vest in Grantee any rights to hunt, fish, trap or otherwise take or capture wild-life, game or fish from or on said property.

IV.

This permit is further subject to the right of Grantor, which right is hereby expressly reserved, to use, occupy and enjoy all of the property above described, for any and all purposes, in such manner and at such time as it may desire, provided that such use, occupation and enjoyment shall not unreasonably and unduly interfere with the maintenance and operation of said pipe line. It is agreed, however, that in the event said pipe line, or any operations or facilities of Grantee hereunder, should unreasonably and unduly interfere with the full right of ingress and egress by Grantor to, from over or across said property, the construction, use, or maintenance of waterways, canals, roads, railroads, levees, dams or other transportation, drainage or water control facilities, the exploration for, mining, production, transportation or disposition of oil, gas, sulphur, or other minerals, or shell deposits, the reclamation of land, or any other substantial commercial, industrial or agricultural use or development of said property, or any adjacent property of Grantor, then, in any such event, Grantee shall, at its own cost, risk and expense, upon sixty (60) days prior written notice from Grantor, lower, raise, or otherwise alter or modify said pipe line or facilities to the extent necessary to eliminate such unreasonable and undue interference. It is further agreed that, if said pipe line or facilities shall so preclude a proposed major use or development of Grantor's property as to render it impractical of accomplishment without the relocation of a portion

of said pipe line or facilities, and if the proposed use or development is then of sufficient importance to reasonably warrant such relocation and is of such magnitude that the cost or anticipated benefits thereof exceed the cost of such relocation, then Grantee shall, at its own cost, risk and expense, upon sixty (60) days prior written notice from Grantor, relocate said pipe line or facilities to the extent necessary to permit such use or development. In any of said events, Grantor shall furnish Grantee, free of cost, such additional rights, subject to the terms and provisions of this agreement, as may be necessary for Grantee to accomplish such lowering, raising, alteration, modification or relocation.

V.

Grantee shall bury said pipe line to a sufficient depth so as not to interfere with mineral operations, trapping of fur-bearing animals or the cultivation of the soil, and shall bury said pipe line to a minimum depth of three (3) feet below the surface of the earth and a minimum depth of three (3) feet below the bottom of all canals, bayous, field ditches and trenasses which it may cross, and a permanent monument shall be placed on each side of such canals and bayous; provided that Grantee shall not be required to bury its pipe line to a depth of three (3) feet if in doing so it would violate any rules or regulations of the War Department of the United States or any other duly constituted body from whom Grantee may be required to obtain a permit.

VI.

Grantee shall repair all fences, roads, bridges, canals, ditches, trenasses, and other facilities and improvements located on Grantor's property which may become worn, damaged or destroyed by Grantee in the location, construction, maintenance, use, repair

or removal of said pipe line and shall remove from Grantor's land all brush and other debris caused by its operations hereunder, leaving Grantor's property at all times in a presentable condition, all to the satisfaction of Grantor.

VII.

Grantee assumes and agrees:

- (a) To pay for all loss or damage to Grantor's property, including timber, crops and fur-bearing animals thereon, and
- (b) To indemnify and hold Grantor harmless against any loss or liability on account of injuries to (including death of) persons or damage to property of others, including costs and expenses incident thereto,

arising wholly or in part from or in connection with the existence, construction, maintenance, repair, operation, use, removal, alteration, reconstruction, or removal of the aforesaid pipe line or ditch, or any other facility constructed hereunder, or any defect therein or failure thereof, or any of the Grantee's operations hereunder. In the event any suit is brought against Grantor to recover for or on account of any such damage, injury or death, Grantee will, at Grantor's request appear and defend said suit at its own sole cost and expense, and will pay any judgment that may be entered against Grantor therein when said suit is finally determined.

VIII.

In the event said pipe line should cease to be used for the purposes herein specified for a period of one (1) year or be permanently abandoned for such purposes, or in the event any rights acquired by Grantee hereunder should be used for any other purpose, then in any of such events, all rights acquired by Grantee hereunder shall, at the option of Grantor, cease and terminate without

demand or putting in default; and in such event, or in the event of other termination of this permit, Grantee shall, with reasonable promptness and at its own cost and expense, remove said pipe line and all of its facilities from the hereinabove described property, and otherwise restore the premises to the same condition in which they were prior to the execution of this agreement; provided that Grantee shall not be required to fill any ditch dredged hereunder, except as may be elsewhere provided herein.

IX.

The waiver of a breach of any of the terms or conditions hereof shall be limited to the act or acts constituting such breach, and shall never be construed as being a continuing or permanent waiver of any of such terms or conditions or as a waiver of any other terms and conditions hereof, all of which shall be and remain in full force and effect notwithstanding any such waiver.

X.

This permit is given without any warranty by or recourse on Grantor whatsoever, not even for the return of the consideration above recited. Grantor does not warrant or represent the correctness of any survey purporting to show the location of Grantor's land, and nothing herein contained shall operate as an estoppel against Grantor's establishing the correct location of the boundaries of Grantor's land.

XI.

All of the provisions hereof shall inure to the benefit of and be binding upon the parties hereto, their successors and assigns.

IN TESTIMONY WHEREOF, this instrument has been executed in five (5) original counterparts in the presence of the undersigned competent witnesses.

WITNESSES:

Louise G. Boudreau

Arden B. Burns

THE LOUISIANA LAND AND
EXPLORATION COMPANY

By Frank W. Ritchie
Senior Vice President

Reed Jackson

Sherry L. Bennett

TEXAS GAS TRANSMISSION
CORPORATION

By A. Z. Roberts
Vice President

STATE OF LOUISIANA
PARISH OF TERREBONNE

On this 29th day of September, 1967, before me appeared FRANK M. RITCHIE, to me personally known, who, being by me duly sworn, did say that he is a Senior Vice President of THE LOUISIANA LAND AND EXPLORATION COMPANY, a Maryland corporation, and that the seal affixed to said instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its Board of Directors, and said appearer acknowledged said instrument to be the free act and deed of said corporation.

Frank M. Ritchie
NOTARY PUBLIC

DEPUTY CLERK OF COURT
AND EX-OFFICIO NOTARY PUBLIC
PARISH OF TERREBONNE, LA.

STATE OF KENTUCKY
COUNTY OF DAVIESS

On this 29th day of January, 1968, before me appeared A. L. Roberts, to me personally known, who, being by me duly sworn, did say that he is a Vice President of TEXAS GAS TRANSMISSION CORPORATION, a Delaware corporation, and that the seal affixed to said instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its Board of Directors, and said appearer acknowledged said instrument to be the free act and deed of said corporation.

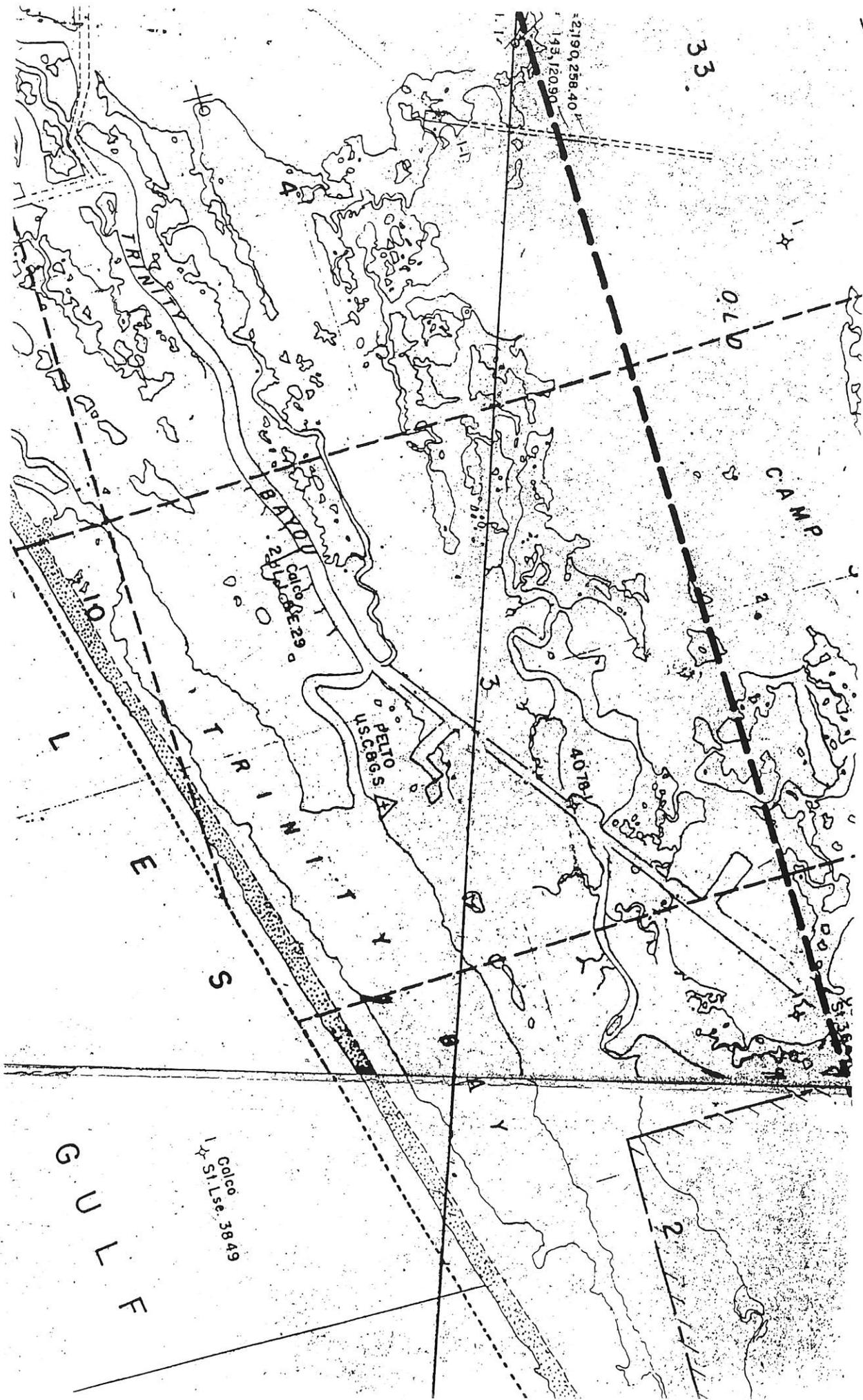
STATE OF LOUISIANA
PARISH OF TERREBONNE

I HEREBY CERTIFY that the within and foregoing is a true copy of the original on file in this office and recorded February 5, 1968 at 11:27 o'clock A.M., in Ormeysance Book No. 452, folio --, et seq. Under Entry No. 336861

James G. Elliott
NOTARY PUBLIC

My Commission Expires April 10, 1968

Office of Clerk of Court and Recorder,
Houma, Louisiana February 5, 1968
Mario B. Clark
Clerk of Court



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PIPE LINE PERMIT

THIS AGREEMENT made as of the 27th day of April, 1966, between THE LOUISIANA LAND AND EXPLORATION COMPANY, a Maryland corporation qualified to do business in Louisiana (hereinafter called "Grantor"), and CHEVRON OIL COMPANY, a California corporation qualified to do business in Louisiana (hereinafter called "Grantee"),

W I T N E S S E T H:

In consideration of the sum of FIVE HUNDRED SEVENTY-THREE AND 45/100 DOLLARS (\$573.45), cash paid to Grantor by Grantee, and other good and valuable consideration, the receipt of which is hereby acknowledged, and of the obligations herein undertaken by Grantee, Grantor hereby grants unto Grantee, upon the terms and conditions hereinafter set forth, a license, privilege and permit (hereinafter called "permit"), to construct, maintain and operate one single pipe line, and appurtenances thereto, for the transportation of oil, gas, and other hydrocarbons over and across the following described property belonging to Grantor and situated in Terrebonne Parish, Louisiana, to-wit:

Section 32, all fractional
Section 33, all fractional

In Township 23 South, Range 18 East

along those portions of the following route and course which cross the aforesaid property, to-wit:

Beginning at a point in the center line of permit, said point having Lambert Grid Coordinate values of X = 2,221,506.59 and Y = 147,969.22;

Thence, with and/or along the center line of permit as follows:

South 40°38'50" West a distance of 3,193.07 feet to a point;

South 22°59'00" East to the extent of ownership of Grantor.

All bearings and all coordinates set forth herein are based on State Plane Lambert Grid, Louisiana, South Zone.

COB 418

Entry no. 298428

I.

This permit shall be null and void and of no effect as to any segment of said pipe line which is not constructed, completed and put into actual operation across the premises above described, on or before two (2) years from the date hereof.

II.

This permit shall include the right of ingress and egress by Grantee, its agents, representatives and employees for the construction of said pipe line, but for no other purpose, only along said pipe line and for a distance of not exceeding fifty (50) feet on each side of the center line thereof; and, after construction of said pipe line, this permit shall then include the right of ingress by Grantee, its agents, representatives and employees, for the maintenance, operation, repair and removal of said pipe line, but for no other purpose, only along said pipe line and for a distance of not exceeding twenty (20) feet on each side of the center line thereof; all, however, subject to the following:

(a) Grantee shall have the right to dig only a ditch along those portions of the routes and courses hereinabove set forth which cross the aforesaid property and to lay said pipe line in said ditch; provided, however, that such ditch shall not exceed five (5) feet in depth and seven (7) feet in width, and, after construction of said pipe line, Grantee shall cover same with earth to ground level and shall fill all such excavations and diggings with earth to ground level;

(b) Grantee shall install and maintain, at Grantee's expense, and as directed by Grantor, bulkheads, plugs and dams sufficiently adequate to effectively obstruct the flow of water in said ditch, at each and every point designated by Grantor; and Grantee shall also construct and maintain, at Grantee's expense, such other protective works, structures and facilities as designated by Grantor; all of which shall be constructed at the locations and in the manner designated by Grantor. The design of said bulkheads, plugs, dams and other protective works, structures and

facilities shall be mutually agreed on by Grantor and Grantee prior to the construction thereof. In the event Grantor deems that any maintenance and/or repairs to the works, structures and facilities constructed hereunder, in addition to those performed by Grantee, are necessary, then without limiting the foregoing obligations of Grantee, Grantee shall, within ninety (90) days from the date of written notice by Grantor, commence the said additional maintenance and/or repairs to said works, structures and facilities. Grantee further agrees, at Grantee's expense, to cut such openings in said spoil banks and to construct and maintain such additional works, and to remove any of these constructed hereunder, as may from time to time be directed by Grantor, in order to prevent undue erosion, drainage, flooding, infiltration of salt water or intrusion of trespassers of or upon Grantor's property, resulting from Grantee's operations hereunder;

(c) In the construction of said bulkheads, plugs, dams and other protective works, Grantee shall use only spoil dredged from said ditch and shall not dredge upon or from any other portion of Grantor's land for such purposes. Grantee shall not use hydraulic dredges in dredging upon or from any portion of Grantor's land, provided that this restriction shall not apply to any dredging operations conducted on property other than that belonging to Grantor, the purpose of which is to back-fill any portion of said ditch dredged hereunder.

III.

The rights of Grantee under this permit shall at all times be held by Grantee subject, subordinate and inferior to any presently existing servitude, mineral lease, trapping lease or other contract affecting said property; and this permit shall not vest in or ever be construed to vest in, Grantee any right, title or interest in or to the fee ownership of, or any mineral or mineral rights in, on, under or in respect to, the property above described, nor as requiring the consent of Grantee to any lease, grant or other contract affecting either the surface, minerals or mineral rights in, on, under or in respect to the above described

property; nor shall this permit vest in or ever be construed to vest in Grantee any rights to hunt, fish, trap or otherwise take or capture wildlife, game or fish from or on said property.

IV.

This permit is further subject to the right of Grantor, which right is hereby expressly reserved, to use, occupy and enjoy all of the property above described, for any and all purposes, in such manner and at such time as it may desire, provided that such use, occupation and enjoyment shall not unreasonably and unduly interfere with the maintenance and operation of said pipe line. It is agreed, however, that in the event said pipe line, or any operations or facilities of Grantee hereunder, should unreasonably and unduly interfere with the full right of ingress and egress by Grantor to, from, over or across said property, the construction, use, or maintenance of waterways, canals, roads, railroads, levees, dams or other transportation, drainage or water control facilities, the exploration for, mining, production, transportation or disposition of oil, gas, sulphur, or other minerals, or shell deposits, the reclamation of land, or any other substantial commercial, industrial or agricultural use or development of said property, or any adjacent property of Grantor, then, in any such event, Grantee shall, at its own cost, risk and expense, upon sixty (60) days' prior written notice from Grantor, lower, raise, or otherwise alter or modify said pipe line or facilities to the extent necessary to eliminate such unreasonable and undue interference. It is further agreed that, if said pipe line or facilities shall so preclude a proposed major use or development of Grantor's property as to render it impractical of accomplishment without the relocation of a portion of said pipe line or facilities, and if the proposed use or development is then of sufficient importance to reasonably warrant such relocation and is of such magnitude that the cost or anticipated benefits thereof exceed the cost of such relocation, then Grantee shall, at its own cost, risk and expense, upon sixty (60) days' prior written notice from Grantor, relocate said pipe line or facil-

ities to the extent necessary to permit such use or development. In any of said events. Grantor shall furnish Grantee, free of cost, such additional rights, subject to the terms and provisions of this agreement, as may be necessary for Grantee to accomplish such lowering, raising, alteration, modification or relocation.

V.

Grantee shall bury said pipe line to a sufficient depth so as not to interfere with mineral operations, trapping of fur-bearing animals or the cultivation of the soil, and shall bury said pipe line to a minimum depth of three (3) feet below the surface of the earth and a minimum depth of three (3) feet below the bottom of all canals, bayous, field ditches and trenasses which it may cross, and a permanent monument shall be placed on each side of such canals and bayous; provided that Grantee shall not be required to bury its pipe line to a depth of three (3) feet, if in doing so it would violate any rules or regulations of the War Department of the United States or any other duly constituted body from whom Grantee may be required to obtain a permit.

VI.

Grantee shall repair all fences, roads, bridges, canals, ditches, trenasses and other facilities and improvements located on Grantor's property which may become worn, damaged or destroyed by Grantee in the location, construction, maintenance, use, repair or removal of said pipe line and shall remove from Grantor's land all brush and other debris caused by its operations hereunder, leaving Grantor's property at all times in a presentable condition, all to the satisfaction of Grantor.

VII.

Grantee assumes and agrees:

- (a) To pay for all loss or damage to Grantor's property, including timber, crops and fur-bearing animals thereon, and
- (b) To indemnify and hold Grantor harmless against any loss or liability on account of injuries to (including death of) persons

or damage to property of others, including costs and expenses incident thereto,

arising wholly or in part from or in connection with the existence, construction, maintenance, repair, operation, use, removal, alteration, reconstruction or removal of the aforesaid pipe line or ditch, or any other facility constructed hereunder, or any defect therein or failure thereof, or any of the Grantee's operations hereunder. In the event any suit is brought against Grantor to recover for or on account of any such damage, injury or death, Grantee will, at Grantor's request, appear and defend said suit at its own sole cost and expense, and will pay any judgment that may be entered against Grantor therein when said suit is finally determined.

VIII.

In the event said pipe line should cease to be used for the purposes herein specified for a period of two (2) years or be permanently abandoned for such purposes, or in the event any rights acquired by Grantee hereunder should be used for any other purpose, then in any of such events, all rights acquired by Grantee hereunder shall, at the option of Grantor, cease and terminate without demand or putting in default; and in such event, or in the event of other termination of this permit, Grantee shall, with reasonable promptness and at its own cost and expense, remove said pipe line and all of its facilities from the hereinabove described property, and otherwise restore the premises to the same condition in which they were prior to the execution of this agreement; provided that Grantee shall not be required to fill any ditch dredged hereunder, except as may be elsewhere provided herein.

IX.

The waiver of a breach of any of the terms or conditions hereof shall be limited to the act or acts constituting such breach, and shall never be construed as being a continuing or permanent waiver of any of such terms or conditions or as a waiver of any other terms and conditions hereof, all of which shall be and remain in full force and effect notwithstanding any such waiver.

X.

This permit is given without any warranty by or recourse on Grantor whatsoever, not even for the return of the consideration above recited. Grantor does not warrant or represent the correctness of any survey purporting to show the location of Grantor's land, and nothing herein contained shall operate as an estoppel against Grantor's establishing the correct location of the boundaries of Grantor's land.

