G-26931 MC
15298
UPDATE

14 FEB 2006

In Reply Refer To: MS 5232

Mr. Scott Broussard
Spinnaker Exploration Company, L.L.C.
1200 Smith Street, Suite 800
Houston, Texas 77002

Dear Mr. Broussard:

Reference is made to the following application that has been reviewed by the Minerals Management Service:

Application Type: Right-of-Way Route Modification
Application Date: November 16, 2005
Supplemental Data Date(s): November 16, 2005, January 25, February 13, February 14, 2006

Work Description: Modify Right of Way OCS-G 26931 by adding approximately 12,709.28' of new pipe from the "B" Platform to a capped end, all in Galveston Area Block 210.

Pursuant to 30 CFR 250.1000(b), your application is hereby approved.

The pipeline resulting from this modification is described below:

An 8 5/8-inch pipeline 6.77 miles in length to transport gas and condensate from the B Platform in Block 210, through Blocks 226 and 225, to a 12-inch subsea tie-in in Block 239, all in the Galveston Area.

The approval is subject to the following:

Our review indicates that the proposed pipeline route is in the vicinity of the unidentified side-scan sonar targets listed in the Enclosure, features that may represent significant archaeological resources. In accordance with 30 CFR 250.194(b), you will either (conduct an underwater archaeological investigation prior to commencing construction activities to determine whether these features represent archaeological resources, or (2) ensure that all seafloor disturbing actions avoid the unidentified features by a distance greater than that listed in the Enclosure. Submit lay barge anchor position plats, at a scale of 1-in. = 1,000-ft. with DGPS accuracy, with your pipeline construction report required by 30 CFR 250.1008(b) that demonstrate that the features were not physically impacted by the construction activities. If you conduct an underwater

archaeological investigation prior to commencing operations, comply with the investigation methodology and reporting requirements found at: http://www.gomr.mms.gov/homepg/regulate/environ/archaeological/evaulation.html.

Assigned Right-of-Way Number: OCS-G26931
Assigned Segment Number: 15298

Assigned MAOP (psi): 1440
MAOP Determination : Subsea Segment

Please be reminded that, in accordance with 30 CFR 250.1008(a), you must notify the Regional Supervisor at least 48 hours prior to commencing the installation or relocation of a pipeline or conducting a pressure test on the pipeline. Also in accordance with 30 CFR 250.1008(b), you must submit a report to the Regional Supervisor within 90 days after completion of any pipeline construction.

Sincerely,

O/S A Alvarez

Donald C. Howard
Regional Supervisor
Field Operations

bcc: 1502-01 Segment No. 15298, ROW OCS-G26931 (MS5232)
1502-01 ROW OCS-G26931 (Microfilm) (MS 5033)
MS 5232 Cartography

Enclosure No. 1

Enclosure No. 1

Side-Scan Sonar Targets

Area/ Block	Magnetometer Association	Dimensions LxWxH(Feet)	Coordinates		Minimum Avoidance Distance(Feet)
GA 210	YES	16x2x0	X=	3404588	500
			Y=	492771	
GA 210	YES	66x13x0	X=	3405234	1000
			Y=	493926	

15298
MMCKD

Coastal Coordination Council

P.O. Box 12873 ♦ Austin, Texas 78711-2873 ♦ (512) 936-9703 ♦ FAX (512) 475-0680

February 10, 2006

Minerals Management Service
RECEIVED
Feb 13 2006
Office of Field Operations
Pipeline Section

Mr. Tom Becnel
Hydro Gulf of Mexico, L.L.C.
Suite 800
1200 Smith Street
Houston Texas 77002-4502

Re: Application for the Modification to an Existing 8.375-inch OD Natural Gas ROW from Spinnaker Exploration Galveston Area Block 210 - B OCS-G 25524 to 09032 22247, OCS Federal Waters, Offshore Texas.
CMP#: 06-0172-F4

Dear Mr. Becnel:

Pursuant to Section 506.40 of 31 TAC of the Coastal Coordination Act, the project referenced above has been reviewed for consistency with the Texas Coastal Management Program (CMP).

The project was reviewed for impacts to coastal natural resource areas within the CMP boundary. No unavoidable adverse impacts were found. Therefore, this project is consistent with the CMP goals and policies.

Sincerely,

Tammy S Brooks
Consistency Review Coordinator
Texas General Land Office

cc: Alex Alvarado, MMS
Bonnie Johnson, MMS
Janet Diaz, MMS
Anthony Gagliano, MMS

PIPELINE APPLICATION ENGINEERING ANALYSIS

Report Run Date: 02/07/2006
Engineer: Manny Gagliano
Permit Number: 15298
Permit Type: ROW Route Modification
Application Date: 11/16/2005

Pipeline Masters

Segment Number	15298		--- ORIGIN ---		--- DESTINATION ---
Row Number	G26931		ID Name: B		ID Name: 12 SSTI
Row Status Code	ACT		Area/Block: GA/ 210		Area/Block: GA/ 239
Row Permitte Name	Spinnaker Exploration		Lease Number: G25524		Lease Number: G09032
Row Permittee Code	02169		Protraction No. TX6		Protraction No. TX6
Operator Name	Spinnaker Exploration				
Operator Code	02169	Design Type	BRACELET	Pipeline Apprv Date	11/04/200
Approval Code	R	Anode Composition	GALIII	ROW Issue Date	11/04/200
Approval Authority	I	Cathodic Life time	100	Initial HTP Date	10/08/199
Status Code	PROP	Digitized Data Flag	N	Recent HTP Date	
Size Code	08	Bi-Directional Flag		Out of Service Date	
Product Code	G/C	Old Pipe Flag	Y	Flush/Fill Date	
Oil/Condensate API		Surface Tie-in Seg No.		Temp. Cess of Ops. Date	
H2S Concentration		Surface Tie-in MAOP	0	ROW Relinquishment Date	
Alt Product Code		Subsea Tie-in Seg No.	4590	Abandonment Approval Date	
Fed Segment Length	35767	Subsea Tie-in MAOP	1440	Abandonment Date	
Fed+State Offshore Length	35767	Assigned MAOP	1440	Abandonment Type	
Minimum Water Depth	55			Last Updated By	GAGLIAN
Maximum Water Depth	55			Date Updated	01/23/200
Burial Designator Flag	Y				

Technical Data

Segment Number 15298 Authority Code I Application Number 15298
Originating Area Block GA 210 Product Code G/C Application Type RWMR
Destination Area Block GA 239

Flange and Valve Data

Valve Max Temperature (F): 100

		MAOP (psig)
Flanges	ANSI 900# 2160 psig	2160
Valves	ANSI 900# 2160 psig	2160

Tie-in Data

Subsea Segment	4590	1440
Surface Segment		0

Hydrostatic Test Data

	Proposed H.T.P (psig)	Actual H.T.P (psig)	Test Duration (hrs)	Max Test H.T.P (psig) (S*0.95)	
Pipelines	2160			2891	1728
Deprt Rsrs	2160				1728
Recv Rsrs				3855	
Flanges	2160			3250	2160
Valves	2160			3250	2160

Cathodic Protection Data

Design Type: BRACELET
Anode Type: GALIII
Anode Weight(lbs): 38
Anode Spacing(ft): 200
Anode Life(yrs): 100

Operational Data

Max Source Press(psi): 3300
Design Gas Capacity(mmscfpd): 30
Design Oil Capacity(blpd): 1000

Collapse Data

Water Depth(ft) Min: 55 Max: 55
External Pressure Min: 24.42 Max: 24.42
Collapse Pressure(psi): 2632
Safety Factor: 107.7
Buried: Y

Volume Data

Pipe Section Length: 35767

Max Pipeline Volume(bbls): 2814

Specific Gravity Data

Bare Pipe S.G.	Weighted Pipe S.G.	WEIGHT COATING Thick(in)	WEIGHT COATING Density(pcf)
1.27	1.27	0	0

	Size (in)	Wall Thickness	Grade	SMYS (S) (psig)	(S*0.72) Riser (S*0.6)	(S*0.5)	Pipe Type	MAOP (psig)
Pipelines	8.625	.375	B-35	3043	2191		STND	2191
Deprt Rsrs				0	0	0	STND	1728
Recv Rsrs	8.625	.5	B-35	4058	2435	2029	STND	
							Assigned MAOP	1440

Permit Applications

Number	Permit Type	Application Dt	Received Dt	ROW No.	Engineer	Operator
15298	ROW Route Modification	11/16/2005	11/22/2005	G26931	Manny Gagliano	Spinnaker Exploration

Pipeline Description:

Modify Right of Way OCS-G 26931 by adding approximately 12,709.28' of new pipe from the "B" Platform to a capped end, all in Galveston Area Block 210.

Pipeline Submittals

Submittal Type	Application Dt	Sub Recv'd Dt	Sent To Type	Sent to Sign	Final Action	Final Action Dt
	11/16/2005	11/22/2005				
	11/16/2005	01/24/2006				
	01/25/2006	01/30/2006				

Pipeline Segments

Segment No	Size	Product	Orig Area/Block	Orig ID Name	Dest Area/Block	Dest ID Name
15298	08	G/C	GA/ 210	B	GA/ 239	12 SSTI

All Reviews

Review Name	Sent Date	Received Dt	Requested Dt	Completed Dt	Reviewer
Application Completeness Review	01/20/2006				
Adjudication Review	02/01/2006	02/03/2006	02/20/2006	02/03/2006	987
Leasing and Environment Pipeline I	02/01/2006		02/20/2006		
Hazards Review (Geological and Ge	02/01/2006		02/20/2006		
Pipeline Engineers Review	01/24/2006	01/24/2006	02/09/2006		2656
NEPA (1) Determination Type Revie	02/02/2006	02/02/2006	02/12/2006	02/02/2006	1070
Archaeological Review	02/02/2006	02/02/2006	02/20/2006	02/03/2006	1658

Platforms

Complex ID	Structure No	Structure Name	Area/Block	Install Date	Removal Date

Application Fees

Application Fee $ .00

Rental Fee $ 15.00 **Rent Period** 1 **Unit** ML **Length of ROW** 2.41 **Total Rent** $ 45.

Total Application Fees $ 45.00

Check Info Application to modify by the addition of 2.41 miles to the ROW for a total ROW length of 6.77 miles.

DEPARTMENT OF THE ARMY
GALVESTON DISTRICT, CORPS OF ENGINEERS
P.O. BOX 1229
GALVESTON, TEXAS 77553-1229

REPLY TO
ATTENTION OF:

October 27, 2005

Evaluation Section

SUBJECT: Permit Application – 23869

Spinnaker Exploration Company, L.L.C.
1200 Smith Street, Suite 800
Houston, Texas 77002-4502

Gentlemen:

Two copies of a permit for work in waters of the United States, resulting from your above numbered application, are enclosed for your signature.

Before you accept the permit, please note all terms and conditions and any minor plan modifications that may have been necessary. Also, please note the Notification of Administrative Appeal Options regarding this permit. This authorization is based on an approved jurisdictional determination.

If you do not intend to appeal this permit action, both original copies of the accepted permit should be returned to this office within ten days for approval, after which one copy of the permit will be promptly sent to you for retention. This permit is not valid until signed in the issuing office.

Both copies of the permit should be signed and dated in the space provided. A fee in the amount of $100.00 must be paid before the permit can be approved. Your check should be made payable to the U.S. Army Engineer District, Galveston, and mailed to the District Engineer at the above address.

Sincerely,

Janet Thomas Botello

Janet Thomas Botello
Leader, Central Evaluation Unit

Enclosures

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

United States Army Corps of Engineers

27 Oct 2005

A permit to install, operate and maintain an 8-inch diameter pipeline

at Galveston Anchorage Area Blocks 210, 226, 225 & 239, offshore, Texas

has been issued to Spinnaker Exploration Co, LLC on 27 Oct 2005

Address of Permittee 1200 Smith St, Ste. 800, Houston TX 77002-4502

Permit Number

23869

Janet Thomas Botello
Janet Thomas Botello
For Col. Steven L. Hawstein
District Commander

ENG FORM 4336 Jul 81 (ER 1145-2-303) EDITION OF JUL 70 MAY BE USED (Proponent DAEN-CWO)

Compliance Certificate

I, _____ hereby certify that the work authorized by Department of the Army Permit 23869, located ~~in~~ offshore, Texas ~~County/Parish~~ was performed in accordance with the project plans, and the terms and conditions of the permit. The authorized work was completed as of _____.

(date)

_____ _____

Signature of Permittee (date)

Spinnaker Exp.

U.S. Army Corps of Engineers, Galveston District
P.O. Box 1229, Galveston, Texas 77553-1229
(409) 766-3930

DEPARTMENT OF THE ARMY PERMIT

Permittee Spinnaker Exploration Company, L.L.C.

Permit No. 23869

Issuing Office Galveston 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: To install, operate and maintain an 8-inch diameter pipeline for oil and gas production and transportation activities. This project involves both new and existing pipeline that will ultimately measure a length of 6.77 statute miles. Specifically, a 12,709.28-foot length of new pipeline will originate at a previously permitted Spinnaker structure in Block 210 within the Galveston Anchorage Area [DA Permit 23232(01)]. The pipeline will tie in to an existing 8-inch, 23,057.68-foot-long pipeline (previously owned by Amerada Hess Corporation) also in Block 210. The existing portion of pipeline traverses Galveston Anchorage Area, Block 226, continues through Block 225 to terminate at a subsea tie-in assembly on the Williams Field Services 12-inch pipeline in Galveston Block 239, outside of the anchorage area. The new pipeline will be buried to a minimum of 16.5 feet below the mudline. No dredging will be required. The project will be conducted in accordance with the attached plans in 6 sheets.

Project Location: In the Gulf of Mexico, Galveston Area Blocks 210, 226, 225 and 239 in the Galveston Anchorage Area in Federal waters, offshore, Texas.

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on 31 December 2010. 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.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

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.

Thomas J. Bland — 12-27-05

(PERMITTEE) *(DATE)*

SPINNAKER EXPLORATION COMPANY, L.L.C.

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

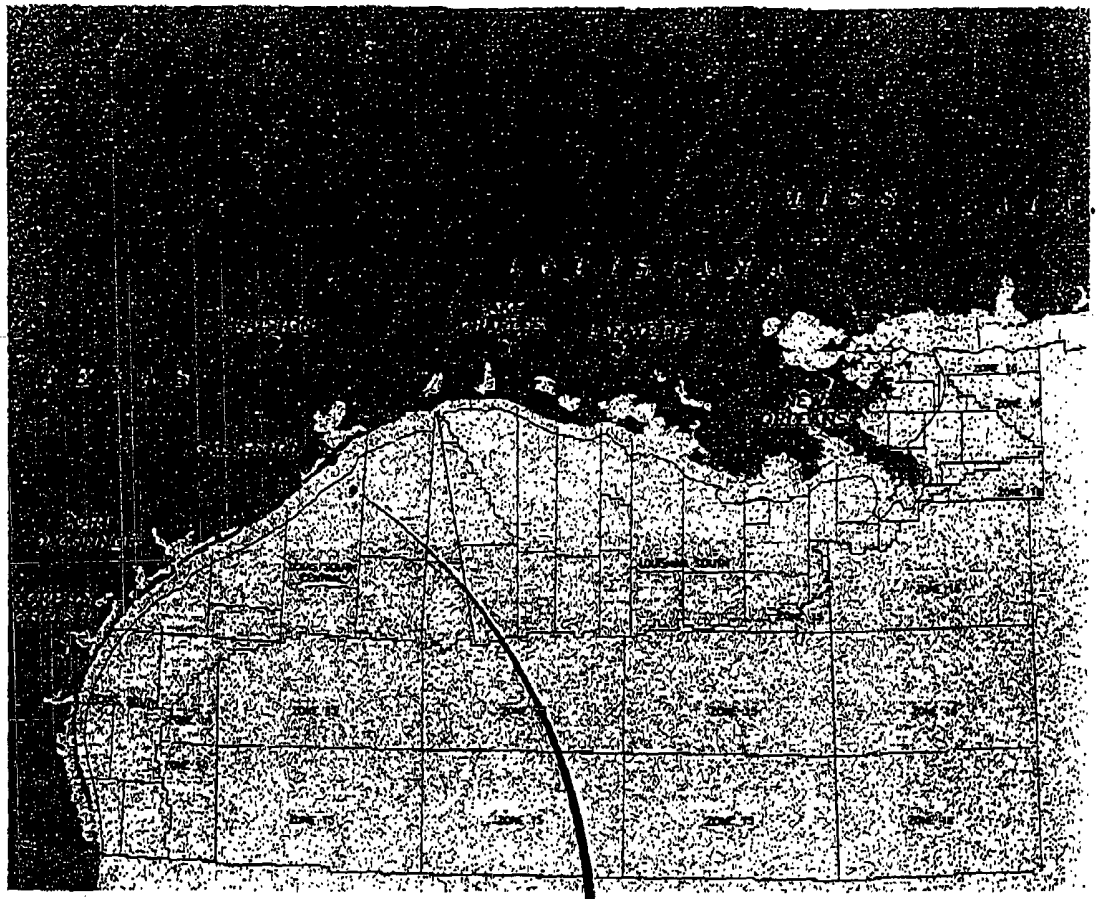
Janet Thomas Botello — 27 October 2005

(DISTRICT ENGINEER) *(DATE)*

JANET THOMAS BOTELLO, LEADER
CENTRAL EVALUATION UNIT
FOR COLONEL STEVEN P. HAUSTEIN

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.

(TRANSFEREE) *(DATE)*



SITE OF PROPOSED
PIPELINE ROUTE

G U L F O F M E X I C O

50 0 50 100 150 200

HORIZONTAL SCALE: 1" = APPROX. 100 MILES

PERMITTED PLANS

Permit No. 23869
Spinnaker Exploration Co.

SPINNAKER EXPLORATION

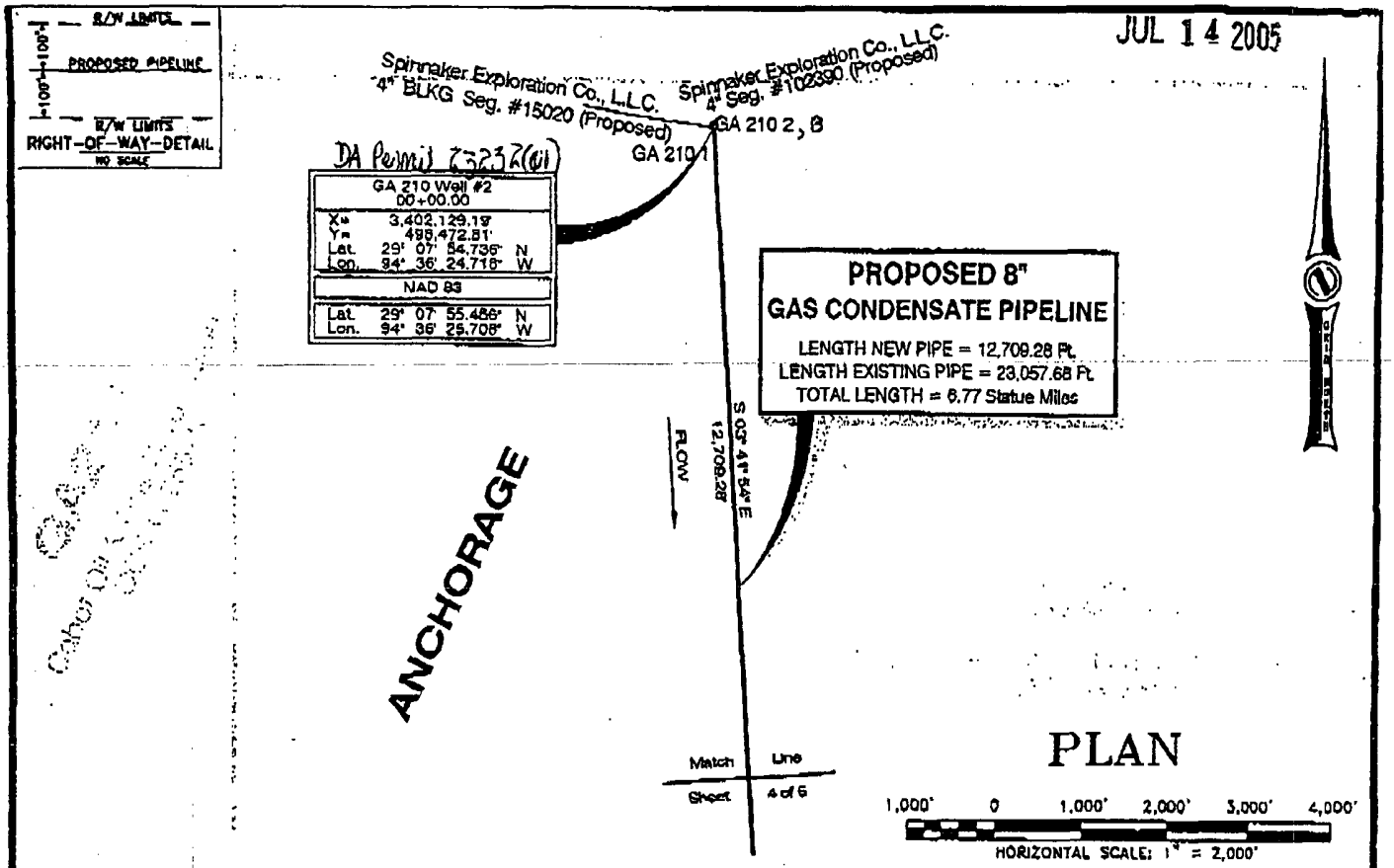
PROPOSED 8"
GAS CONDENSATE PIPELINE
FROM GALVESTON AREA BLOCK 210 WELL #2
TO GALVESTON AREA BLOCK 239 SUB-SEA TIE-IN

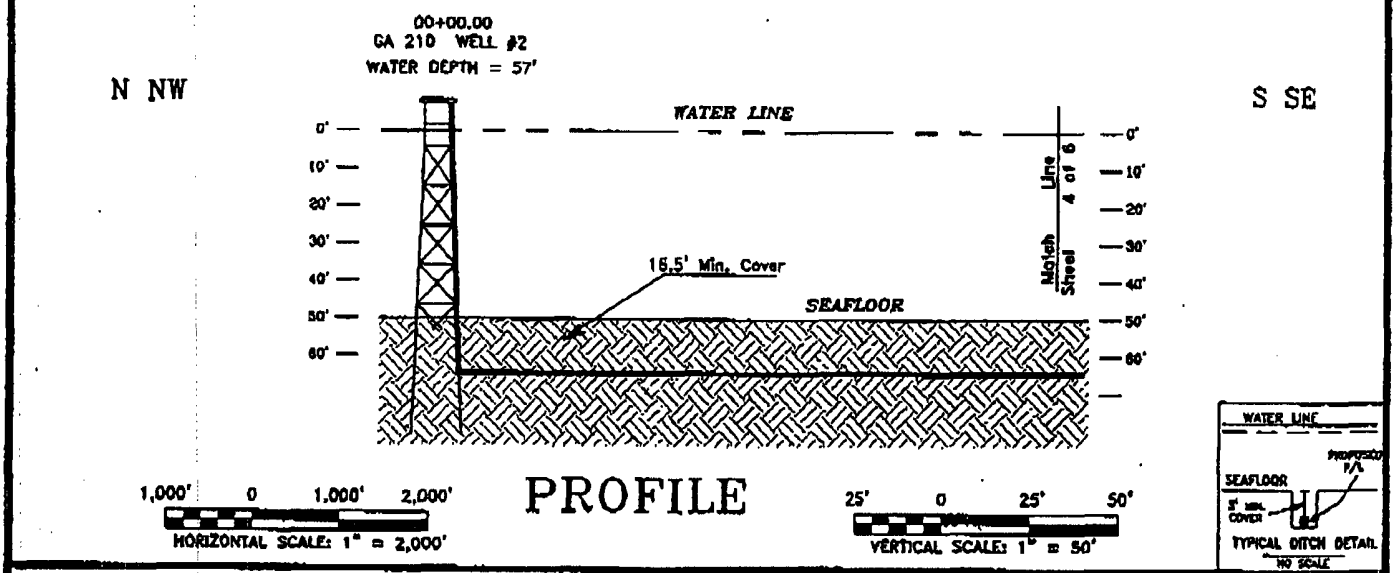
cochrane TECHNOLOGIES, INC.
(337) 837-3334 LAFAYETTE, LA.

