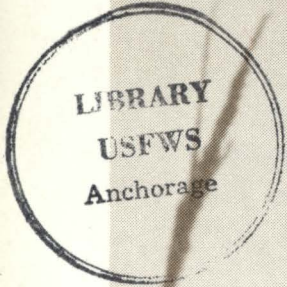


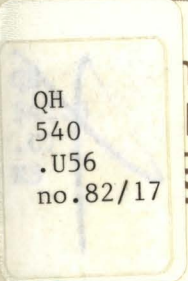
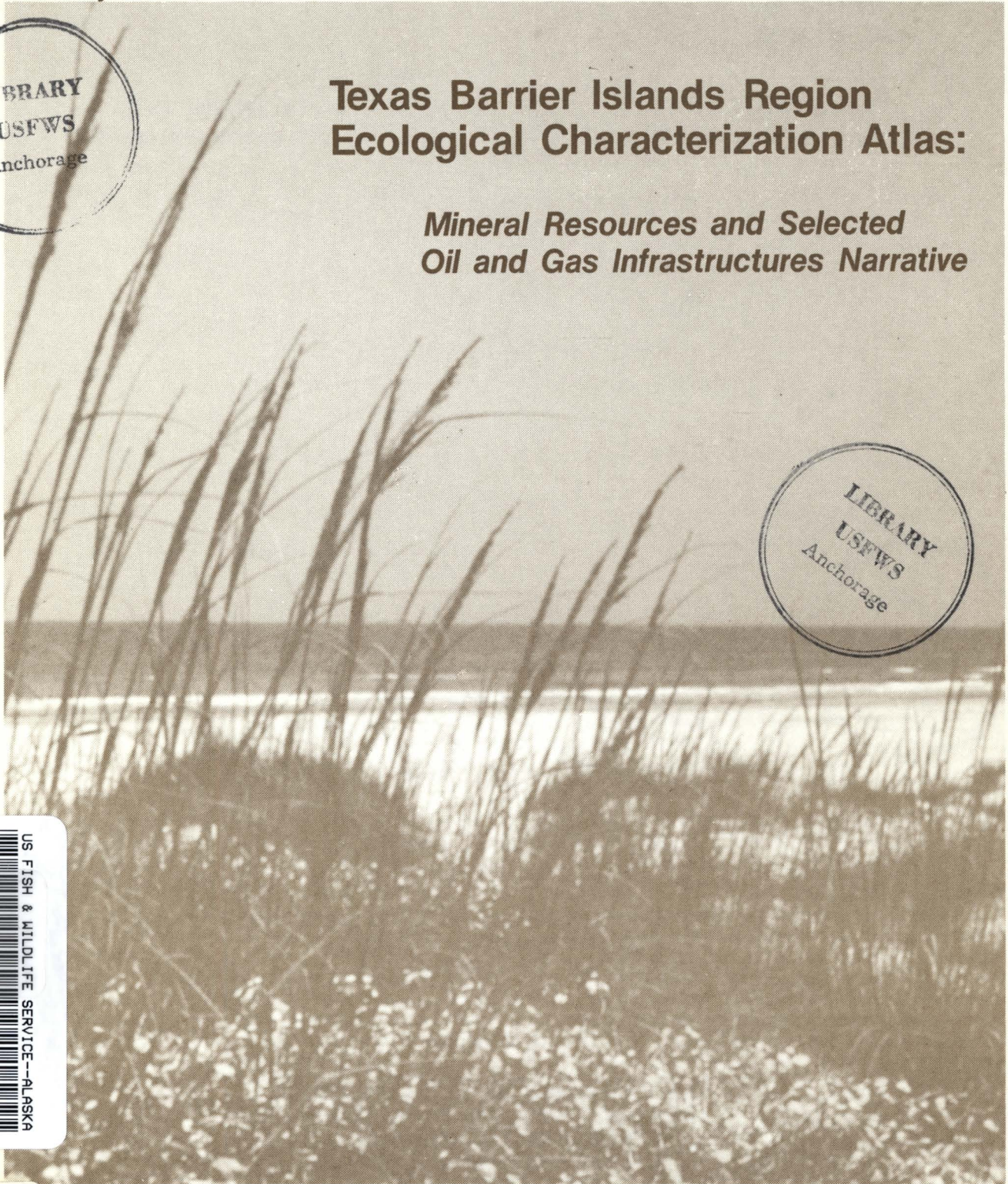
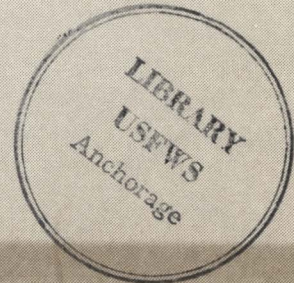
FWS/OBS-82/17  
February 1984

MMS 84-0005



# Texas Barrier Islands Region Ecological Characterization Atlas:

*Mineral Resources and Selected  
Oil and Gas Infrastructures Narrative*



Minerals Management Service  
Fish and Wildlife Service  
U.S. Department of the Interior

FWS/OBS-82/17  
MMS 84-0005  
February 1984

TEXAS BARRIER ISLANDS REGION ECOLOGICAL CHARACTERIZATION ATLAS:  
Mineral Resources and Selected Oil and Gas Infrastructures Narrative  
by

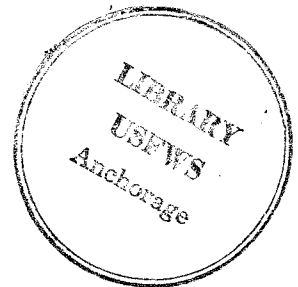
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## PREFACE