XI.

All of the provisions hereof shall inure to the benefit of and be binding upon the parties hereto, their successors and assigns.

IN TESTIMONY WHEREOF, this instrument has been executed in five (5) original counterparts in the presence of the undersigned competent witnesses.

WITNESSES:

Louise G. Boudreaux
Nanda B. Brunet

THE LOUISIANA LAND AND EXPLORATION COMPANY
By Frank M. Little
Senior Vice President

Mary Janet Tate
Mary Janet Tate
Johnnie L. Booser
Johnnie L. Booser

CHEVRON OIL COMPANY
By R. d. King
Its ATTORNEY IN FACT
By J. G. Ratto
Its ATTORNEY IN FACT

STATE OF LOUISIANA
PARISH OF TERREBONNE

On this 28th day of April, 1966, before me appeared FRANK M. RITCHIE, to me personally known, who, being by me duly sworn, did say that he is a Senior Vice President of THE LOUISIANA LAND AND EXPLORATION COMPANY, a Maryland corporation, and that the seal affixed to said instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its Board of Directors, and said appearer acknowledged said instrument to be the free act and deed of said corporation.

Roy B. Theriot
NOTARY PUBLIC

DEPUTY CLERK OF COURT
AND EX-OFFICIO NOTARY PUBLIC
PARISH OF TERREBONNE, LA.

STATE OF LOUISIANA
PARISH OF ORLEANS

On this 3rd day of May, 1966, before me appeared R. D. KING and E. J. BATHKE, to me personally known, who, being by me duly sworn, did say that they are the ATTORNEYS IN FACT of CHEVRON OIL COMPANY, a California corporation, and that the seal affixed to the foregoing instrument is the corporate seal of said corporation, and that said instrument was signed and sealed on behalf of said corporation by authority of its Board of Directors, and said appearers acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my official hand and seal on the date hereinabove written.

Philip Herman Boud
NOTARY PUBLIC

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TATE LEASE 2620

SUN OIL CO. PURE OIL CO.

STATE LEASE 2621
PAN AM PETROLEUM CORP.

Clegg & Hunt
St. 2621

A.N.R. Prod.
St. 8817

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S.L. 2620
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WINE
T-2421
ISLAND

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T23S-R18E

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MUD

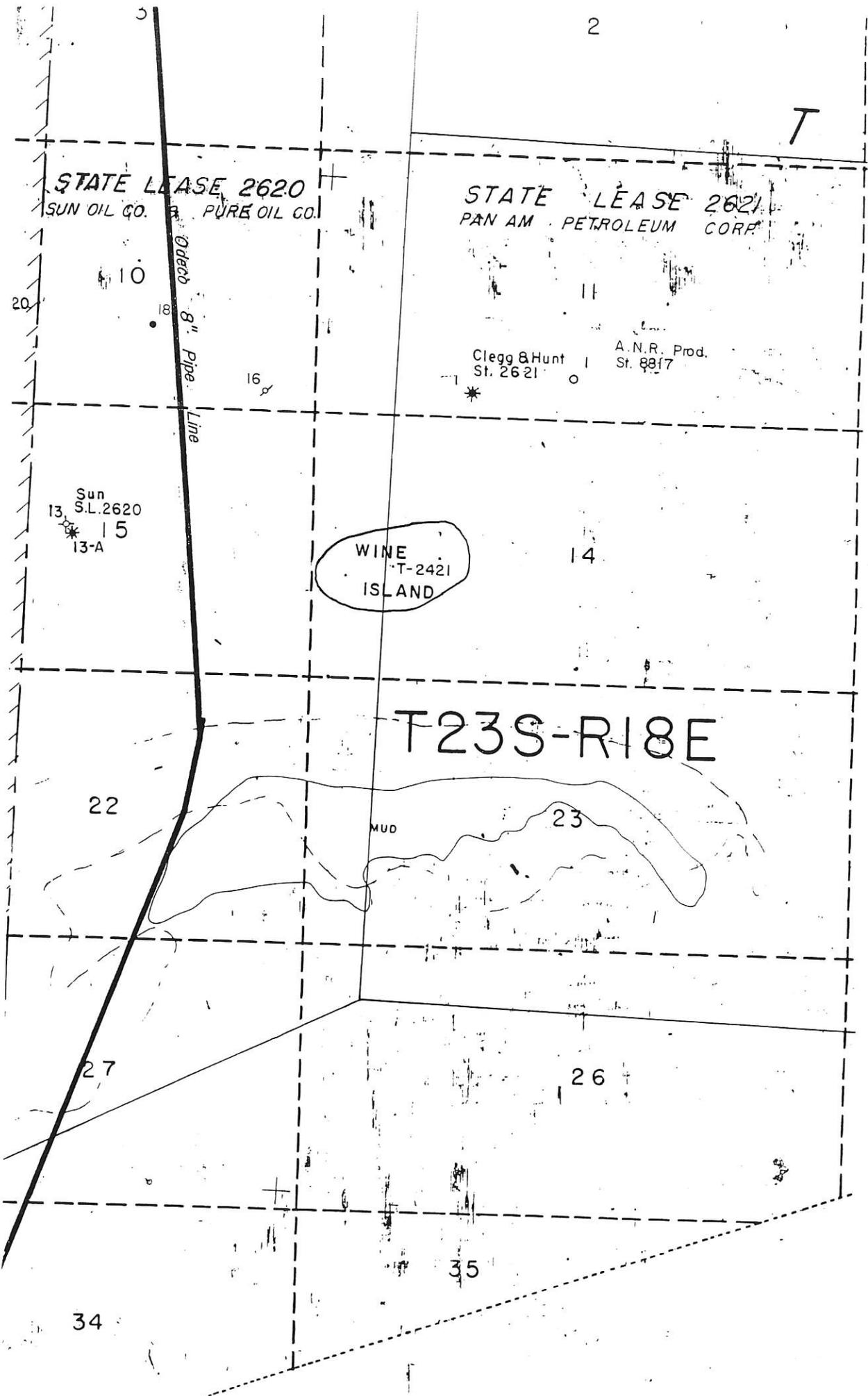
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STATE LEASE 2620
SUN OIL CO. & PURE OIL CO.

STATE LEASE 2621
PAN AM PETROLEUM CORP.

Clegg & Hunt
St. 2621

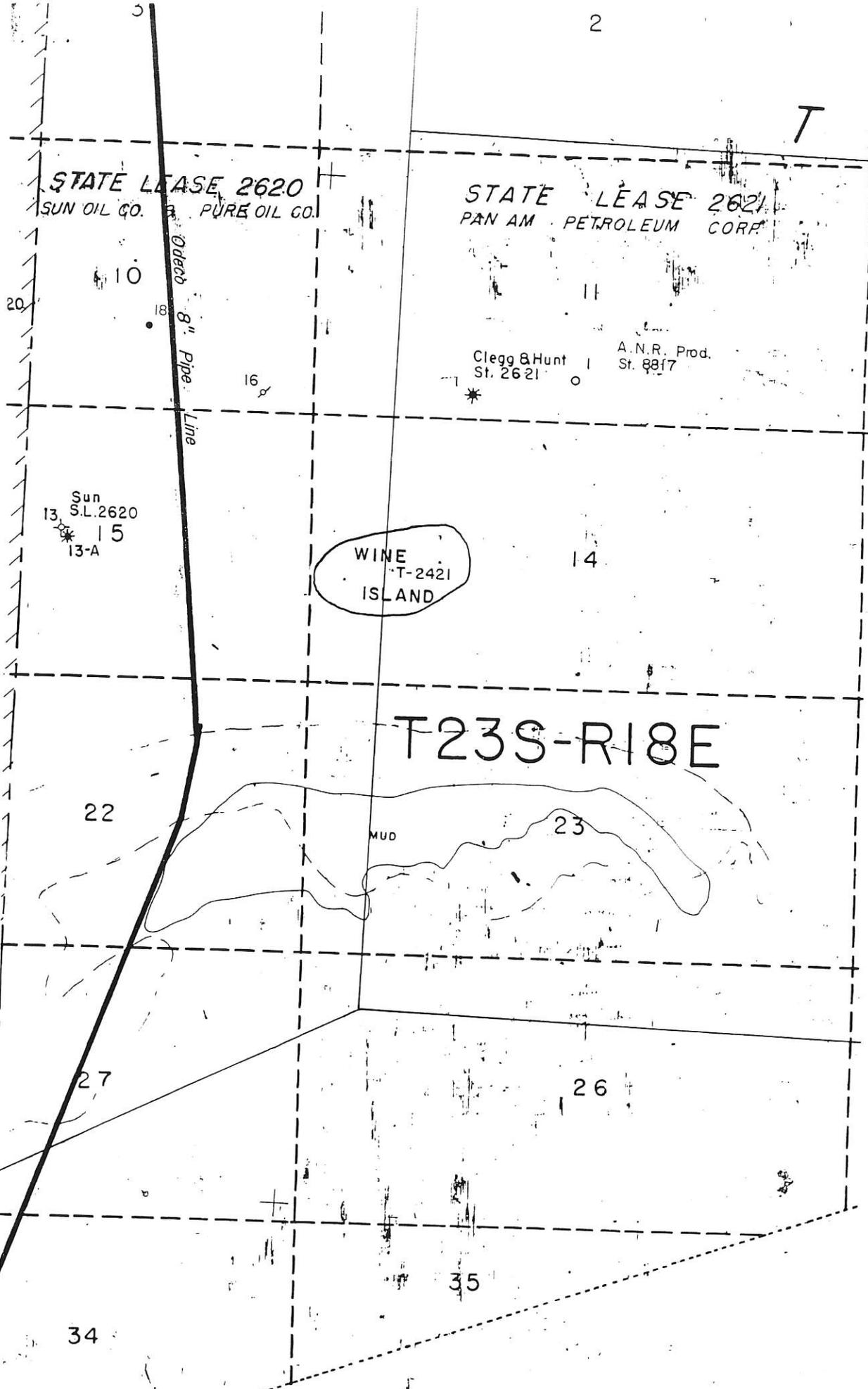
A.N.R. Prod.
St. 8817

Odessa
8" Pipe
Line

WINE
T-2421
ISLAND

T23S-R18E

MUD



APPENDIX I

DRAFT

SERVITUDE AND RIGHT-OF-WAY AGREEMENT

STATE OF LOUISIANA

PARISH OF _____

THIS AGREEMENT, made and entered into this _____ day of _____,
19____, by between:

hereinafter called the "Grantor", as owner of the below described property and the State of Louisiana, through its Department of Natural Resources, herein represented by _____, _____, hereinafter called "GRANTEE (SPONSOR)".

WITNESSETH: For and in consideration of the promises and undertakings by GRANTEE (SPONSOR) to GRANTOR(s) herein, and further for the sum of Ten and No/100 (\$10.00) Dollars and other good and valuable consideration, the receipt of which is hereby acknowledged, GRANTOR(s) hereby grant unto GRANTEE (SPONSOR), its successors, assigns or transferees, the necessary rights-of-way, servitudes, and easements together with the right to enter in, on and over the following described property:

for planning, construction, operation, maintenance, and monitoring of conservation and restorative measures, structures, and/or appurtenances as part of the _____
_____ Conservation Project (plan) located on said (GRANTOR) property.

I. Said servitude including the rights to perform the following activities for the purposes authorized by federal (P.L. 101-646) and state (R.S. 49:213 & 214) law and at the sites or locations identified in the official project plans and attached exhibits and within the limits and bounds therein described:

a. The right to construct (including the necessary excavation and/or filling), operate, maintain and monitor water control structures including all appurtenances thereto, in, over and across the said lands and waterbottoms as shown on Exhibit(s) _____, at site(s) _____ (see Exhibit(s) _____);

b. The right to construct, operate, maintain and monitor structures or improvements to enhance the deposition of sediment upon said lands and waterbottoms as shown on Exhibit(s) _____ at site(s) _____ (see Exhibit(s) _____);

c. The right to plant or cause the growth of vegetation in, on, over and across said lands, including the right to nourish, replenish and maintain said vegetation at locations _____ (see Exhibit(s) _____);

d. The right to temporarily or permanently plug, close or fill selected channels, canals, ditches, streams or water bodies located on the said lands and waterbottoms as shown on Exhibit(s) _____, at site(s) _____ (see Exhibit(s) _____);

e. The right to construct (including the necessary borrow areas), maintain and monitor overflow banks/no channelized water exchange on, over and across said lands as shown on Exhibit(s) _____ (see Exhibit(s) _____);

f. The right to deposit dredged sediment and/or fill material on, over, and across the said lands and waterbottoms by either natural or mechanical means, including the right to alter land contours and undertake management practices to enhance or extend the beneficial use of dredged or sediment deposition for wetland creation, restoration and enhancement as shown on Exhibit(s) _____ (see Exhibit(s) _____);

g. The right to borrow, excavate, grade, and remove soil, vegetation and associated materials from the said lands and waterbottoms as shown on Exhibit(s) _____ (see Exhibit(s) _____);

h. The right to construct, operate, maintain, and monitor channel improvements works on, over and across the said lands and waterbottoms, including the right to enlarge, improve, deepen or realign existing channels, canals, or ditches as shown on Exhibit(s) _____ (see Exhibit(s) _____);

i. The right, temporarily, or for the life of the project, to post signs or notices on or near appropriate project features as necessary for public safety.

j. The right to relocate, alter, replace or remove appropriate pipelines, utility lines, facilities or other structures in, or under, and across said lands as shown on Exhibit(s) _____ (see Exhibit(s) _____);

k. The right to construct, locate, maintain and service required monitoring devices and equipment on said lands and waterbottoms as shown on Exhibit(s) _____, at site(s) _____ (see Exhibit(s) _____);

l. The right to enter said lands and waterbottoms for the purposes of conducting surveys, inspections and investigations required to evaluate the effectiveness of project features in maintaining/improving wetland quantity and quality.

II. The GRANTOR(s) shall allow the GRANTEE (SPONSOR) and its designated representatives, assigns, or contractors the right to enter upon the above described properties to survey, plan, construct, operate, maintain, and monitor the proposed structural measures and/or appurtenances as outlined in the project plans. However, the GRANTOR(s) reserve all such rights and privileges in the said land as may be used without interfering with or abridging the rights herein acquired by the GRANTEE (SPONSOR). GRANTEE (SPONSOR) agrees to give reasonable notice to GRANTOR(s) prior to initiation of work or the need for ingress or egress for the purposes required for the project.

III. The GRANTEE (SPONSOR) further agrees to indemnify and hold GRANTOR(s) harmless against any loss of liability on account of injuries to (including the death of) persons or to the property of others, including reasonable attorney's fees, arising wholly or in part from or in connection with GRANTEE'S (SPONSOR'S) operations hereinunder, except for any loss or liability on account of injuries resulting from the negligence of GRANTOR(s). In the event

any suit is brought against one or more of the GRANTOR(s) to recover for or on account of any such damage, injury or death, resulting wholly or in part from GRANTEE'S (SPONSOR'S) operations, GRANTEE (SPONSOR) will, at GRANTOR'S written request, appear and defend said suit at GRANTEE'S (SPONSOR'S) own sole cost and expense, and will be responsible for any judgement that may be entered against GRANTOR(s) therein when said suit is finally determined. Should GRANTEE (SPONSOR) contract out work to be performed on the servitude property, GRANTEE (SPONSOR) shall require the contractor to list GRANTOR as an additional insured on all insurance policies required by GRANTEE (SPONSOR). Such insurance policies shall provide that GRANTOR is, and will be, protected from and defended and insured against, without costs or expense to it, any liability or loss, including damages, fines, penalties and attorneys' fees, on account of injuries to persons (including death, or damage to property of any kind or the violation of any law or regulation, arising wholly or partially out of its operations.

IV. GRANTEE shall be responsible for repair or replacement in like manner of any fences, roads, bridges, levees, ditches and other facilities located on GRANTOR'S property which may be damaged or destroyed by GRANTEE during the construction, operation and maintenance of the structures and/or appurtenances installed as part of the project, and shall remove or dispose of all debris associated with construction, operation and maintenance of the project.

V. GRANTEE (SPONSOR) acknowledges, that La. R.S. 49:213.7E(2), provides that no rights whatsoever shall be created in the public, whether such rights be in the nature of ownership, servitude, or use, with respect to any private lands or waters utilized, enhanced, created, or otherwise affected by activities of any governmental agency, local, state, or federal,

or any person contracting with same for the performance of any activities, funded in whole or in part, by expenditures from the Wetlands Conservation and Restoration Fund. In the event legal proceedings are instituted by any person seeking recognition of right of ownership, servitude, or use in or over private property solely on the basis of the expenditure of funds from the Wetlands Conservation and Restoration Fund, the state shall indemnify and hold harmless the owner of such property for any costs, expense, or loss related to such proceeding, including court costs and attorney fees.

VI. It is understood that said GRANTOR(s) shall retain title and all property rights affected by this servitude, and all minerals beneath the properties are not affected in any way thereby. No surface activities for the exploration, drilling, or mining of oil, gas, or other mineral or any kind shall be conducted upon the area subject to the servitude without prior written permission notice to the GRANTEE (SPONSOR). Such activities shall not unduly interfere with or abridge the rights granted herein granted to GRANTEE (SPONSOR). The GRANTEE (SPONSOR) will consult and negotiate with the GRANTOR(s) concerning appropriate measures to mitigate any such activities which impact structural features installed upon the area subject to the servitude.

VII. Subject to the above, in its exercise of the rights herein granted, GRANTEE agrees not to unduly interfere with the (a) oil and gas operations, (b) agricultural operations, and (c) hunting, trapping and alligator egg operations presently occurring on GRANTORS' lands, or which may hereafter occur in the future. GRANTEE specifically acknowledges the continuing right of GRANTOR(s), its successors, assigns, transferees or lessees to use, occupy and enjoy all of the property above described, for all purposes, in such manner and at such times as they, or any of them, shall desire to use same, including, but without limitation, for the purpose of

conducting mineral operations on any of such property, for the discovery, production, storage, transportation and disposition of oil, gas, sulphur or other minerals, under mineral leases or otherwise, and for the purpose of farming, grazing, hunting and trapping fur-bearing animals thereon; provided, however, that such use, occupation, and enjoyment shall not unreasonably and unduly interfere with the lawful activities of GRANTEE pursuant to this Agreement.

VIII. ~~Servitudes, leases or other interest presently existing on or affecting the property are as follows: [List individual servitudes, leases, or other interests. If none presently exists please indicate "none".]~~

IX. The rights herein granted to GRANTEE (SPONSOR) are subject to all existing instruments of record in _____ Parish, Louisiana, affecting the Servitude Premises, and any unrecorded agreement described on Exhibit "B" attached hereto and made a part hereof.

For these servitudes, leases, or other interests, GRANTOR(s) agrees to cooperate with GRANTEE (SPONSOR) in obtaining appropriate documentation from such holders that they shall honor this servitude.

X. GRANTOR(s) further states that its records reflect that there are no other existing servitudes, leases, or other interests on or affecting the property which will interfere with this servitude. Should GRANTOR(s) determine that there are other servitudes, leases or other interests which the affect the property, GRANTOR(s) agrees to cooperate with the GRANTEE

(SPONSOR) in obtaining appropriate documentation from such servitude, lease or other interest holder that such holder will honor this Servitude.

XI. The GRANTOR(s) hereby represents that he/she/it is the lawful owner of the hereinabove described property, with the rights and privileges herein and hereby conveyed unto the GRANTEE (SPONSOR) and its employees, successors, and assigns.

XII. GRANTOR(s) specifically do not warrant or represent the correctness of any survey, or any of the plats attached hereto which purport to show the location of GRANTORS' land. If at any time any questions or litigation should arise as to the ownership of any part of the property covered hereby or as to any boundary or limit of any part of the separate properties covered by this agreement, neither this agreement, nor any of the data, maps or exhibits considered in connection herewith, whether attached hereto or not, nor any course of conduct followed by any party hereto pursuant to this agreement, shall ever be construed to be or permitted to serve as a basis of estoppel against any party hereto or prevent any party hereto from establishing its ownership, or having the boundaries or limits of its property determined, in any lawful manner, anything herein contained to the contrary notwithstanding.