PREPARED FOR:
SPINNAKER EXPLORATION CO. L.L.C.
HOUSTON, TX.

DRAWING NO.: 7023-1	
DRAFTED BY: A.P.-M.	REV. NO.: 0
CHK. BY:	DATE: JULY 7, 2005
APP. BY: DMB	SHEET: 1 OF 6

JUL 14 2005





I certify this plat represents the proposed pipeline route.

DAVID K. BURGEAUX, P.L.S.
REGISTRATION NO. 4713 - STATE OF LOUISIANA

7/12/05

NOTES:

1. Coordinates are referenced to the Texas Coordinate System of 1927, South Central Zone. Units are in U.S. Survey Feet.
2. Water Depths are based on a block hazard survey performed in field on March, April, and May 2004 referred to Mean Lower Low Water based on the N.O.A.A. tide gauge "Galveston Pleasure Pier" Texas.
3. Plat revised 7-12-2005 to change well #2 coordinates.

PERMITTED PLANS

Permit No. 23869
Spinnaker Exploration Co.

SPINNAKER EXPLORATION

SPINNAKER EXPLORATION COMPANY L.L.C.

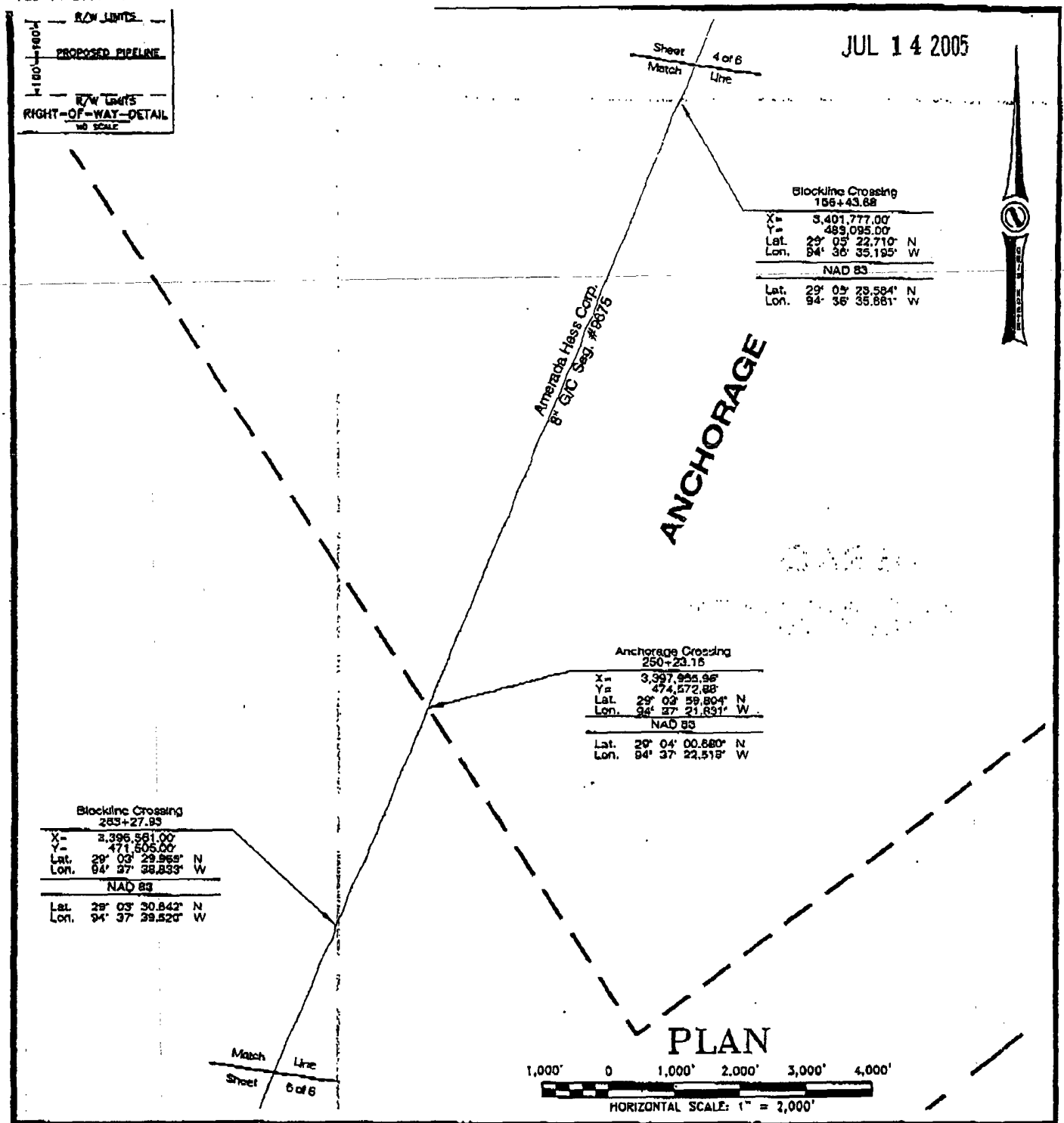
PROPOSED 8"
GAS CONDENSATE PIPELINE
FROM GALVESTON AREA BLOCK 210 WELL #2
TO GALVESTON AREA BLOCK 239 SUB-SEA TIE-IN

cochrane TECHNOLOGIES, INC.
(337) 837-3334 LAFAYETTE, LA.

PREPARED FOR:
SPINNAKER EXPLORATION CO. L.L.C.
HOUSTON, TX.

DRAWING NO.: 7023-3	
DRAFTED BY: A.P.M.	REV. NO.: 1
CHK. BY:	DATE: JUNE 24, 2005
APP. BY: DKB	SHEET: 3 of 6

JUL 1 4 2005



PLAN

1,000' 0 1,000' 2,000' 3,000' 4,000'

HORIZONTAL SCALE: 1" = 2,000'

I certify this plat represents the proposed pipeline route.

NOTES:

1. Coordinates are referenced to the Texas Coordinate System of 1927, South Central Zone. Units are in U.S. Survey Feet.
2. Water Depths are based on a block hazard survey performed in field on March, April, and May 2004 referred to Mean Lower Low Water based on the N.O.A.A. tide gauge "Galveston Pleasure Pier" Texas.
3. Plat revised 7-12-2005 to change well #2 coordinate.

PERMITTED PLANS

DAVID K. BURDEAUX, P.L.S.
REGISTRATION NO. 4713 - STATE OF LOUISIANA
7/12/05

Permit No. 23869
Spinnaker Exploration Co.

SPINNAKER EXPLORATION

SPINNAKER EXPLORATION COMPANY L.L.C.

PROPOSED 8"
GAS CONDENSATE PIPELINE
FROM GALVESTON AREA BLOCK 210 WELL #2
TO GALVESTON AREA BLOCK 239 SUB-SEA TIE-IN

cochrane TECHNOLOGIES, INC.
(337) 237-1134 LAFAYETTE, LA.

PREPARED FOR:	SPINNAKER EXPLORATION CO. L.L.C. HOUSTON TX
DRAWING NO.:	7023-5
DRAFTED BY:	A.P.-H. REV. NO.: 1
CHK. BY:	DATE: JUNE 24, 2005
APP. BY:	OKO SHEET: 5 of 6

NOTICE TO PERMITTEES

Department of the Army Permits for Work in Navigable Waters require attention to administration and policies which are often misunderstood or disregarded. To avoid possible misinterpretations and to expedite procedures, permit post-authorization requirements and pertinent information are outlined as follows:

1. Permits remain in effect until revoked, relinquished, or the structures are removed. An extension of time for completion of structures or work may be granted provided that a public notice is issued and that evidence is furnished of the bona fide intention of the permittee to complete the work within a reasonable time. If work or structures are not completed within the time provided in the permit, it is the permittee's responsibility to request an extension of time at least 4 months before the expiration date.

2. Maintenance of authorized completed structures may be done at any time without extending the completion period. It is, however, required that the District Engineer be notified prior to commencement of maintenance.

3. SPECIAL REGULATIONS GOVERN MAINTENANCE WORK INVOLVING DREDGING OR FILL. This maintenance is not authorized by the original permit and specific prior approval is required before such work is commenced in navigable waters. Your request for authorization should be submitted in time for public notice requirements and coordination with other agencies.

4. If ownership of structures or work covered by a permit is transferred, the District Engineer must be notified immediately. The notification will provide information so that permit responsibilities can be changed to the new owner or assignee.

5. Permittees are reminded that the Area Engineer must be notified as soon as possible of the time for commencement of construction or work, and immediately upon completion. If pipelines across Federal project channels are covered by the permit, the Area Engineer should be informed of the date the pipelines are to be placed in time for him to arrange for an inspector to be present.

6. All material changes in location or plans must be submitted promptly to the District Engineer for approval before construction is begun.

7. Permits should not be considered as an approval of design features of any structure authorized or an implication that such structure is adequate for the purpose intended.

DISTRICT ENGINEER
GALVESTON DISTRICT
CORPS OF ENGINEERS

SWG FL 279
24 April 85

Applicant: Spinnaker Exploration Company, L.L.C.	File Number: 23869	Date: 10/27/05
Attached is:		See Section below
X	INITIAL PROFFERED PERMIT (Standard Permit or Letter of Permission)	A
	PROFFERED PERMIT (Standard Permit or Letter of Permission)	B
	PERMIT DENIAL	C
X	APPROVED JURISDICTIONAL DETERMINATION	D
	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - OPTIONS

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved jurisdictional determination (JD) or provide new information.

- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

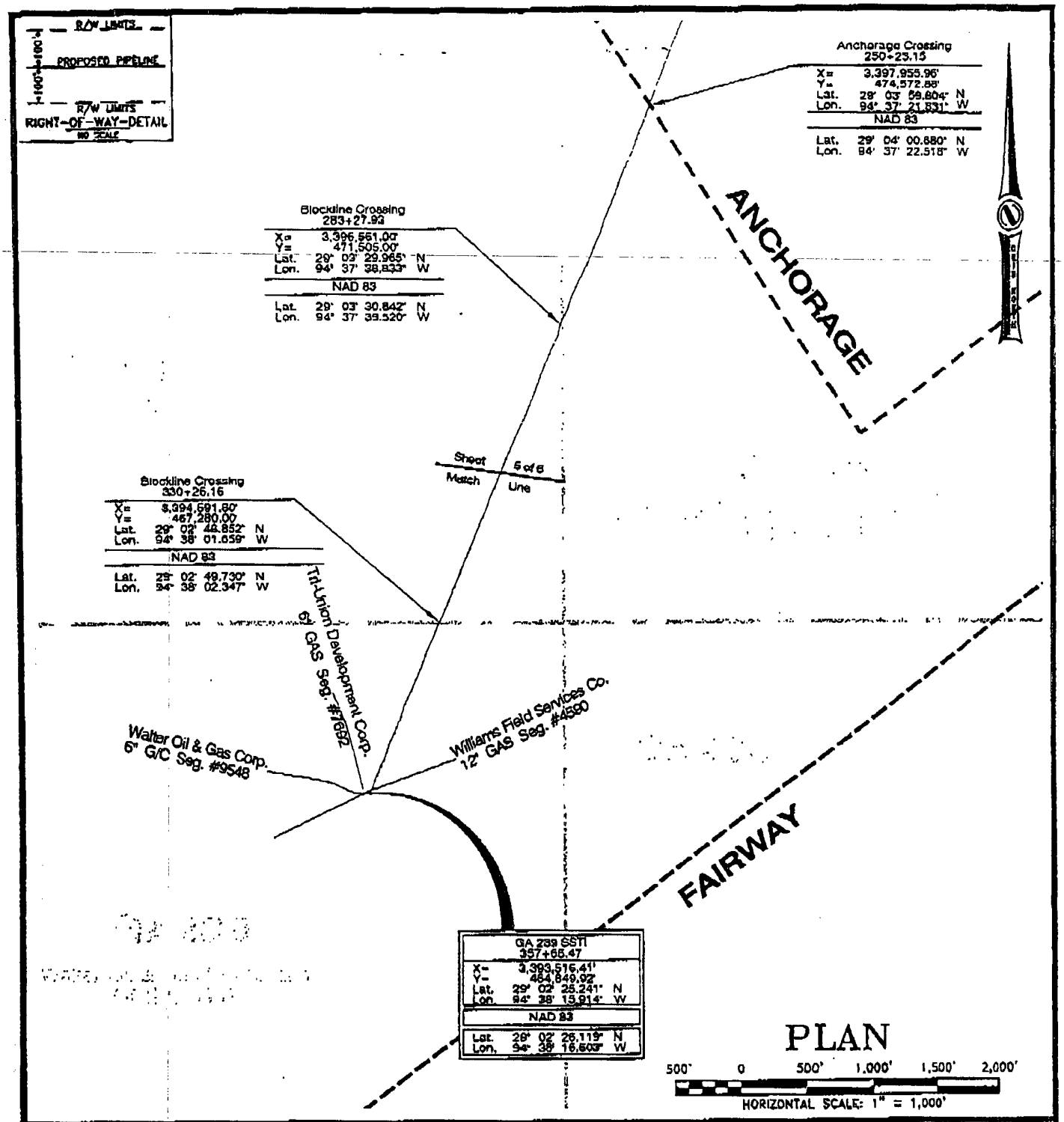
CONTACT FOR QUESTIONS OR INFORMATION

If you have questions regarding this decision and/or the appeal process you may contact: T. Cheryl Jaynes, Project Manager CESWG-PE-RE, P.O. Box 1229 Galveston, Texas 77553-1229 Telephone: 409-766-3804; FAX: 409-766-3931	If you only have questions regarding the appeal process you may also contact: James E. Gilmore, Appeal Review Officer CESWD-CMO-E, 1100 Commerce Street, Room 8E9 Dallas, Texas 75242-0216 Telephone: 496-487-7061; FAX: 469-487-7190 Email: James.E.Gilmore@usace.army.mil

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15-day notice of any site investigation, and will have the opportunity to participate in all site investigations.

_____ Signature of appellant or authorized agent.	Date:	Telephone number:

JUL 2 2 2005



PLAN

500' 0 500' 1,000' 1,500' 2,000'

HORIZONTAL SCALE: 1" = 1,000'

I certify this plat represents the proposed pipeline route.

NOTES:

1. Coordinates are referenced to the Texas Coordinate System of 1927, South Central Zone. Units are in U.S. Survey Feet.
2. Water Depths are based on a block hazard survey performed in field on March, April, and May 2004 referred to Mean Lower Low Water based on the N.O.A.A. tide gauge "Galveston Pleasure Pier" Texas.
3. Plat revised 7-12-2005 to change well #2 coordinate.

PERMITTED PLANS

7/12/05

DAVID K. BURDEAUX, P.L.S.
REGISTRATION NO. 4713 - STATE OF LOUISIANA

Permit No. 23869
Spinnaker Exploration Co.

SPINNAKER EXPLORATION

SPINNAKER EXPLORATION COMPANY L.L.C.

PROPOSED 8"

GAS CONDENSATE PIPELINE

FROM GALVESTON AREA BLOCK 210 WELL #2

TO GALVESTON AREA BLOCK 239 SUB-SEA TIE-IN

cochrane TECHNOLOGIES, INC.
(337) 837-3334 LAFAYETTE, LA.

PREPARED FOR:	SPINNAKER EXPLORATION CO. L.L.C. HOUSTON, TX.
DRAWING NO.:	7025-SA
DRAFTED BY:	L.P.M.
REV. NO.:	1
CHK. BY:	
DATE:	JUNE 24, 2005
APP. BY:	DLC
SHEET:	6 of 6

JUL 14 2005

R/W LIMITS
PROPOSED PIPELINE
R/W LIMITS
RIGHT-OF-WAY-DETAIL
NO SCALE

ANCHORAGE

Sheet Match 3 of 6 Line

PROPOSED 8"
GAS CONDENSATE PIPELINE
LENGTH NEW PIPE = 12,709.28 Ft.
LENGTH EXISTING PIPE = 23,057.68 Ft.
TOTAL LENGTH = 6.77 Statue Miles

FLOW

S 03° 41' 54" E
12,709.28'

Tie-in to existing pipeline 127+09.28		
X=	3,402,949.00'	
Y=	485,790.00'	
Lat.	29° 05' 48.940"	N
Lon.	94° 36' 20.852"	W
NAD 83		
Lat.	29° 05' 49.813"	N
Lon.	94° 36' 21.537"	W

GA 210 A

Amerada Hess Corp. G/C Seg. #8575

Match Sheet 5 of 5 Line

PLAN

1,000' 0 1,000' 2,000' 3,000' 4,000'
HORIZONTAL SCALE: 1" = 2,000'

127+09.28
Tie-in to existing Pipeline

N NW S SE

WATER LINE

0' 10' 20' 30' 40' 50' 60'

Sheet Match 3 of 6 Line

Match Sheet 5 of 6 Line

16.5' Min. Cover

SEAFLOOR

PROFILE

1,000' 0 1,000' 2,000'
HORIZONTAL SCALE: 1" = 2,000'

25' 0 25' 50'
VERTICAL SCALE: 1" = 50'

WATER LINE
PROPOSED P/L
SEAFLOOR
5' MIN. COVER
TYPICAL DITCH DETAIL
NO SCALE

I certify this plat represents the proposed pipeline route.

NOTES:

1. Coordinates are referenced to the Texas Coordinate System of 1927, South Central Zone. Units are in U.S. Survey Feet.
2. Water Depths are based on a block hazard survey performed in field on March, April and May 2004 referred to Mean Lower Low Water based on the N.O.A.A. tide gauge "Galveston Pleasure Pier" Texas.
3. Plat revised 7-12-2005 to change well #2 coordinate.

PERMITTED PLANS

7/12/05

DAVID K. BURDEAUX, P.L.S.
REGISTRATION NO. 4713 – STATE OF LOUISIANA

Permit No. 23869
Spinnaker Exploration Co.

SPINNAKER EXPLORATION

SPINNAKER EXPLORATION COMPANY L.L.C.