The purpose of this study, begun in October of 1979, is to cartographically render those known aspects of the natural and cultural features of the Texas coastal areas which might influence land use decisions. The study uses an ecological characterization approach in which the characterizations provide descriptions of the socioeconomic features, biological resources, and physical processes that make up a particular coastal ecosystem. This narrative and its accompanying maps on minerals resources and oil and gas infrastructures are one set in a series of three constituting the Texas Barrier Islands Region Ecological Characterization Atlas sponsored by the Minerals Management Service and Fish and Wildlife Service of the United States Department of the Interior. Other map sets and narratives available are Biological Resources (FWS/OBS-82/16) and Socioeconomic and Natural Features (FWS/OBS-82/15). The maps of the Mineral Resources and Selected Oil and Gas Infrastructures are designed to supplement the textual materials contained in Texas Barrier Islands Region Ecological Characterization: A Socioeconomic Study (Vol. 1: Synthesis Paper, FWS/OBS-80/19; Vol. 2: Data Appendix, FWS/OBS-80/20; U.S. Fish and Wildlife Service and Bureau of Land Management, August 1980).

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## SUMMARY

The people of the United States have benefited greatly from the contributions made from their coastal regions. The 2,500 miles of Texas shoreline, together with the lands and waters adjacent to that shoreline, provide major contributions to the economy, the living space, and recreation which enhance the quality of life of the people in the Gulf Coast Region. Increasingly rapid development of the region suggests that coastal areas must be carefully managed if that development is to continue and the public interests are to be preserved. This study, a portion of the Texas Barrier Islands Region Ecological Characterization Atlas (TBIRECA), is part of the contribution of the U. S. Fish and Wildlife Service (FWS) to natural resource planning policy for the western Gulf of Mexico coast.

The Texas coast is almost entirely protected by barrier islands and peninsulas. Behind these are located the bays and estuaries that have created the exceptionally long coast line as well as the marshes and lagoons that support a rich wildlife resource. The Texas Barrier Islands Region (TBIR) characterization study area extends along the coast from High Island on the eastern edge of Chambers County to the mouth of the Rio Grande. The area extends roughly 40 mi (65 km) onshore and approximately 9 mi (3 leagues) offshore.

This study maps the oil and gas production activities and selected mineral resources as they are distributed in that region. It stands alone as a TBIRECA map set, but it can also be considered a cartographic supplement to Texas Barrier Islands Region Ecological Characterization: A Socioeconomic Study (Liebow et al. 1980). Sixteen map overlays have been prepared to cover the more than 50,000 km<sup>2</sup> area of the TBIR. The base maps (at a scale of 1:100,000) extend one degree of longitude in the east-west dimension and thirty minutes in the north-south dimension.

Mineral Resources and Oil and Gas Infrastructures map overlays show the distribution of the known mineral deposits including oil and gas fields, sulphur deposits, geopressured-geothermal areas, and groundwater sources. They also show the pits and quarries for sand, gravel, clay, and dirt. The pipelines for crude oil and natural gas, both onshore and offshore, are delineated with associated pumping, metering, and compressor stations. Refineries, gas processing plants, storage facilities, offshore platforms and platform fabrication yards, terminals, and dock facilities have also been mapped. The helicopter service centers have been recorded.

The mapped oil and gas fields are roughly in two bands paralleling the coast. One, the Frio Trend, lies 10-25 mi (16-40 km) inland and the other, the Vicksburg Trend, lies 25-40 mi (40-65 km) inland extending from the eastern boundary of the TBIR area to Kenedy County.

Some small production comes from deposits in the Rio Grande Valley. Galveston, Trinity, Nueces, and Corpus Christi Bays contain most of the fields exploited in bay waters although all Texas bays have exploitable fields. The Gulf waters exploited out to the 3-league line are largely offshore from Galveston, Brazoria, and Matagorda Counties.

The distribution of onshore and offshore oil and gas production facilities and exploration activity is widespread. Pipelines, stations, or other installations occur in every county of the coast. The principal activity, however, is concentrated in the Houston-Galveston area, the Freeport-Bay City area, Port Lavaca area, and Corpus Christi Bay area. Most of the major refining areas are in the upper coastal region (particularly the Galveston-Houston area and the Freeport-Bay City area), but the Corpus Christi-Aransas Pass area is a significant one which is growing in importance. The map overlays containing the heavy concentrations of oil and gas pipelines are on the Anahuac, Angleton, Galveston, and Houston sheets in the northern portion of the study area and the Beeville, Freeport, and Corpus Christi map overlays in the central portion of the study area. The 21 oil refineries are more localized than the 88 gas processing plants. The gas plants are found in 15 of the 16 quadrangle areas while the refineries are restricted to 7 quadrangle areas. The present expansion of both types of facilities has been in areas previously having such enterprises.

There are six mobile rig and offshore platform construction yards and five other construction yards in the Region. In the northern part of the TBIR are Todd Shipyards (Galveston Quadrangle) and Brown and Root in Bayou Harbor (Houston Quadrangle). Baker Marine is in the mid-coast Corpus Christi Quadrangle area, as is the Brown and Root Ingleside-Aransas Pass plant. Marathon Le Tourneau is located in the southernmost Brownsville quadrangle.

Construction materials (sand, gravel, clay and dirt) are available along the coast, but not in quantity sufficient for current and future demands in the TBIR area. Most of the gravel produced comes from the inland margins of the study area between 30 and 50 mi inland along the terraces of the major streams. The pits and quarries shown on the map overlays represent active operations and some inactive ones which have not been distinguished from the active ones on these maps. Industrial sands are available in the TBIR, but most require upgrading and beneficiation to qualify for industrial use and so have not been much exploited. Common clays are used in the manufacture of brick and tile. Most of these are unsuitable for high-grade structural clay products (McGowen et al. 1976).