XIII. This servitude becomes effective upon the date of the signature of the GRANTEE (SPONSOR) and shall remain in effect for twenty years from the date of acceptance of the completed project by the GRANTEE (SPONSOR). The terms of this servitude will remain in effect upon transfer of ownership.

XIV. GRANTEE (SPONSOR) acknowledges that the Servitude Premises and the canals and waterways thereon or leading thereto may have been the subject of extensive seismic evaluations and operations relating to the exploration for and production of oil, gas and

other minerals therefrom and that GRANTOR has an active marsh management program that involves water control and marsh containment improvements throughout its property. GRANTEE (SPONSOR) further acknowledges that it has been given the opportunity to inspect the Servitude Premises and any navigable waters on GRANTOR'S other property which may be used by GRANTEE (SPONSOR) and its representatives to access the Servitude Premises and accepts their condition for all purposes.

XV. GRANTEE (SPONSOR) may upon prior written notice to GRANTOR assign its rights hereunder, but only to the extent necessary to implement the purposes of the Project on the Servitude Premises. This servitude becomes effective upon the date of the signature of the GRANTEE (SPONSOR), and shall remain in effect for twenty years, provided, however, this servitude shall sooner and automatically terminate if the sponsoring agency should abandon the Project; and, provided further, that if GRANTEE (SPONSOR) should fail to commence work or improvements on GRANTOR'S property affected hereby to implement the Project within one year of GRANTOR'S execution hereof, GRANTEE (SPONSOR) will be deemed to have abandoned this servitude whereupon GRANTEE (SPONSOR) shall have no further rights hereunder.

XVI. This agreement shall be binding upon, and inure to the benefit of, the parties hereto, their successors in interest, transferees and assigns.

IN WITNESS WHEREOF, the GRANTOR(S) has hereunto signed his name this ____ day of _____, 19__ in the presence of the two undersigned competent witnesses.

WITNESSES:

GRANTOR(S):

By: _____
Title: _____

IN WITNESS WHEREOF, the GRANTEE has hereunto signed his name this ____ day of _____, 19__ in the presence of the two undersigned competent witnesses.

WITNESSES:

GRANTEE (SPONSOR):

STATE OF LOUISIANA
Department of Natural Resources

By: _____
Title: _____

IN WITNESS WHEREOF, the GRANTEE has hereunto signed his name this ____ day of _____, 19__ in the presence of the two undersigned competent witnesses.

WITNESSES:

GRANTEE (SPONSOR):

STATE OF LOUISIANA
PARISH OF LAFOURCHE

By: _____
Title: _____

STATE OF _____

PARISH OF _____

BEFORE ME, the undersigned authority, on this _____ day of _____, 1992, personally came and appeared _____, to me known, who declared that he/she/it is the _____ of the Department of Natural Resources, State of Louisiana, that he/she/it executed the foregoing instrument on behalf of said State Agency and that the instrument was signed pursuant to the authority granted to him by said State Agency and that he/she/it acknowledged the instrument to be the free act and deed of said State Agency.

NOTARY PUBLIC

STATE OF _____

PARISH OF _____

BEFORE ME, the undersigned authority, on this _____ day of _____, 1992, personally came and appeared _____, to me known, who declared that he/she/it is the Parish President of the Parish of Lafourche, State of Louisiana, that he/she/it executed the foregoing instrument on behalf of said Parish of Lafourche and that the instrument was signed pursuant to the authority granted to him by said Parish of Lafourche and that he/she/it acknowledged the instrument to be the free act and deed of said Parish of Lafourche.

NOTARY PUBLIC

STATE OF _____

PARISH (COUNTY) OF _____

BEFORE ME, the undersigned authority, on this _____ day of _____, 1992, before me personally appeared _____, to me known to be the person described in and who executed the foregoing instrument, and acknowledged that he executed it as his free act and deed.

NOTARY PUBLIC

APPENDIX J

DRAFT

SERVITUDE AND RIGHT-OF-WAY AGREEMENT

STATE OF LOUISIANA

PARISH OF _____

THIS AGREEMENT, made and entered into this _____ day of _____,
19____, by between:

hereinafter called the "Grantor", as owner of the below described property and the State of
Louisiana, through its Department of Natural Resources, herein represented by
_____, _____, hereinafter called "GRANTEE
(SPONSOR)".

WITNESSETH: For and in consideration of the promises and undertakings by GRANTEE
(SPONSOR) to GRANTOR(s) herein, and further for the sum of Ten and No/100 (\$10.00)
Dollars and other good and valuable consideration, the receipt of which is hereby acknowledged,
GRANTOR(s) hereby grant unto GRANTEE (SPONSOR), its successors, assigns or transferees,
the necessary rights-of-way, servitudes, and easements together with the right to enter in, on and
over the following described property:

for planning, construction, operation, maintenance, and monitoring of conservation and restorative measures, structures, and/or appurtenances as part of the _____
_____ Conservation Project (plan) located on said (GRANTOR) property.

I. Said servitude including the rights to perform the following activities for the purposes authorized by federal (P.L. 101-646) and state (R.S. 49:213 & 214) law and at the sites or locations identified in the official project plans and attached exhibits and within the limits and bounds therein described:

a. The right to construct (including the necessary excavation and/or filling), operate, maintain and monitor water control structures including all appurtenances thereto, in, over and across the said lands and waterbottoms as shown on Exhibit(s) _____, at site(s) _____ (see Exhibit(s) _____);

b. The right to construct, operate, maintain and monitor structures or improvements to enhance the deposition of sediment upon said lands and waterbottoms as shown on Exhibit(s) _____ at site(s) _____ (see Exhibit(s) _____);

c. The right to plant or cause the growth of vegetation in, on, over and across said lands, including the right to nourish, replenish and maintain said vegetation at locations _____ (see Exhibit(s) _____);

d. The right to temporarily or permanently plug, close or fill selected channels, canals, ditches, streams or water bodies located on the said lands and waterbottoms as shown on Exhibit(s) _____, at site(s) _____ (see Exhibit(s) _____);

e. The right to construct (including the necessary borrow areas), maintain and monitor overflow banks/no channelized water exchange on, over and across said lands as shown on Exhibit(s) _____ (see Exhibit(s) _____);

f. The right to deposit dredged sediment and/or fill material on, over, and across the said lands and waterbottoms by either natural or mechanical means, including the right to alter land contours and undertake management practices to enhance or extend the beneficial use of dredged or sediment deposition for wetland creation, restoration and enhancement as shown on Exhibit(s) _____ (see Exhibit(s) _____);

g. The right to borrow, excavate, grade, and remove soil, vegetation and associated materials from the said lands and waterbottoms as shown on Exhibit(s) _____ (see Exhibit(s) _____);

h. The right to construct, operate, maintain, and monitor channel improvements works on, over and across the said lands and waterbottoms, including the right to enlarge, improve, deepen or realign existing channels, canals, or ditches as shown on Exhibit(s) _____ (see Exhibit(s) _____);

i. The right, temporarily, or for the life of the project, to post signs or notices on or near appropriate project features as necessary for public safety.

j. The right to relocate, alter, replace or remove appropriate pipelines, utility lines, facilities or other structures in, or under, and across said lands as shown on Exhibit(s)

_____ (see Exhibit(s) _____);

k. The right to construct, locate, maintain and service required monitoring devices and equipment on said lands and waterbottoms as shown on Exhibit(s) _____, at

site(s) _____ (see Exhibit(s) _____);

l. The right to enter said lands and waterbottoms for the purposes of conducting surveys, inspections and investigations required to evaluate the effectiveness of project features in maintaining/improving wetland quantity and quality.

II. The GRANTOR(s) shall allow the GRANTEE (SPONSOR) and its designated representatives, assigns, or contractors the right to enter upon the above described properties to survey, plan, construct, operate, maintain, and monitor the proposed structural measures and/or appurtenances as outlined in the project plans. However, the GRANTOR(s) reserve all such rights and privileges in the said land as may be used without interfering with or abridging the rights herein acquired by the GRANTEE (SPONSOR). GRANTEE (SPONSOR) agrees to give reasonable notice to GRANTOR(s) prior to initiation of work or the need for ingress or egress for the purposes required for the project.

III. The GRANTEE (SPONSOR) further agrees to indemnify and hold GRANTOR(s) harmless against any loss of liability on account of injuries to (including the death of) persons or to the property of others, including reasonable attorney's fees, arising wholly or in part from or in connection with GRANTEE'S (SPONSOR'S) operations hereunder, except for any loss or liability on account of injuries resulting from the negligence of GRANTOR(s). In the event

any suit is brought against one or more of the GRANTOR(s) to recover for or on account of any such damage, injury or death, resulting wholly or in part from GRANTEE'S (SPONSOR'S) operations, GRANTEE (SPONSOR) will, at GRANTOR'S written request, appear and defend said suit at GRANTEE'S (SPONSOR'S) own sole cost and expense, and will be responsible for any judgement that may be entered against GRANTOR(s) therein when said suit is finally determined. **Should GRANTEE (SPONSOR) contract out work to be performed on the servitude property, GRANTEE (SPONSOR) shall require the contractor to list GRANTOR as an additional insured on all insurance policies required by GRANTEE (SPONSOR). Such insurance policies shall provide that GRANTOR is, and will be, protected from and defended and insured against, without costs or expense to it, any liability or loss, including damages, fines, penalties and attorneys' fees, on account of injuries to persons (including death, or damage to property of any kind or the violation of any law or regulation, arising wholly or partially out of its operations.**

IV. GRANTEE shall be responsible for repair or replacement in like manner of any fences, roads, bridges, levees, ditches and other facilities located on GRANTOR'S property which may be damaged or destroyed by GRANTEE during the construction, operation and maintenance of the structures and/or appurtenances installed as part of the project, and shall remove or dispose of all debris associated with construction, operation and maintenance of the project.

V. GRANTEE (SPONSOR) acknowledges, that La. R.S. 49:213.7E(2), provides that no rights whatsoever shall be created in the public, whether such rights be in the nature of ownership, servitude, or use, with respect to any private lands or waters utilized, enhanced, created, or otherwise affected by activities of any governmental agency, local, state, or federal,

or any person contracting with same for the performance of any activities, funded in whole or in part, by expenditures from the Wetlands Conservation and Restoration Fund. In the event legal proceedings are instituted by any person seeking recognition of right of ownership, servitude, or use in or over private property solely on the basis of the expenditure of funds from the Wetlands Conservation and Restoration Fund, the state shall indemnify and hold harmless the owner of such property for any costs, expense, or loss related to such proceeding, including court costs and attorney fees.

VI. It is understood that said GRANTOR(s) shall retain title and all property rights affected by this servitude, and all minerals beneath the properties are not affected in any way thereby. No surface activities for the exploration, drilling, or mining of oil, gas, or other mineral or any kind shall be conducted upon the area subject to the servitude without prior written permission notice to the GRANTEE (SPONSOR). Such activities shall not unduly interfere with or abridge the rights granted herein granted to GRANTEE (SPONSOR). The GRANTEE (SPONSOR) will consult and negotiate with the GRANTOR(s) concerning appropriate measures to mitigate any such activities which impact structural features installed upon the area subject to the servitude.

VII. Subject to the above, in its exercise of the rights herein granted, GRANTEE agrees not to unduly interfere with the (a) oil and gas operations, (b) agricultural operations, and (c) hunting, trapping and alligator egg operations presently occurring on GRANTORS' lands, or which may hereafter occur in the future. GRANTEE specifically acknowledges the continuing right of GRANTOR(s), its successors, assigns, transferees or lessees to use, occupy and enjoy all of the property above described, for all purposes, in such manner and at such times as they, or any of them, shall desire to use same, including, but without limitation, for the purpose of

conducting mineral operations on any of such property, for the discovery, production, storage, transportation and disposition of oil, gas, sulphur or other minerals, under mineral leases or otherwise, and for the purpose of farming, grazing, hunting and trapping fur-bearing animals thereon; provided, however, that such use, occupation, and enjoyment shall not unreasonably and unduly interfere with the lawful activities of GRANTEE pursuant to this Agreement.

VIII. ~~Servitudes, leases or other interest presently existing on or affecting the property are as follows: [List individual servitudes, leases, or other interests. If none presently exists please indicate "none".]~~

IX. **The rights herein granted to GRANTEE (SPONSOR) are subject to all existing instruments of record in _____ Parish, Louisiana, affecting the Servitude Premises, and any unrecorded agreement described on Exhibit "B" attached hereto and made a part hereof.**

For these servitudes, leases, or other interests, GRANTOR(s) agrees to cooperate with GRANTEE (SPONSOR) in obtaining appropriate documentation from such holders that they shall honor this servitude.

X. GRANTOR(s) further states that its records reflect that there are no other existing servitudes, leases, or other interests on or affecting the property which will interfere with this servitude. Should GRANTOR(s) determine that there are other servitudes, leases or other interests which affect the property, GRANTOR(s) agrees to cooperate with the GRANTEE

(SPONSOR) in obtaining appropriate documentation from such servitude, lease or other interest holder that such holder will honor this Servitude.

XI. The GRANTOR(s) hereby represents that he/she/it is the lawful owner of the hereinabove described property, with the rights and privileges herein and hereby conveyed unto the GRANTEE (SPONSOR) and its employees, successors, and assigns.

XII. GRANTOR(s) specifically do not warrant or represent the correctness of any survey, or any of the plats attached hereto which purport to show the location of GRANTORS' land. If at any time any questions or litigation should arise as to the ownership of any part of the property covered hereby or as to any boundary or limit of any part of the separate properties covered by this agreement, neither this agreement, nor any of the data, maps or exhibits considered in connection herewith, whether attached hereto or not, nor any course of conduct followed by any party hereto pursuant to this agreement, shall ever be construed to be or permitted to serve as a basis of estoppel against any party hereto or prevent any party hereto from establishing its ownership, or having the boundaries or limits of its property determined, in any lawful manner, anything herein contained to the contrary notwithstanding.

XIII. This servitude becomes effective upon the date of the signature of the GRANTEE (SPONSOR) and shall remain in effect for twenty years from the date of acceptance of the completed project by the GRANTEE (SPONSOR). The terms of this servitude will remain in effect upon transfer of ownership.

XIV. **GRANTEE (SPONSOR) acknowledges that the Servitude Premises and the canals and waterways thereon or leading thereto may have been the subject of extensive seismic evaluations and operations relating to the exploration for and production of oil, gas and**

other minerals therefrom and that GRANTOR has an active marsh management program that involves water control and marsh containment improvements throughout its property. GRANTEE (SPONSOR) further acknowledges that it has been given the opportunity to inspect the Servitude Premises and any navigable waters on GRANTOR'S other property which may be used by GRANTEE (SPONSOR) and its representatives to access the Servitude Premises and accepts their condition for all purposes.

XV. GRANTEE (SPONSOR) may upon prior written notice to GRANTOR assign its rights hereunder, but only to the extent necessary to implement the purposes of the Project on the Servitude Premises. This servitude becomes effective upon the date of the signature of the GRANTEE (SPONSOR), and shall remain in effect for twenty years, provided, however, this servitude shall sooner and automatically terminate if the sponsoring agency should abandon the Project; and, provided further, that if GRANTEE (SPONSOR) should fail to commence work or improvements on GRANTOR'S property affected hereby to implement the Project within one year of GRANTOR'S execution hereof, GRANTEE (SPONSOR) will be deemed to have abandoned this servitude whereupon GRANTEE (SPONSOR) shall have no further rights hereunder.

XVI. This agreement shall be binding upon, and inure to the benefit of, the parties hereto, their successors in interest, transferees and assigns.

IN WITNESS WHEREOF, the GRANTOR(S) has hereunto signed his name this ____ day of _____, 19__ in the presence of the two undersigned competent witnesses.

WITNESSES:

GRANTOR(S):

By: _____
Title: _____

IN WITNESS WHEREOF, the GRANTEE has hereunto signed his name this ____ day of _____, 19__ in the presence of the two undersigned competent witnesses.

WITNESSES:

GRANTEE (SPONSOR):

STATE OF LOUISIANA
Department of Natural Resources

By: _____
Title: _____

IN WITNESS WHEREOF, the GRANTEE has hereunto signed his name this ____ day of _____, 19__ in the presence of the two undersigned competent witnesses.

WITNESSES:

GRANTEE (SPONSOR):

STATE OF LOUISIANA
PARISH OF LAFOURCHE

By: _____
Title: _____

STATE OF _____

PARISH OF _____

BEFORE ME, the undersigned authority, on this _____ day of _____, 1992, personally came and appeared _____, to me known, who declared that he/she/it is the _____ of the Department of Natural Resources, State of Louisiana, that he/she/it executed the foregoing instrument on behalf of said State Agency and that the instrument was signed pursuant to the authority granted to him by said State Agency and that he/she/it acknowledged the instrument to be the free act and deed of said State Agency.

NOTARY PUBLIC

STATE OF _____

PARISH OF _____

BEFORE ME, the undersigned authority, on this _____ day of _____, 1992, personally came and appeared _____, to me known, who declared that he/she/it is the Parish President of the Parish of Lafourche, State of Louisiana, that he/she/it executed the foregoing instrument on behalf of said Parish of Lafourche and that the instrument was signed pursuant to the authority granted to him by said Parish of Lafourche and that he/she/it acknowledged the instrument to be the free act and deed of said Parish of Lafourche.

NOTARY PUBLIC

STATE OF _____

PARISH (COUNTY) OF _____

BEFORE ME, the undersigned authority, on this _____ day of _____, 1992, before me personally appeared _____, to me known to be the person described in and who executed the foregoing instrument, and acknowledged that he executed it as his free act and deed.

NOTARY PUBLIC

APPENDIX K

THE LOUISIANA LAND AND EXPLORATION COMPANY

P. O. Box 7097

HOUMA, LOUISIANA 70361-7097

HOUMA DISTRICT

PHONE (504) 879-1517

October 5, 1993

Wm. Clifford Smith
T. Baker Smith & Son, Inc.
Civil Engineers - Land Surveyors
P.O. Box 2266
Houma, LA 70361

Re: Survey Permit T-2540
Township 23 South - Range 17 East
Township 23 South - Range 18 East
Township 24 South - Range 17 East
Township 24 South - Range 18 East
Terrebonne Parish, Louisiana

Gentlemen:

This letter will serve as your permit to enter upon certain lands owned by The Louisiana Land and Exploration Company (LL&E) included in the area outlined in red on the plat(s) attached hereto for the purpose of conducting survey work thereon, as described in your letter of September 29, 1993, a copy of which is attached hereto. It is understood and agreed that in connection with your exercise of rights under or pursuant to this permit upon the subject lands that you are accepting the condition of the same as they exist and that you will place no material upon the subject lands in any manner which unreasonably impedes or restricts the use of any portion thereof by boats of any description. It is further understood that upon completion of this project or cancellation of this permit by either party, that you shall remove any materials placed upon subject lands and restore said lands back to its original condition.

Additionally, you further agree that you will hold LL&E harmless against and indemnify it for all loss, damage or liability on account of injuries to or death of persons or damage to property of any kind or the violation of any loss or regulation arising wholly or partially out of or in connection with the use of the property subject hereto (including any canals or waters leading thereto or thereupon) by you, or your representatives, or in the exercise of any rights granted herein. You will further obey and comply with all valid laws and regulations which may be applicable to the subject lands or your use thereof. It is agreed and understood that the liability of the United States for the acts and omissions of its employees shall be governed by the Federal Tort Claims Act; and, to the extent the provisions thereof, or any other statutory law of the United States, are in conflict with any obligation you have assumed to us under this paragraph, the provisions of that Act or other applicable statute of the United States shall be given effect in determining your obligations to us under this paragraph.

You shall, prior to commencement of your field operations, provide us with a certificate of insurance evidencing that we are, and we will be, protected from and defended and insured against, by a

reputable insurance company, without cost or expense to us, any damage, liability or loss, including fines, penalties and attorneys' fees, on account of injuries to persons (including death) or damage to property of any kind or the violation of any law or regulation, arising wholly or partially out of or in connection with or resulting from the use of our premises or the canals and waterways thereon or leading thereto by you or your employees, agents, contractors, guests, invitees or visitors, or the exercise of any rights granted herein or any action hereunder, irrespective of any negligence, strict liability or liability without fault of us.