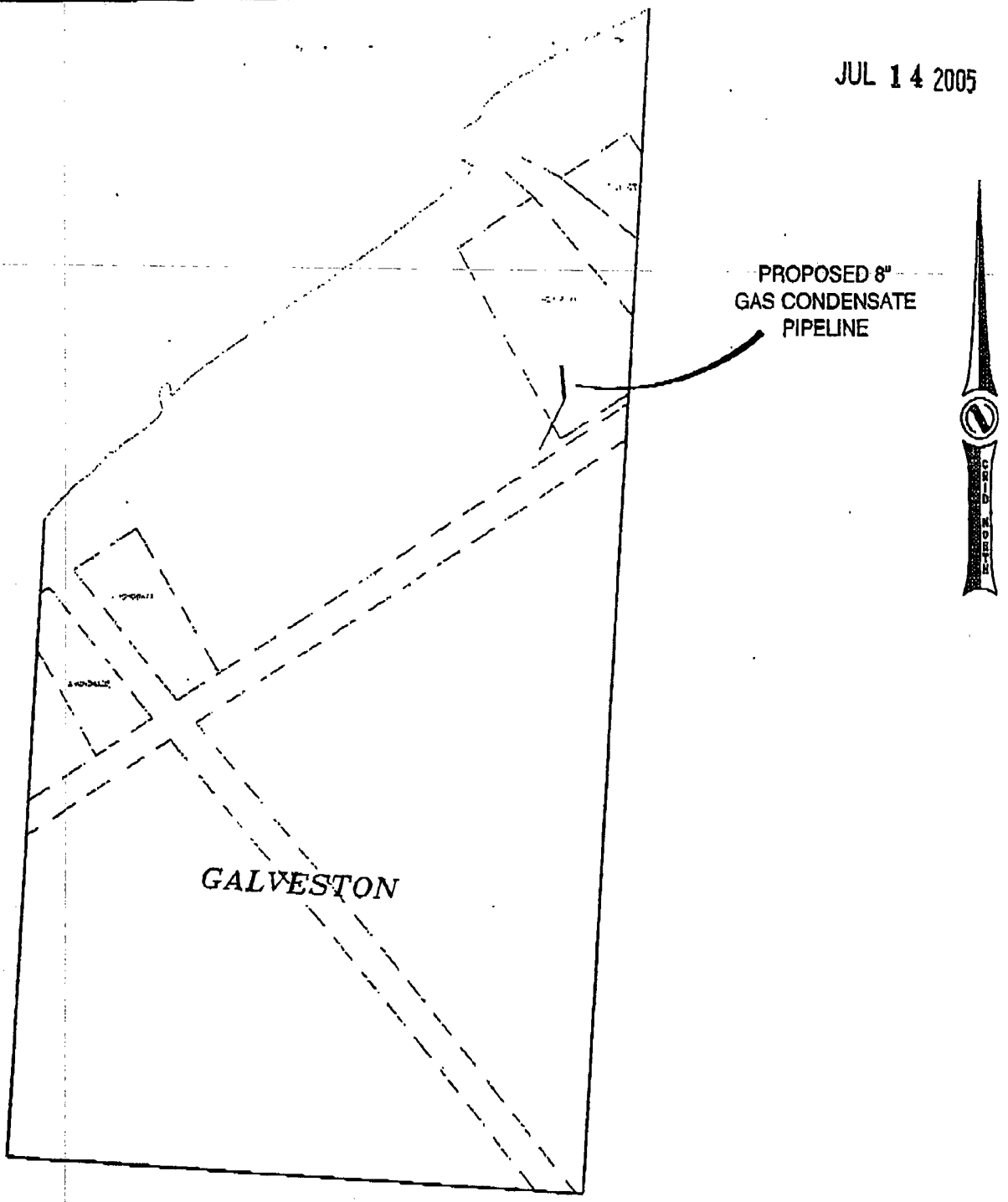
PROPOSED 8"
GAS CONDENSATE PIPELINE
FROM GALVESTON AREA BLOCK 210 WELL #2
TO GALVESTON AREA BLOCK 239 SUB-SEA TIE-IN

cochrane TECHNOLOGIES, INC.
(337) 837-3334 LAFAYETTE, LA.

PREPARED FOR: SPINNAKER EXPLORATION CO. L.L.C. HOUSTON, TX.

DRAWING NO.:	7023-4		
DRAFTED BY:	J.P.-M.	REV. NO.:	1
CHK. BY:		DATE:	JUNE 24, 2005
APP. BY:	DKB	SHEET:	4 of 6

JUL 14 2005



5 0 5 10 15 20

HORIZONTAL SCALE: 1" = APPROX. 10 MILES

PERMITTED PLANS

Permit No. 23869
Spinnaker Exploration Co.

SPINNAKER EXPLORATION

PROPOSED 8"

GAS CONDENSATE PIPELINE

FROM GALVESTON AREA BLOCK 210 WELL#2
TO GALVESTON AREA BLOCK 239 SUB-SEA TIE-IN

cochrane TECHNOLOGIES, INC.
(337)-837-3334 LAFAYETTE, LA.

PREPARED FOR: SPINNAKER EXPLORATION CO. L.L.C. HOUSTON, TX.	
DRAWING NO.: 7023-2	
DRAFTED BY: J.P.M.	REV. NO.: 0
CHK. BY:	DATE: JULY 7, 2005
APP. BY: DKB	SHEET: 2 OF 6

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

Special Conditions:

1. The contact for all notification on this permit is the U. S. Army Corps of Engineers, Regulatory Branch, Chief, Compliance Section (Corps), P.O. Box 1229, Galveston, Texas 77553-1229.

2. The permittee understands and agrees that if future operations by the United States require the removal, relocation or other alteration of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate or alter the structural work or obstructions caused thereby without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

3. The permittee shall supply written notification to the 8th District U.S. Coast Guard (USCG), Marine Safety Unit, Captain of the Port, two weeks prior to the installation of pipeline placed in Federal Fairways or Anchorage areas. This notification will include the date the work is expected to begin, a construction timeline, and contact information of the site supervisor. Additionally, the permittee will again telephonically notify the USCG, MSU, 48 hours before construction/installation begins to verify the start date and issue a notice to mariners. A copy of all notifications required by this special condition will be also sent to the Corps.

4. Upon completion of the pipeline installation, you must submit as-built drawings to the Corps within 60 calendar days.

5. When structures or work authorized by this permit are determined by the Corps to have become abandoned, obstructive to navigation or cease to be used for the purpose for which they were permitted, such structures or other work must be removed, the area cleared of all obstructions, and written notice given to the Corps within 30 calendar days of removal.

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

(X) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).

( ) Section 404 of the Clean Water Act (33 U.S.C. 1344).

( ) Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization.

a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

MG
15298

Amend 1
MICRO

SPINNAKER EXPLORATION

January 25, 2006

FEDERAL EXPRESS

Mr. Donald C. Howard
Regional Supervisor
Field Operations
U.S. Department of the Interior
Minerals Management Service
Gulf of Mexico OCS Region
1201 Elmwood Park Blvd.
New Orleans, LA 70123-2394

Minerals Management Service
RECEIVED
JAN 30 2006
Office of Field Operations
Pipeline Section

Attention: Mr. Alex Alvarado, MS 5232

Reference: ***Modification to Existing Pipeline***
Spinnaker Exploration Company, L.L.C.
Proposed **8-inch** O.D. Natural Gas Pipeline
(Segment No.**15298**, ROW OCS-G **26931**)

From: Spinnaker Exploration Company, L.L.C.
Galveston Area Block 210 –B (Proposed)
OCS-G 25524

To: Williams Field Services
Galveston Area Block 239 SSTI
OCS-G 09032

Dear Sir:

The revised drawings and process flow schematic are enclosed for your review.

The shore base supporting this operation will be located in Galveston, Texas.

Spinnaker has contracted Global Industries to Modify SN 15298. They are prepared to commence operations with your timely approval.

If the above and the attached information meet with your approval, we would appreciate your issuing the necessary permit for the right-of-way at your earliest convenience. Inquiries concerning this application may be directed to Mr. Tom Becnel at (713) 356-7534 or Mr. Savvas Savva, with Atlas Engineering at (713) 939-4995.

Sincerely,

Spinnaker Exploration Company, L.L.C.

Scott Broussard TGB
Vice President – Drilling and Production

tgb

enclosures

1-26-06

Manny Gagliano
MMS- Pipeline Section

SN 15298
GA210-B TO GA239 SSTI

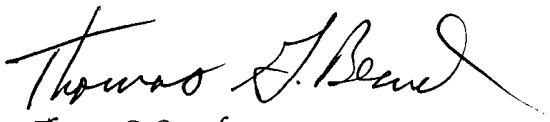
Safety Flow Diagram,
the Safety System of GA210B such as PSHL on the pipeline or PSHL, LSH, LSL on the separator will be shut-in directly all affected wells that flow to the separator either from the GA210#1 or GA210#2.
The Panel will be intelligent to identify which well is switch to flow thru the separator.

This logic was listed on the drawing as Note 3. We have made that note bolder to clarify the logic of the safety system.

Please let me know if you need anything else.
I apologize for the delay.

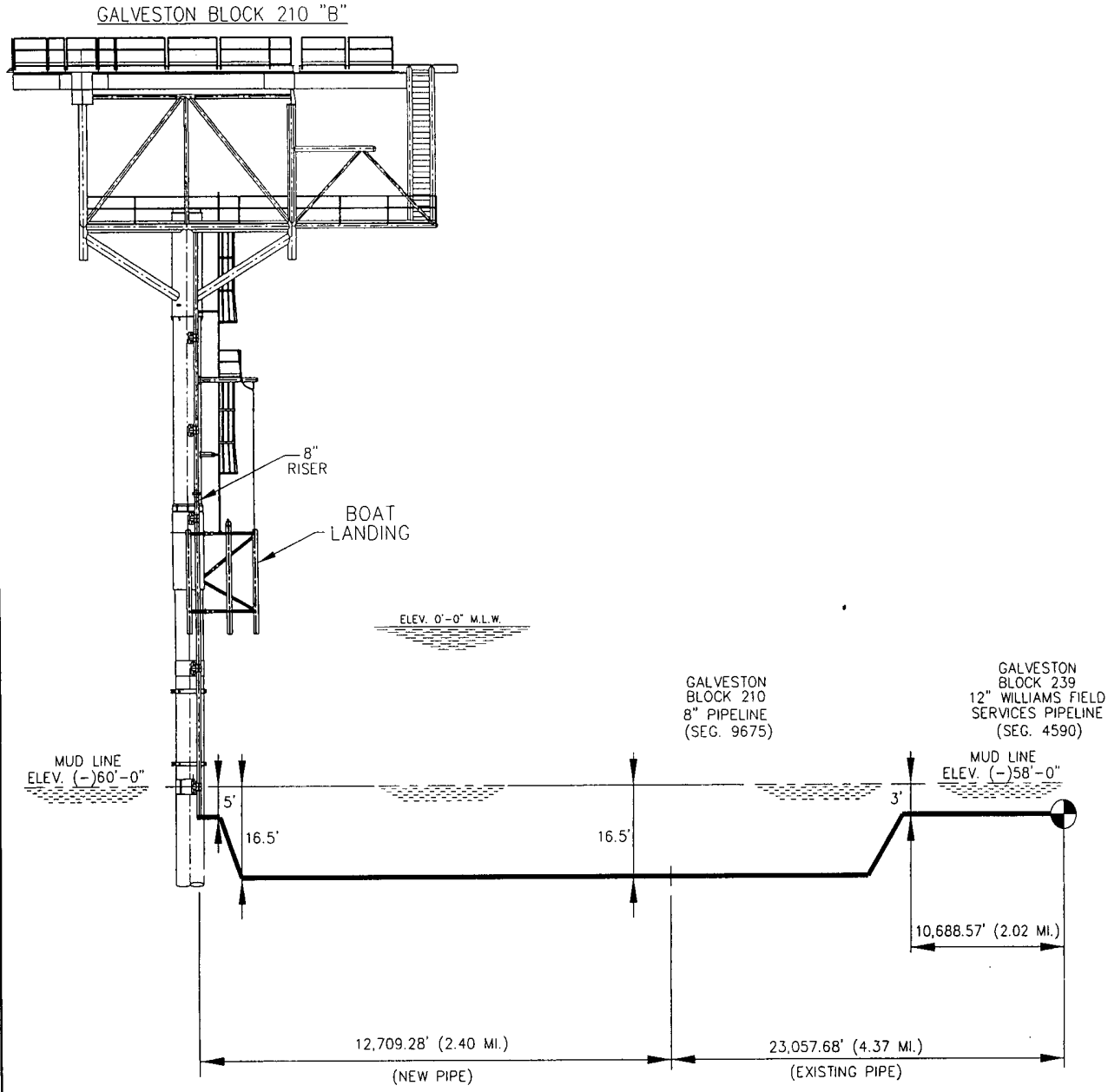
Thanks

Savvas Savva P.E.
Engineering Manager
Atlas Engineering, Inc.
13831 Northwest Freeway Suite 450
Houston, TX 77040-5243
(713) 939 4995 Phone
(713) 939 4996 Fax
ssavva@atlasengineering.com



Thomas G. Becnel
Spinnaker Exploration Company, L.L.C.
713-356-7534

SPINNAKER EXPLORATION COMPANY
8" GAS/CONDENSATE PIPELINE PROFILE DIAGRAM



NOTES:
RISERS BENDS WILL BE BURIED 5'-0" & TAPERED TO 16'-6" BURIAL FOR APPROXIMATELY 65'-0" AWAY FROM EACH PLATFORM.

ELEVATION
SCALE: NONE

PLOT TIME: Jan 25, 2006 - 3:40pm B:_id FILE NAME: O:\Current Projects\Hydro GOM LLC\Galveston Area 210 B\ASN 852 Pipeline Permits 6212852.dwg

APPROVED BY	NAME	DATE	SCALE
CLIENT			NONE
ENGINEER	SKS	8/02/05	PROJECT NO.
DESIGN BY	JKW	8/02/05	6212
CHECK BY			DWG. NO.
DRAWN BY	JD	8/02/05	852

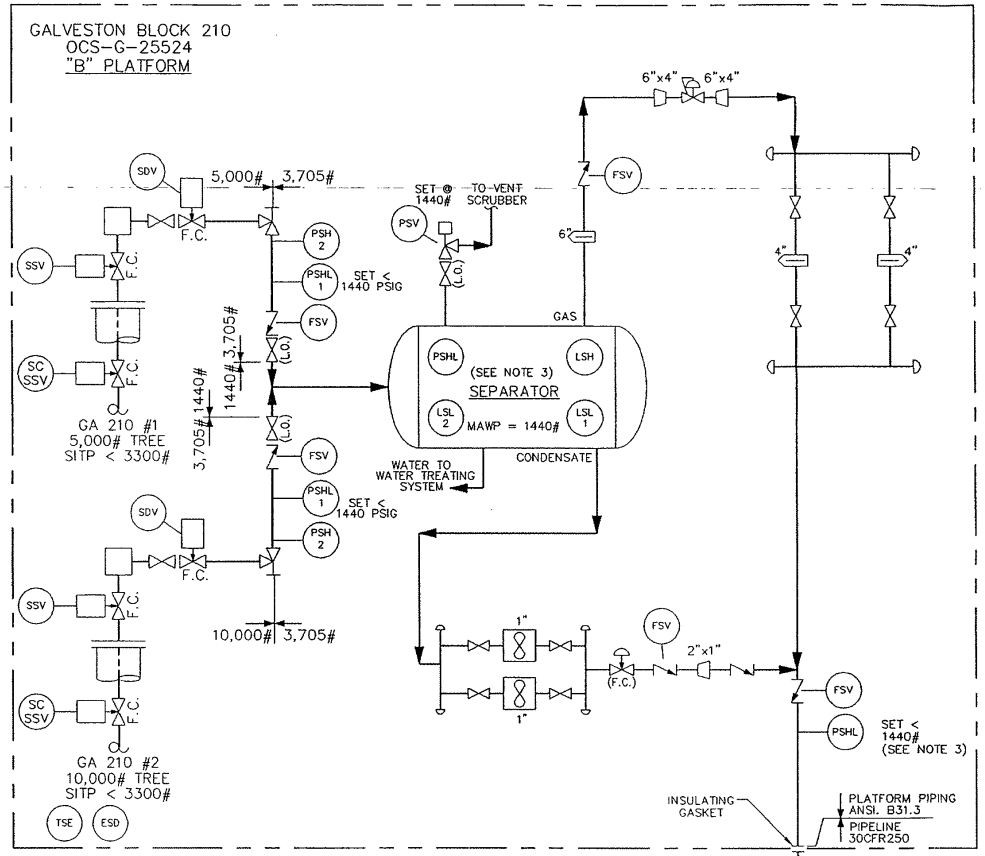
Atlas engineering inc

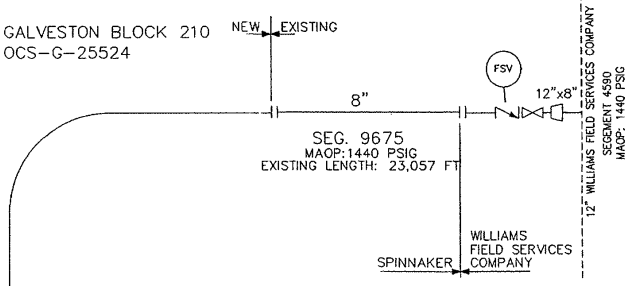
SPINNAKER EXPLORATION

TITLE: PIPELINE MODIFICATION PERMIT
TO EXISTING SEG. 9675 8" GAS/CONDENSATE PIPELINE FROM
GALVESTON 210 "B" TO GALVESTON 239 SSTI
PIPELINE PROFILE DIAGRAM

CLIENT: SPINNAKER EXPLORATION

REV- 1





NOTES

1. PIPELINE COMPLIES WITH D.O.T. PART 192, TITLE 49 CFR & D.O.I. TITLE 30 PART 250, SUBPART H & J
2. CODES & SPECIFICATIONS:
   VALVES & FITTINGS ANSI B16.5
   PIPELINE ANSI B31.8
3. PSHL ON DEPARTING PIPELINE AT GA 210 "B" WILL SHUT-IN ALL WELLS DIRECTLY.

DESIGN DATA

DESIGN CODE: DOI 30-CFR-250
DESIGN PRODUCT: GAS & CONDENSATE
DESIGN FLOW RATES: 20 MMSCFD GAS, 1000 BCPD
RISER: 8 5/8"O.D.x0.500"W.T. API 5L Gr. B W/14 MILS FBE COATING
PIPELINE: 8 5/8"O.D.x0.375"W.T. API 5L Gr. B W/14 MILS FBE COATING
CATHODIC PROTECTION: ALUMINUM TAPERED SEMI-CYLINDRICAL BRACELET 40 LBS. (NET WEIGHT) ANODES EVERY 700 FT.
MAOP: 1440 PSIG
HYDROSTATIC TEST PRESSURE: 1.25 x MAOP (+100-0)

SPINNAKER EXPLORATION

REV.	REVISION	DATE	APP'D.
4	SHOW GA 210 #1 & #2	9/21/05	SKS
3	REVISED PER MMS COMMENTS	11/25/05	SKS
2	ISSUED FOR PERMIT	11/08/05	SKS
1	REVISED PER COMPANY COMMENTS	11/04/05	MT
0	ISSUED FOR APPROVAL	8/02/05	SKS

	NAME	DATE	SCALE
APPROVED BY			NONE
CLIENT			
ENGINEER	SKS	8/02/05	PROJECT NO.
DESIGN BY	JKW	8/02/05	6212
CHECK BY			DWG. NO.
DRAWN BY	MT	8/02/05	851

AMOS ENGINEERING INC.