Sulphur is associated with the caprock of some salt domes. Fifteen of the shallow-depth, coastal salt domes originally contained commercial deposits of native sulphur. These are largely in the upper

portion of the coastal region of Texas. The only active domes for sulphur mining are Boling Dome in Wharton County and Long Point Dome in Fort Bend County on the Angleton Quadrangle. These active sulphur mine deposits have been mapped.

The coastal area contains the most extensive and, by volume, the most significant geothermal sources of Texas. These are in seven geopressured-geothermal fairways within the Frio Formation extending from West Bay (Brazoria Fairway) to Cameron County (Hidalgo Fairway). Test wells have been dug, but exploitation is still in the exploratory phase.

Groundwater sources are widespread but increasingly subject to drawdown leading to possible salt water intrusions near the coast, and to collapse of pore space inland. All municipalities with large populations and industrial establishments are looking to sources of water outside the TBIR area. Petroleum refining and petrochemical processing facilities continue to be the major water users.

This report was submitted in fulfillment of Contract Number 14-16-0009-79-126 by the U. S. Fish and Wildlife Service under the sponsorship of the Division of Biological Services. U. S. Fish and Wildlife Service work was completed August 31, 1982.

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## ACKNOWLEDGMENTS

The data compiled on these maps came from a great variety of sources. Recent compilations of oil and natural gas pipelines published by Texas state agencies and unpublished files made available by officials of state agencies greatly facilitated the mapping effort. Colleagues in business and industry have provided generously from their publications and data files. Only the generosity of many individuals made it possible to compile on one map information widely scattered in a variety of published and unpublished sources. We are especially indebted to the following people and their respective agencies:

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We also thank the many people who aided in the compilation and provided the cartographic and editorial expertise for the preparation of the maps. Numerous individuals of Texas A&M University and of the Texas A&M Research Foundation were invaluable in helping us complete the goals of the project.

## INTRODUCTION

The study area extends from the eastern end of East Bay, Chambers County, Texas, to the Texas-Mexico border (Figure 1). The offshore boundary is the State-Federal demarcation line, and the inland boundary is about 65 km (40 mi) inland, including, among others, the coastal counties of Chambers, Galveston, Brazoria, Matagorda, Calhoun, Aransas, Refugio, San Patricio, Nueces, Kleberg, Kenedy, Willacy, and Cameron (Figure 2).

This study maps the oil and gas production activities and selected mineral resources as they are distributed in the Texas Barrier Island Region. The themes of these maps are grouped into two major parts: selected items of oil and gas infrastructures, and mineral resources. The oil and gas infrastructure section is subdivided into:

- 1) Pipelines - including onshore and offshore lines for the transport of crude oil and natural gas;
- 2) Transfer, processing, and storage facilities - including refineries, gas processing plants, compressors, pumping and metering stations, and storage facilities; and
- 3) Port and offshore facilities - including platforms, platform fabrication yards, dock facilities, and helicopter services.

The mineral resources section is subdivided into:

- 1) Oil and gas fields;

- 2) Sand, clay, and gravel pits;
- 3) Sulphur wells or mines;
- 4) Geopressed-geothermal areas; and
- 5) Groundwater sources.

Table 1 lists the themes of the Oil and Gas Infrastructures and Mineral Resources Map and their presence or absence on each of the 16 maps of this series. An "X" represents one or more features of this theme plotted on that overlay. A blank indicates a lack of information from field checking and literature review. When the theme is not applicable (e.g., offshore platforms in inland areas), "N/A" has been used. For each map overlay an accompanying Map Narrative Detail gives a more complete listing of features. When no information on a particular feature was found within a specific map area and, therefore, no data were compiled on the map, "No data" is indicated in the Map Narrative Detail.

The maps were compiled at a meso-scale (1:100,000) on United States Geological Survey (USGS) planimetric base maps printed on mylar. Theme data were originally plotted on diazo copies of the base maps, and the information was then transferred to 5 mil mylar overlays which were punch registered with the USGS base maps. The series has had peer reviews. A series of folded paper copy maps has been provided. The names of the 16 base maps are (from northeast to south Texas): Anahuac Quadrangle (Houston northeast), Houston Quadrangle (Houston