You hereby recognize that our premises subject to this permit and the canals and waterways thereon or leading thereto may have been the subject of extensive seismic evaluations and operations relating to the exploration for and production of oil, gas and other minerals therefrom. You further recognize that our property has suffered the effects of erosion and subsidence and that we have an active marsh management program that involves water control and marsh containment improvements throughout our property. You hereby accept the condition of our property for all purposes and assume the risk of injury or damage as a result of such conditions or improvements. You hereby further agree that you will not institute any suit or other proceeding against us, our employees, directors, agents, consultants and the insurers of any of the same, claiming or seeking to recover under any theory whatsoever, damages, including fines, penalties and attorneys' fees, on account of injuries to persons (including death) or damage to property of any kind or the violation of any law or regulation, arising wholly or partially out of or in connection with or resulting from the use of our premises or the canals and waterways thereon or leading thereto by you or your employees, agents, consultants, contractors, guests, invitees or visitors, or the exercise of any rights granted herein or any action hereunder, irrespective of any negligence, strict liability or liability without fault of us, our employees, directors, agents or consultants and the insurers of any of the same. You further agree that you will require each of your employees, agents, consultants, contractors, guests, invitees or visitors who is to go on our property to read this paragraph, you will explain to them the implications of its contents and you will require them to agree to be bound by all of its terms. You further agree to require each such person who is to go on our property to sign a statement whereby they acknowledge that they have read this paragraph, they understand its contents and confirm their agreement to be bound by all of its terms. You shall furnish to us an original of such statement signed by you and each such person prior to them entering upon our property, failing which, you will be in material breach of this permit and each such person who has not signed such a statement shall automatically be deemed a trespasser on our property.

This permit shall remain in effect for a period of six (6) months from the date hereof but may nevertheless be cancelled without cause upon ten (10) days prior notice to you. This permit shall expire April 5, 1994.

This permit is further subject to all mineral and surface leases, permits, licenses, rights of way or other agreements, recorded and unrecorded, which now or may hereafter affect the property which is

the subject hereof. In the event that any provision of this permit should be judicially determined to be legally unenforceable, such determination shall have no effect on the validity and enforceability of all other provisions of this permit.

Yours truly,

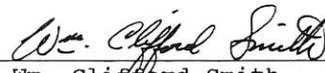
THE LOUISIANA LAND AND
EXPLORATION COMPANY


Kermit J. Coulon, Jr.
Manager-Houma District

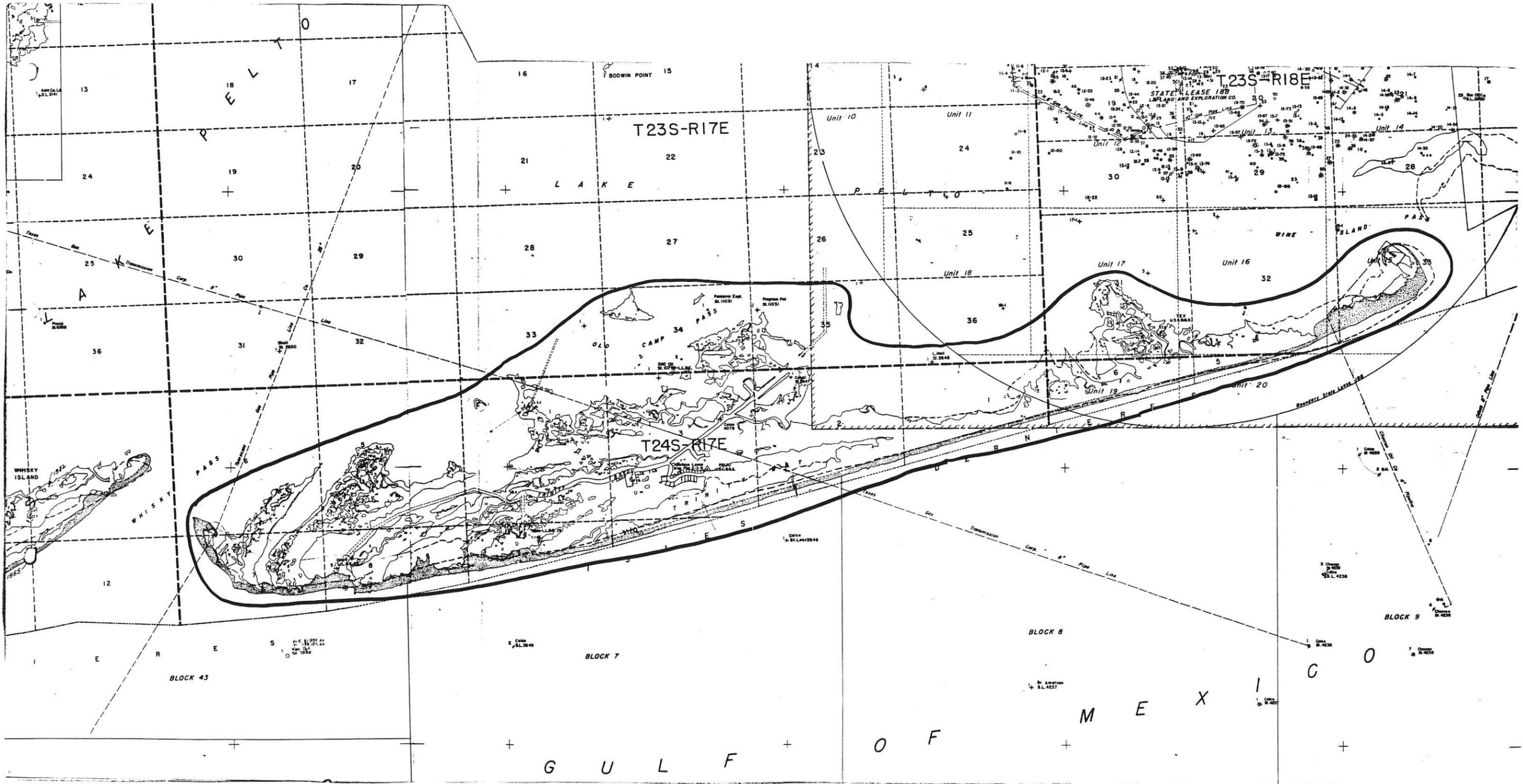
AGREED AND ACCEPTED THIS

5 DAY OF October, 1993

T. BAKER SMITH & SON, INC.

BY: 
Wm. Clifford Smith

/kln
T2540/1a



APPENDIX L

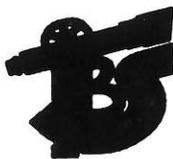
SUMMARY REPORT

**ESTABLISHMENT OF HORIZONTAL
AND VERTICAL CONTROL FOR THE
ISLE DERNIERS BARRIER ISLAND CHAIN
TERREBONNE PARISH, LOUISIANA**

PREPARED FOR:

**STATE OF LOUISIANA
DEPARTMENT OF NATURAL RESOURCES
COASTAL RESTORATION DIVISION**

PREPARED BY:



**T. BAKER SMITH & SON, INC.
CIVIL ENGINEERS - LAND SURVEYORS
ENVIRONMENTAL RESEARCH
P.O. BOX 2266
HOUMA, LA 70361
PHONE: 504/868-1050**

DATE: MAY 17, 1993

EXECUTIVE SUMMARY

Differential Global Positioning System (GPS) techniques were used to establish a total of eight (8) control points for the ultimate purpose of estimating their Horizontal positions referenced to NAD 83 datum and their Orthometric heights referenced to NGVD 29. The eight control points are located along the existing Isle Derniers Barrier Island chain covering East, Trinity, Whiskey and Raccoon Islands off the coast of Terrebonne Parish, Louisiana.

Monumentation was completed on March 29, 1993. The GPS field observations were conducted between April 3, 1993 and April, 19, 1993. The project was performed for the State of Louisiana, Department of Natural Resources, Coastal Restoration Division thru T. Baker Smith & Son, Inc.

Because of the number of and distances between control point locations the GPS survey was obtained thru the use of one independent GPS Network, tied to the National Reference System.

A detailed report follows.

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I. **INTRODUCTION:**

- A. **Purpose** - The purpose of this project was to establish control monuments with horizontal and vertical components along the Isle Dernier Barrier Island chain located off the coast of Terrebonne Parish, Louisiana. As of the time of the writing of this report four (4) major islands remain along this chain. Running east to west they are East, Trinity, Whiskey and Raccoon Islands.
- B. **Scope** - The scope of this project was the establishment of control monuments in reference to the anticipated island restoration projects being proposed under the "Breaux Bill" for this island chain. The DNR - CRD's objective was establishment of a control network that insure to the greatest degree possible that one set of continuous and compatible control exist along the entire island chain. It was determined by T. Baker Smith & Son, Inc. that deferential GPS surveying methods was the approximate technique to achieve the required results for this project.
- C. **Time Period** - The establishment of the monuments began with the topographic survey being performed on the Raccoon Island on February 24, 1993. The remaining six (6) monuments were established on March 29, 1993.
- GPS observations began on April 3, 1993 and were completed on April 19, 1993.
- D. **Point of Contact** - Technical questions regarding this project and the contents of this report should be addressed to:

T. Baker Smith & Son, Inc.
P.O. Box 2266
550 South Van Ave.
Houma, Louisiana 70361

Attention: Kenneth Wm. Smith, P.E.
Telephone : (504) 868-1050
Fax: (504) 868-4853

II. **MONUMENTATION:**

A: **Selection of Sites** - To achieve the objective for the project a minimum of two (2) monuments would be installed on each of the four (4) existing islands along the chain. This equated to a total of eight (8) required monuments. The following criteria was established for each site:

1. That consideration be given to the proposed island restoration projects and that the monuments be located in an area, if possible that would not be destroyed during construction activities, but still be readily accessible for topographic surveys.
2. That the site be GPS surveyable, ie: no overhead nor horizontal restrictions.
3. That the two control monuments for each island be located to allow each other to be used as reference marks as required for control surveys.

Refer to Plate No. 1 for an overall plan view of the locations of the eight monuments.

B: **Designation of Control Monuments** - The following list represents the naming system used for the eight established control monuments:

RACCOON ISLAND

GPS RC-1
GPS RC-2

WHISKEY ISLAND

GPS WI-1
GPS WI-2

TRINITY ISLAND

GPS TI-1
GPS TI-2

EAST ISLAND

GPS EI-1
GPS EI-2 (2888 A 1986)

C: **Type of Monumentation** - Three different types of monuments were utilized for the project. Two types were existing prior to commencement of this project and consists of three of the eight monuments. The monuments were established in a attempt to insure longevity, stability and usability.

TYPE # 1 - Existing NGS deep rod benchmark - Set in 1986 by T. Baker Smith & Son, Inc. in conjunction with NOAA and the State of La., Division of State Lands. Refer to Exhibit "A" for details.

Type # 2 - Existing 10' 3/4" G.I.P. driven into the ground with 18" protruding above the natural ground and spray painted orange. Established by T. Baker Smith & Son, Inc. in Feb. 1993. Refer to Exhibit "B" for details.

Type # 3 - 20' 5/8" stainless steel rod driven into the ground with 18" protruding above the natural ground with an aluminum disk crimp to the top of rod. The entire rod system enclosed within a 6" PVC pipe with cement around the monument for approximately 1' diameter. Refer to Exhibit "C" for details.

TABLE NO. 1: TYPE OF MONUMENTATION

RACCOON		WHISKEY	
GPS RC-1	Type # 2	GPS WI-1	Type # 3
GPS RC-2	Type # 2	GPS WI-2	Type # 3
TRINITY		EAST	
GPS TI-1	Type # 3	GPS EI-1	Type # 3
GPS TI-2	Type # 3	GPS EI-2	Type # 1

Exhibit "D" is the field notes of the T. Baker Smith & Son, Inc. field crew indicating the setting of the monumentation. Additionally we have enclosed photos of each monument.

NOTE: Control monuments RC-1 and RC-2 are type #2 monuments. They were established prior to commencement of the GPS project. The possibility of their distruction during the proposed construction activities is considered high. It is highly suggested that these monument be referenced with type #3 monumentation prior to any construction activities in areas with minimal disturbance.

III. GPS SURVEY:

A: **Pre-mission Planning and Reconnaissance** - Locations of the monuments were determined by Kenneth Wm. Smith of T. Baker Smith & Son, Inc. Recent aerial photos (October 1993) of the island chain were obtained from Coastal Engineering. On March 28, 1993 a reconnaissance field trip was made and final determination of the control point locations made.

All monumentation was completed on March 29, 1993.

All available horizontal and vertical data for the area was ascertained. Mr. Bob Zurfluh, Geodetic Advisor for Louisiana was contacted and asked for updates on the La. HARN (High Accuracy Reference Network) to be used as horizontal control. A preliminary GPS Network was designed which included the best available horizontal and vertical ties that exist in this area to the National Geodetic Reference System (NGRS).

B: Instrumentation - The GPS survey was conducted with 2 Trimble 4000-SE System Surveyor, 3 Trimble 4000-SSE and 1 Trimble 4000-ST GPS receivers.

C: Chronology of GPS Survey - A summary of the field events follows:

Date	Session #	Equipment	Comments
03/31/93	-----	2 4000SE 3 4000SSE	Designed GPS network, prepared log books and programed receivers.
04/02/93	-----	2 4000SE 3 4000SSE	Due to weather conditions survey was rescheduled, reprogramed receivers.
04/03/93	093-1	2 4000SE 3 4000SSE	Sea conditions were rough, but survey went well
04/04/93	094-1	2 4000SE 3 4000SSE	Session cancelled due to thunderstorms.
04/15/93	-----	4 4000SE 1 4000ST	Set up log books and programed receivers
04/16/93	106-1	4 4000SE 1 4000ST	Sea conditions good, session went well
04/16/93	106-2	4 4000SE 1 4000ST	Sea Condition copy, 1 receiver collected only 9 min. of data.
04/18/93	-----	3 4000SE	1 more session required due to receiver failure on the 16th.
04/19/93	109-1	3 4000SE	Sea conditions choppy, session went well.

D. Accuracy Standards - The primary purpose of the survey was to establish as permanent as possible control monuments along the Isle Derniers chain of Island NAD 83/92 Datum horizontal positions and

estimate as accurately as possible NGVD 29 Datum vertical control by the means of GPS technology combined with NGS Geoid model, "Geoid-90". This was accomplished; and a review of the statistical data generated by Trimble's least square adjustment software TRIMNET, along with rigorous quality control procedures and checks reveal the following:

Horizontally - the precisions obtained from the variance-covariance summaries indicates that the net is well above first-order accuracy. (1:100,000) The network is tied to the Louisiana High Accuracy Reference Network (H.A.R.N.), which has an accuracy of 1:1,000,000.

Vertically - the GPS derived Orthometric Heights estimated on the eight (8) monuments are accurate relative to each other and the three control monuments to within a range of 2 to 10 centimeters. However, it should be considered by the user of this information that the vertical control monuments held constant during the GPS survey are considered questionable, but are the best and highest of quality available in this area.

E: Results of GPS Survey - the following results were obtained:

SUMMARY OF RESULTS

STATION	LATITUDE *NAD 83/92*	LONGITUDE *NAD 83/93*	GEOID. HT (meters)	ELLIP. HT (meters)	ORTH. HT (feet)
DREAUX 2	29 17 23.949120	90 38 54.219160	-24.982	-24.378	1.982
LITTLER O/S	29 14 48.015321	90 39 41.052267	-24.881	-24.421	1.509
SISTER LAKE	29 15 08.302364	90 55 18.259343	-24.982	-24.141	2.760
EI-1	29 03 50.380103	90 39 04.693676	-24.426	-23.314	3.648
EI-2=2888-A	29 04 16.261150	90 38 25.022520	-24.437	-23.619	2.684
RC-1	29 03 09.704910	90 56 15.190983	-24.513	-22.949	5.132
RC-2	29 03 01.581954	90 55 43.053362	-24.507	-23.066	4.729
TI-1	29 02 57.759111	90 43 26.185597	-24.434	-23.084	4.431
TI-2	29 03 05.718666	90 43 06.091319	-24.437	-22.829	5.276
WI-1	29 03 05.259615	90 50 30.846892	-24.491	-23.871	2.033
WI-2	29 02 54.699017	90 48 54.874084	-24.474	-23.922	1.812

* Horizontal Note: The Horizontal positions of each of these marks is referenced to the NAD 93/92 datum. The GPS network was adjusted by holding the NAD 83/92 positions of DREAUX 2 and SISTER LAKE. The NAD 83/92 position of DREAUX 2 was determined by NGS during the implementation of the Louisiana High Accuracy Reference Network (HARN). The NAD 83/92 position of SISTER LAKE was determined by T. Baker Smith & Son, Inc. during a previous GPS survey.

**NAD 83/92 is not the same as NAD 83/86. There may be a difference of 1 to 3 feet between the two.

* Vertical Note: The GPS derived Orthometric Heights are referenced to NGVD 29. The GPS network was adjusted by holding to the vertical positions of DREAUX 2 and LITTLER O/S. The NGVD 29 elevation of DREAUX 2 was determined by T. Baker Smith & Son, Inc. by conventional leveling from BM Z-233. The NGVD 29 elevation of LITTLER O/S was determined by T. Baker Smith & Son, Inc. by conventional leveling from LITTLER RM 1 and LITTLER RM 4. The NGVD 29 elevations in conjunction with Geoid 90 were then used in the GPS adjustment to determine the GPS derived Orthometric Height for the other points in the survey.