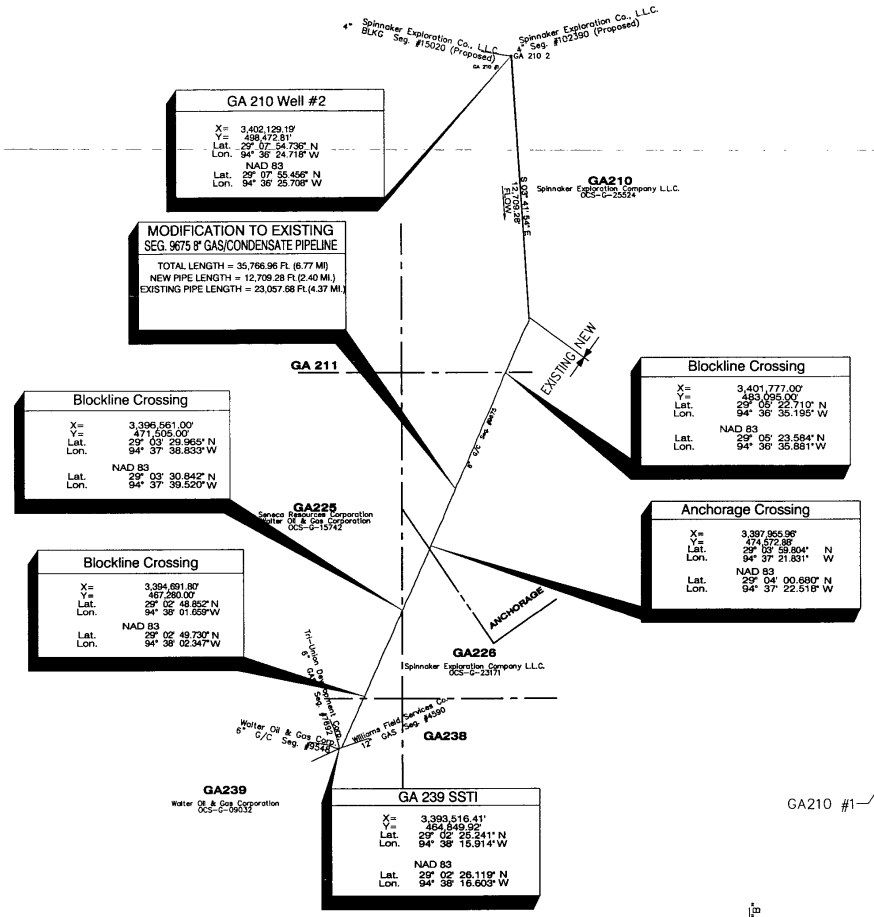
SPINNAKER EXPLORATION

TITLE: **PIPELINE MODIFICATION PERMIT TO EXISTING SEG. 9675 8" GAS\CONDENSATE PIPELINE FROM** GALVESTON 210 "B" TO GALVESTON 239 SSTI
PIPELINE SAFETY FLOW DIAGRAM

CLIENT: SPINNAKER EXPLORATION REV 2

Bmd_D_AB v1.0

PLOT TIME: Jan 26, 2006 - 3:51pm BY: ss FILE NAME: Q:\Current Projects\Hydro GOM LLC\Galveston Area 210 B\(ASN 850) Pipeline Permits\6212851.dwg



PIPELINE CROSSING DATA

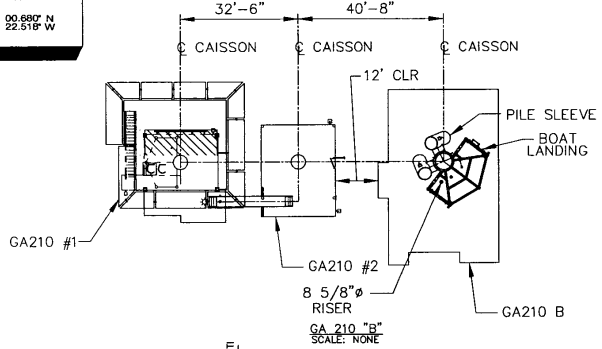
POINT	SEGMENT #	X	Y	NAME
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				

CURVE DATA

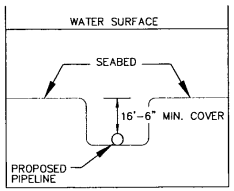
NO.	FROM	TO	RADIUS	ANGLE	LENGTH

MATERIAL SUMMARY

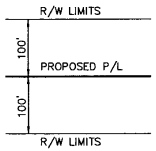
ITEM	QTY.	DESCRIPTION
1	37,766.96	PIPE, 8 5/8" O.D. x 0.375" WT., API 5L GR. B, SMLS,
		COATED 12-14 MILS. FUSION BONDED EPOXY,
	12,709.28	(NEW)
	23,057.68	(EXISTING)
2	20	ANODE, 40 LBS.-NET WEIGHT, (45 LBS.-GROSS WEIGHT)
		TAPERED SEMI-CYLINDRICAL BRACELET FOR 8" PIPE
		GALVALUM III OR EQUAL. (NEW)
3	1	RISER @ GALVESTON 210 "B"
		8 5/8" O.D. x 0.500" WT., API 5L GR. B, FBE COATED.
4		SUBSEA TIE-IN @ GALVESTON 239



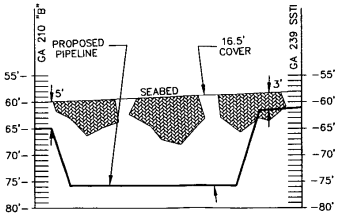
GA 210 "B"
SCALE: NONE



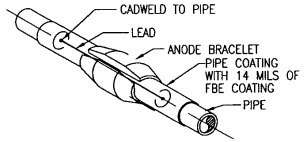
TYPICAL DITCH
N.T.S.



R/W DETAIL
N.T.S.



PROFILE
SCALE: VERT. 1"=10' HORZ. 1"=1000'



TYPICAL ANODE INSTALLATION DETAIL
SCALE: NONE

DESIGN NOTES:

1. CODE:
   DEPARTMENT OF TRANSPORTATION MINIMUM FEDERAL SAFETY STANDARDS FOR GAS LINES, PART 192. TITLE 49. CODE OF FEDERAL REGULATIONS.
2. DESIGN PRESSURE:
   MAOP =1440 PSIG
4. ANODES:
   DESIGN LIFE - 30 YEARS
   CURRENT - 5 MA/ SQ.FT.
   HOLIDAYS - 2%
   USAGE - 7.62 LBS/AMPS YEAR
   EFFICIENCY - 85%
   SPACING -700 FT.
   WEIGHT - 40 LB. (NET.)

NOTES:

1. CONSTRUCTION SHALL BE GOVERNED BY THE CONTRACT AND SPECIFICATIONS FOR THE FABRICATION AND INSTALLATION OF PIPELINES PROVIDED BY THE COMPANY.
2. HYDROTEST:
   THE ENTIRE PIPELINE SYSTEM SHALL BE HYDROTESTED AFTER INSTALLATION TO A MINIMUM OF 1.25 x MAOP (+100-0) PSI AND HELD FOR A PERIOD OF 8 HOURS. PRESSURE SHALL HOLD OR RISE OVER THE LAST THREE HOURS.
3. INSTALLATION CONTRACTOR WILL SUPPLY ALL MATERIALS UNLESS NOTED OTHERWISE.

REV.	REVISION	DATE	APP'D.
1	REVISED PER MMS COMMENTS	01/25/06	JD
0	ISSUED FOR PERMIT	11/09/05	JW
B	REVISED PER COMPANY COMMENTS	11/04/05	MT
A	ISSUED FOR APPROVAL	8/02/05	JD

	NAME	DATE	SCALE
APPROVED BY			NOTED
CLIENT			PROJECT NO.
ENGINEER	SKS	8/02/05	6212
DESIGN BY	JKW	8/02/05	DWG. NO.
CHECK BY			850
DRAWN BY	MT	8/02/05	

SPINNAKER EXPLORATION

TITLE: PIPELINE MODIFICATION PERMIT TO EXISTING SEG. 9675 8" GAS/CONDENSATE PIPELINE FROM GALVESTON 210 "B" TO GALVESTON 239 SSTI
AREA PLOT PLAN AND DETAILS

CLIENT: SPINNAKER EXPLORATION
REV 1

BEST AVAILABLE COPY

Bord_D_A61 v1.0

M(

SPINNAKER EXPLORATION

Minerals Management Service
RECEIVED
JAN 24 2006
Office of Field Operations
Pipeline Section

November 16, 2005

FEDERAL EXPRESS

Mr. Donald C. Howard
Regional Supervisor
Field Operations
U.S. Department of the Interior
Minerals Management Service
Gulf of Mexico OCS Region
1201 Elmwood Park Blvd.
New Orleans, LA 70123-2394

FILE COPY

Attention: Mr. Alex Alvarado, MS 5232

Reference: ***Modification to Existing Pipeline***
Spinnaker Exploration Company, L.L.C.
Proposed **8.375-inch** O.D. Natural Gas Pipeline
(Segment No.**15298**, ROW OCS-G **26931**)

From: Spinnaker Exploration Company, L.L.C.
Galveston Area Block 210 –B (Proposed)
OCS-G 25524

To: Williams Field Services
Galveston Area Block 239 SSTI
OCS-G 09032

Dear Sir:

Pursuant to the authority granted in Section 43 U.S.C. 1334(e) of the Outer Continental Shelf Lands Act (67 Stat. 462) (43 U.S.C. 1331), as amended (92 Stat. 629); and in compliance with the regulations contained in Title 30 CFR, Part 250, Subpart J, Spinnaker Exploration Company, L. L.C. (Spinnaker) is filing this application in quadruplicate to modify Segment No.15298 by adding **12,709.28** feet (**2.41** miles) of new 8.375" pipe from our proposed GA210-B platform location through a right-of-way two hundred feet (200') in width, for the reconnection, maintenance and operation of the subject 8.375" O.D. natural gas pipeline in the Galveston Area, Gulf of Mexico. Spinnaker agrees that said modification, if approved, will be subject to the terms and conditions of said regulations.

The overall pipeline length will be approximately **35,766.96** feet (**6.77** miles). The anticipated maximum production rate is **25-30** MMSCFD natural gas, **1000** BPD condensate and **1000** BPD water.

Operations will commence on or before **December 15, 2005**.

In support of the application and for your review and use, the following maps, drawings and documents have been enclosed herewith and made a part hereof:

Gulf of Mexico Vicinity Map, Proposed **8.375"** Bulk Gas P/L Route (8½" X 11")
Proposed **8.375"** Bulk Gas P/L; Alignment/Burial Profile
Archeological & Hazard Analysis, Proposed **8.375"** Bulk Gas Pipeline (Report Prepared by Cochrane Technologies, Inc.).
Bulk Gas Pipeline, General Information, Calculations, and Summary, (Prepared by Atlas Engineering, Inc.)
Proposed Bulk Gas Pipeline (Safety Flow) Schematic
Riser Elevation at Block 210 Platform "B "
Tie-in Details at GA239 SSTI
Diskette with Digital Pipeline Location Data
As-Built Map (Segment No.**15298**, ROW OCS-G **26931**)
Non-Discrimination in Employment Statement

Spinnaker requests approval to utilize a **Differential GPS** navigation system, in lieu of buoying, to avoid any pipelines or other hazards while picking up SN 9675 to hydro-test it. We are requesting a waiver from the requirement found in NTL 98-20 (IV.B.1.), which states that "Prior to performing operations, you must buoy all existing pipelines and other potential hazards located within 150 meters (490 feet) of the operation (including anchor patterns)."

The MAOP of the existing pipeline is 1440 psi.

An originally signed copy of a Non-Discrimination in Employment Statement is enclosed with each copy of the application. Spinnaker's payment in the amount of **$45.00** covering the first year's rental fee of the new **2.41** miles of pipeline is also enclosed.

Our $3,000,000 Area Wide Development Bond number is RLB-0001151 and our $300,000 OCS Right-Of-Way Grant Bond number is B-7748. Spinnaker Exploration Company, L.L.C. acquired these bonds June 25, 1999 and September 25, 1998, respectively.

If the above and the attached information meets with your approval, we would appreciate your issuing the necessary permit for the right-of-way at your earliest convenience. Inquiries concerning this application may be directed to Mr. Tom Becnel at (713) 356-7534.

Sincerely,

Spinnaker Exploration Company, L.L.C.

Scott Broussard
Vice President – Drilling and Production

tgb

enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
MINERALS MANAGEMENT SERVICE

NONDISCRIMINATION IN EMPLOYMENT

As a condition precedent to the approval of the granting of the subject pipeline right-of-way, the grantee, Spinnaker Exploration Company, L.L.C., hereby agrees and consents to the following stipulation, which is to be incorporated into the application for said right-of-way.

During the performance of this grant, the grantee agrees as follows:

During the performance under this grant, the grantee shall fully comply with paragraphs (1) through (7) of Section 202 of Executive Order 11246, as amended (reprinted in 41CFR 60-1.4 (a)), which are for the purpose of preventing discrimination against persons on the basis of race, color, religion, sex, or national origin. Paragraphs (1) through (7) of Section 292 of Executive Order 11246, as amended, are incorporated in this grant by reference.

Spinnaker Exploration Company, L.L.C. - GRANTEE

By: _____
Scott Broussard
V. P. Drilling & Production

November 16, 2005
Date

SPINNAKER EXPLORATION

PIPELINE MODIFICATION PERMIT

TO EXISTING SEGMENT 9675
8" GAS/CONDENSATE PIPELINE

GALVESTON BLK 210 "B"

TO

GALVESTON BLK 239 SSTI

PROJECT # 6212

Atlas Engineering, Inc
13831 Northwest Freeway, Suite 450
Houston, TX 77040
Office (713) 939-4995
Fax (713) 939-4996

SPINNAKER EXPLORATION
PIPELINE MODIFICATION PERMIT
To existing Seg. 9675 8" Gas/Condensate Pipeline
Galveston Blk 210 "B" to Galveston Blk 239 SSTI

SECTION 1. INTRODUCTION

Pipeline Origin	The P/L departs GA210 "B"			
Pipeline Destination	12" Williams Field Services Seg. 4590 in GA239 Pipe has been added to Seg. 9675 to connect GA 210 B			
P/L Crossings	OCS Row No.	Segment No	Block	Status
None				

General Information	
Product to be transported	Natural Gas and Condensate
Class Location	Class I
Maximum Water Depth (ft)	-60 ft MSL
Pipeline Length Horizontal, (Ft)	12,709.28(new pipe) 23,057.68(existing pipe) 35,766.96 (total)
Water Depth (ft)	60 at GA 210 "B"
Water Depth (ft)	58 at GA 239 SSTI
Riser Location at GA 210 "B"	Through the Boat Landing
Pipeline Capacity (Design)	20 MMSCFD, 1000 BCPD (Gas=0.65, BCPD =0.80)
Working Pressure (Design)	1440 psig
Design Codes	API RP 14E
	MMS DOI 30 CFR Part 250 Subpart H and J
	DOT Part 192 Title 49 CFR Ch1 Part 192
	ANSI B16.5, ANSI B31.4, ANSI B31.8

Piping Specifications				
Type	Grade or Class	O.D. (inches)	Wall Thickness (inches)	Weight lbs/ft
Line Pipe	API 5L Gr. B	8 5/8	0.375	33.043
Riser Pipe at GA 210 "B"	API 5L Gr. B	8 5/8	0.500	43.39
Subsea Valves	N/A	N/A	N/A	N/A
Valves: Hot tap, Block, Check	N/A	N/A	N/A	N/A
Flanges	ANSI 900	8"	N/A	N/A

Protective Coating		
Area	Line Pipe	Riser Pipe
Internal	No Surface Coating; However, The Composition of the Fluid Being Transported Will Be Monitored and Analyzed and Appropriate Preventative Measures Taken to Inhibit the Fluid and/to Prevent Pipeline Corrosion	
External	12-14 mils of Fusion Bonded Epoxy	
Joints	Heat Shrinkable Wrap	Heat Shrinkable Wrap
Splash Zone		0.5" Splashtron Rubberized Coating
Above Water		Zinc Primer, Tie-Coat and Vinyl Topcoat Paint System
Below Water	12-14 Mils FBE	12-14 Mils Fusion Bonded Epoxy

ATLAS ENGINEERING INC

SECTION 2. WALL THICKNESS CALCULATIONS

Symbol	Description	Value
P	Internal Design Pressure, psig	1,440
Riser		
D_{riser}	Nominal Outside Diameter of Riser, inches	8 5/8
SMYS	Yield Strength (from ANSI B31.8), psi	35,000
tr	Riser Wall Thickness, inches	0.500
DF	Design Factor Riser	0.60
E	Longitudinal Joint Factor	1.00
T	Temperature Factor	1.00
CA	Corrosion Allowance, inches	0.05
Pipeline		
D_{line}	Nominal Outside Diameter of Line, inches	8 5/8
SMYS	Yield Strength (from ANSI B31.8), psi	35,000
tp	Pipeline Wall Thickness, inches	0.375
DF	Design Factor Pipeline	0.72
E	Longitudinal Joint Factor	1.00
T	Temperature Factor	1.00
CA	Corrosion Allowance, inches	0.05
Flanges. Fittings and Valves		
	Maximum Allowable Design Pressure due to temperature, psig	2,220

Minimum Wall Thickness, tmin	**Maximum Allowable Pressure, Pmax**
Riser	
$t_{min} = PD_{riser}/(2(SMYSxDFxExT)) + CA$ = (1440x8.625)/(2x(35000x0.6x1x1))+0.05 0.346 inches	$P_{max} = 2(SMYSxDFxExT)x(t-CA)/D_{riser}$ = 2x(35000x0.6x1x1)x(0.5-0.05)/8.625 2191.3 psig
Pipeline	
$t_{min} = PD_{line}/(2(SMYSxDFxExT)) + CA$ = (1440x8.625)/(2x(35000x0.72x1x1))+0.05 0.296 inches	$P_{max} = 2(SMYSxDFxExT)x(t-CA)/D_{line}$ = 2x(35000x0.72x1x1)x(0.375-0.05)/8.625 1899.1 psig

Riser
Use 8.625 in O.D. X 0.5 in Wall Thickness Grade API 5L Gr. B Seamless Pipe
Pipeline
Use 8.625 in O.D. X 0.375 in Wall Thickness Grade API 5L Gr. B Seamless Pipe
MAOP of RISER/PIPELINE SYSTEM = 1,440 psig

SECTION 3. HYDROSTATIC TEST PRESSURE CALCULATIONS

Line Pipe and Riser - Input For Hydrostatic Test Pressure Calculations

Symbol	Description	Value
MAOP	Maximum Allowable Operating Pressure, psig	1,440
SMYS (Line)	Yield Strength(from ANSI B31.8), psi	35,000
SMYS (Riser)	Yield Strength(from ANSI B31.8), psi	35,000
t (Line)	Nominal Wall Thickness, inches	0.375
t (Riser)	Nominal Wall Thickness, inches	0.500
H	Setting Depth of Pipeline Below Sealevel, ft	60
HF (Riser)	Hydrostatic Factor	1.25
HF (Line)	Hydrostatic Factor	1.25

Hydrostatic Test of Line Pipe as a Segment, HTP

HTP_{Line} = HF Line x MAOP

HTP_{Line} = HF x MAOP

HTP_{Line} = 1,800 psig

Hydrostatic Test of Riser as a Segment, HTP

HTP_{Riser} = HF Riser x MAOP

HTP_{Riser} = 1,800 psig

Hoop Stress Pressure Check Calculation For Line Segment, HSP

HSP = 2t(SMYS)/D line

		Condition	HTPline (psig)
HSP =	3043 psig		
95% of HSP	2891 psig	>	1800

CHECK: Is HTP_{LINE} less than 95% of HSP? TRUE

Hoop Stress Pressure Check Calculation For Riser Segment, HSP

HSP = 2t(SMYS)/D riser

		Condition	HTPriser (psig)
HSP =	4058 psig		
95% of HSP	3855 psig	>	1800

CHECK: Is HTP_{RISER} less than 95% of HSP? TRUE

CHECK: Is HTPsystem (1800psig) less than 95% of HSP?

1800 < 2891 TRUE

Hydrostatic Test Pressure for Pipeline and Risers

Pipeline Hydrostatic Test Pressure	**1800 psig**
Riser Hydrostaric Test Pressure	**1800 psig**
Pipeline & Riser Hydrostaric Test Pressure	**1800 psig**
Test Length	**8 hours**

SECTION 4. LINE PIPE SPECIFIC GRAVITY

Specific Gravity, - Input For Calculation		
Symbol	Description	Value
Line Pipe	Density of Pipe lbs/cu. Ft	490.0
	Density of Corrosion Coating lbs/cu. Ft	90.0
	Density of Concrete lbs/cu. Ft	150.00
	Thickness of Corrosion Coating, inches	0.014
	Thickness of Concrete, inches	0.000
Riser Below Water	Density of Pipe lbs/cu. Ft	490.0
	Density of Corrosion Coating lbs/cu. Ft	90.0
	Density of Concrete lbs/cu. Ft	150.00
	Thickness of Corrosion Coating, inches	0.014
	Thickness of Concrete, inches	0.000
Riser at Splash Zone	Density of Pipe lbs/cu. Ft	490.0
	Density of Corrosion Coating lbs/cu. Ft	100.0
	Density of Concrete lbs/cu. Ft	150.00
	Thickness of Corrosion Coating, inches	0.500
	Thickness of Concrete, inches	0.000
	Sea Water Properties	
	Specific Weight of Water, lb/ft^3	62.4
	Specific Gravity of Water	1.03

* Weight of flanges, valves and anodes not included

Specific gravity = weight in air (empty)/ water displacement (Sea water)

Description	Air Weight lb/ft	Water Displacement lb/ft	SG Empty
Pipeline with 12-14 mils FBE	33.31	26.25	1.269
Riser (Below Water) with 12-14 mils FBE	43.67	26.25	1.664
Riser (Splash Zone) with 0.5" Splashtron	52.84	32.48	1.627

SECTION 5. PRESSURE MONITORING DEVICES

Pressure Monitoring Devices	
Pressure	Description
High Pressure Pilot	PSH Set at 15% Above the Normal Operating Pressure, but not above the MAOP of the Pipeline
Low Pressure Pilot	Set not to exceed15% Below the Normal Operating Pressure
Pressure Excesses	If Either of the Pressure Limits is Exceeded, Then the Facility will Automatically and Orderly Shutdown the Pressure Sources and Connected Wells.

SECTION 6. CATHODIC PROTECTION SYSTEM

Pipeline Sacrificial Anode System - Input For Calculations		
Symbol	Description	Value
D	Nominal Outside Diameter, inches	8.625
BP	Amount of Exposed Pipe, %	0.02
I	Current Through Anode, amps/sq ft	0.005
L	Design Life of Pipeline, yrs	30.0
R	Rate of Consumption (Anode Usage), lb/amp yr	7.62
W	Anode Weight (Net), lb	40.0

A	Surface Area/Mile
	A = pi X D X Length CF
	A = pi X 8.625in/12in/ft X 5,280 ft/mi
	A = 11922.3 sq ft/mi

IM	Amperage/Mile		
	I_M = A X BP X I =	1.192	amps/mi
LA	Anode Line Life		
	LA = I_M X L =	35.77	amp yr/mi
WM	Anode Weight Per Mile		
	W_M = LA X R =	272.5	lb/mi
Q	Quantity of Anodes Required		
	Q = W_M / W =	6.81	Anodes/mi
S	Required Anode Spacing		
	S = 5280 ft/mi / Q =	774.92	ft/Anode

Pipeline Sacrificial Anode System General Information	
Anodes Type =	Tapered Semi-Cylindrical Bracelet
Alloy =	Aluminum Alloy Galvalum III
Actual Spacing (ft) =	700
Net Anode Weight (lbs) =	40.0
Actual Anode Life Years =	33.21

Cathodic Protection System	
Area	Description
Riser	Neoprene lined riser clamps below water and insulating flange kits at the top of the riser will electrically isolate the riser from the platform cathodic protection system.
Pipeline	The pipeline will be protected by a sacrificial anode system as described above and anodes will be placed at each end of the pipeline 40 ft spacing. (if any)
Sub Sea Tie in	Insulating flange assembly and Neoprene support clamps at the sub sea tie-in will electrically isolate the pipeline from the SSTI.