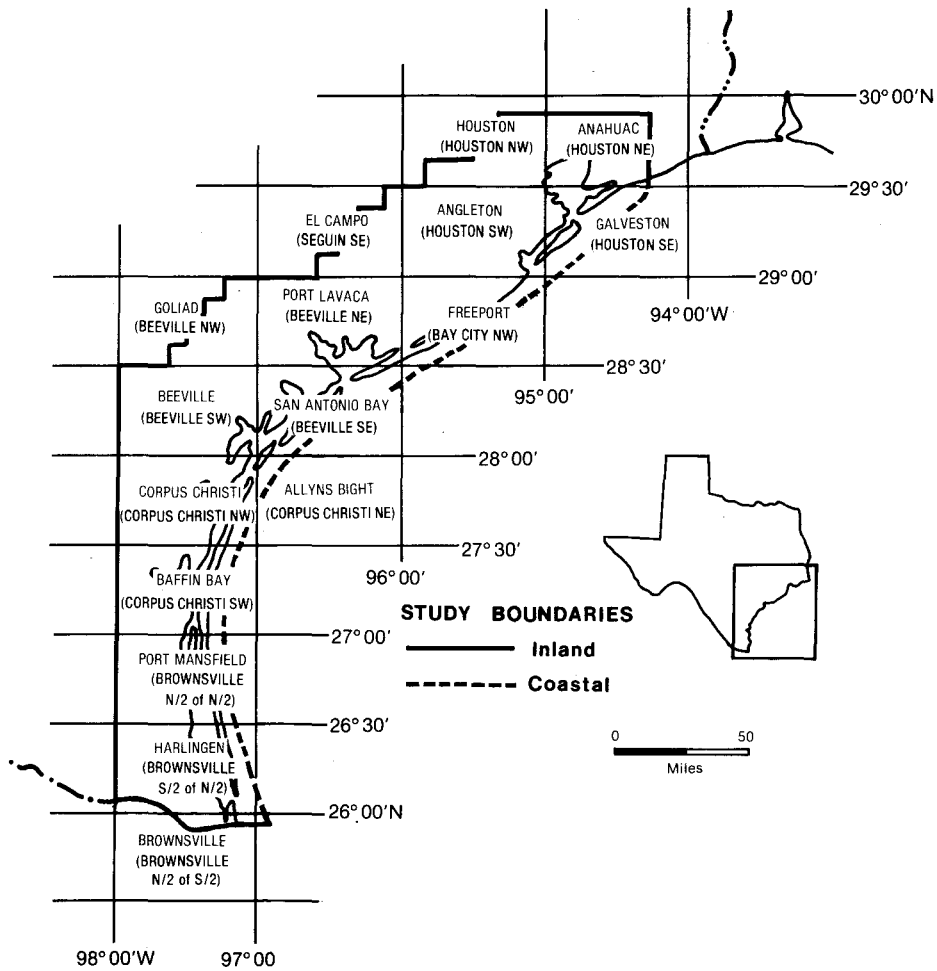


Figure 1. Index to sheets of the Texas Barrier Islands Region Ecological Characterization Atlas: Mineral Resources and Selected Oil and Gas Infrastructures.

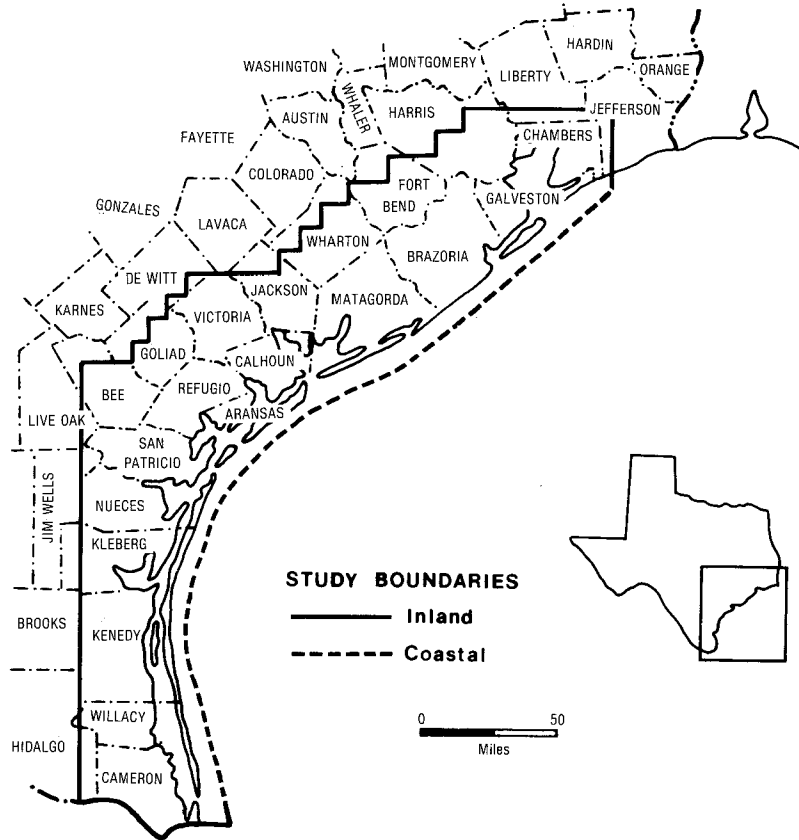


Figure 2. Counties of the Texas Barrier Islands Region.

Table 1. Map themes for the oil and gas infrastructure and mineral resources maps and the map overlays on which the themes are represented.

Quadrangle Name	Themes																			
	Oil pipelines: onshore	Oil pipelines: offshore	Gas pipelines: onshore	Gas pipelines: offshore	Refineries	Gas Processing plants	Compressor, pumping, and metering stations	Storage facilities (tank farms)	Offshore platforms	Platform fabrication yard	Dock facilities	Terminals	Helicopter service	Oil field	Gas field	Sand, clay, gravel, dirt pits	Sulphur wells/mines	Geopressed Geothermal areas	Groundwater sources	
Allyns Bight		X		X				X	X						X					X
Anahuac	X	X	X	X	X	X	X	X	X			X	X		X	X	X			X
Angleton	X		X	X	X	X	X	X				X	X		X	X	X	X	X	X
Baffin Bay	X	X	X	X		X	X	X	X				X		X	X	X		X	X
Beeville	X	X	X	X		X	X	X							X	X	X		X	X
Brownsville			X		X	X		X		X		X	X		X	X			X	X
Corpus Christi	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X
El Campo	X	X	X	X	X	X	X	X	NA	NA			X		X	X	X			X
Freeport	X	X	X	X		X	X	X	X	X	X	X	X		X	X	X	X	X	X
Galveston	X	X	X	X	X	X	X	X	X	X		X	X		X	X			X	X
Goliad	X	NA	X	NA		X	X	X	NA	NA	NA		X		X	X	X			X
Harlingen	X	X	X	X		X	X	X					X		X	X	X		X	X
Houston	X		X		X	X	X	X	X	X		X	X		X	X	X			X
Port Lavaca	X	X	X	X		X	X	X					X		X	X	X			X
Port Mansfield	X	X	X	X		X	X	X							X	X	X		X	X
San Antonio Bay	X	X	X	X		X	X	X			X		X		X	X				X