Whiskey Pass GPS Network
 Perimeter Loop Check Around GPS Network
 Precision = 0.58 ppm (Ref. end of Loop Check)
 Closure = 1: 5,829,647.4 in a 64.04 mile traverse

Timble Loop Closure Utility

Start Traverse at Station: DREUX 2
 Starting Coords : 29°17'23.94911" N 90°38'54.21915" W -24.379

Baseline 1
 File Name: 90019002.OPT
 From Station: DREUX 2 To Station: SISTER LAKE
 Distance Travelled (m): 26890.701
 Current Coords : 29°15'08.30270" N 90°55'18.25744" W -24.173

Baseline 2
 File Name: 90021001.OPT
 From Station: SISTER LAKE To Station: RC-1
 Distance Travelled (m): 49068.498
 Current Coords : 29°03'09.70599" N 90°56'15.18864" W -22.976

Baseline 3
 File Name: 10011002.OPT
 From Station: RC-1 To Station: RC-2
 Distance Travelled (m): 49973.164
 Current Coords : 29°03'01.58305" N 90°55'43.05106" W -23.092

Baseline 4
 File Name: 10022001.OPT
 From Station: RC-2 To Station: WI-1
 Distance Travelled (m): 58420.030
 Current Coords : 29°03'05.26075" N 90°50'30.84488" W -23.898

Baseline 5
 File Name: 20012002.OPT
 From Station: WI-1 To Station: WI-2
 Distance Travelled (m): 61036.682
 Current Coords : 29°02'54.70021" N 90°48'54.87212" W -23.947

Baseline 6
 File Name: 30012002.OPT
 From Station: WI-2 To Station: TI-1
 Distance Travelled (m): 69929.351
 Current Coords : 29°02'57.76048" N 90°43'26.18374" W -23.111

Baseline 7
 File Name: 30013002.OPT
 From Station: TI-1 To Station: TI-2
 Distance Travelled (m): 70525.646
 Current Coords : 29°03'05.72003" N 90°43'06.08947" W -22.856

Baseline 8

File Name: 30024001.OPT
 From Station: TI-2 To Station: EI-1
 Distance Travelled (m): 77198.933
 Current Coords : 29°03'50.38149" N 90°39'04.69207" W -23.342

Baseline 9

File Name: 40014002.OPT
 From Station: EI-1 To Station: EI-2
 Distance Travelled (m): 78535.482
 Current Coords : 29°04'16.26256" N 90°38'25.02095" W -23.648

Baseline 10

File Name: 75014002.OPT
 From Station: EI-2 To Station: LITTLER OS
 Distance Travelled (m): 98094.348
 Current Coords : 29°14'48.01664" N 90°39'41.05074" W -24.468

Baseline 11

File Name: 90017501.OPT
 From Station: LITTLER OS To Station: DREUX 2
 Distance Travelled (m): 103059.044
 Current Coords : 29°17'23.95028" N 90°38'54.21774" W -24.351

1 Traverse at Station: DREUX 2
 Distance Travelled (m): 103059.044 Precision (ppm): 0.58
 dx: 0.038 dy: -0.007 dz: 0.045 dh: 0.028
 Ending Coords : 29°17'23.95028" N 90°38'54.21774" W -24.351
 Reference Coords: 29°17'23.94911" N 90°38'54.21915" W -24.379

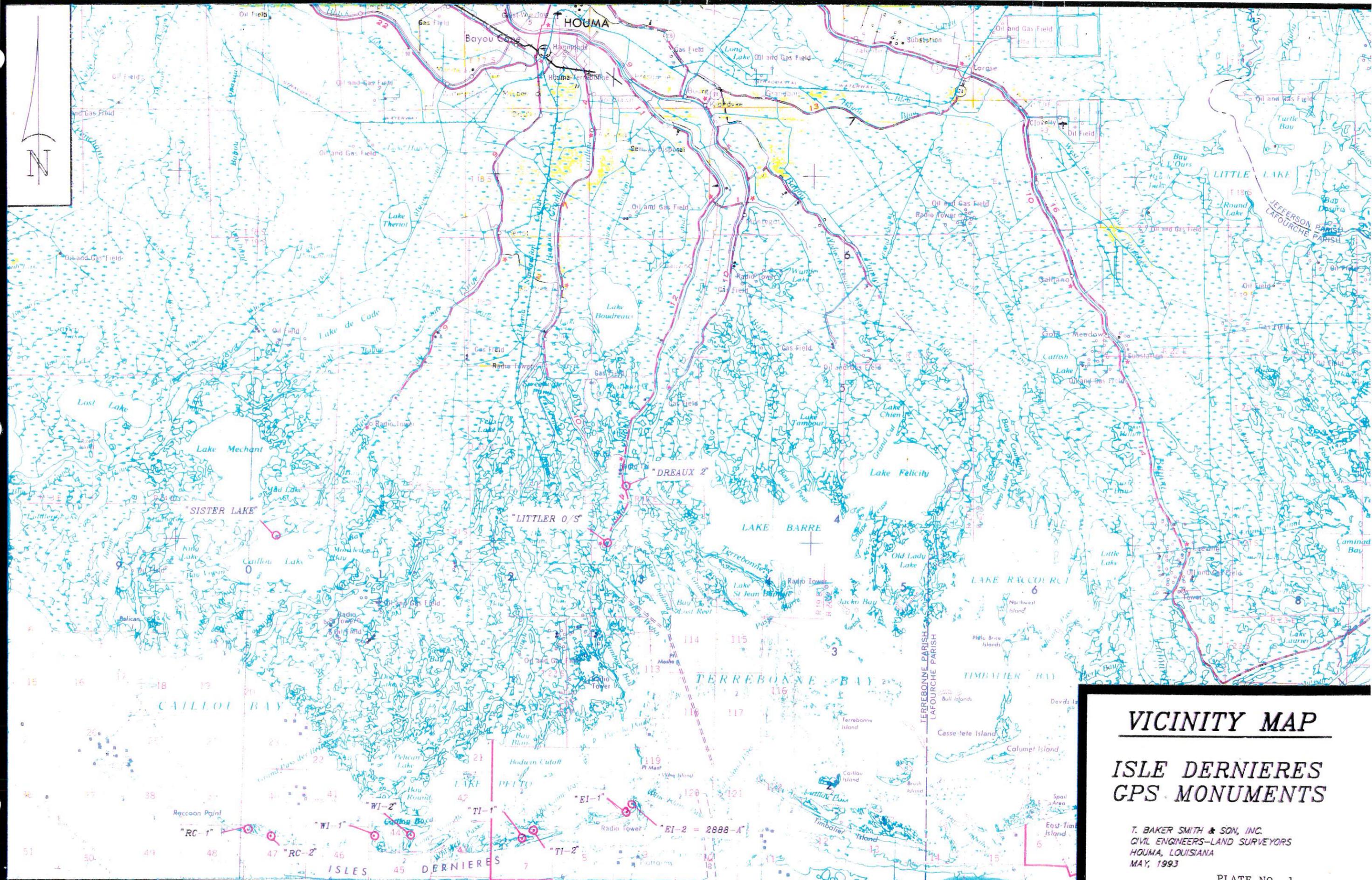
Filename: WHISKEY.OUT
 CEL

SUMMARY OF COVARIANCES

NETWORK = TEST

TIME = Tue Apr 20 11:26:10 1993

FROM	TO	AZIMUTH	1.00σ	DISTANCE	1.00σ	DELTA H	1.00σ	HOR	PREC
2888-A	DREUX 2	358°08'20"	0.05	24264.59	0.0061	-0.76	0.0104	1:	3985818
2888-A	EI-1	233°24'21"	0.31	1336.55	0.0020	+0.30	0.0052	1:	655285
288-A	LITTLER	0353°58'30"	0.06	19558.95	0.0054	-0.80	0.0104	1:	3653462
288-A	RC-1	266°01'24"	0.04	29020.71	0.0055	+0.67	0.0140	1:	5287001
2888-A	RC-2	265°23'20"	0.04	28173.23	0.0054	+0.55	0.0138	1:	5263447
288-A	SISTER LA	306°18'58"	0.04	33952.65	0.0061	-0.52	0.0142	1:	5546628
288-A	TI-1	253°29'45"	0.06	8497.62	0.0026	+0.54	0.0057	1:	3213545
2888-A	TI-2	254°04'36"	0.07	7907.13	0.0026	+0.79	0.0056	1:	3080680
2888-A	WI-1	263°41'45"	0.05	19755.13	0.0045	-0.25	0.0134	1:	4421173
288-A	WI-2	261°39'30"	0.05	17222.02	0.0042	-0.30	0.0127	1:	4074817
DREUX 2	EI-1	180°38'53"	0.05	25050.19	0.0062	+1.06	0.0106	1:	4054322
DREUX 2	LITTLER	0194°45'24"	0.10	4964.72	0.0023	-0.04	0.0000	1:	2160438
DREUX 2	RC-1	226°59'38"	0.03	38509.22	0.0055	+1.43	0.0134	1:	6964293
DREUX 2	RC-2	225°49'26"	0.03	38053.83	0.0055	+1.31	0.0133	1:	6937643
DREUX 2	SISTER LA	261°07'55"	0.00	26890.88	0.0000	+0.24	0.0135	1:	0
DREUX 2	TI-1	195°25'30"	0.04	27662.75	0.0060	+1.29	0.0098	1:	4639751
DREUX 2	TI-2	194°27'40"	0.05	27286.07	0.0061	+1.55	0.0103	1:	4461571
DREUX 2	WI-1	215°29'55"	0.04	32454.60	0.0052	+0.51	0.0128	1:	6260137
DREUX 2	WI-2	211°16'35"	0.04	31300.11	0.0052	+0.46	0.0122	1:	6038566
EI-1	LITTLER	0357°13'27"	0.05	20271.38	0.0055	-1.11	0.0106	1:	3702474
EI-1	RC-1	267°29'50"	0.04	27904.25	0.0054	+0.37	0.0140	1:	5152637
EI-1	RC-2	266°52'60"	0.04	27048.82	0.0053	+0.25	0.0138	1:	5122604
EI-1	SISTER LA	308°29'26"	0.04	33584.18	0.0062	-0.83	0.0142	1:	5407343
EI-1	TI-1	257°07'04"	0.07	7256.92	0.0024	+0.23	0.0052	1:	3053126
EI-1	TI-2	258°07'31"	0.07	6673.32	0.0023	+0.49	0.0050	1:	2948806
EI-1	WI-1	265°45'58"	0.05	18613.25	0.0044	-0.56	0.0133	1:	4199779
EI-1	WI-2	263°54'40"	0.05	16057.15	0.0042	-0.61	0.0127	1:	3826985
LITTLER	ORC-1	231°24'05"	0.03	34411.89	0.0055	+1.47	0.0134	1:	6284461
LITTLER	ORC-2	230°09'07"	0.03	33898.19	0.0054	+1.36	0.0133	1:	6267584
LITTLER	OSISTER LA	271°28'39"	0.02	25313.34	0.0025	+0.28	0.0135	1:	10200702
LITTLER	OTI-1	195°33'54"	0.05	22698.44	0.0053	+1.34	0.0098	1:	4248722
LITTLER	OTI-2	194°23'20"	0.05	22321.43	0.0055	+1.59	0.0103	1:	4058804
LITTLER	OWI-1	219°06'35"	0.04	27867.20	0.0049	+0.55	0.0128	1:	5641475
LITTLER	OWI-2	214°18'53"	0.04	26577.84	0.0049	+0.50	0.0122	1:	5460490
RC-1	RC-2	106°02'45"	0.40	904.67	0.0016	-0.12	0.0048	1:	561520
RC-1	SISTER LA	3°58'28"	0.05	22177.91	0.0059	-1.19	0.0096	1:	3760551
RC-1	TI-1	90°57'39"	0.04	20807.19	0.0045	-0.13	0.0131	1:	4673128
RC-1	TI-2	90°16'34"	0.05	21347.68	0.0047	+0.12	0.0137	1:	4579339
RC-1	WI-1	90°49'07"	0.06	9316.47	0.0027	-0.92	0.0062	1:	3439809
RC-1	WI-2	92°11'29"	0.05	11920.92	0.0030	-0.97	0.0063	1:	3971842
RC-2	SISTER LA	1°42'50"	0.05	22384.60	0.0059	-1.08	0.0094	1:	3820269
RC-2	TI-1	90°17'19"	0.04	19935.09	0.0043	-0.02	0.0130	1:	4597557
RC-2	TI-2	89°35'33"	0.05	20478.54	0.0045	+0.24	0.0135	1:	4501933
RC-2	WI-1	89°12'39"	0.06	8446.91	0.0025	-0.81	0.0058	1:	3371075
RC-2	WI-2	91°04'19"	0.05	11044.70	0.0028	-0.86	0.0060	1:	3948289
SISTER	LATI-1	139°24'01"	0.04	29602.00	0.0060	+1.06	0.0134	1:	4968003
SISTER	LATI-2	138°17'55"	0.04	29774.23	0.0061	+1.31	0.0139	1:	4898889
SISTER	LAWI-1	160°44'41"	0.04	23577.66	0.0056	+0.27	0.0091	1:	4188818
SISTER	LAWI-2	155°19'49"	0.04	24849.85	0.0057	+0.22	0.0089	1:	4391668
TI-1	TI-2	65°43'59"	0.55	596.30	0.0015	+0.25	0.0040	1:	387005
TI-1	WI-1	271°10'49"	0.07	11490.77	0.0039	-0.79	0.0125	1:	2978190
TI-1	WI-2	269°24'54"	0.08	8892.71	0.0037	-0.84	0.0118	1:	2392688
TI-2	WI-1	269°57'46"	0.07	12031.95	0.0041	-1.04	0.0130	1:	2956200
TI-2	WI-2	267°57'51"	0.08	9441.83	0.0039	-1.09	0.0124	1:	2400389
WI-1	WI-2	97°07'53"	0.13	2616.66	0.0015	-0.05	0.0045	1:	1721406



VICINITY MAP

**ISLE DERNIERES
GPS MONUMENTS**

T. BAKER SMITH & SON, INC.
 CIVIL ENGINEERS—LAND SURVEYORS
 HOUMA, LOUISIANA
 MAY, 1993

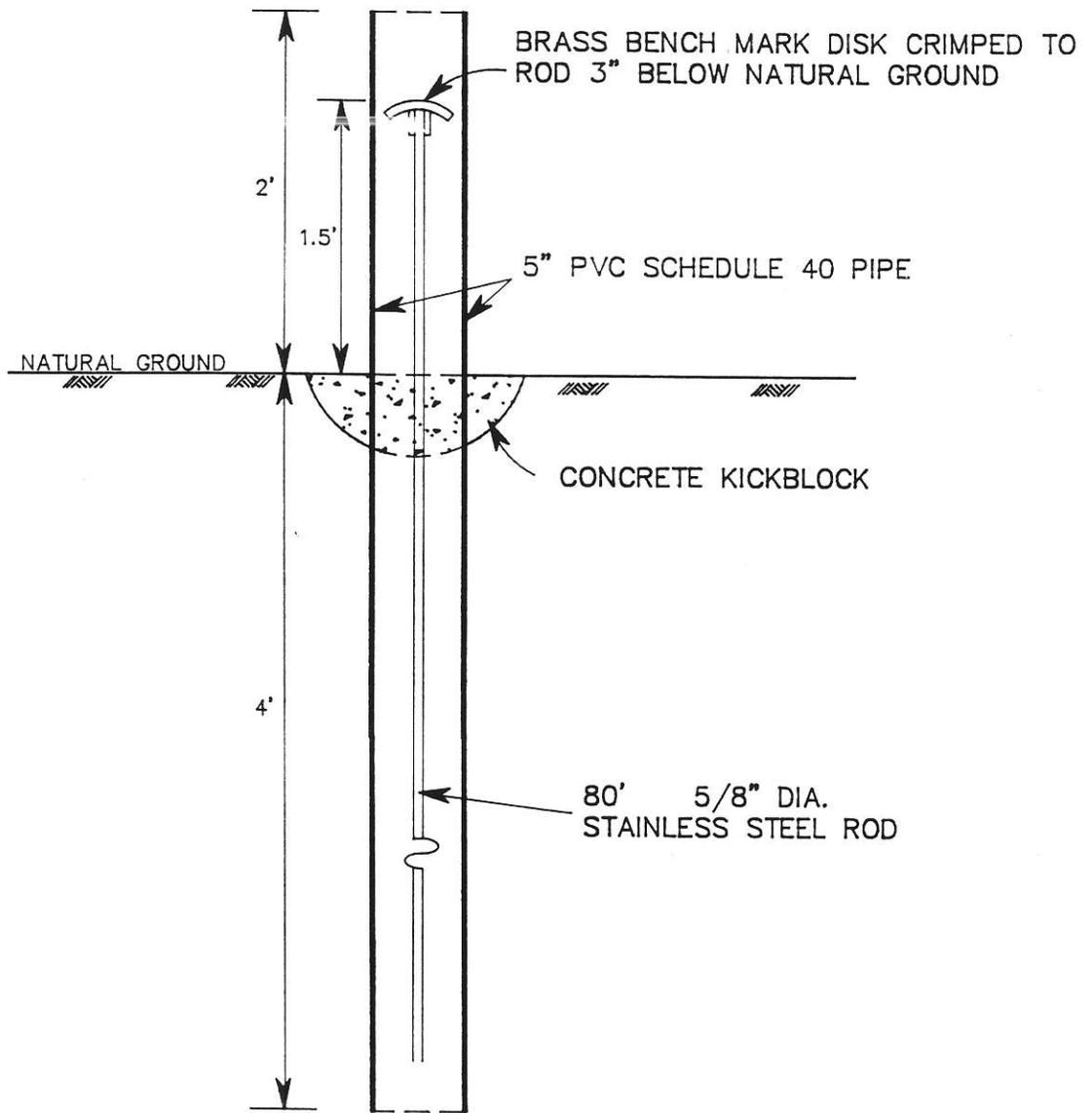


EXHIBIT "A"

T. BAKER SMITH & SON, INC.
CIVIL ENGINEERS-LAND SURVEYORS
HOUMA, LOUISIANA

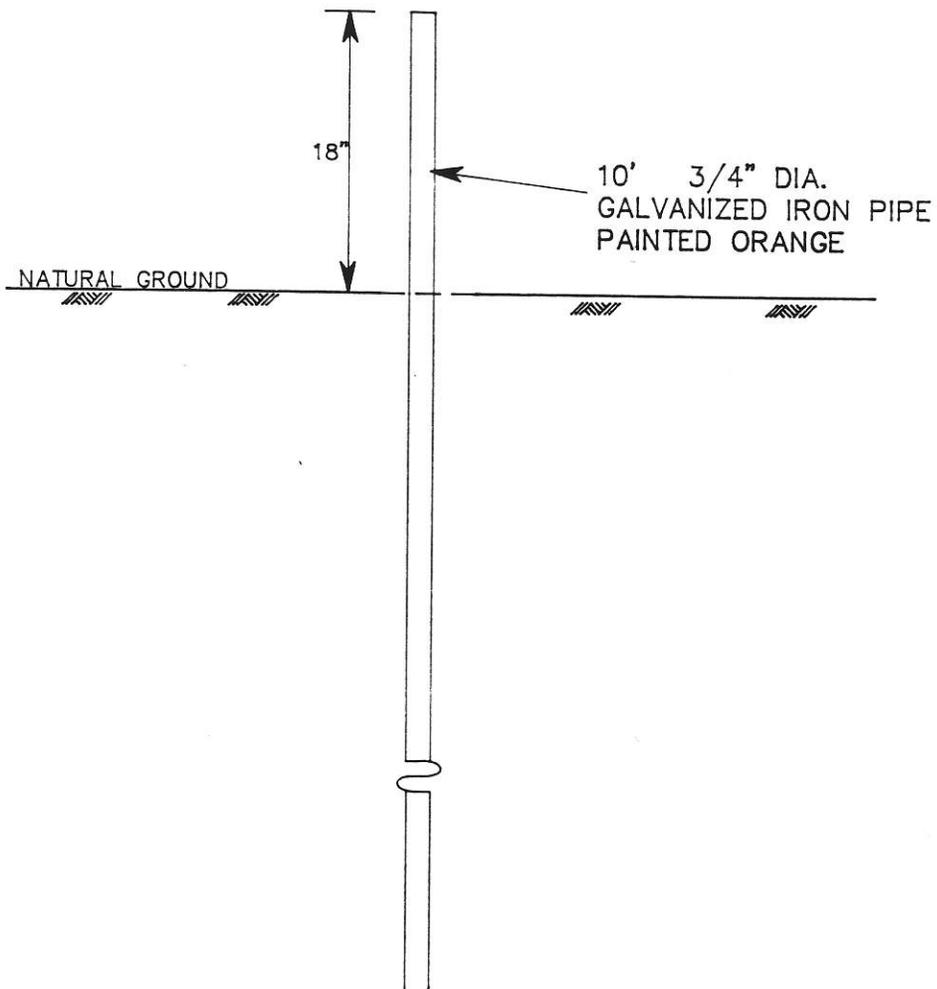


EXHIBIT "B"