SECTION 7. SUMMARY

Pipeline Origin	The P/L departs GA210 "B"
Pipeline Destination	12" Williams Field Services Seg. 4590 in GA239

P/L Crossings-ROW Holder	OCS Row No.	Segment No	Block	Status
None				

General Information	
Product	Natural Gas and Condensate
Class Location	Class I
Maximum Water Depth (ft)	-60 ft MSL
Pipeline Length Horizontal	12,709.28(new pipe) 23,057.68(existing pipe) 35,766.96 (total)
Water Depth (ft)	60 at GA 210 "B"
Water Depth (ft)	58 at GA 239 SSTI
Riser Location at GA 210 "B"	Through the Boat Landing
Pipeline Capacity (Design)	20 MMSCFD, 1000 BCPD (Gas=0.65, BCPD =0.80)
Working Pressure (Design)	1440
Design Codes	API RP 14E
	MMS DOI 30 CFR Part 250 Subpart H and J
	DOT Part 192 Title 49 CFR Ch1 Part 192
	ANSI B16.5, ANSI B31.4, ANSI B31.8

Piping Specifications				
Type	Grade or Class	O.D. (inches)	Wall Thickness (inches)	Length (feet)
Line Pipe	API 5L Gr. B	8 5/8	0.375	35,766.96
Riser Pipe	API 5L Gr. B	8 5/8	0.500	60 ft.
Subsea Valves	N/A	N/A	N/A	N/A
Valves: Hot tap, Block, Check	N/A	N/A	N/A	N/A
Flanges	ANSI 900	8"	N/A	N/A

Coating		
Area	Line Pipe	Riser Pipe
External	12-14 mils of Fusion Bonded Epoxy	
Joints	Heat Shrinkable Wrap	Heat Shrinkable Wrap
Splash Zone		0.5" Splashtron Rubberized Coating
Above Water		Zinc Primer, Tie-Coat and Vinyl Topcoat Paint System
Below Water	12-14 Mils FBE	12-14 Mils Fusion Bonded Epoxy

Hydrostatic Test Pressure for Pipeline and Riser	
Pipeline Hydrostatic Test Pressure	**1800 psig**
Riser Hydrostaric Test Pressure	**1800 psig**
Pipeline & Riser Hydrostaric Test Pressure	**1800 psig**
Test Length	**8 hours**

ATLAS ENGINEERING INC

Customer: Spinnaker Exploration — **Design By : JKW**
Pipeline: 8" Gas/Cond. P/L from GA 210B to GA 239SSTI — **Revision No: D**
Segment #: 9675 — **Date: 11/9/2005**

Oil Spill Financial Responsibility (OSFR) Requirement Determination

Assume the following
a) Total Break in Pipeline
b) Pipeline is Shut-In
c) Pipeline is Horizontal

Input Data	Case I	Case II
Pipeline Outside Diameter (inches) =	8.625	8.625
Pipeline Wall Thickness (inches) =	0.375	0.375
Pipeline Inside Diameter (inches) =	7.875	7.875
Pipeline Length (Ft) =	35,767	35,767
Pressure PSI (at the time of the break) =	1440	1440
Pipeline Water Depth at Leak (Ft) =	60	58
SeaWater Specific Gravity SG =	1.03	1.03
Gas Production (MMscfd) =	20	20
Liquid Production (BLPD) =	1000	1000
Calculated GORE scf/stb =	20,000	20,000
Actual GOR scf/stb =	20,000	20,000
Pipeline Volume Analysis		
Pipeline Length (miles) =	6.774	6.774
Pipeline Static Volume (cu. Ft) =	12,098	12,098
Pipeline Static Volume (Gallons) =	90,499	90,498
Pipeline Static Volume (Bbls) =	**2,155**	**2,155**
Relative Pressures		
External Pressure (Ambient) psi =	26.8	25.9
Internal Pressure (Pipeline) psi =	1440.0	1440.0
Relative Pressure Difference =	54.4	56.2
Oil Released Volume		
Oil Released Volume Formula (cu. Ft) =	Volume (cu.ft) * Frel_Max * GORmax	
Lookup Frel_Max (value from Table 2.3) =	0.760	0.760
Lookup GORMax (value from Table 2.3) =	112.0	112.0
GOR Reduction Factor (value from Table 2.4) =	0.260	0.260
Oil Released Volume (cu. Ft) =	2391	2391
Oil Released Volume (Gallons) =	17,883	17,882
Oil Released Volume (Barrels) =	**425.8**	**425.8**
Pipeline Static Volume > 1000 Bbls =	**WCD Required**	**WCD Required**
Oil Released Volume > 1000 Bbls =	**OSFR NOT Required**	**OSFR NOT Required**

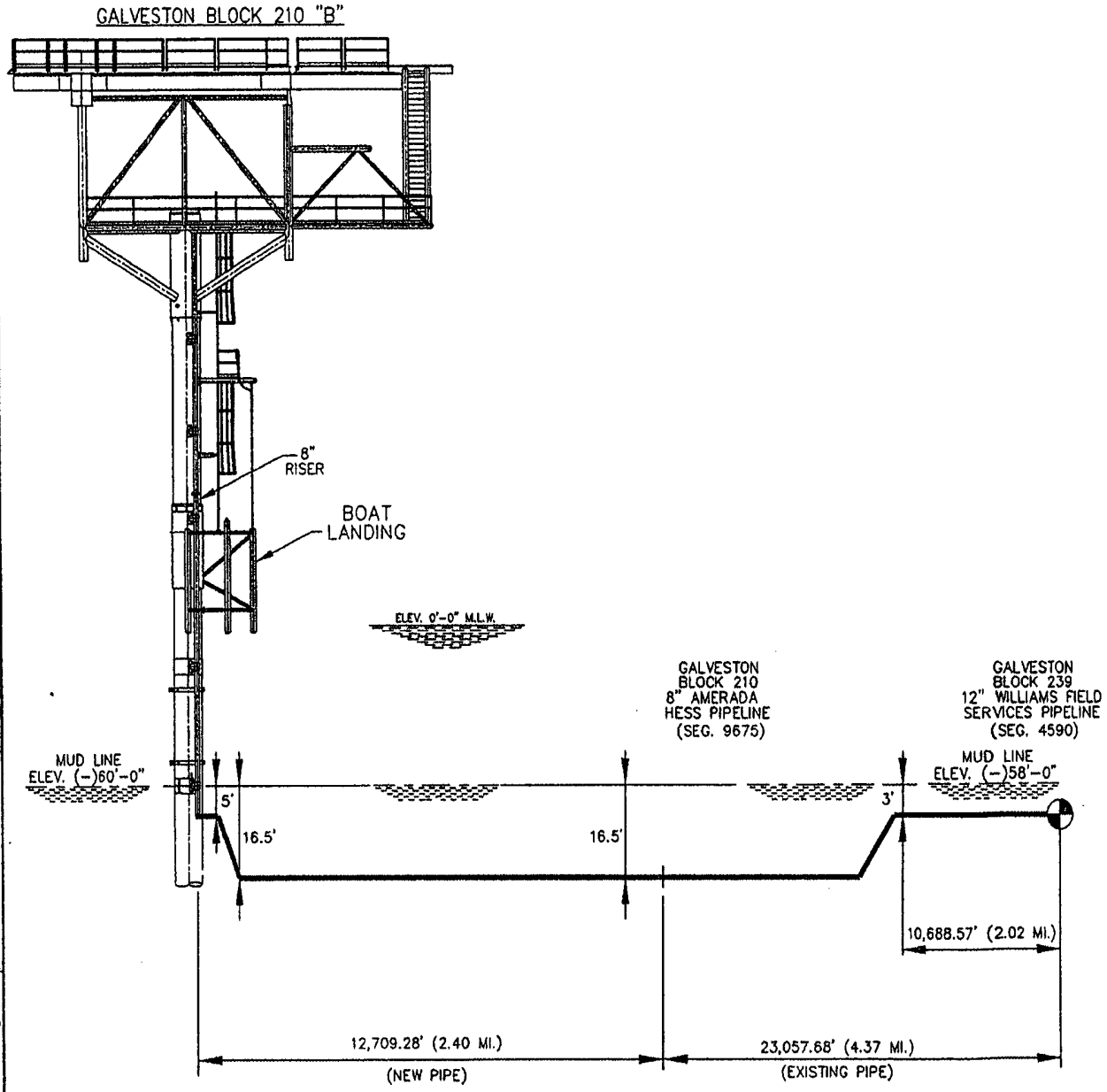
Table 2.3 Maximum Released Volume Fraction, Frel_Max

Relative Pressure Difference	Maximum Release Fraction Frel_Max	Maximum Release occurs for a GOR of GORMax
1.1-1.2	0.08	140
1.2-1.5	0.17	225
1.5-2.0	0.30	337
2.0-3.0	0.40	449
3.0-4.0	0.47	505
4.0-5.0	0.50	561
5.0-10.0	0.55	505
10.0-20.0	0.64	337
20.0-50.0	0.71	168
50.0-200	0.76	112
>200	0.77	112

Table 2.4 GOR Reduction Factor RF

GOR	IF GOR<GORmax	IF GOR>GORmax
55-225		1.00
225-280	F=GOR/GORm:	0.98
280-340		0.97
340-420		0.95
420-560		0.90
560-1100		0.85
1100-1700	Will Not Occur	0.82
1700-2800		0.63
2800-5600		0.43
5600-11300		0.26

SPINNAKER EXPLORATION COMPANY
8" GAS/CONDENSATE PIPELINE PROFILE DIAGRAM



NOTES:
RISERS BENDS WILL BE BURIED 5'-0" & TAPERED TO 16'-6" BURIAL FOR APPROXIMATELY 65'-0" AWAY FROM EACH PLATFORM.

ELEVATION
SCALE: NONE

PLOT TIME: Nov 11, 2005 - 10:48am BY: pt FILE NAME: Q:\HOU\Current Projects\Spinnaker\Galveston Area 210 B\(ASN 850) Pipeline Permits\6212852.dwg

APPROVED BY	NAME	DATE	SCALE
CLIENT			NONE
ENGINEER	SKS	8/02/05	PROJECT NO.
DESIGN BY	JKW	8/02/05	6212
CHECK BY			DWG. NO.
DRAWN BY	JD	8/02/05	852

Atlas engineering inc

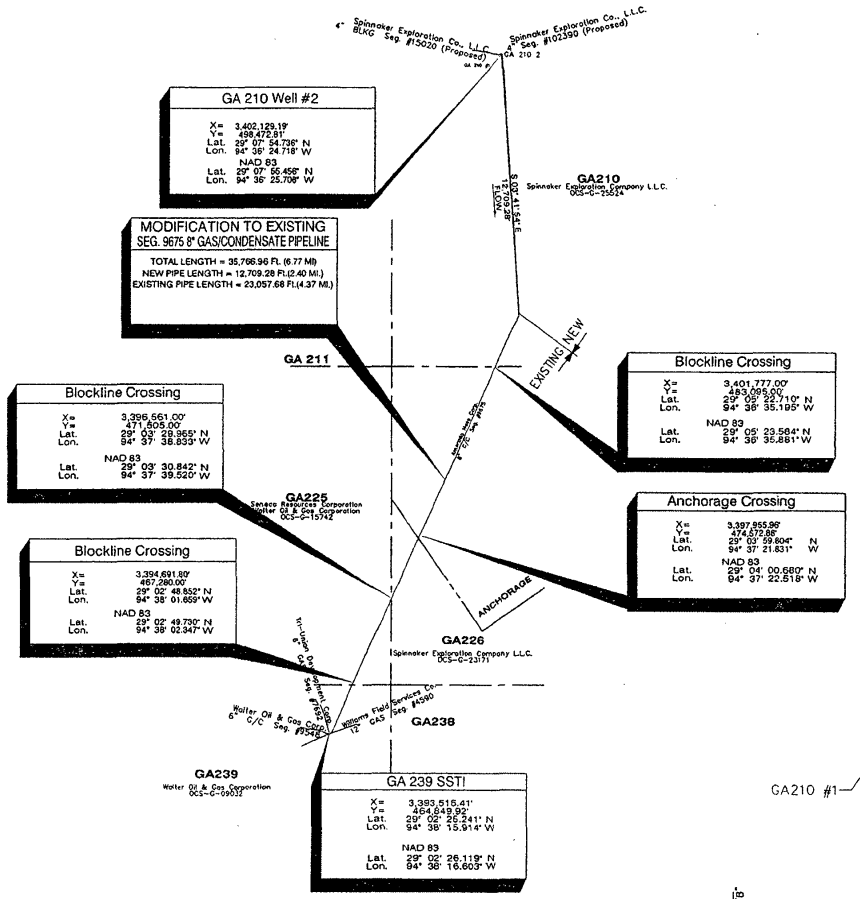
SPINNAKER EXPLORATION

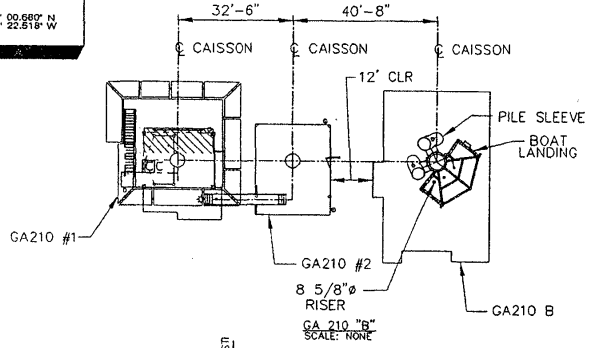
TITLE: PIPELINE MODIFICATION PERMIT
TO EXISTING SEG. 9675 8" GAS/CONDENSATE PIPELINE FROM
GALVESTON 210 "B" TO GALVESTON 239 SSTI
PIPELINE PROFILE DIAGRAM

CLIENT: SPINNAKER EXPLORATION

REV- 0

BEST AVAILABLE COPY



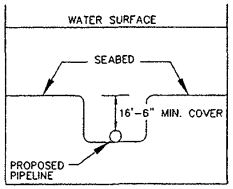


GA 210 "B"
SCALE: NONE

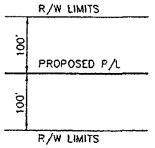
PIPELINE CROSSING DATA				
POINT	SEGMENT #	X	Y	NAME
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				

CURVE DATA					
NO.	FROM	TO	RADIUS	ANGLE	LENGTH

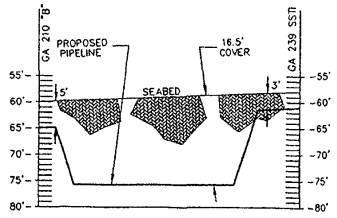
MATERIAL SUMMARY		
ITEM	QTY.	DESCRIPTION
1	37,766.96	PIPE, 8 5/8" O.D. x 0.375" WT., API 5L GR. B, SMLS,
		COATED 12-14 MILS. FUSION BONDED EPOXY,
	12,709.28	(NEW)
	23,057.68	(EXISTING)
2	53	ANODE, 40 LBS.-NET WEIGHT, (45 LBS.-GROSS WEIGHT)
		TAPERED SEMI-CYLINDRICAL BRACELET FOR 8" PIPE
		GALVALUM III OR EQUAL.
	20	(NEW)
	33	(EXISTING)
3	1	RISER @ GALVESTON 210 "B"
		8 5/8" O.D. x 0.500" WT., API 5L GR. B, FBE COATED.
4		SUBSEA TIE-IN @ GALVESTON 239



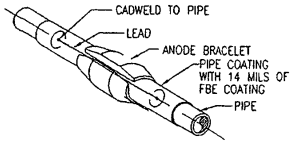
TYPICAL DITCH
N.T.S.



R/W DETAIL
N.T.S.



PROFILE
SCALE: VERT. 1"=10' HORZ. 1"=1000'



TYPICAL ANODE INSTALLATION DETAIL
SCALE: NONE

DESIGN NOTES:

1. CODE:
   DEPARTMENT OF TRANSPORTATION MINIMUM FEDERAL SAFETY STANDARDS FOR GAS LINES. PART 192. TITLE 49. CODE OF FEDERAL REGULATIONS.
2. DESIGN PRESSURE:
   MAOP =1440 PSIG
4. ANODES:
   DESIGN LIFE - 30 YEARS
   CURRENT - 5 MA/ SQ.FT.
   HOLIDAYS - 2%
   USAGE - 7.62 LBS/AMPS YEAR
   EFFICIENCY - 85%
   SPACING - 700 FT.
   WEIGHT - 40 LB. (NET.)

NOTES:

1. CONSTRUCTION SHALL BE GOVERNED BY THE CONTRACT AND SPECIFICATIONS FOR THE FABRICATION AND INSTALLATION OF PIPELINES PROVIDED BY THE COMPANY.
2. HYDROTEST:
   THE ENTIRE PIPELINE SYSTEM SHALL BE HYDROTESTED AFTER INSTALLATION TO A MINIMUM OF 1.25 x MAOP (+100-0) PSI AND HELD FOR A PERIOD OF 8 HOURS. PRESSURE SHALL HOLD OR RISE OVER THE LAST THREE HOURS.
3. INSTALLATION CONTRACTOR WILL SUPPLY ALL MATERIALS UNLESS NOTED OTHERWISE.

SPINNAKER EXPLORATION

REV.	REVISION	DATE	APP'D.
A	ISSUED FOR PERMIT	11/09/05	GK
B	REVISED PER COMPANY COMMENTS	11/04/05	BT
A	ISSUED FOR APPROVAL	8/02/05	G

Atlas engineering inc

	NAME	DATE	SCALE
APPROVED BY			NOTED
CLIENT			PROJECT NO.
ENGINEER	SKS	8/02/05	6212
DESIGN BY	JKW	8/02/05	DWG. NO.
CHECK BY			850
DRAWN BY	MT	8/02/05	

SPINNAKER EXPLORATION

TITLE: PIPELINE MODIFICATION PERMIT TO EXISTING SEG. 9675 8" GAS/CONDENSATE PIPELINE FROM GALVESTON 210 "B" TO GALVESTON 239 SST1
AREA PLOT PLAN AND DETAILS

CLIENT: SPINNAKER EXPLORATION | REV 0

PLOT TIME: Nov 11, 2005 - 10:48am BY: pt FILE NAME: Q:\HOU\Current Projects\Spinnaker\Galveston Area 210 B\(ASN 850) Pipeline Permits\6212850.dwg

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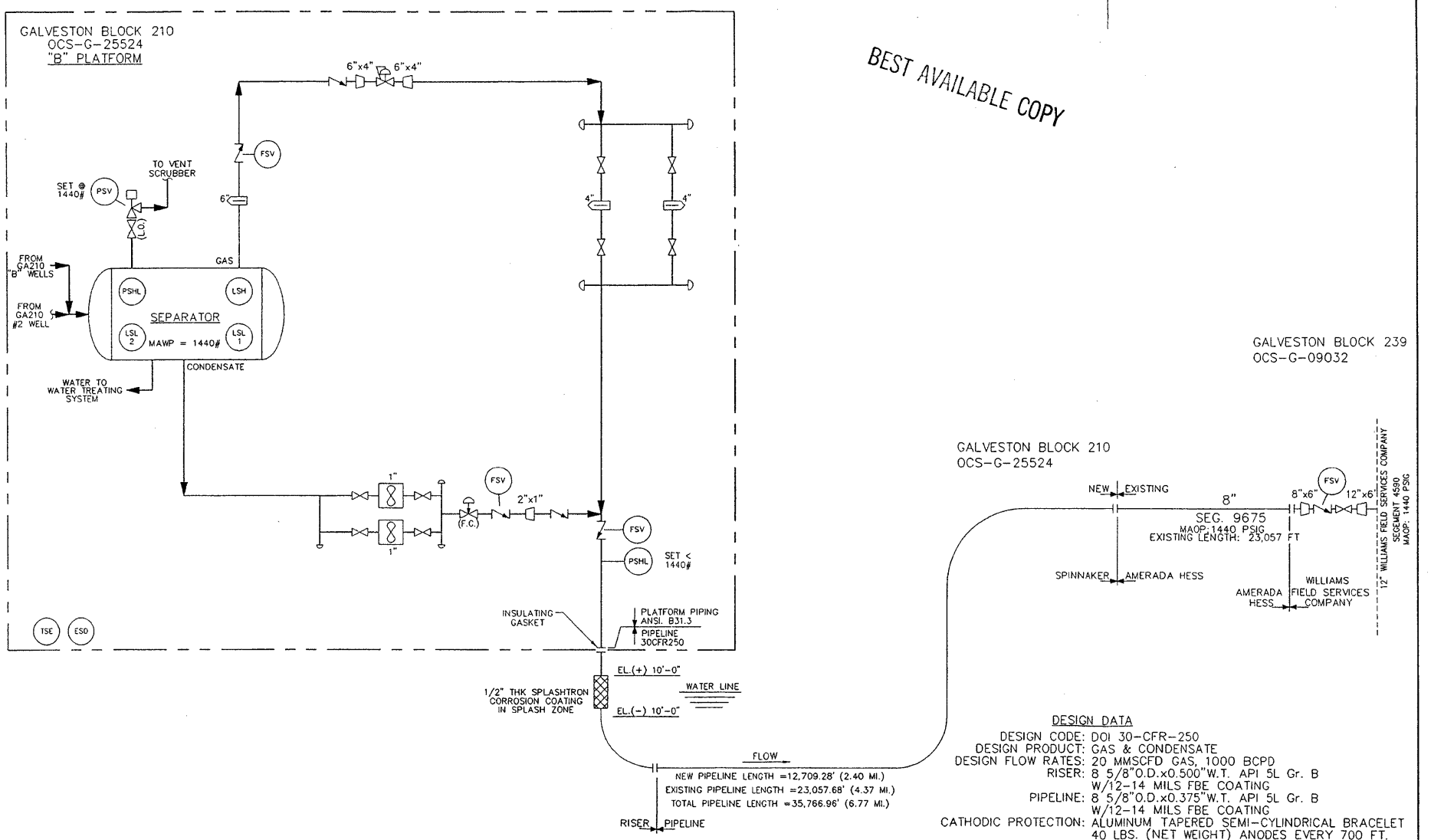

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DESIGN DATA

DESIGN CODE: DOI 30-CFR-250
DESIGN PRODUCT: GAS & CONDENSATE
DESIGN FLOW RATES: 20 MMSCFD GAS, 1000 BCPD
RISER: 8 5/8"O.D.x0.500"W.T. API 5L Gr. B W/12-14 MILS FBE COATING
PIPELINE: 8 5/8"O.D.x0.375"W.T. API 5L Gr. B W/12-14 MILS FBE COATING
CATHODIC PROTECTION: ALUMINUM TAPERED SEMI-CYLINDRICAL BRACELET 40 LBS. (NET WEIGHT) ANODES EVERY 700 FT.
MAOP: 1440 PSIG
HYDROSTATIC TEST PRESSURE: 1.25 x MAOP (+100-0)

NOTES

1. PIPELINE COMPLIES WITH D.O.T. PART 192, TITLE 49 CFR & D.O.I. TITLE 30 PART 250, SUBPART H & J
2. CODES & SPECIFICATIONS:
   VALVES & FITTINGS ANSI B16.5
   PIPELINE ANSI B31.8
3. PSHL ON DEPARTING PIPELINE AT GA 210 "B" WILL SHUT-IN ALL WELLS.