Pipelines                      Transfer, Processing, Storage                      Offshore and Port facilities

Oil and Gas Infrastructure

Mineral Resources

northwest), Galveston Quadrangle (Houston southeast), Angleton Quadrangle (Houston southwest), El Campo Quadrangle (Seguin southeast), Freeport Quadrangle (Bay City northwest), Port Lavaca Quadrangle (Beeville northeast), San Antonio Bay Quadrangle (Beeville southeast), Allyns Bight (Corpus Christi northeast), Beeville Quadrangle (Beeville southwest), Goliad Quadrangle (Beeville northwest), Corpus Christi Quadrangle (Corpus Christi northwest), Baffin Bay Quadrangle (Corpus Christi southwest), Port Mansfield (Brownsville north half of north half), Harlingen Quadrangle (Brownsville south half of north half), and Brownsville Quadrangle (Brownsville north half of south half). The location of these quadrangles in the study area is shown in Figure 1.

The legend for this set of Atlas maps has been reduced and is given in Table 2. The symbols were designed for easy recognition and were made large enough to be visible on mylar overlays over base maps.































The principal sources used to locate the onshore oil and gas pipelines, the refineries, gas processing plants, compressor, pumping and metering stations, storage facilities, and terminals were the 1979 Texas County Pipeline and Industrial Atlas, which used a screened copy of the Texas General Highway Map at various dates and various scales (about 1:126,720) published by DeWitt Graphics; the unpublished "Commercial Company Pipeline Transmission Maps" of the Texas Railroad Commission, which are plotted on the same bases; and the published map of Texs Gulf Coast and Continental Shelf Showing Natural Gas Pipelines (1:444,000) of Transco Companies, Inc. These sources consist of maps at different scales and were compiled at different times (see the

references for particulars). Where pipeline identifications were ambiguous or incomplete, permit files of the Texas Railroad Commission in Austin were consulted. These manuscript maps use the Texas Highway Maps of each county as a base. Only crude oil and natural gas pipelines and combinations thereof were plotted. No product lines nor gases other than natural gas were plotted. No chemical plants were plotted unless a refinery was associated with it.

The principal sources used for the location of the offshore pipelines (bay and gulf waters) were the unpublished charts of the Texas General Land Office showing the subdivision for mineral development of the bay waters and the "Texas Coast Map from Sabine River to the Rio Grande as Subdivided for Mineral Development." These have no date, are variably current as time to plot permits. The scales vary from 1" = 1200 varas to 1" = 300 varas. These charts were made available to us through the courtesy of Mr. Herman Forbes, Director, Surveying Division, Texas General Land Office. These data were supplemented by information derived from Pipelines and Natural Resources of the Texas Coast 1:24,000 prepared by Batterton and Green, Texas General Land Office.

The offshore platform locations were derived from the United States Department of Transportation's (1979) Listing of Offshore Oil Well Structures and Submerged Wells in the Eighth Coast Guard District and the map published for Offshore Helicopters, Inc., by the Sabine Offshore Service, Inc., which is an untitled 1979 map showing the location of lease blocks and offshore rigs. The platform fabrication yards were located from the Directory of Texas Shipyards.

Table 2. Legends for oil and gas infrastructure and mineral resources.

 Boundary of Texas Barrier Islands Region		
<b>A. Selected oil and gas infrastructure</b>		
Oil Pipelines		
	Onshore -- one	
	Onshore -- two or more	
	Offshore -- one	
	Offshore -- two or more	
	Company and/or size change	
Gas Pipelines		
	Onshore -- one	
	Onshore -- two or more	
	Offshore -- one	
	Offshore -- two or more	
	Company and/or size change	
<b>N1</b>	Pipeline Nodes: offshore oil and gas combined	
Refineries		
	Sites	
	Areas	
Gas Processing Plants		
	Sites	
	Areas	
Compressor, Pumping, and Metering Stations		
	Sites	
	Areas	
		Storage Facilities
		Sites
		Areas
		Platforms, offshore
		Platform Fabrication Yards
		Sites
		Areas
		Dock Facilities
		Sites
		Areas
		Terminal
		Sites
		Areas
		Helicopter Service
		Sites
		Areas
<b>B. Mineral resources</b>		
	<b>O</b>	Oil Fields
	<b>G</b>	Gas Fields
		Sulphur Wells/Mines
		Sand, Gravel, Clay, Dirt Pit
	<b>GG1</b>	Geopressured-Geothermal Source
	<b>GW1</b>	Groundwater Source

All numbers and superscripts are identified in map narrative details.

Dock and terminal facilities were located from the 1979 Texas County Pipeline and Industrial Atlas, and the United States Department of Interior 1980 Final Environment Impact Statements entitled Proposed 1980 Outer Continental Shelf Oil and Gas Lease Sales, Western and Central Gulf of Mexico and Atlantic Ocean, and the Proposed 1980 Outer Continental Shelf Oil and Gas Lease Sales A62 and 62 (1:1,000,000) and from material provided by the Harbor Masters at the ports of Galveston, Houston, Corpus Christi, and the Brazosport Chamber of Commerce. The dock and terminal facilities are underreported; therefore, these maps do not record all those facilities found along the coast. Terminals were identified from the same sources and are certainly not all mapped.