T. BAKER SMITH & SON, INC.
CIVIL ENGINEERS-LAND SURVEYORS
HOUMA, LOUISIANA

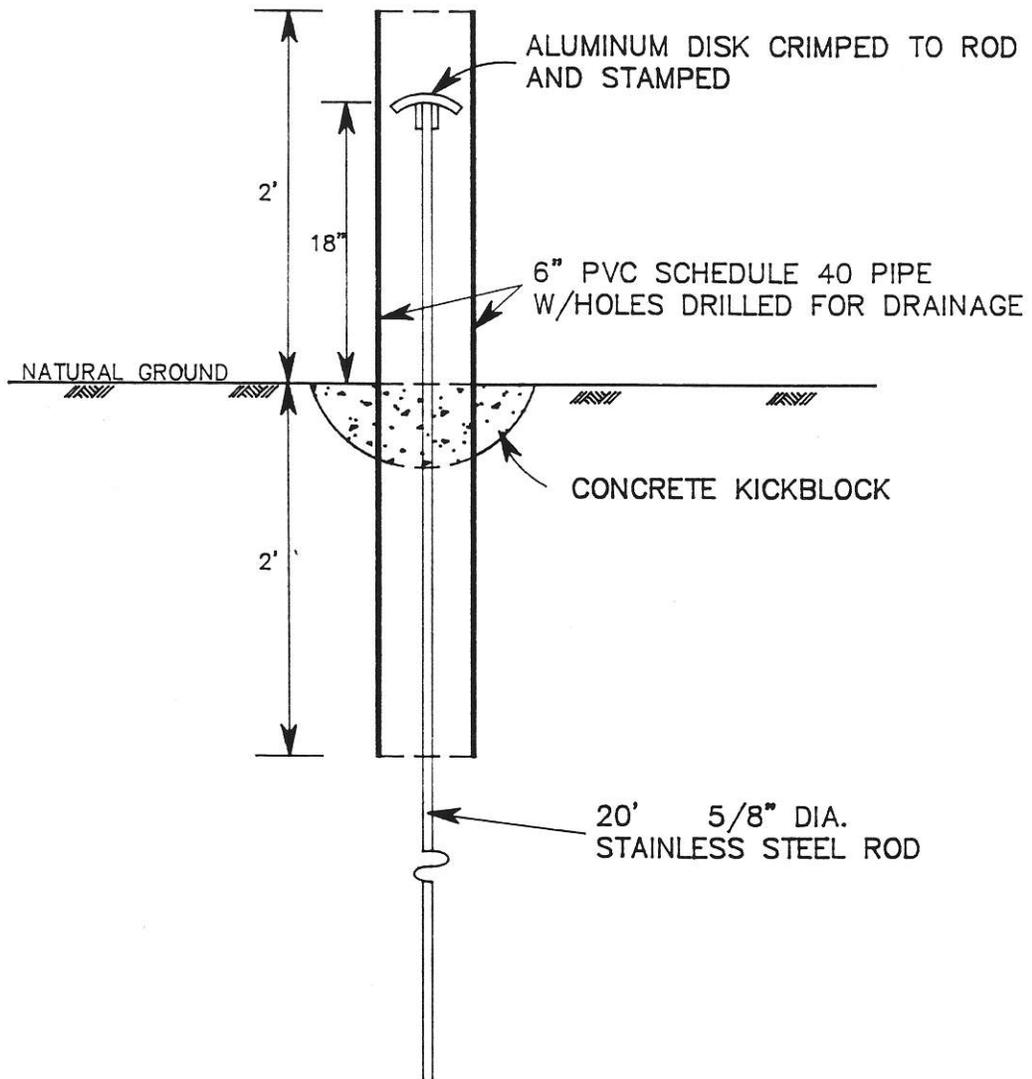


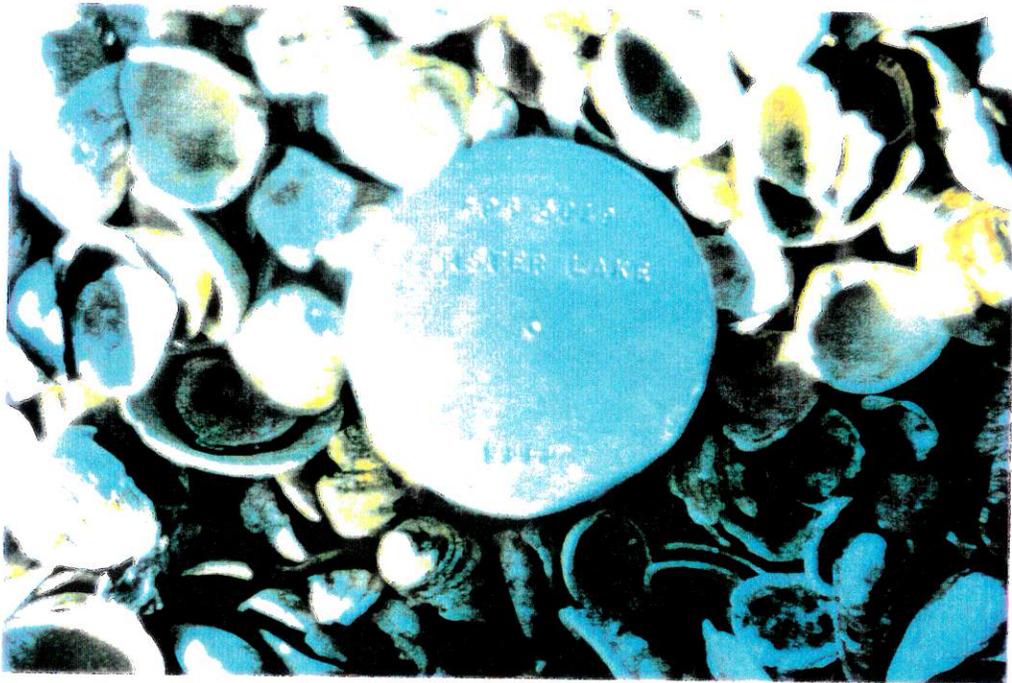
EXHIBIT "C"

T. BAKER SMITH & SON, INC.
 CIVIL ENGINEERS-LAND SURVEYORS
 HOUMA, LOUISIANA

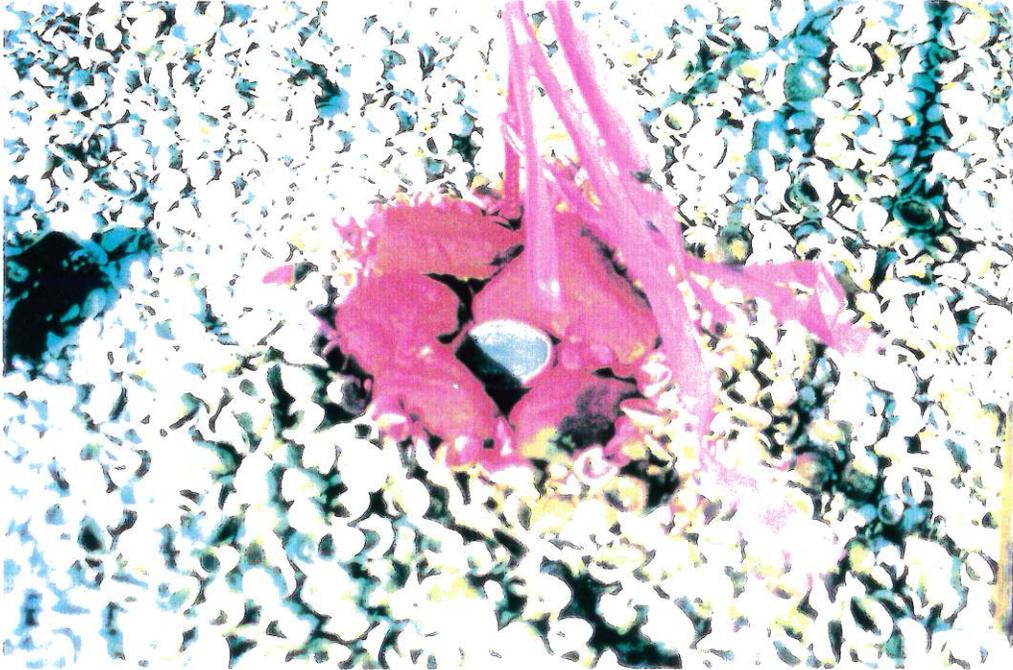
PHOTOGRAPHS, FIELD NOTES, AND
LOCATION PLATS FOR THE
THREE REFERENCE AND EIGHT CONTROL MONUMENTS

EXHIBIT "D"

G.P.S. PT. #5019
"SISTER LAKE"



G.P.S. PT. #5019
"SISTER LAKE"



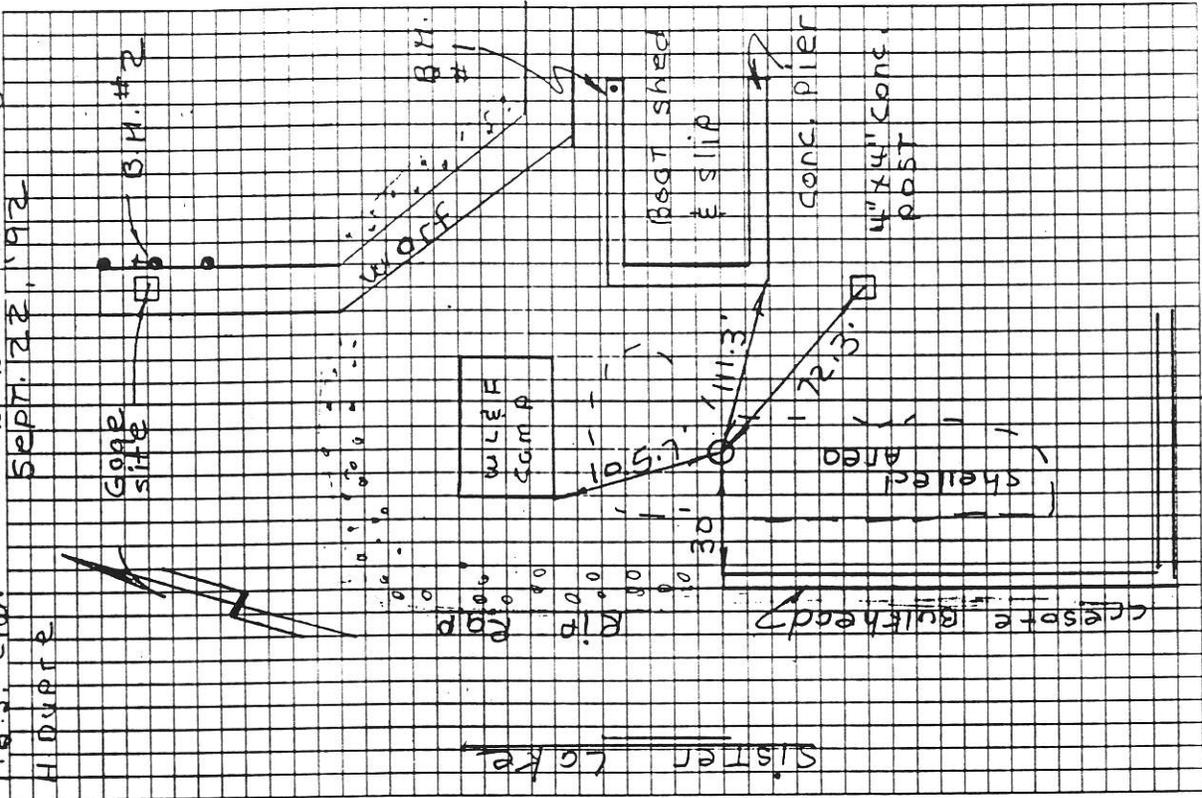
D.N. 7200

"sister lake" G.P.S PT # 5019
 sketch of B.M.s set
 REFS TO PT # 5019
 Alum. cap on top of L#
 rebar driven 15' in ground,
 stamped "G.P.S 5019 1992"
 surrounded by small rocks
 painted orange & flush
 with top of shells

2026

SEPT. 22, 1992

T.B.S. crw.
HIDVRE



3

2026

same pt

9-22-92

D.N. R...
sister "cake"

Elev. Loop. From G.P.S. PT #5019
to B.M.s #1 & #2

STA. #5019 + H.I. - ELEV. 3.252

4.240

B.M.#1 2.912 4.580 ft

2.449

B.M.#2 3.059 3.970 ft

2.965

#5019 3.692 3.243

ERR = 0.009

1

G.P.S. PT. #5019 TOP ALUM. CAP (A.G.R.)
REL. TO UNAMEB TRS. B.C. OH

B.M.#1 FOUND BRASS CAP ON W/ CAR, OF
CONC. PIER AROUND BOAT SHED &
SLIP STAMPEL
"CO. DEPT. OF PUBLIC WORKS SURVEY"

B.M.

B.M.#2 TOP OF HEAD ON RAIL ROAD
SPIKE DRIVEN ON NORTH EDGE OF
2ND PILING SUPPORTING CRIB AND WALK
LEADING TO W. LIFE CAMP

U.S.C. & G.S. "LITTLER OFFSET"



HORIZON . L CONTROL DATA

by the
 Coast and Geodetic Survey
 NORTH AMERICAN 1927 DATUM

QUAD 290903 STATION 1014
 LA
 LATITUDE 29°00' TO 29°30'
 LONGITUDE 90°30' TO 91°00'
 DIAGRAM NH 15-9 NEW ORLEANS

DREUX (Terrebonne Parish, La., E.R.McC., 1934) - Station is in solid ground on the W bank of Bayou Little Caillon between a dirt road (State Highway 79) and the bayou, on the property of Mr. Dreuxrages, of Houma, 10 meters (33 feet) E of the highway, 11 meters (36 feet) W of the bayou, NE of a large frame house occupied by Alex Blanchard, and 18 meters (60 feet) N of 2 large live-oak trees which are the only large trees in that vicinity.

Station and azimuth marks are standard bronze disks set in concrete in the top of tiles, as described in note 6a. Reference mark No. 1, a standard bronze disk set in concrete, as described in note 11a, is 7 meters (23 feet) E of the highway and 32.530 meters (106.73 feet) from the station in azimuth 165°28'. as described in note 11a, is on a fence line, 4 meters (13 feet) from the highway and 18.320 meters (60.10 feet) from the station in azimuth 75°05'. The azimuth mark is on the S fence line of a house, 16 meters (52 feet) W of the highway and about 0.2 mile from the station in azimuth 167°13'15".

DREUX (Terrebonne Parish, La., E.R.McC., 1934; A.L.P., 1952) marks were recovered in good condition. The distances to the reference marks were checked and were found to be correct. A new description follows:

Station is located about 26 mi. SE of the intersection of State Highways 69 and 141 in Houma, 2.9 mi. S of a bridge over Robinsons Canal, on the E side of the highway, near a small L-shaped pier, 33 ft. E of the centerline of the road 70 ft. N of a 40-in. lone oak tree, 72 ft. E-NE of the center of a driveway gate to a corrugated tin cabin, 21 ft. W of the bayou bank, and 3 ft. W of a 4-by-4-in. white wooden witness post. It is a standard disk, stamped "DREUX 1934" and set in the top of a 10-in. round concrete monument flush with the ground.

Reference mark 1 is 177 ft. N of a lone 40-in. oak tree, 44 ft. W of the bayou bank, and 23 ft. E of the centerline of the road. It is a standard disk, stamped "DREUX NO 1 1934" and set in the top of a 9-by-9-in. concrete monument projecting 2 in. above the ground.

Reference mark 2 is 26 ft. W of the centerline of the road, 24 ft. N of the center of the driveway gate, and 5.5 ft. E of a fence. It is a standard disk, stamped "DREUX NO 2 1934" and set in the top of a 9-by-9-in. concrete monument projecting 2 in. above the ground.

The azimuth mark is 311.835 m. (1023.08 ft.) N-NW of the station, 79 ft. S-SE of a wooden cistern, 73 ft. S-SW of the SE corner of a house, and 47 ft. W of the centerline of the road. It is a standard triangulation-station disk, stamped "AZIMUTH DREUX 1934" and set in the top of a concrete-filled 10-in. terra-cotta tile projecting 2 in. above the ground.

To reach the station from the intersection of State Highways 69 and 141 in Houma, go SE on State Highway 69 to the junction of State Highway 79 at Presquille, and thence SE on State Highway 79 to the station site.

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: DREUX
 STATE: LOUISIANA YEAR: 1934 SECOND-ORDER
 LOCALITY: MISSISSIPPI DELTA TO ATCHAFALAYA RAY
 SOURCE: G-2386 FIELD SKETCH: LA 91 NO 2

GEODETIC LATITUDE: GEODETIC LONGITUDE:	ELEVATION: METERS FEET
29 17 26.702 90 38 53.738	

STATE COORDINATED (FM)			
STATE & ZONE	CODE	X	Y
LA. 5.	1702	2,218,392.39	227,601.54 + 0 20 33

TO STATION OR OBJECT	GEODETIC AZIMUTH (from Merid)	PLANE AZIMUTH (from Merid)	CODE

OVER

103-395

HORIZONTAL CONTROL DATA

QUAD 290903 STATION 1014
LA
LATITUDE 29°00' TO 29°30'
LONGITUDE 90°30' TO 91°00'
DIAGRAM NH 15-9 NEW ORLEANS

by the
Coast and Geodetic Survey
NORTH AMERICAN 1927 DATUM

DREUX (Continued)

U.S. DEPARTMENT OF COMMERCE - COAST AND GEODETIC SURVEY
RECOVERY NOTE, TRIANGULATION STATION

R

Name of Station: DREUX
Established by: E. R. McC. Year: 1934 State: Louisiana
Recovered by: C. R. R. Year: 1960 Surveyor: Terrebonne Parish

Detailed statement as to the fitness of the original description, including marks found, stampings, changes made, and other pertinent facts:

The station was visited and all marks were found in good condition. The azimuth mark is not visible from the station due to a building on line. For information of the highway a new description follows:

The station is located about 26 miles southeast of Houma, on the west bank of Bayou Little Caillon, between the bayou and State Highway 56, 2.9 miles south of the bridge over Robinson Canal and 1.1 mile south of the junction of State Highway 56 and 57. It is 208 feet north of a steel road leading east to the bayou at Adeco Landing, 70 feet north of a 2-foot lone oak tree, 16 feet west of the west edge of the bayou, 34.5 feet east of the center of the gravel road, 126.5 feet east-northeast of the northeast corner of a tin building painted green, 73 feet east-northeast of the center of the driveway to the green building and 1 foot northeast of a metal witness post. It is a standard disk, stamped DREUX 1934, flush with the ground. (note 1a & 7a).

Reference mark No. 1 is 106.69 feet north of the station, 23.5 feet east of the center of the gravel road, 177 feet north of a lone 2-foot oak tree, 32.5 feet west of the west bank of the bayou, 41 feet north of a lone 8-inch oak tree and 1 foot west of a metal witness post. It is a standard disk, stamped DREUX FO 1 1934, projecting 1 inch. (note 11a).

Reference mark No. 2 is 60.06 feet west-southwest of the station, 25.5 feet west of the center of the old gravel road, 25.5 feet north of the center of the driveway to the tin building, 73 feet east northeast of the northeast corner of the tin building, 81.5 feet northwest of a lone 2-foot oak tree, 5.5 feet east of a fence line and 1 foot north-west of a metal witness post. It is a standard disk, stamped DREUX NO 2 1934, flush with the ground. (note 11a).

The distance between reference mark No. 1 and No. 2 is 122.80 feet. The azimuth mark is 311.835 meters north-northwest of the station, in the driveway of a farm house, 48 feet west of the center of the gravel road, 28.5 feet west of a metal witness post, 73 feet east southeast of the southeast corner of a house painted green, 101 feet west of the west edge of the bayou, 45 feet east of a 2-foot hackberry tree, 83.5 feet north of the northeast corner of a tin building and in the north edge of the driveway. It is a standard triangulation disk, stamped DREUX AZIMUTH 1934, set in the top of an 8-inch concrete filled terra cotta pipe flush with the ground.

To reach the station from the post office at Houma, go east on State Highway 24 for 1.05 mile to the junction with State Highway 57, continue east on State Highway 24 for 4.4 miles to the junction with State Highway 56, continue straight ahead on State Highway 56 for 21.5 miles to the mark on the left.

Handwritten: Form 10/2

Handwritten signature: [Signature]
Name of chart of party should be inserted here. The officer who actually visited the station should sign his name at the end of the recovery note.

NOTE - One of these forms must be used for every station recovered.