SPINNAKER EXPLORATION

REV.	REVISION	DATE	APP'D.
A	ISSUED FOR PERMIT	11/09/05	CK
A	REVISED PER COMPANY COMMENTS	11/04/05	MT
A	ISSUED FOR APPROVAL	8/02/05	SKS

Atlas engineering inc

	NAME	DATE	SCALE
APPROVED BY			NONE
CLIENT			PROJECT NO.
ENGINEER	SKS	8/02/05	6212
DESIGN BY	JKW	8/02/05	DWG. NO.
CHECK BY			851
DRAWN BY	MT	8/02/05	

SPINNAKER EXPLORATION

TITLE: PIPELINE MODIFICATION PERMIT TO EXISTING SEG. 9675 8" GAS/CONDENSATE PIPELINE FROM GALVESTON 210 "B" TO GALVESTON 239 SSTI
PIPELINE SAFETY FLOW DIAGRAM

CLIENT: SPINNAKER EXPLORATION | REV 0

Bord_D_ARI v1.0

PLOT TIME: Nov 11, 2005 - 10:48am BY: pt FILE NAME: Q:\HOU\Current Projects\Spinnaker\Galveston Area 210 B\(ASN 850) Pipeline Permits\6212851.dwg

cochrane

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GEOPHYSICAL DATA
RE-EVALUATION

PROPOSED 8" GAS CONDENSATE PIPELINE MODIFICATION

FROM GALVESTON AREA BLOCK 210 WELL #2

TO GALVESTON AREA BLOCK 239 SUB-SEA TIE-IN

SPINNAKER EXPLORATION

SPINNAKER EXPLORATION COMPANY L.L.C.

P.O. Box 81276
Lafayette, Louisiana 70598-1276
3913 Highway 90 East
Broussard, Louisiana 70518

cochrane
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Minerals Management Service
Gulf of Mexico OCS Region
1201 Elmwood Park Blvd.
New Orleans, LA 70123-2394

RE: **Spinnaker Exploration Company, L.L.C.**
Proposed 8" Gas Condensate Pipeline Modification
Block 210, Galveston Area (OCS-G-25524)

Dear Staff:

Spinnaker Exploration Company, L.L.C. proposes to modify an existing 8" Gas Condensate pipeline by extending it with a new section of pipe to be constructed within their lease in Block 210 Galveston Area, offshore Texas **(OCS-G-25524)**. This letter presents the results of the re-evaluation of high resolution geophysical survey data along this planned alignment The data set used for this assessment was collected during a Block clearance survey conducted by Cochrane Technologies, Inc under contract with Spinnaker Exploration Company L.L.C and its purpose is to determine bottom and subbottom conditions and determine if any potential hazards or engineering constraints to the proposed pipeline exist within the area of interest. An Archaeological assessment of the potential for the presence of cultural resource material across the entire block was performed in June, 2004 for the original block clearance survey on which this effort is based on. That report (Archaeological and Hazard Study, Block 210 Galveston Area, El Darragi and Saltus, 2004) should be referred to should any additional information be required.

Flow through the proposed 8-inch Gas/Condensate pipeline will begin at the Well No.2 (X= 3,402,129.19', Y= 498,472.81') and terminates at the end of an existing Amerada Hess 8-inch Gas/Condensate pipeline at the following coordinates (X= 3,402,949.00', Y= 485,790.00'). Route length of the new pipeline is 12,709.28 feet along a bearing of S 03° 41' 54" W when adding the 23,057.68 of the existing Amerada Hess Pipeline (Segment # 9675), the total length of the proposed pipeline is 6.77 Miles. All information regarding the proposed pipeline is included in the Permit Plate submitted with this text. Segment length, bearing, and stationing for the route are also presented on the enclosed Engineering and Hazard map (Map No.1).

For the purposes of providing adequate coverage for this pipeline modification, a four thousand feet wide corridor was cropped out from the original block clearance survey grid. This selected area surrounding the proposed pipeline provides complete coverage with the side scan sonar and representative sampling with the rest of the sensors such as the magnetometer and seismic systems as shown on the enclose study map. This lease lies in MMS Zone 1, which

requires the survey to be conducted along a 50 meter grid pattern. Navigational fixes (shot points) were recorded at 150-meter intervals along all survey lines. All aspects of the field work were carried out in accordance with the latest federal guidelines in affect at the time of the survey including **NTL 2002-G01**.

1-Water depths along the proposed pipeline route are virtually constant at -59 feet below Mean Lower Low Water. The seafloor slopes evenly towards the southeast at an average rate of approximately 2 feet per mile. The fathometer records indicate a smooth seabed and do not show any significant topographic anomalies.

2-The sea floor sediments across Block 210, Galveston Area are reported to consist predominately of fine grained sand within a clayey matrix. The Side Scan Sonar data, which provided 100 percent seafloor coverage as required in the latest MMS NTL, did not contain any evidence of seafloor debris within the proposed pipeline corridor.

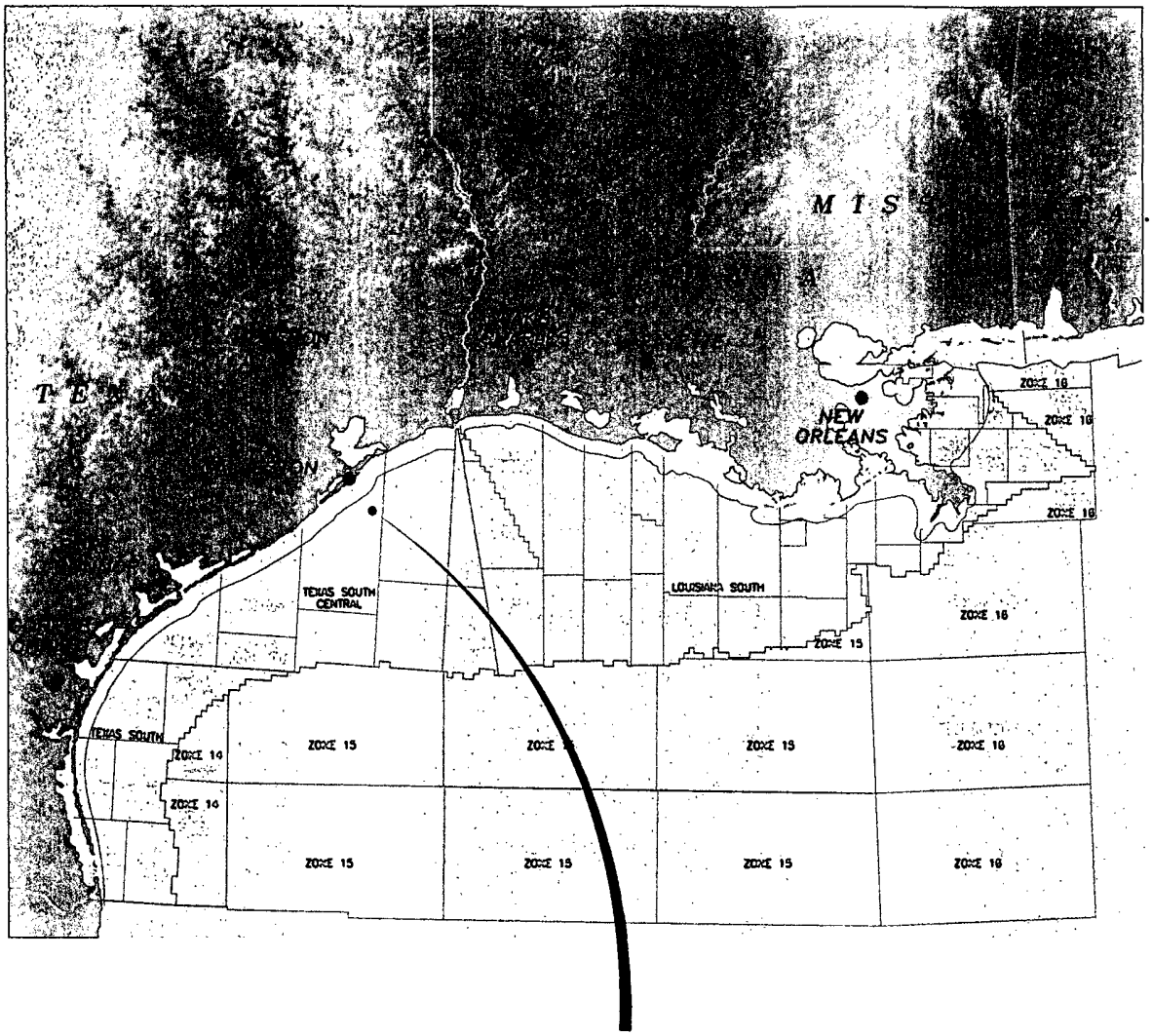
3-The subbottom profiler data revealed the southern flank of the Sabine-Calcasieu Trench as well as two generations of erosional channels. Depth of burial of the channels varied between 1 and 12 feet below the seafloor. The mapped channels are indicated on the enclosed Project Map. The depth of these relict channels is within the impact zone associated with the construction and burial of the subject pipeline which is required to be buried 16.5 feet below the mudline in this Anchorage Area.

4-Two existing pipelines, one well site and one removed production platform location (Galveston 210 A Structure) exist within the survey limits. Their locations were verified with the collected field data. Additionally the magnetometer recorded 112 magnetic anomalies with no known man made sources within this area of interest. None of these lie along the specific pipeline route although several do appear to exist within close proximity. The point sources of these magnetic anomalies remain unknown and they should be avoided when possible.

With the exception of the unidentified magnetic anomalies, the proposed pipeline route appears to be clear of potential hazards and presents a suitable environment for the installation of the planned pipeline.
Thank you for the opportunity to be of service.

Respectfully,

S. Dean El Darragi
Consulting Marine Geophysicist



SITE OF PROPOSED
PIPELINE ROUTE

G U L F O F M E X I C O

50 0 50 100 150 200

HORIZONTAL SCALE: 1" = APPROX. 100 MILES

SPINNAKER EXPLORATION

PROPOSED 8"

GAS CONDENSATE PIPELINE MODIFICATION
FROM GALVESTON AREA BLOCK 210 WELL #2
TO GALVESTON AREA BLOCK 239 SUB-SEA TIE-IN

cochrane TECHNOLOGIES, INC.
(337) 837-3334 LAFAYETTE, LA.

PREPARED FOR:
SPINNAKER EXPLORATION CO. L.L.C.
HOUSTON, TX.

DRAWING NO.: 7023-1	
DRAFTED BY: A.S.M.	REV. NO.: 0
CHK. BY: RCM	DATE: JULY 7, 2005
APP. BY: DKB	SHEET: 1 OF 6

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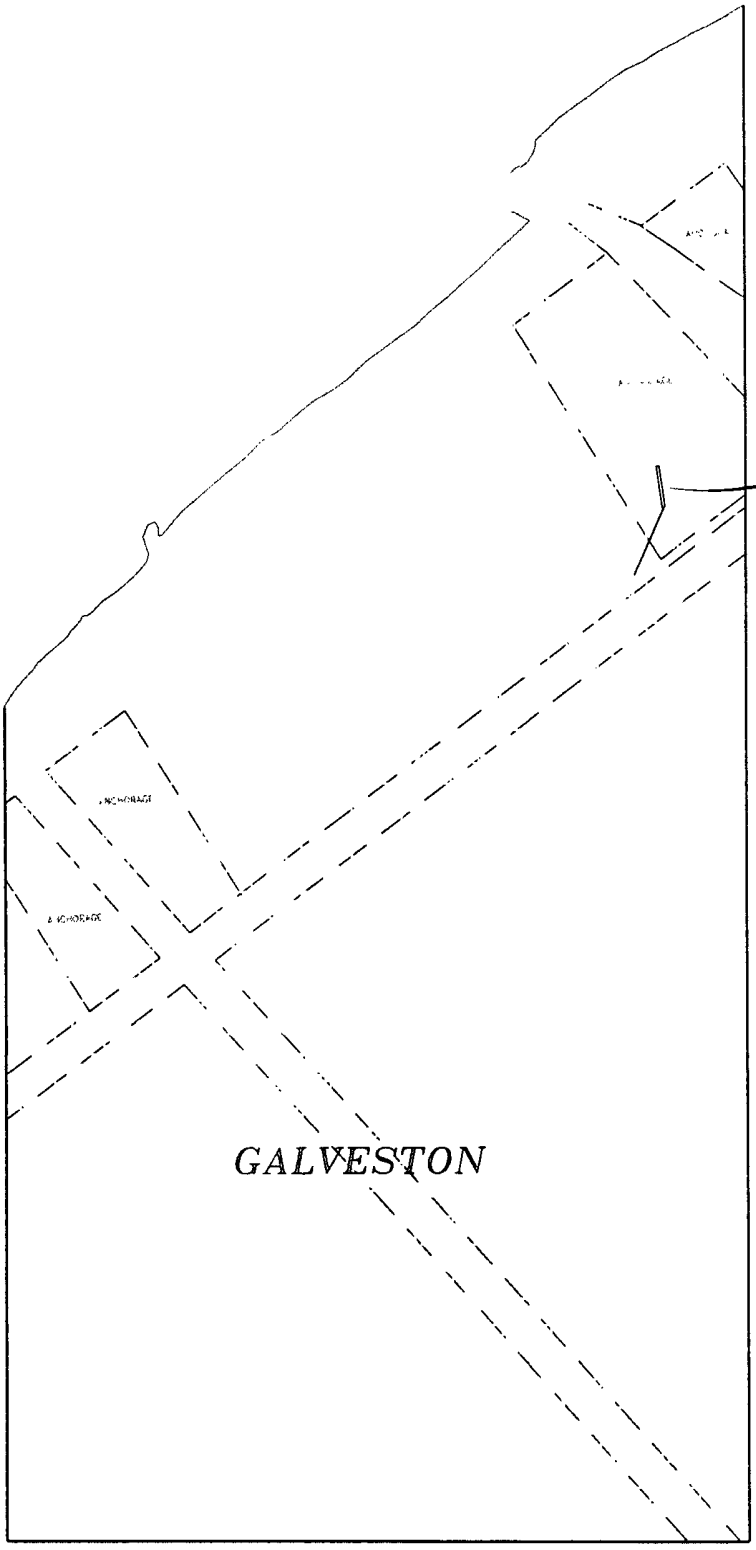

5 0 5 10 15 20

HORIZONTAL SCALE: 1" = APPROX. 10 MILES

SPINNAKER EXPLORATION

SPINNAKER EXPLORATION COMPANY L.L.C.

PROPOSED 8"

GAS CONDENSATE PIPELINE MODIFICATION

FROM GALVESTON AREA BLOCK 210 WELL#2
TO GALVESTON AREA BLOCK 239 SUB-SEA TIE-IN

cochrane TECHNOLOGIES, INC.
(337)-837-3334 LAFAYETTE, LA.

PREPARED FOR: SPINNAKER EXPLORATION CO. L.L.C. HOUSTON, TX.	
DRAWING NO.: 7023-2	
DRAFTED BY: A.P.M.	REV. NO.: 0
CHK. BY: RM	DATE: JULY 7, 2005
APP. BY: DJSB	SHEET: 2 OF 6

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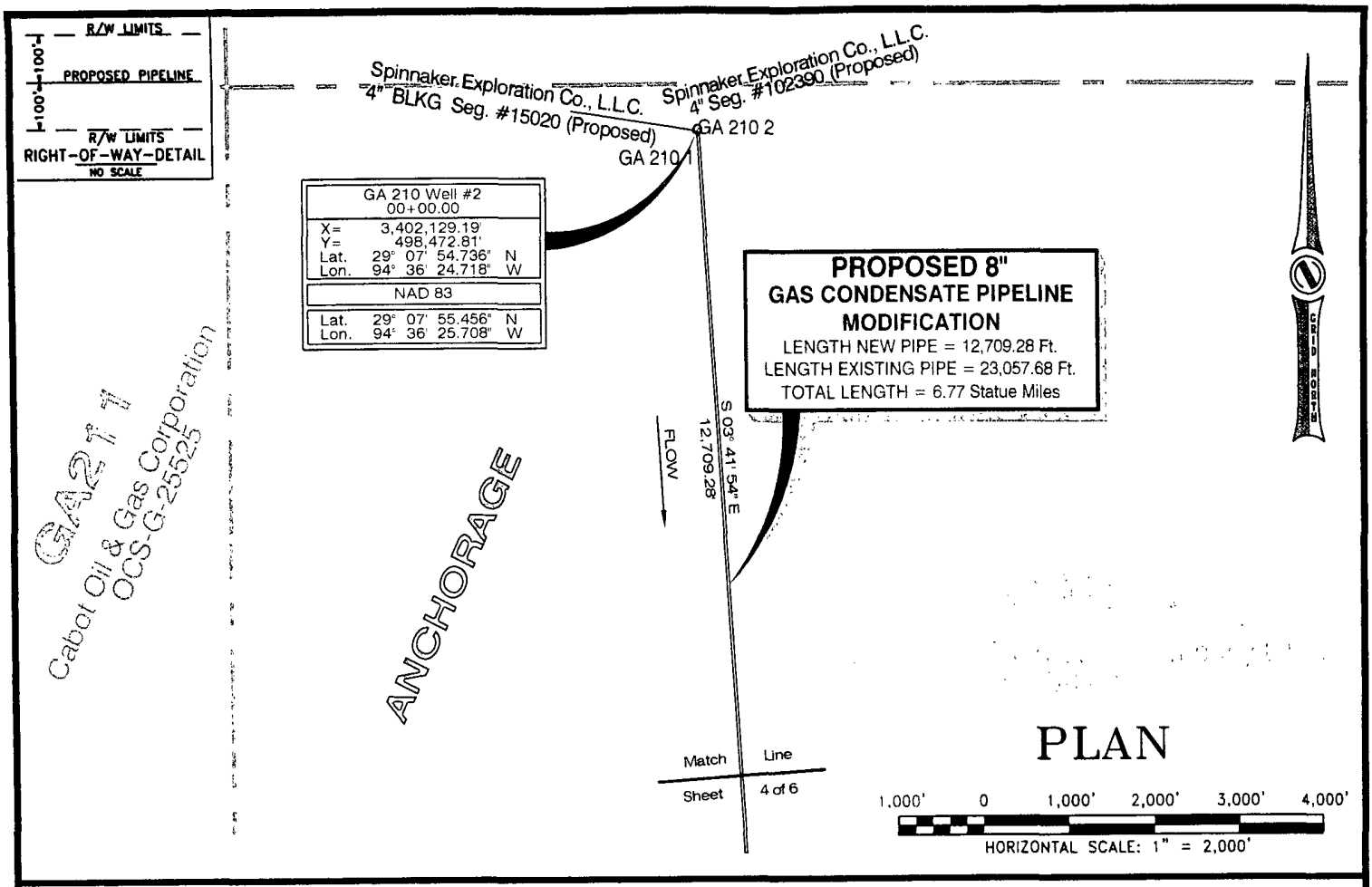

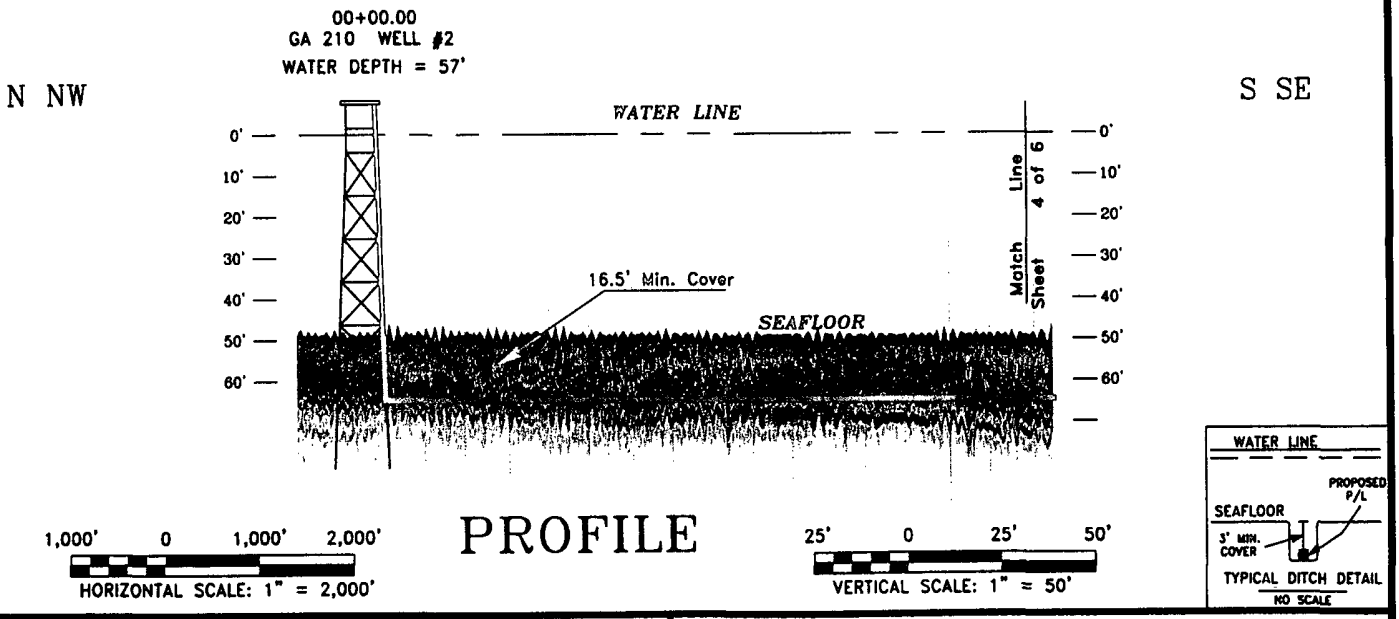

I certify this plat represents the proposed pipeline route.