Helicopter service to the offshore platforms is provided by a few companies, of which Evergreen, Air Majestic, and Petroleum Helicopter, Inc., handle the bulk of the activity. The principal heliport locations for offshore rig service are located in Brownsville, Corpus Christi, Galveston, and Lake Jackson. The location of all heliports in the study area was provided by Federal Aviation Administration, Fort Worth. These have been mapped and they are identified in the Map Narrative Detail.

The principal sources for the mineral resources were the several volumes of the Environmental Geologic Atlas of the Texas Coastal Zone (1:250,000) by the Bureau of Economic Geology (BEG), University of Texas at Austin; and two maps, also by the BEG, entitled Energy Resources of Texas (1:500,000). Gas and oil fields were distinguished from the 1979 Map of Texas Gulf Coast and Continental Shelf Showing Natural Gas Pipe Lines by Transco Companies, Inc. Sulphur

deposits were mapped from the BEG maps. These include only the native sulphur deposits associated with the caprock of salt domes, and do not include that received secondarily from sour gas. Supplemental information on sand, gravel, clay, and dirt pits was taken from the USGS topographic quadrangles (7.5-minute series) and 1:65,000 aerial photographs taken by NASA in November of 1979. Groundwater sources were taken from the Texas General Land Office (GLO) maps (1:500,000) published in the Texas Coastal Zone Management Program. Geopressured-geothermal fairways were identified from small-scale maps (1:800,000) in Loucks, Dodge, and Galloway's 1979 study. They are, therefore, indicated in a very generalized outline on the Atlas map overlays.

Two field checks were made in the course of the mapping process. The trips followed the compilation phase and served to clarify points of confusion in the literature, as well as to map recently established enterprises. Those interested in larger scale plots of the pipelines and oil and gas service facilities of the Houston, Freeport, Ingleside, and Corpus Christi areas are directed to the detailed maps in the DeWitt Graphics 1979 Texas County Pipeline and Industrial Atlas.

Compilation and map conventions used in this study are those in general use among cartographers together with a few which were developed for use in this study. The information on the map includes linear features represented by solid, dashed, and hashed lines; areas which have been outlined by solid lines of different weights; and smaller areas and places which are represented by point symbols in the map.

Most of the straight lines represent pipelines. Oil lines are

dashed lines, natural gas lines are continuous. A double-width pipeline signifies that more than one pipeline is in the corridor. Onshore pipelines are labeled with plain numbers and offshore pipelines are labeled with boxed or circled numbers representing oil or gas lines respectively. A zig-zag line through a line signifies a change in pipeline size, or company name, or both. The oil and gas lines are numbered separately in four categories: oil on- and offshore and gas on- and offshore. Offshore lines are those pipelines originating offshore and having the larger part of their courses in bay or Gulf waters. Some onshore pipelines pass for considerable distances across bay waters but are identified among the onshore pipelines. Where offshore lines are extremely congested about a collecting node, the letter "N" denotes the center of converging lines. The pipelines of the node are represented only diagrammatically and indicate the quadrants having the most lines. This means that not every pipeline has been mapped. These pipelines, both oil and gas, are listed from north clockwise in the Map Narrative Detail for each map overlay. To determine the easement holder not identified in the narrative, consult the Texas General Land Office files. Small feeder lines both onland and offshore are not identified. Since any line smaller than 2", as well as some larger ones which are feeder lines, are not represented on the map, storage facilities may have no pipelines going to them and pipelines may not go into all fields. Therefore, some pipelines are mapped as originating outside a field.

Terrestrial pipelines have been identified by company name and pipeline size. These include all pipelines originating on shore. Some may pass part of their courses under bay waters.

Groups of gathering lines and feeders may be represented by one number but the principal pipelines are individually identified by number beginning with 1 for each overlay. Occasionally the pipeline size was not recorded in the source material, and therefore only the company is listed. A few pipelines were not identified. They have been labeled "unknown" pipelines. Very short feeder lines have not been identified. A list of the abbreviations of pipeline names used in this study is in Table 3. Other company names, especially of small private companies, are listed in the Map Narrative Detail for the map sheet. Care has been taken to use currently valid names for companies such as EXXON for the Humble designation used in base data.

Every effort has been made to plot the pipelines 2" or more that are in use. Some plotted pipelines have been abandoned and the word "abandoned" was placed after the identification in the map narrative details. In spite of considerable care the locations of pipelines are incomplete because the record is incomplete. Pipelines installed after 1979 are not included.

Offshore lines have been separated into oil and gas lines and are numbered separately. These are lines originating in the Gulf of Mexico or in any one of the many bays along the coast. Due to the sources used these may or may not connect on the map overlays with an onshore pipeline or facility. Information has been mapped as was available. The permit numbers used to identify the offshore pipelines are composed of three parts: product carried, the Texas General Land Office easement file number, and the diameter of the pipeline. Oil pipelines carry the prefix "O"; gas pipelines, the prefix "G"; and oil and gas pipelines, the

Table 3. Pipeline abbreviations used in this study.