13

2025
9-25-93

H. Nuypre
C. D. Blair
R. M. Thorne

B.M. = 2233 ✓

GPS 9509 =

B.M. DREUX-2 in code

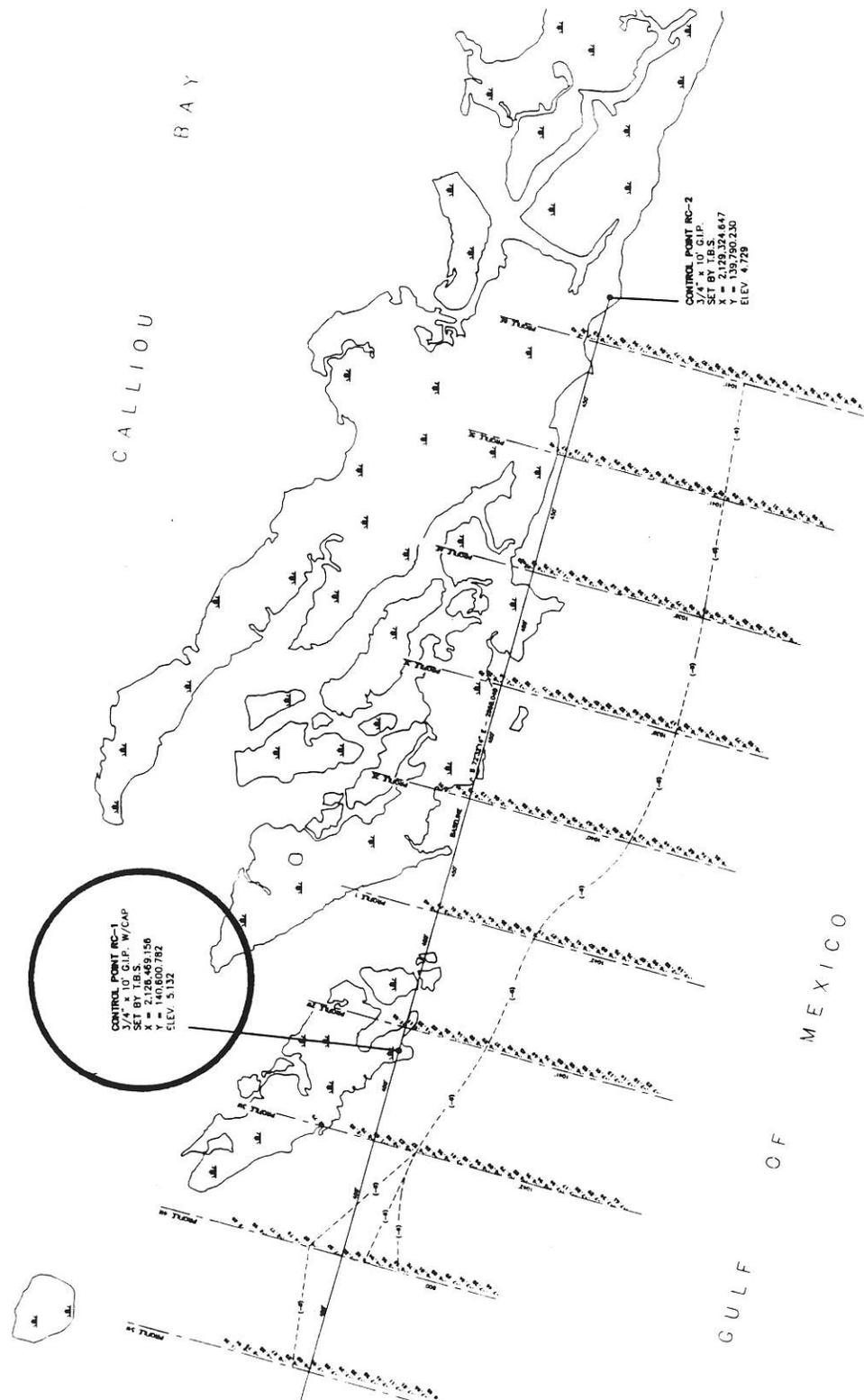
ELEV. = ~~4205~~ 1981 FT.

E 4282 meters, 604m

Elevation Loop To DREUX-2					
G.P.S. PT. #9506					
(Cocodrie, La)					
STA. + H.I. - ELEV.					
B.M.	6.6645	8.931		2.286	N.G.U.D.
T.P.#1	4.963	9.211	4.683	4.248	
T.P.#2	5.172	9.413	4.970	4.241	
T.P.#3	5.785	10.448	4.750	4.663	
T.P.#4	5.200	10.847	4.801	5.647	
T.P.#5	4.349	9.927	5.269	5.578	
T.P.#6	4.201	8.843	5.285	4.642	
T.P.#7	5.481	10.024	4.300	4.543	
T.P.#8	1.401	7.255	4.170	5.854	
T.P.#9	1.467	5.672	3.050	4.205	
B.M. 1			3.691	1.981	

STA.	BS	IS	#	Elev.
Elev. Loop to DREUX-2 contd.				
B.M.		H.I.	-	1.981
#9	3.528	5.509	1.302	4.207
#8	2.949	7.156	1.300	5.856
#7	4.051	9.907	5.360	4.547
#6	4.295	8.842	4.190	4.652
#5	5.150	9.802	4.215	5.587
#4	5.055	10.642	4.989	5.653
#3	5.020	10.673	6.005	4.668
#2	4.630	9.298	5.055	4.243
#1	5.270	9.513	5.269	4.244
B.M.	5.131	9.375	7.093	2.282

#	2025	9-25-92	14
same pty			
DREUX-2			
B.M. 2-233 (Elev = 2.286)			
Closure = -0.004			



TOPOGRAPHIC SURVEY

DEPARTMENT OF NATURAL RESOURCES
 COASTAL RESTORATION DIVISION
 RACON LAKE RESTORATION PROJECT
 SILES DECHERRE, TERREBONNE PARISH, LA.
 SECTIONS 2, 3, 4, 5, 32 1245-R15E

DATE: FEBRUARY 1993
 T. BAKER SMITH & SON, INC.
 CIVIL ENGINEERS - SURVEYORS - ENVIRONMENTAL ENGINEERS
 P.O. BOX 4000, MONROE, LOUISIANA 70001

DATE	DESCRIPTION	BY

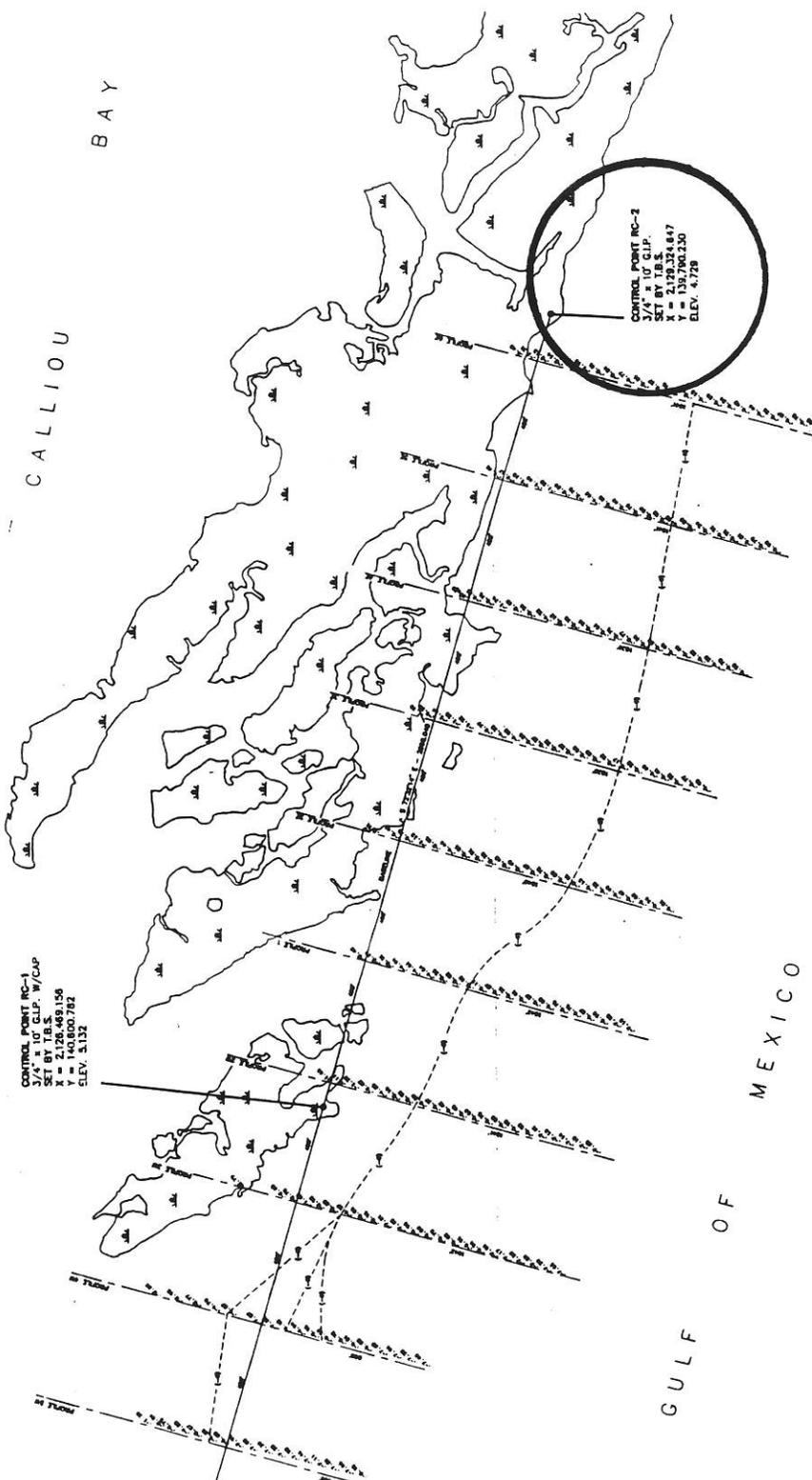
DESIGNED	DRAWN	TRACED	CHECKED



NOTE: HORIZONTAL AND VERTICAL CONTROL
 ESTABLISHED BY T.B.S. GPS CONTROL SURVEY (MARCH 93)
 HORIZONTAL POSITION REFERENCE NAD 83/92 DATUM
 VERTICAL CONTROL REFERENCE N.G.V.D. 29

76.54

SKETCH NO.
1 OF 2



TOROGRAPHIC SURVEY

DEPARTMENT OF NATURAL RESOURCES
COASTAL RESTORATION DIVISION
RACCOON ISLAND RESTORATION PROJECT
ISLES DERRIERES, TERREBOUQUE PARISH, LA.
SECTIONS 2, 3, 4, 5, 32 7245-R15E

DATE: FEBRUARY, 1993
T. BAKER SMITH & SON, INC.
1000 N. W. 10th St., Metairie, Louisiana 70002

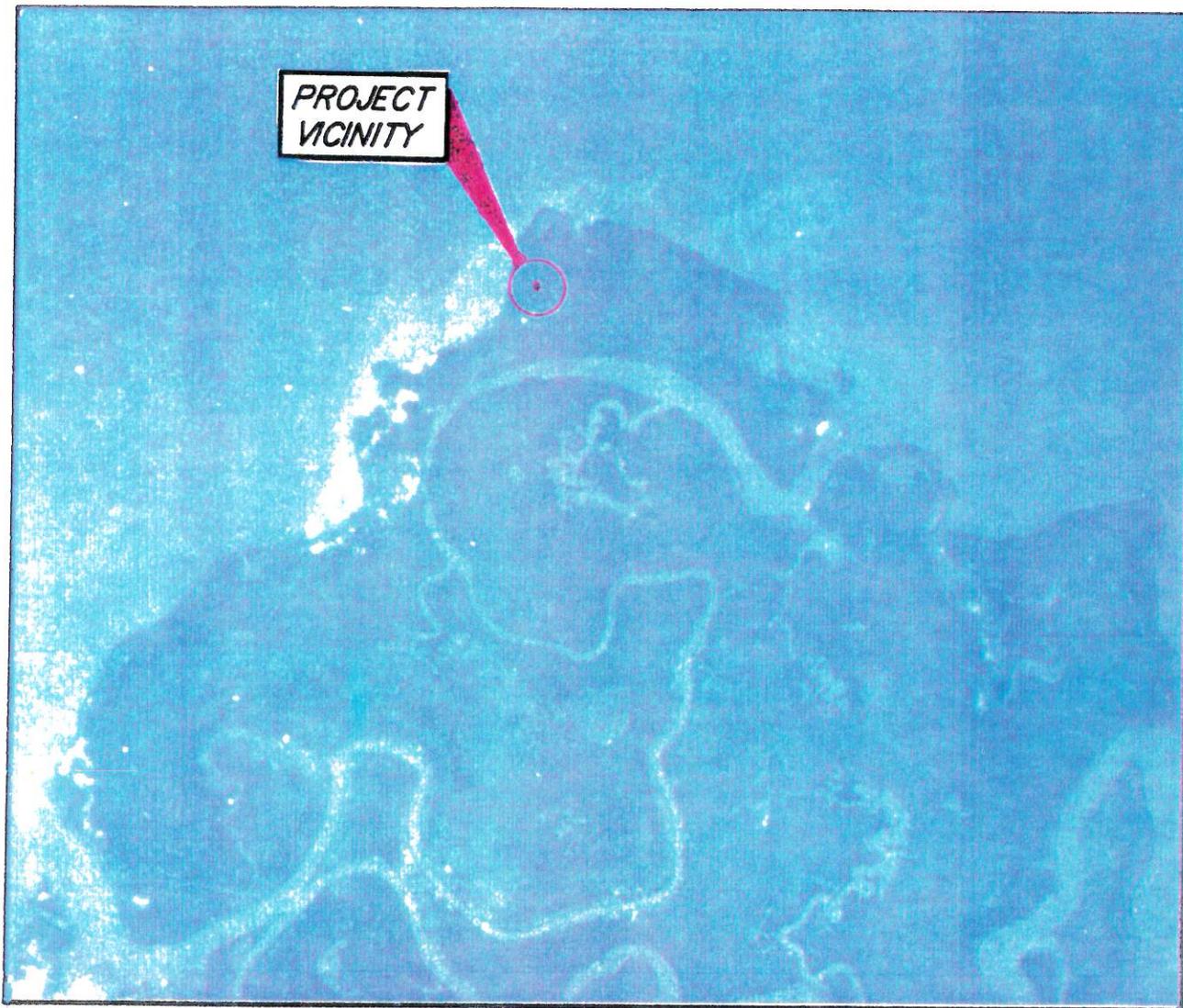
DATE	BY	DESCRIPTION	REVISION

DATE	BY	DESCRIPTION	REVISION



NOTE: HORIZONTAL AND VERTICAL CONTROL
ESTABLISHED BY T.B.S. GPS CONTROL SURVEY (MARCH 93)
HORIZONTAL POSITION REFERENCE NAD 83/92 DATUM
VERTICAL CONTROL REFERENCE N.G.V.D. 29

3763A



AERIAL PHOTOGRAPH

SCALE
1"=400'



MONUMENT STAMP

GPS MONUMENT "WI - 1"
LATITUDE 29°03'05.259615"
LONGITUDE 90°50'30.846892"
ELEVATION = 2.033'

T. BAKER SMITH & SON, INC.
CIVIL ENGINEERS—LAND SURVEYORS
HOUMA, LOUISIANA
MAY, 1993

G.P.S. U.I. # 1

LA. D.N.R. CRD.

ENSIGN N = 29° 03' 05.6"

W = 90° 50' 30.1"

2009

3-27-93

77'