DAVID K. BURDEAUX, P.L.S.
REGISTRATION NO. 4713 – STATE OF LOUISIANA

7/14/05

NOTES:

1. Coordinates are referenced to the Texas Coordinate System of 1927, South Central Zone. Units are in U.S. Survey Feet.
2. Water Depths are based on a block hazard survey performed in field on March, April, and May 2004 referred to Mean Lower Low Water based on the N.O.A.A. tide gauge "Galveston Pleasure Pier" Texas.
3. Plat revised 7-12-2005 to change well #2 coordinate.

SPINNAKER EXPLORATION

SPINNAKER EXPLORATION COMPANY L.L.C.

PROPOSED 8"

GAS CONDENSATE PIPELINE MODIFICATION
FROM GALVESTON AREA BLOCK 210 WELL #2
TO GALVESTON AREA BLOCK 239 SUB-SEA TIE-IN

cochrane TECHNOLOGIES, INC.
(337) 837-3334 LAFAYETTE, LA.

PREPARED FOR: SPINNAKER EXPLORATION CO. L.L.C. HOUSTON, TX.	
DRAWING NO.: 7023-3	
DRAFTED BY: A.P.M.	REV. NO.: 1
CHK. BY:	DATE: JULY 7, 2005
APP. BY: DKB	SHEET: 3 of 6

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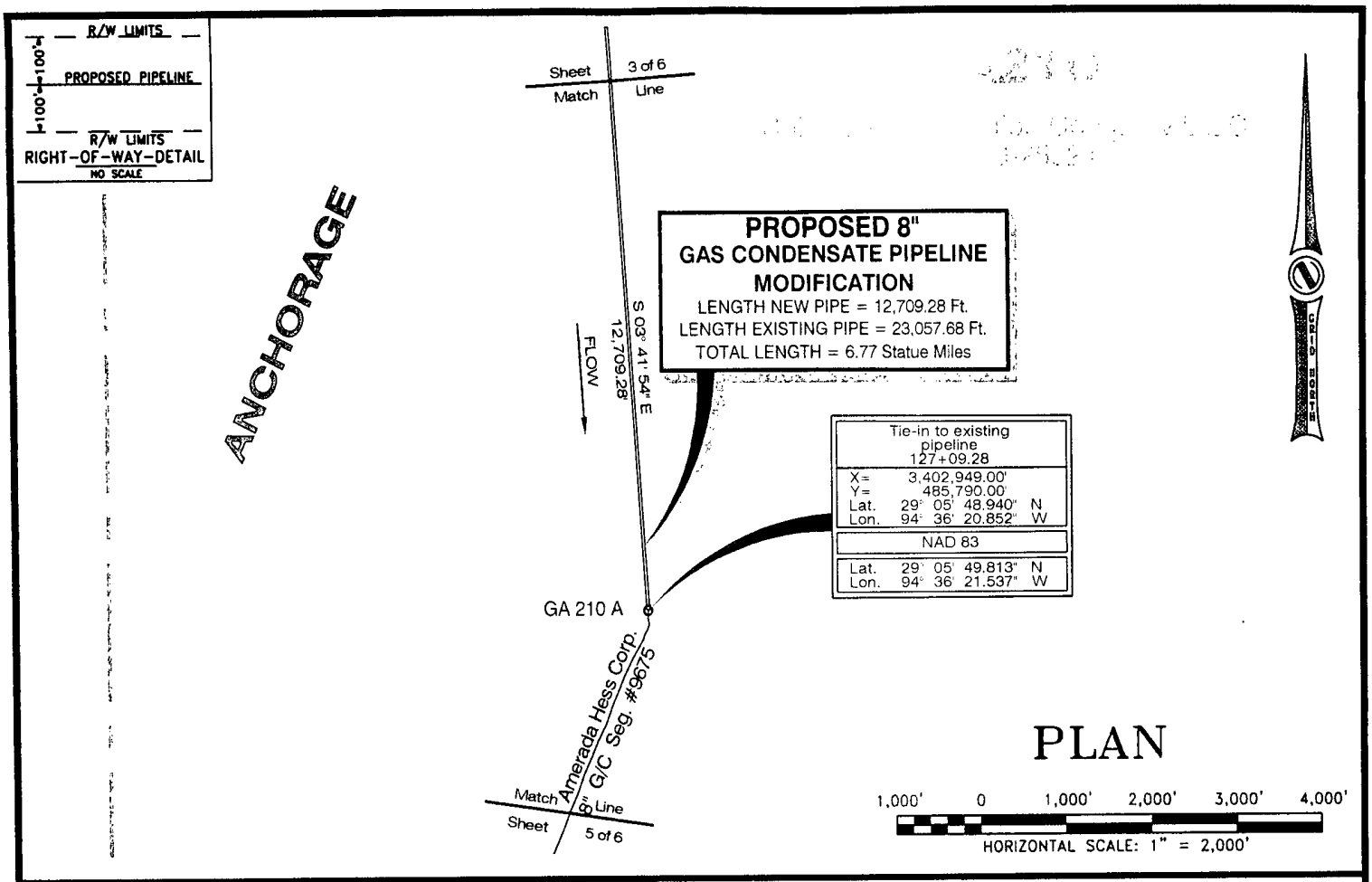

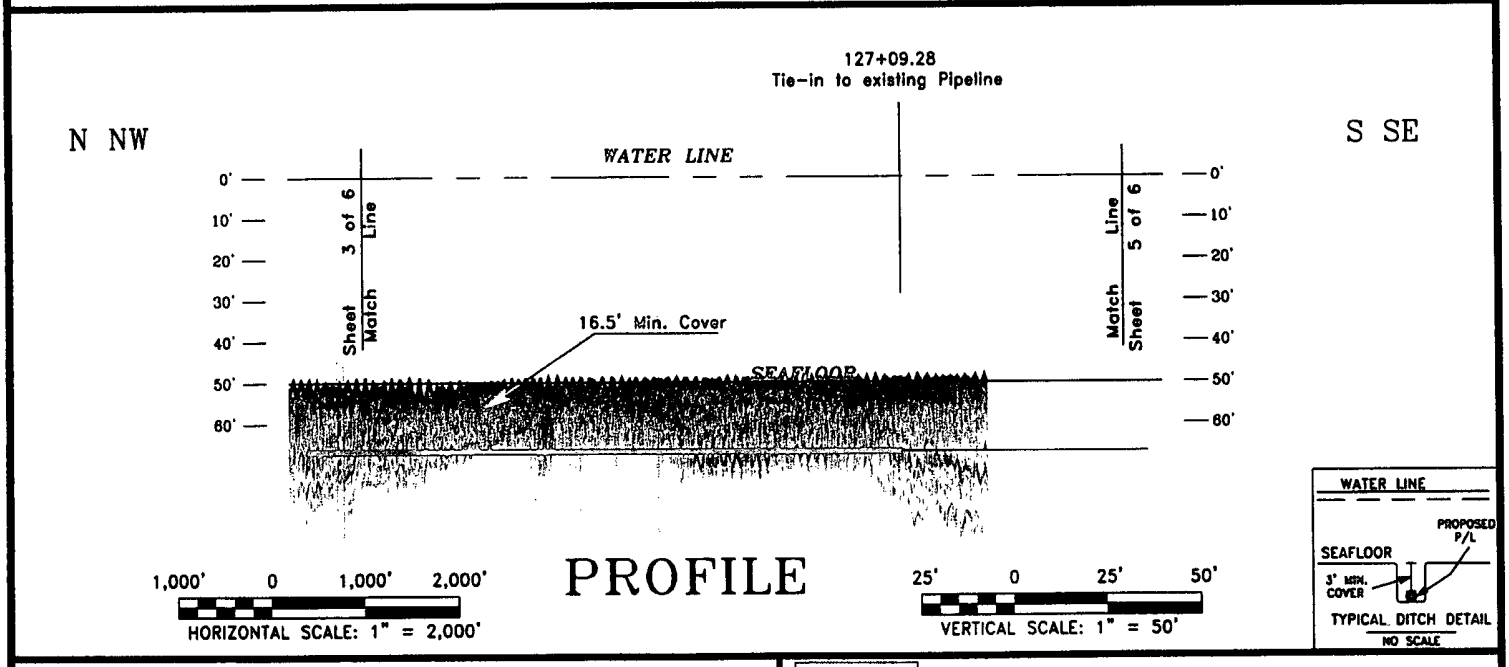

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DAVID K. BURDEAUX, P.L.S.
REGISTRATION NO. 4713 – STATE OF LOUISIANA

7/14/05

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3. Plat revised 7-12-2005 to change well #2 coordinate.

SPINNAKER EXPLORATION COMPANY L.L.C.

PROPOSED 8"

GAS CONDENSATE PIPELINE MODIFICATION
FROM GALVESTON AREA BLOCK 210 WELL #2
TO GALVESTON AREA BLOCK 239 SUB-SEA TIE-IN

cochrane TECHNOLOGIES, INC.
(337) 837-3334 LAFAYETTE, LA.

PREPARED FOR:
SPINNAKER EXPLORATION CO. L.L.C.
HOUSTON, TX.

DRAWING NO.: 7023-4	
DRAFTED BY: A.P.M.	REV. NO.: 1
CHK. BY:	DATE: JULY 7, 2005
APP. BY: DKB	SHEET: 4 of 6

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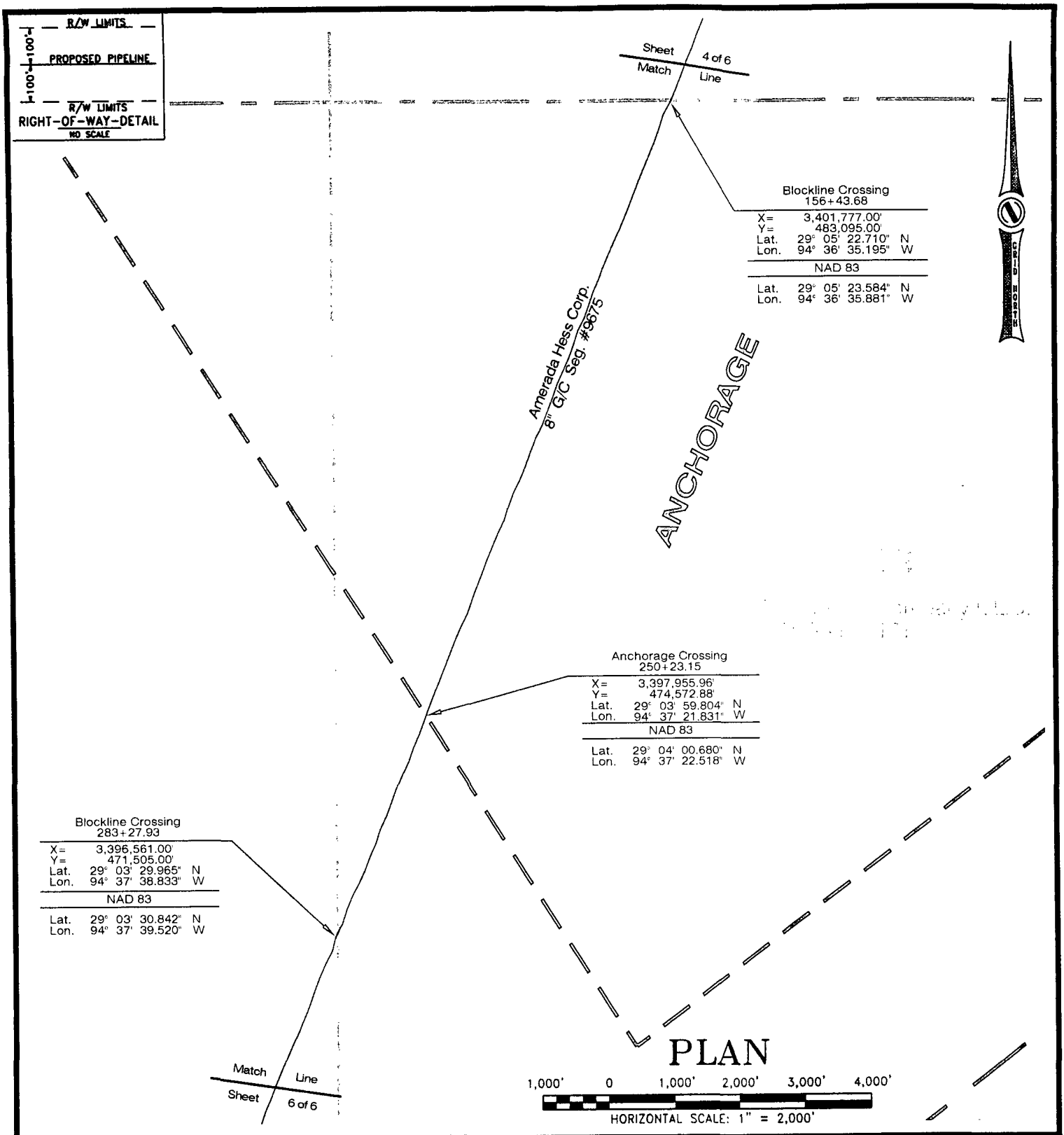

I certify this plat represents the proposed pipeline route.

DAVID K. BURDEAUX, P.L.S.
REGISTRATION NO. 4713 - STATE OF LOUISIANA

7/14/05

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3. Plat revised 7-12-2005 to change well #2 coordinate.

SPINNAKER EXPLORATION

SPINNAKER EXPLORATION COMPANY L.L.C.

PROPOSED 8"

GAS CONDENSATE PIPELINE MODIFICATION
FROM GALVESTON AREA BLOCK 210 WELL #2
TO GALVESTON AREA BLOCK 239 SUB-SEA TIE-IN

cochrane TECHNOLOGIES, INC.
(337) 837-3334 LAFAYETTE, LA.

PREPARED FOR:	SPINNAKER EXPLORATION CO. L.L.C. HOUSTON, TX.
DRAWING NO.:	7023-5
DRAFTED BY:	A.P.M.
REV. NO.:	1
CHK. BY:	DVM
DATE:	JULY 7, 2005
APP. BY:	DKB
SHEET:	5 of 6

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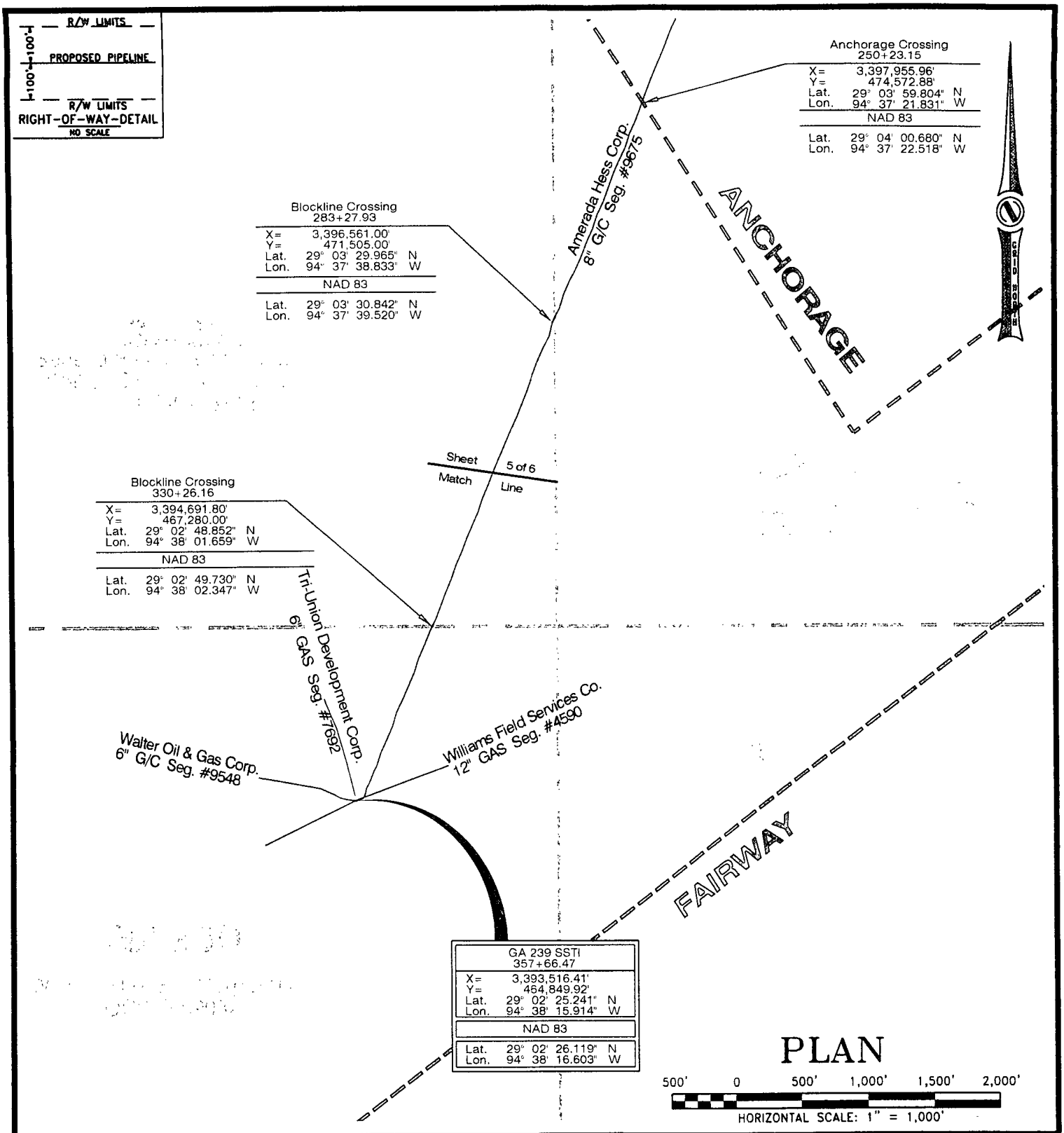

I certify this plat represents the proposed pipeline route.

DAVID K. BURDEAUX, P.L.S.
REGISTRATION NO. 4713 - STATE OF LOUISIANA

7/14/05

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SPINNAKER EXPLORATION

SPINNAKER EXPLORATION COMPANY L.L.C.

PROPOSED 8"

GAS CONDENSATE PIPELINE MODIFICATION
FROM GALVESTON AREA BLOCK 210 WELL #2
TO GALVESTON AREA BLOCK 239 SUB-SEA TIE-IN

cochrane TECHNOLOGIES, INC.
(337) 837-3334 LAFAYETTE, LA.

PREPARED FOR:
SPINNAKER EXPLORATION CO. L.L.C.
HOUSTON, TX.