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ALCOA - Aluminum Company of America: Alcoa Conductor Products Company	Dow - Dow Chemical Company: Dow Chemical U.S.A.
AMOCO - Standard Oil Company (Indiana): Amoco Production Company; Amoco Oil Company; Amoco Pipeline Company; Amoco Production Company; Amoco Gas Company	Eagle - Eagle Gas
ARCO - Atlantic Richfield Company: Arco Pipe Line Company	Energy - Energy Resources Corporation: Energy Resources Oil and Gas Corporation
Big Heart - Big Heart Pipe Line Company	Enserch - Enserch Corporation: Lone Star Gas Company; Lone Star Gathering Co.; Nipak, Inc.; Lone Star Energy Company
Big Three - Big Three Industries Incorporated	Esperanza - Esperanza Gas
Blue Dolphin - Blue Dolphin Pipeline Company	Explorer - Explorer Pipeline Company
Celanese - Celanese Corporation	Extex - Extex Gas
Central P/L - Central & South West Corporation: Central Power & Light Company	EXXON - Exxon Corporation: Exxon Company, U.S.A.; Exxon International Company; Exxon Pipeline Company; (Exxon Magnet Withers Sta).
Chevron - Standard Oil Company of California: Chevron Chemical Company, Chevron Industries Inc.; Chevron Pipe Line Company; Chevron U.S.A. Inc.	FGT - The Continental Groups, Inc.: Continental Resources Company; Florida Gas Transmission Company; Florida Exploration Company
Cities Service - Cities Service Company: Cit-Con Oil Corporation; Cities Service Gas Company; Cities Service Oil Company; Cities Service Pipe Line Company	FINA - American Petrofina, Inc.: American Petrofina Company of Texas; American Petrofina Pipe Line Company
Coronado - Coronado Minerals Company Corpus Christi - Corpus Christi Oil & Gas Company	Gathering - Gathering line; Identified or unidentified pipeline owner; mostly smaller than 2 inches in diameter.
Crown Central - Crown Central Petroleum Corporation: Crown Central Exploration & Production Division	GATX - GATX Corporation
CSGP - Coastal Corporation: Coastal States Marketing, Inc.; (Coastal States Crude Gathering Company); (Coastal States Producing Company)	General - Company of General American Oil: General Crude Oil Company
CSGP (RGV) - Coastal Corporation Rio Grande Valley	Getty - Getty Oil Company: Getty Pipe Company
Delhi - Delhi International Oil Corporation: Delhi Gas Pipeline Corporation	Gulf - Gulf Oil Corporation: Gulf Mineral Resources Company; Gulf Oil Company - U.S.; Gulf Oil Exploration & Production Company
	H&H - Hughes & Hughes Oil and Gas
	Haas - R. E. Haas Company
	Halbouty - Michael T. Halbouty Energy Company
	HDC - Hydrocarbon Development Corporation

(continued)

Table 3. (Continued).

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HNG - Houston Natural Gas Corporation: Houston Pipe Line Company; Valley Pipe Line Company	Mitchell - Mitchell Energy & Develop- ment Corporation: Mitchell Energy Corporation; Mitchell Energy Off- shore Corporation
Holly - Holly Corporation: Holly Energy Inc.	Mobil - Mobil Corporation: Mobil Oil Corporation: Mobil Pipe Line Com- pany
Houston L/P - Houston Industries Incor- porated: Houston Lighting and Power Company	N. A. Royalties - North American Royal- ties, Incorporated
Houston O/M - Houston Oil & Minerals Corporation: Seagull Pipeline Corporation	Neumin - Neumin Production Company
HPL - Houston Natural Gas: Houston Pipe Line Company	NGPL - Peoples Energy Corporation: Natural Gas Pipeline Company of America
HT - InterNorth Incorporated: Hydro- carbon Transportation, Incorporated	Occidental Pet. - Occidental Petroleum Corporation
INT - Intratex Gas Corporation, Oasis P/L (HNG)	Old Ocean - Old Ocean Fuel Company
Intramerica - Intramerica Energy Corpo- ration	Paloma - Paloma Petroleum Ltd.
Kilroy - Kilroy Company of Texas, Inc.	Pennzoil - Pennzoil Company: Pennzoil Products Company; Pennzoil Exploration & Production Company
King - King Ranch Oil & Gas, Incorpo- rated: King Resources Co.	Perry R. Bass - Perry R. Bass, Inc.
Lavaca - LaVaca Gathering Company	Phillips - Phillips Petroleum Company: Phillips Pipe Line Company
Loop - A gas or oil pipeline makes a loop	Reynolds - Reynolds Mining Corporation: Reynolds Pipeline Company
Marathon - Marathon Oil Company: Mara- thon International Oil Company; Marathon Pipe Line Company	Scurlock - Scurlock Oil Company: Socony Oil Corporation
May Pet. - May Petroleum Incorporated	Seagull - Seagull International Exploration, Incorporation
McCormick O/G - McCormick Oil and Gas Company	Shell - Shell Oil Company: Shell Development Company; Shell Pipe Line Corporation
McMoRan - McMoRan Oil & Gas Company: Freeport - McMoRan Incorporated: McMoRan Oil & Gas Company: McMoRan Exploration Company; McMoRan - Freeport Oil Company; McMoRan Offshore Exploration Company; McMoRan Offshore Production Com- pany; McMoRan Production Company	Sigmore - Sigmore Corporation
Meter Station - a pipeline serving an unidentified meter station	South. Natural - Southern Natural Resources Incorporated: Southern Natural Gas Company
MGF - MGF Oil Corporation	Tenngas - Tenngasco, Incorporated
	Texana - Texana Gas Company
	Texas Electric - Texas Utilities Company: Texas Electric Service Company
	Texas P/L - Texas Utilities Company: Texas Power & Light Company

(continued)

Table 3. (Concluded).