14:20

42

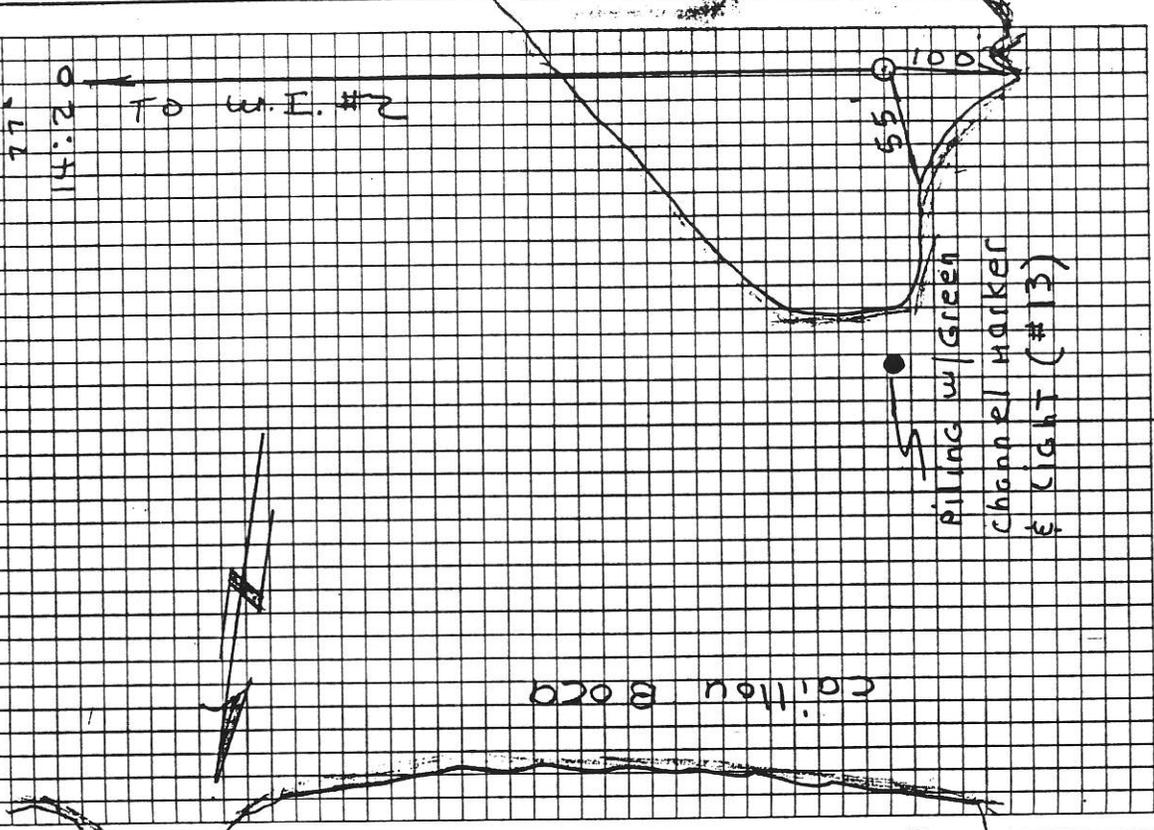
cloudy

to U.I. #2

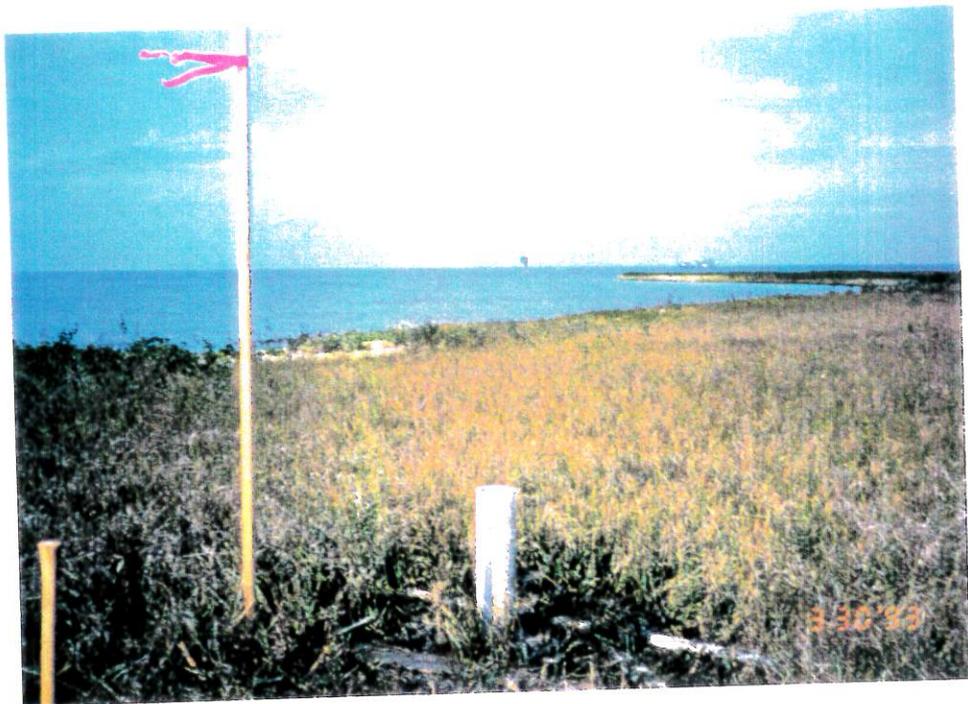
pty on pg. 37

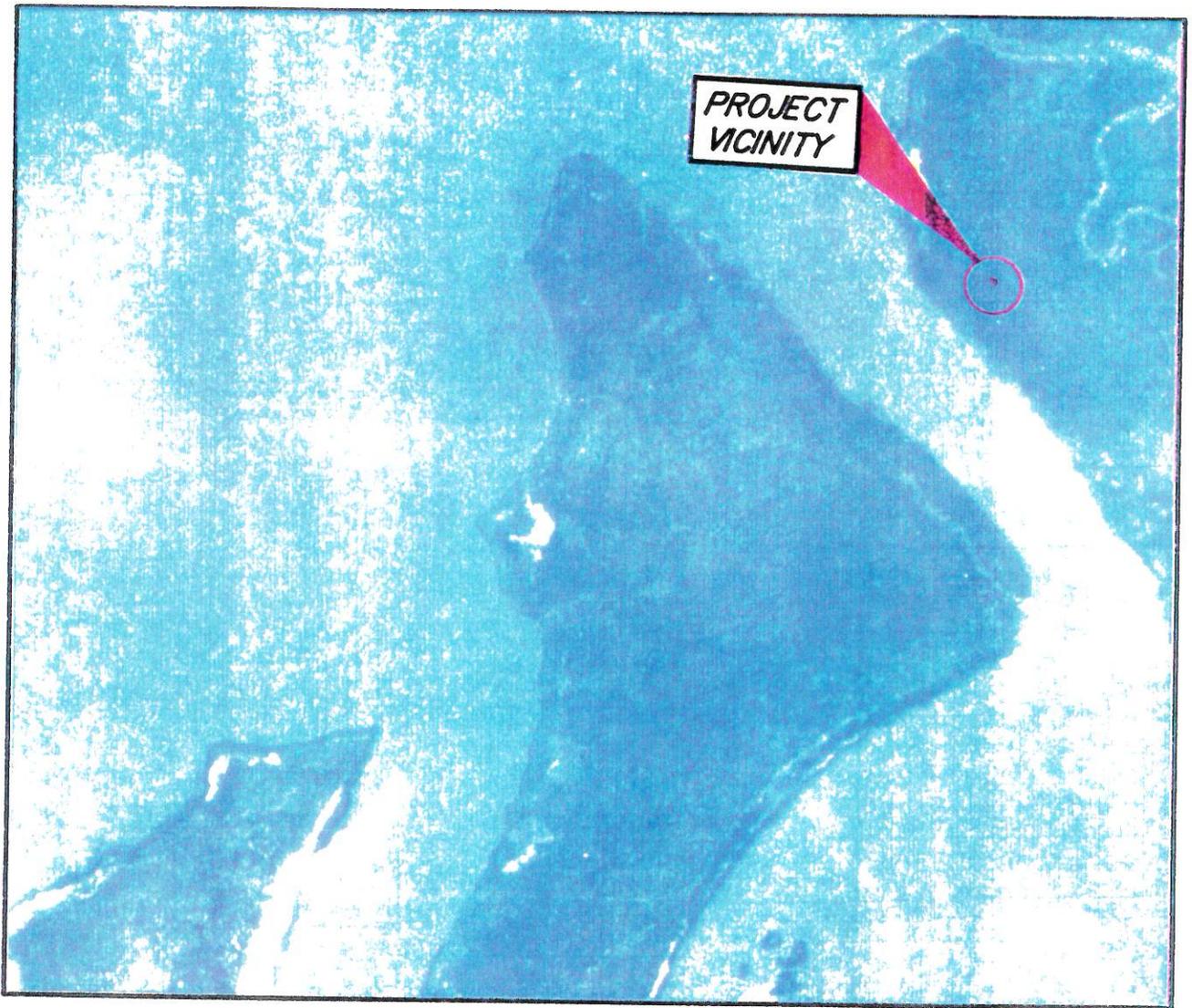


Caillon Boca



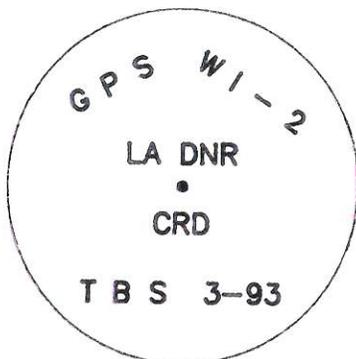
"WI-1"





AERIAL PHOTOGRAPH

SCALE
1"=400'



MONUMENT STAMP

GPS MONUMENT "WI - 2"
LATITUDE 29°02'54.699017"
LONGITUDE 90°48'54.874084"
ELEVATION = 1.812'

T. BAKER SMITH & SON, INC.
CIVIL ENGINEERS—LAND SURVEYORS
HOUMA, LOUISIANA
MAY, 1993

"WI-2"



"TI-1"



"II-1"



G.P.S. # T.I. # 2

CA. D.N.B. C.R.D.

EN SIGN N = 29° 03' 05.4"
W = 90° 43' 07.5"

pty on pg. 37 # 2009 3-29-93

39

cloudy

70°

11:15 A.M.

~~GULF OF MEXICO~~

SPILL

DOCK

FIN ROOF

CONC. BASE

FOR STAKE

35.0

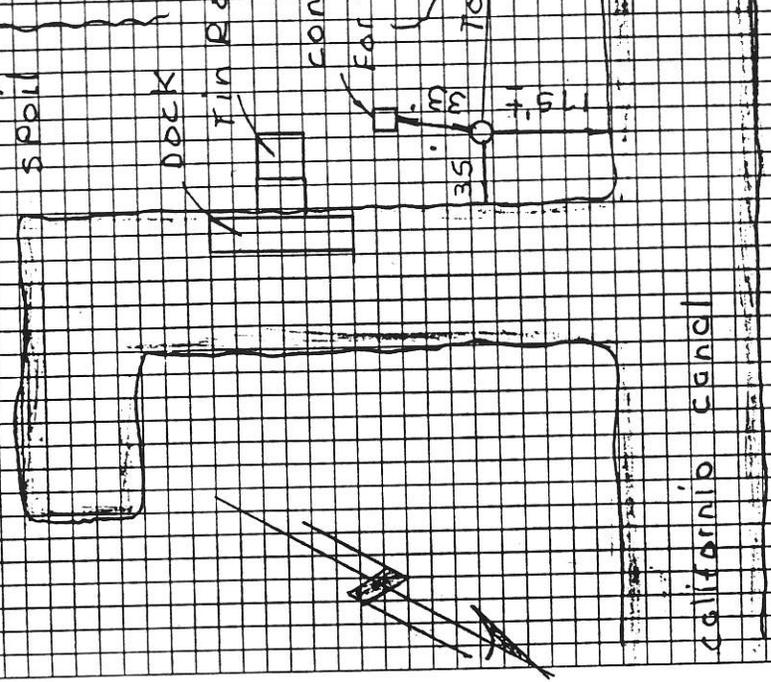
±

±

TOT. I. #1

CALIFORNIA CANAL

TO LAKE PELTO



"TI-2"



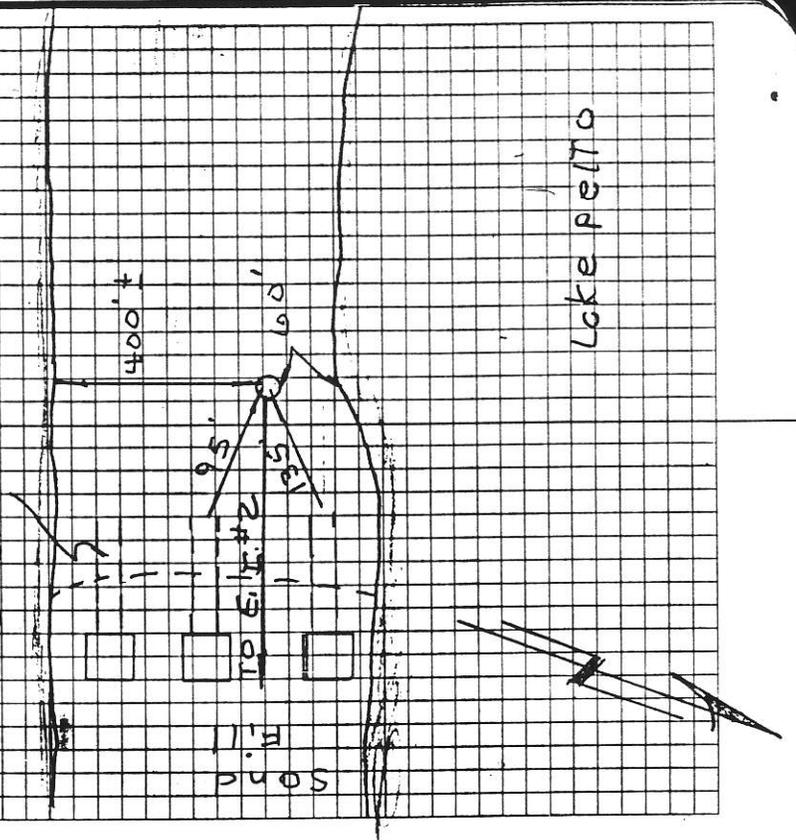
38

pty on pg. 37 # 2009 B-29-93

cloudy
67°
10:00 AM

GULF OF MEXICO

30" DISCHARGE PIPES



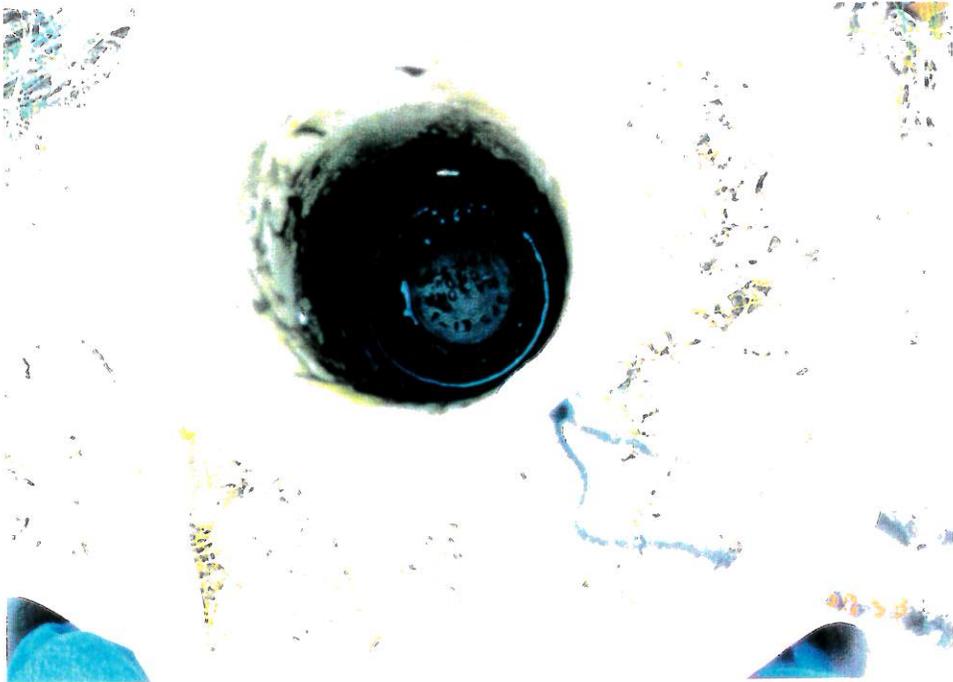
G.P.R. # E.I.#1

LA. D.N.R. CRD.

ENSIGN N=29° 03' 51.1"

W=90° 39' 01.6"

"EI-1"



''EI-1''



G.P.S. E.I. #2
 C.A. D.N.R. CRD

EN SIGN N = 29° 04' 16.0"
 W = 90° 38' 23.5"

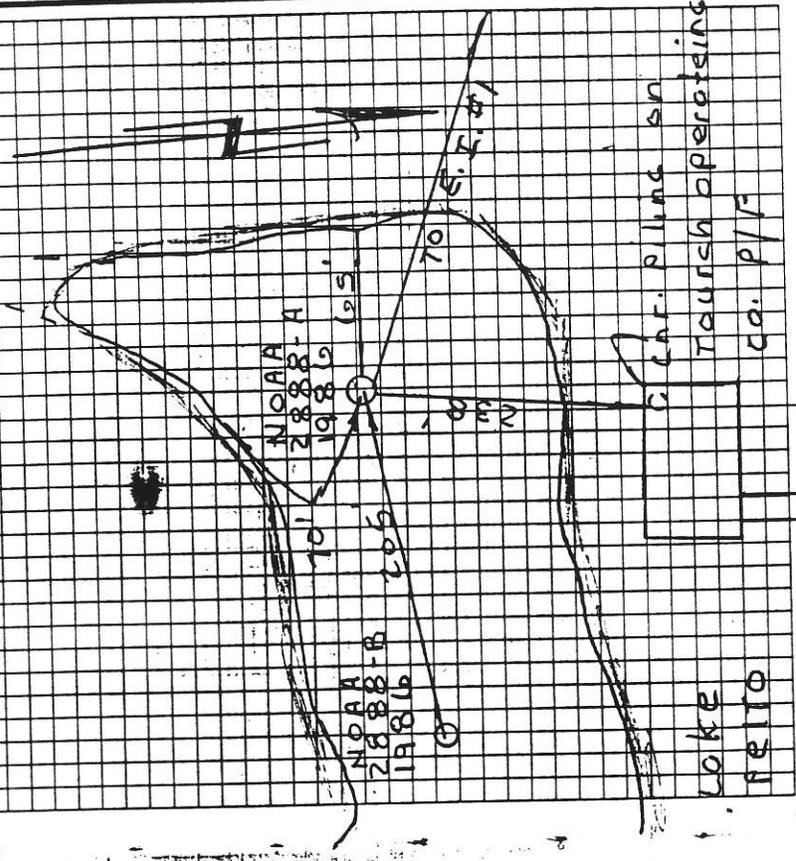
monument is an Alum cap
 crimped on a 21' stainless
 steel Rod above 8" above
 ground set in a 5' long
 6" dia. P.U.C Pipe Encased
 & surrounded conc.

2009 37
 3-29-93

H. Dyre
 C. Carls cloudy
 R. Motherne 65°
 8:50 A.M.

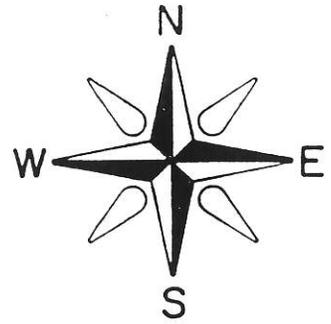
GULF OF MEXICO

pond

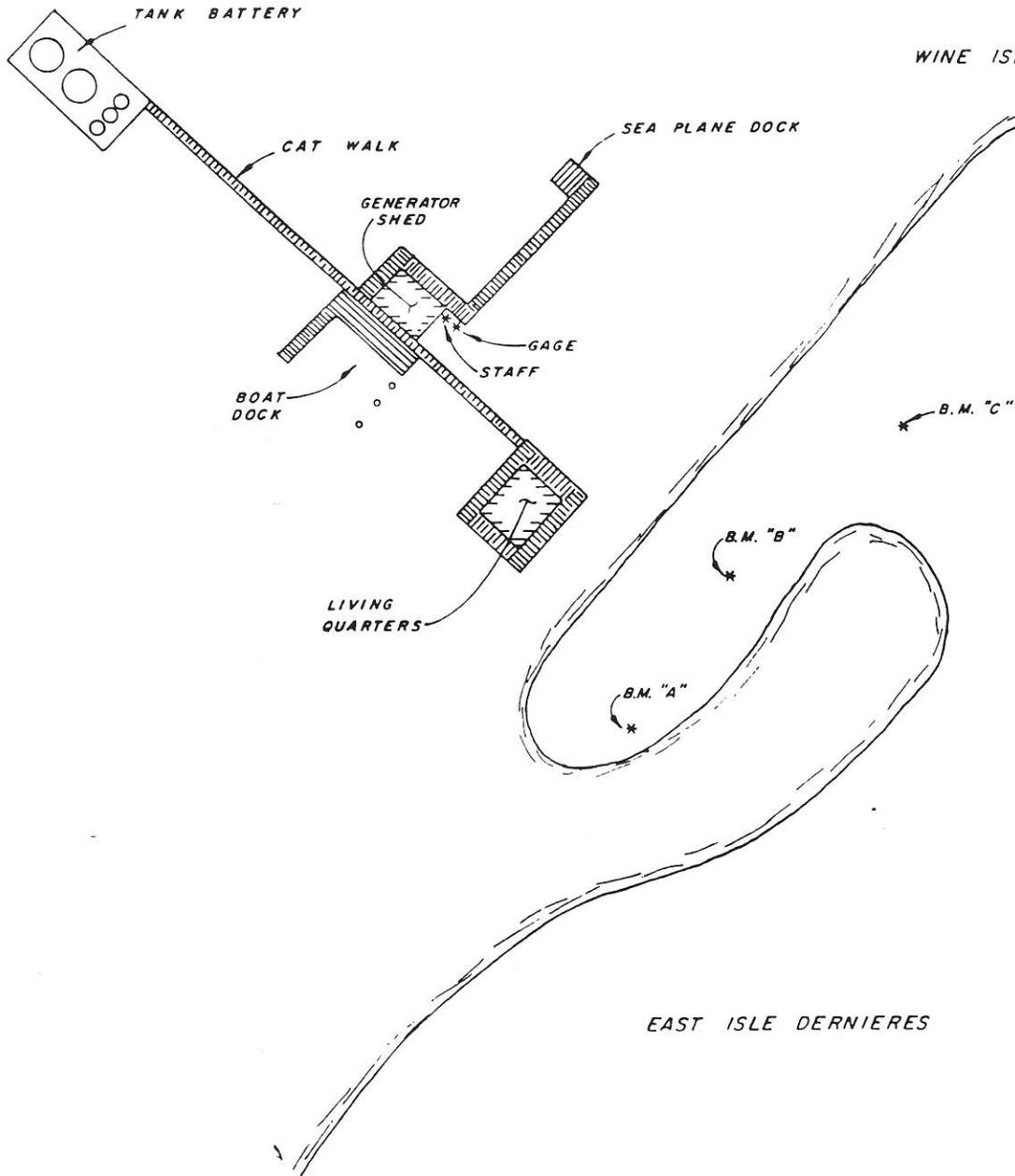


lake
 netto

LAKE PELTO



WINE ISLAND PASS



NOAA FORM 70-100
(8-63)

U.S. Department of Commerce
National Oceanic and Atmospheric Administration
National Ocean Service

FIELD UNIT
L - TBS - 0

DRAWN BY R. W. O.

DATE 12-29-66

BENCHMARK SKETCH

REVISED BY DATE

STATION NAME

STATION NO
876-2000

REVISED BY DATE

EAST ISLE DERNIERES, LAKE PELTO, LA.

REVISED BY DATE

LOUISIANA 876 2888

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE

TIDAL BENCH MARKS

EAST ISLE DERNIERES, LAKE PELTO

LATITUDE: 29°04.3' LONGITUDE: 90°38.4'
NOAA CHART: 11357 USGS QUAD: EASTERN ISLES DERNIERES

To reach this site, embark by boat from Harbor Light Marina at Cocodrie below Houma and proceed southwesterly in Bayou Petit Caillou to Houma Navigation Canal. Turn left and proceed southeasterly in canal to Channel Marker No. 8. Turn right and proceed southwesterly toward large tank battery in Lake Pelto Oil Field beyond Point Mast Island. Opposite island turn left and proceed southwesterly to Chevron Facility at east end of East Isle Dernieres. The bench marks are located SE of the tide gage in a NE to SW line along the NW shoreline of Isles Dernieres. The tide gage and staff were located along the SW side of a timber wharf at the east corner of the generator shed.

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BENCH MARK STAMPING: 2888 A 1986

MONUMENTATION: Survey Disk
AGENCY/DISK TYPE: NOS Tidal Bench Mark
SETTING CLASSIFICATION: Stainless Steel Rod

The bench mark is 384.5 feet (117.2 m) SE of the tide staff, 70.0 feet (21.3 m) WNW from the edge of a small pond on East Timbalier Island, 17.8 feet (5.4 m) NE of a 1" x 2" stake extending above the marsh, and 2.2 feet (0.7 m) WNW of the standard NOS witness post. The bench mark is 1.5 feet (0.4 m) above ground level, crimped to a stainless steel rod driven 80 feet (24 m) to substantial resistance and encased in a 5-inch PVC pipe driven 4.0 feet (1.2 m) below ground level and extending 2.0 feet (0.6 m) above ground.

BENCH MARK STAMPING: 2888 B 1986

MONUMENTATION: Survey Disk
AGENCY/DISK TYPE: NOS Tidal Bench Mark
SETTING CLASSIFICATION: Stainless Steel Rod

The bench mark is 203.4 feet (72.0 m) NNE of Bench Mark 2888 A 1986, 152.8 feet (46.6 m) SSW of a 3-pile cluster east of a 4-pile group, 131.9 feet (40.2 m) south of the southernmost pile in a 4-pile group, and 1.6 feet (0.5 m) NW of the standard NOS witness post. The bench mark is 1.5 feet (0.45 m) above ground level, crimped to a stainless steel rod driven 80 feet (24 m) to substantial resistance and encased in a 5-inch PVC pipe driven 4.0 feet (1.2 m) below ground level and extending 2.0 feet (0.6 m) above ground.

"EI-2"