DRAWING NO.: 7023-6A	
DRAFTED BY: A.P.M.	REV. NO.: 1
CHK. BY:	DATE: JULY 7, 2005
APP. BY: DKB	SHEET: 6 of 6

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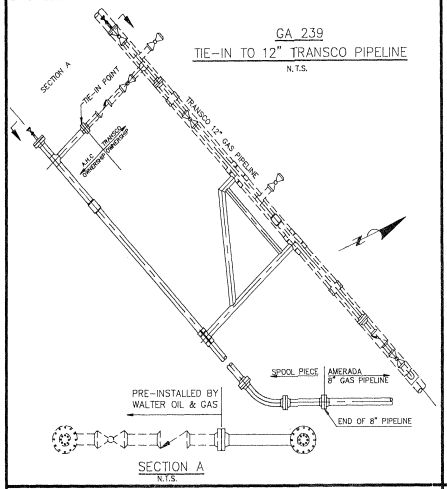
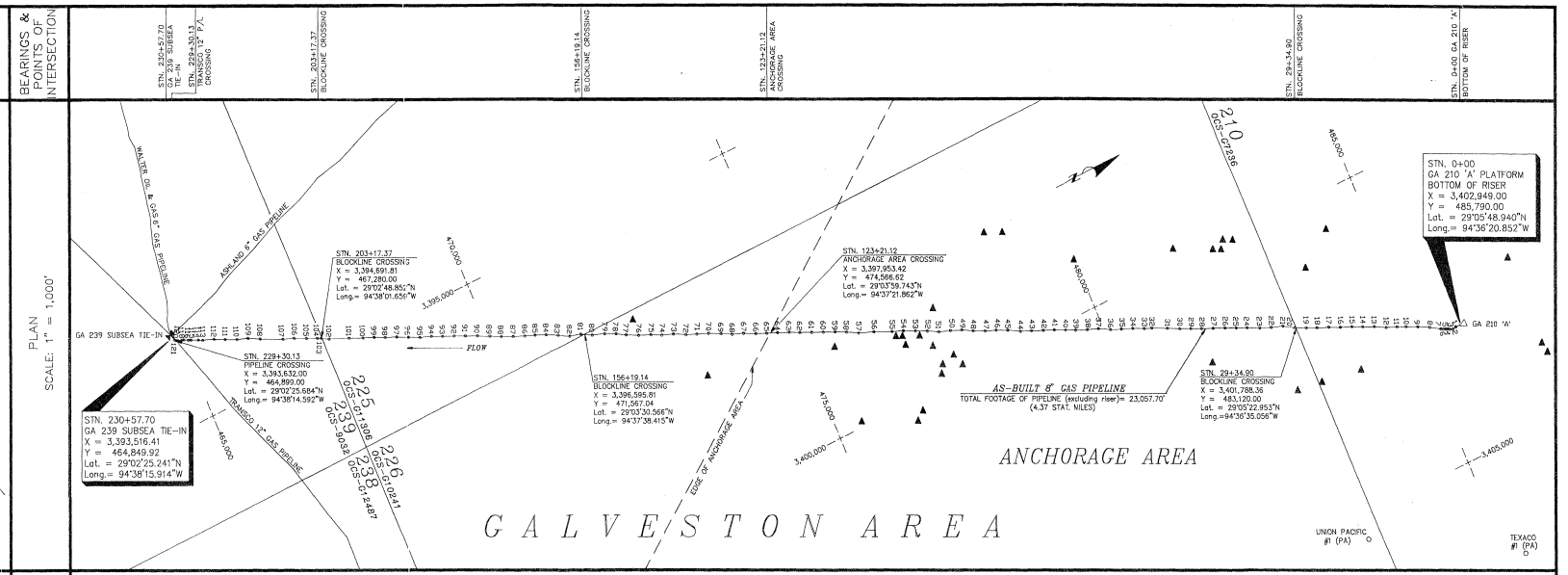
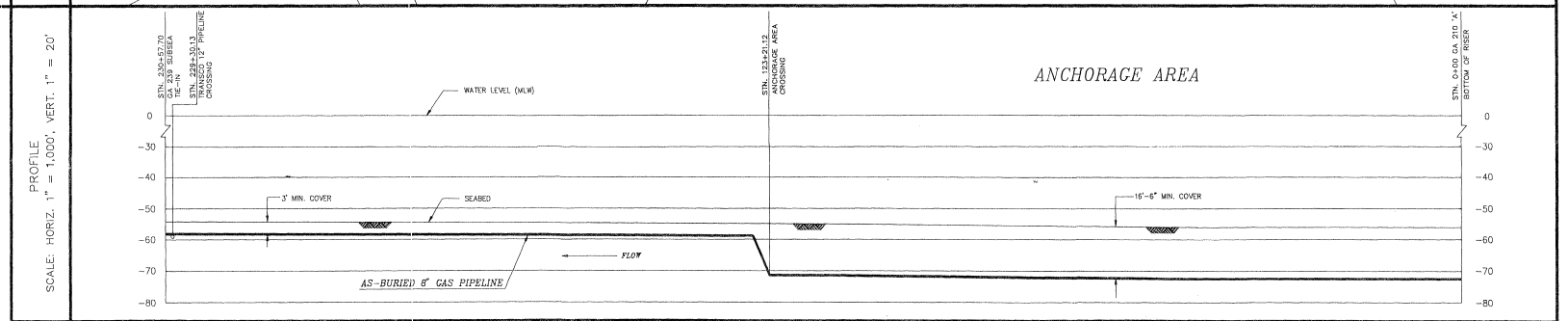






AS-BUILT 8" GAS PIPELINE FROM GA 210 'A' PLATFORM RISER TO GA 239 SUBSEA TIE-IN

POINT	X COORD.	Y COORD.	POINT	X COORD.	Y COORD.
GA 210'A' BOTTOM OF RISER	3,402,949.00	485,790.00	62	3,398,163	475,044
1	3,402,946	485,703	63	3,398,079	474,868
2	3,402,960	485,644	64	3,397,999	474,679
3	3,402,940	485,594	65	3,397,926	474,499
4	3,402,917	485,560	66	3,397,853	474,320
5	3,402,900	485,522	67	3,397,756	474,124
6	3,402,891	485,491	68	3,397,685	473,932
7	3,402,869	485,450	69	3,397,594	473,759
8	3,402,751	485,280	70	3,397,498	473,560
9	3,402,686	485,095	71	3,397,423	473,369
10	3,402,581	484,905	72	3,397,350	473,189
11	3,402,515	484,758	73	3,397,249	472,997
12	3,402,445	484,576	74	3,397,179	472,800
13	3,402,345	484,389	75	3,397,092	472,627
14	3,402,263	484,204	76	3,397,009	472,424
15	3,402,180	484,027	77	3,396,909	472,227
16	3,402,105	483,834	78	3,396,819	472,072
17	3,402,018	483,647	79	3,396,735	471,891
18	3,401,941	483,455	80	3,396,662	471,685
19	3,401,862	483,282	81	3,396,561	471,505
20	3,401,777	483,095	82	3,396,510	471,309
21	3,401,665	482,916	83	3,396,407	471,131
22	3,401,596	482,717	84	3,396,314	470,939
23	3,401,519	482,523	85	3,396,241	470,758
24	3,401,424	482,315	86	3,396,169	470,572
25	3,401,347	482,149	87	3,396,087	470,378
26	3,401,265	481,969	88	3,396,002	470,189
27	3,401,182	481,777	89	3,395,911	470,009
28	3,401,104	481,586	90	3,395,819	469,817
29	3,401,022	481,412	91	3,395,730	469,624
30	3,400,940	481,229	92	3,395,649	469,443
31	3,400,843	481,032	93	3,395,571	469,255
32	3,400,722	480,781	94	3,395,485	469,076
33	3,400,675	480,657	95	3,395,415	468,880
34	3,400,586	480,473	96	3,395,324	468,693
35	3,400,516	480,286	97	3,395,236	468,510
36	3,400,445	480,106	98	3,395,158	468,318
37	3,400,339	479,918	99	3,395,070	468,139
38	3,400,273	479,729	100	3,394,998	467,948
39	3,400,192	479,531	101	3,394,895	467,721
40	3,400,106	479,354	102	3,394,755	467,389
41	3,400,017	479,174	103	3,394,686	467,270
42	3,399,945	478,990	104	3,394,658	467,207
43	3,399,862	478,798	105	3,394,576	467,029
44	3,399,788	478,615	106	3,394,483	466,833
45	3,399,678	478,420	107	3,394,418	466,641
46	3,399,594	478,234	108	3,394,242	466,281
47	3,399,524	478,050	109	3,394,140	466,087
48	3,399,433	477,857	110	3,394,080	465,898
49	3,399,334	477,678	111	3,393,987	465,706
50	3,399,258	477,490	112	3,393,900	465,529
51	3,399,192	477,296	113	3,393,832	465,337
52	3,399,092	477,113	114	3,393,794	465,271
53	3,399,003	476,921	115	3,393,743	465,149
54	3,398,912	476,728	116	3,393,725	465,109
55	3,398,837	476,539	117	3,393,681	465,034
56	3,398,705	476,243	118	3,393,673	465,002
57	3,398,612	475,989	119	3,393,653	464,934
58	3,398,506	475,800	120	3,393,640	464,908
59	3,398,418	475,618	121	3,393,616	464,883
60	3,398,334	475,427	GA 239 SUBSEA TIE-IN	3,393,516.41	464,849.92
61	3,398,249	475,237			

TOTAL FOOTAGE (excluding riser) = 23,057.70'

PIPE CODE	LINE PIPE: 8.625" O.D. x 0.375" W.T. API 5L GRADE B | RISER PIPE: 8.625" O.D. x 0.500" W.T. API 5L GRADE B
LOCATION CLASSIFICATION	CLASS 1
CORROSION COATING	FUSION BONDED EPOXY, 12 – 14 MILS
WEIGHT COATING	NONE
ANODES	38# GALVALUM III NOMINALLY EVERY 200 FEET
FIELD JOINTS	HEAT SHRINKABLE SLEEVES
TRENCH DEPTH	16.5 FT. MIN. IN ANCHORAGE AREA, ELSEWHERE 3 FT. MIN.
HYDROSTATIC TEST PRESSURE	2160 PSIG FOR 8 HOURS
MAOP	1440 PSIG

GENERAL NOTES

1. COORDINATES FOR GA 210 'A' PLATFORM BOTTOM OF RISER AND GA 239 SUBSEA TIE-IN TAKEN FROM PERMIT PLAT AND SURVEYED BY OTHERS. COORDINATES VERIFIED THIS SURVEY.
2. DEPTH OF BURIAL INFORMATION FURNISHED BY CAL DIVE INTERNATIONAL, DIVE INSPECTORS TO AMERADA HESS CORPORATION.

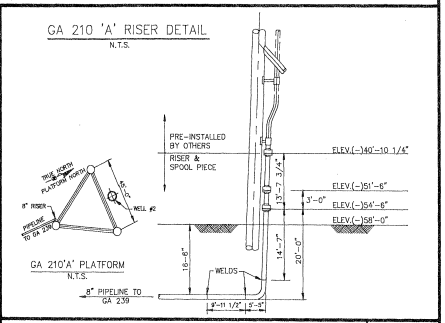
LEGEND

- AS-BUILT PIPELINE
- EXISTING PIPELINE
- WELL LOCATION
- PLATFORM
- 112/314 BLOCKLINES & NUMBERS
- LINE TAP
- MAGNETIC ANOMALIES AVOIDED

REFERENCE DRAWINGS

PIPELINES & UTILITY CROSSINGS

STATION	SIZE	COVER	CLR.	OWNER
229+30.13	12"	3'	18"	TRANSCONTINENTAL



UNITS: U.S.C. & G.S. FEET	FALSE EASTING: 2,000,000.0
PROJECTION: LAMBERT	FALSE NORTHING: 0.0
ZONE: TEXAS SOUTH CENTRAL	POSITIONING SYSTEM: SYLEDIS/DGPS
DATUM: 1927	LAY BARGE: PIPELINER 5
SPHEROID: CLARKE 1866	SURVEY DATES: SEPT/OCT, 1992
CENTRAL MERIDIAN: 99°00'00.0"W	D.P. REF.: 0957
UPPER PARALLEL: 30°17'00.0"N	JOB NO.: 1310-LB
LOWER PARALLEL: 28°23'00.0"N	DRAWING No.: OPI10957
ORIGIN LATITUDE: 27°50'00.0"N	

STATE OF TEXAS REGISTERED KEITH A. CODD 4669 PROFESSIONAL LAND SURVEYOR

Copies of this seal is not purple colored, this plan is a copy that should be assumed to contain unauthorized alterations. The certification contained on this document shall not apply to any copies.

I hereby certify that this plat has been prepared following generally accepted professional standards for offshore surveys, and represents the horizontal position of the pipeline.

Keith A. Codd Tx. Reg. No. 4669 — Date 11/17/92

NCS INTERNATIONAL
3000 HAYES RD.
HOUSTON, TX 77082
TEL (713)584-9000
FAX (713)584-9090

APPROVAL	
DRAWN BY:	S.A.R.
DATE:	10/14/92
CHECKED:	
DATE:	
REVISION:	
DATE:	
CHECKED:	
DATE:	

OPI G26931 SN:15298

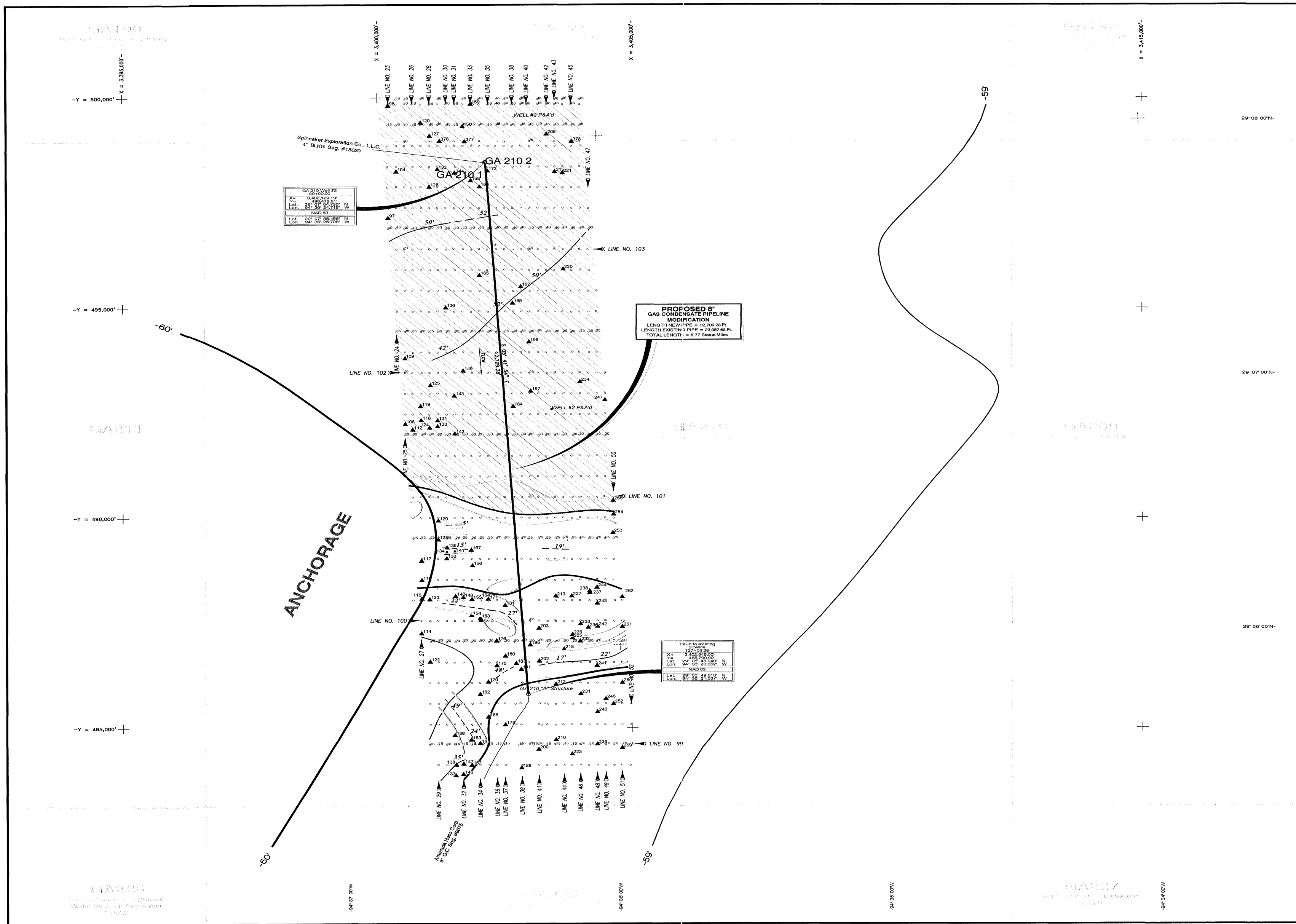
AMERADA HESS CORPORATION

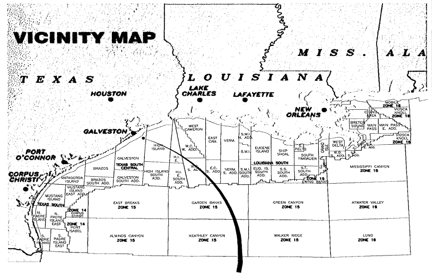
AS-BUILT 8" GAS PIPELINE

GALVESTON AREA

BLOCKS 210 TO 239

SHEET 1 OF 1





WORK LOCATION

LEGEND

- SHOT POINT, SHOT POINT NO. & BOAT TRACK.
- LINE NO. & DIRECTION.
- CONTOUR INTERVAL = 1 FOOT.
- UNIDENTIFIED MAGNETIC ANOMALY WITH ANOMALY NUMBER.
- SABINE-CALCASIEU TRENCH INCISED FROM 2 - 5 FEET BELOW THE SEAFLOOR. THALWEG VALUES ARE INDICATED IN FEET.
- FIRST GENERATION EROSIONAL CHANNEL BURIED 5 - 12 FEET BELOW THE SEAFLOOR. THALWEG VALUES ARE INDICATED IN FEET.
- SECOND GENERATION EROSIONAL CHANNEL BURIED 1 - 3 FEET BELOW THE SEAFLOOR. THALWEG VALUES ARE INDICATED IN FEET.
- AREA OF EXTANT GEOMORPHOLOGY INDICATIVE OF CULTURAL RESOURCE MATERIAL POTENTIAL.

NOTES:

1. *Coordinates are referenced to the Texas Coordinate System of 1927, South Central Zone. Units are in U.S. Survey Feet.*
2. *Features of record which may exist outside the survey area are not represented on this map.*
3. *Lease information shown on this map was obtained from the Minerals Management Service.*

NOTICE: EXTREMELY IMPORTANT

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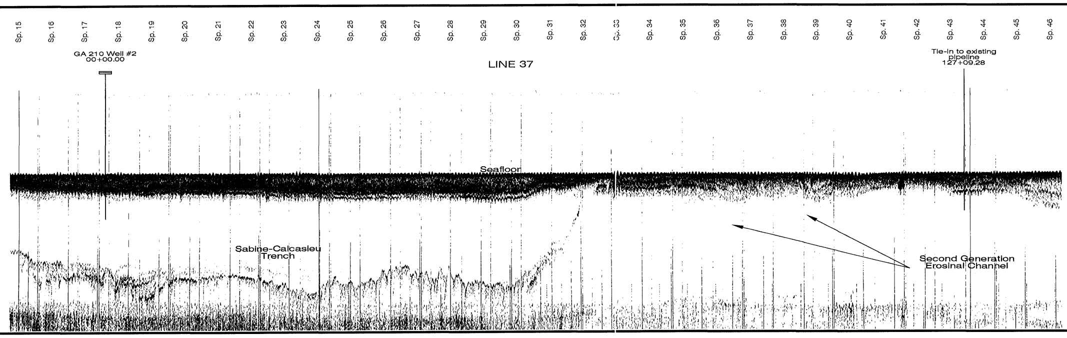
This map does not attempt to depict the location of subsurface or surface features such as, but not limited to, pipelines, wells platforms, communication cables, power cables and anomalies not contained within the information reviewed by Cochrane Technologies, Inc. and cannot confirm the accuracy of third party information. Map depictions may contain information based upon judgment and opinion.

Cochrane Technologies, Inc. does NOT guarantee the accuracy of this map and therefore does NOT assume liability or responsibility for reliance on this map. Any entity using this map or information depicted within does so at their own discretion and at their own risk.

500' 0 500' 1,000' 1,500' 2,000'
HORIZONTAL SCALE: 1" = 1,000'

G 26931
SN: 15298



500' 0 500' 1,000' 1,500' 2,000'
HORIZONTAL SCALE: 1" = 1,000'

10' 0 10' 20' 30' 40'
VERTICAL SCALE: 1" = 20'

SPINNAKER EXPLORATION COMPANY L.L.C.

GEOPHYSICAL DATA RE-EVALUATION

PROPOSED 8" GAS CONDENSATE PIPELINE MODIFICATION
FROM GALVESTON AREA BLOCK 210 WELL #2
TO GALVESTON AREA BLOCK 239 SUB-SEA TIE-IN

cochrane TECHNOLOGIES, INC.
(337) 837-3334 LAFAYETTE, LA.

PREPARED FOR:	SPINNAKER EXPLORATION CO. LLC. HOUSTON, TX.		
FIELD DATA ACQUIRED:	3/11-13/04, 4/08-10/04, 4/14/04, 4/28/04, 5/05/04		
DRAWING NO.:	7055-1		
DRAFTED BY:	A.P.M.	REV NO.:	0
CHK BY:		DATE:	JULY 11, 2005
APP BY:		MAP NO.:	1

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