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Texcol - Texcol Gas Company	Texaco - Texaco Incorporated: Texaco U.S.A
Tidewater - Tidewater Incorporated	Tex.-N. Mex - Texas - New Mexico Pipe Line Company
Transco - Transco Companies, Incorporated: Transcontinental Gas Pipe Line Corporation	TGP - Tennessee Gas Transmission Company
Trunkline - Panhandle Eastern Corporation: Trunkline Gas Company	UG - United Energy Resources Incorporated: United Gas Pipe Line Company
Tubb/Stephenson -Tubb/Stephenson Company	Union Pacific - Union Pacific Corporation: Champlin Petroleum Company
Summit - Summit Energy Corporation	Utah Int. - Utah International Incorporated: Ladd Petroleum Corporation
Superior - Superior Oil Company	UTP - Allied Corporation: Union Texas Petroleum Corporation
Sun - Sun Company Incorporated: Sun Petroleum Products Company, Sun Pipe Line Company	UTT - United Energy Resources Company: United Texas Transmission Company; United Gas Pipeline Company
Tamarack Pet. - Tamarack Petroleum Company, Incorporated	Valero - Valero Production Company: LoVaca Pipe Line Company
Tejas - Tejas Gas Corporation	Valley - Valley Gas Transmission Company
Tenneco - Tenneco Inc.: Channel Industries Gas Company; East Tennessee Natural Gas Company; Tenneco Corporation: Petro-Tex Chemical Corporation; Tenneco Chemicals, Inc; Nenneco Oil Company	Vaquero - Vaquero Petroleum Company
Tesoro - Tesoro Petroleum Corporation	
TET - Texas Eastern Corporation: Texas Eastern Transmission Corporation	

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prefix "O/G". Occasionally the prefix "ME" is used which means "miscellaneous easement." Where oil and gas are covered by the same pipeline permit, as in O/G-2942-2 1/2", the pipeline is coded and entered with the oil lines. Where two or more pipelines are plotted together a wider line is used than for a single pipeline.

Because the sources used in compilation were not at the same scale nor for the same user community, a considerable number of pipelines do not connect at shorelines with other pipelines or to a facility. This is especially marked on the Corpus Christi Quadrangle.

The data source for offshore pipelines used in compilation did not include the owner of the pipeline permit. Some pipelines have been identified from published sources and have been included as an aid to the reader. However, some of these are not identified. A ready reference for some of the easements is the looseleaf narrative published by the General Land Office to accompany their 1979-80 study of Pipelines and Natural Resources of the Texas Coast. This source was used to identify those pipelines which have been labeled by company as well as by permit number. The Texas General Land Office personnel made a special search for this study, thereby substantially reducing the number of unidentified permit holders.

All pipelines mapped are for general locational purposes only and are not to be taken as the legal course of the line. These lines have been plotted with great care from manuscript and published sources at different scales. However, no legal responsibility is accepted by the compilers for the courses of these lines. Similarly,

the Gulf of Mexico side of the mapping area is not demarcated. In case of legal concerns, it is recommended that users consult maps in the offices of the Texas Railroad Commission in Austin, Texas, and charts in the General Land Office, Austin.

Areas are surrounded by solid lines of different weights. The mineral resources areas vary in size from very small to areas extending over several map overlays. Oil and gas fields have O or G in the interior of the area. These fields are not individually named. Other areas are identified by an alpha-numeric placed within the line, with the bottom of the letters and numbers facing inside the area. For example, a geopressured-geothermal fairway is labeled GG1 indicating that it is the first or the only one listed in the Map Narrative Detail for that map. Areas have been plotted as precisely as information and varying map scales allowed, so the reliability of the particular position of the boundary lines varies. Smaller areas enclosing the location of some facility associated with oil and gas infrastructure are labeled with an alpha-numeric inside the circumscribed area.

Very small areas, facilities occupying a small site, platforms, etc., are identified by point symbols. These are placed either on top of the site or close by. Where there is considerable congestion, some symbols will have arrows to the site. A symbol is centered over a site or small area and indicates location only and not areal extent. In those cases where a facility occupies a large amount of land, the boundaries are outlined and thus define an area. Thus, a gas plant may be represented by either a solid triangle with a numerical superscript

or by a heavy-weight solid line outlining an area and identified by an alpha-numeric.

Some themes have not been numbered for identification purposes and are not listed separately in the map narrative details. They are listed merely as present (e.g., groundwater sources or sand and gravel pits).

A segment of the Houston Quadrangle map overlay is reproduced on the next page (Figure 3) to illustrate the mapping symbols used; however, not all themes are represented on this illustration. The straight, dashed lines represent oil pipelines. The narrow-width lines represent one pipeline; the wider lines, two or more pipelines. The numbers associated with each line represents the permit owner and the size of the pipe (e.g., No. 32 is an Arco crude pipeline 36" in diameter; No. 52 is Exxon crude pipelines 2-8", 10" and 16"). Solid lines represent gas pipelines. The narrow lines represent one pipeline; the wider lines, two or more pipelines (e.g., No. 24 is a Channel gas pipeline 30" in diameter, No. 106 is United Texas Gas Transmission 24" and Texas Eastern Transmission 16"). There are two areas defined by narrow curved lines, one within the other in the upper central portion of the map. These represent an oil field, designated by the letter "O" within a larger gas field represented by the

letter "G". A larger oil field is divided by the western boundary of the map segment. The point symbols represent facilities. The open triangle numbered "4" represents Exxon Clear Creek gas plant. A solid square numbered "4" represents the Pasadena pumping station and a diamond numbered "51" represents a Pasadena police heliport, 3321 West Side. The area R2 partially shown on the map represents part of a Shell Oil Company refinery. Other symbols can be identified from the Map Narrative Detail for the Houston Quadrangle.

There are 16 Map Narrative Details, one for each map. The format is the same for each and follows the ordering of features as listed in Table 1. To simplify the use of the narratives, features in great abundance but small in size are keyed to a particular quadrant of the map overlay. Each map is considered to have four equal quadrants. Quadrants are identified by the letters NW, NE, SW, and SE. A feature identified and followed by the letters "SW" is interpreted as being located in the southwestern quadrant of the map. No areas are identified to quadrant.

All maps should be used in conjunction with these map narrative texts.

A list of references including the sources for materials and maps follows.

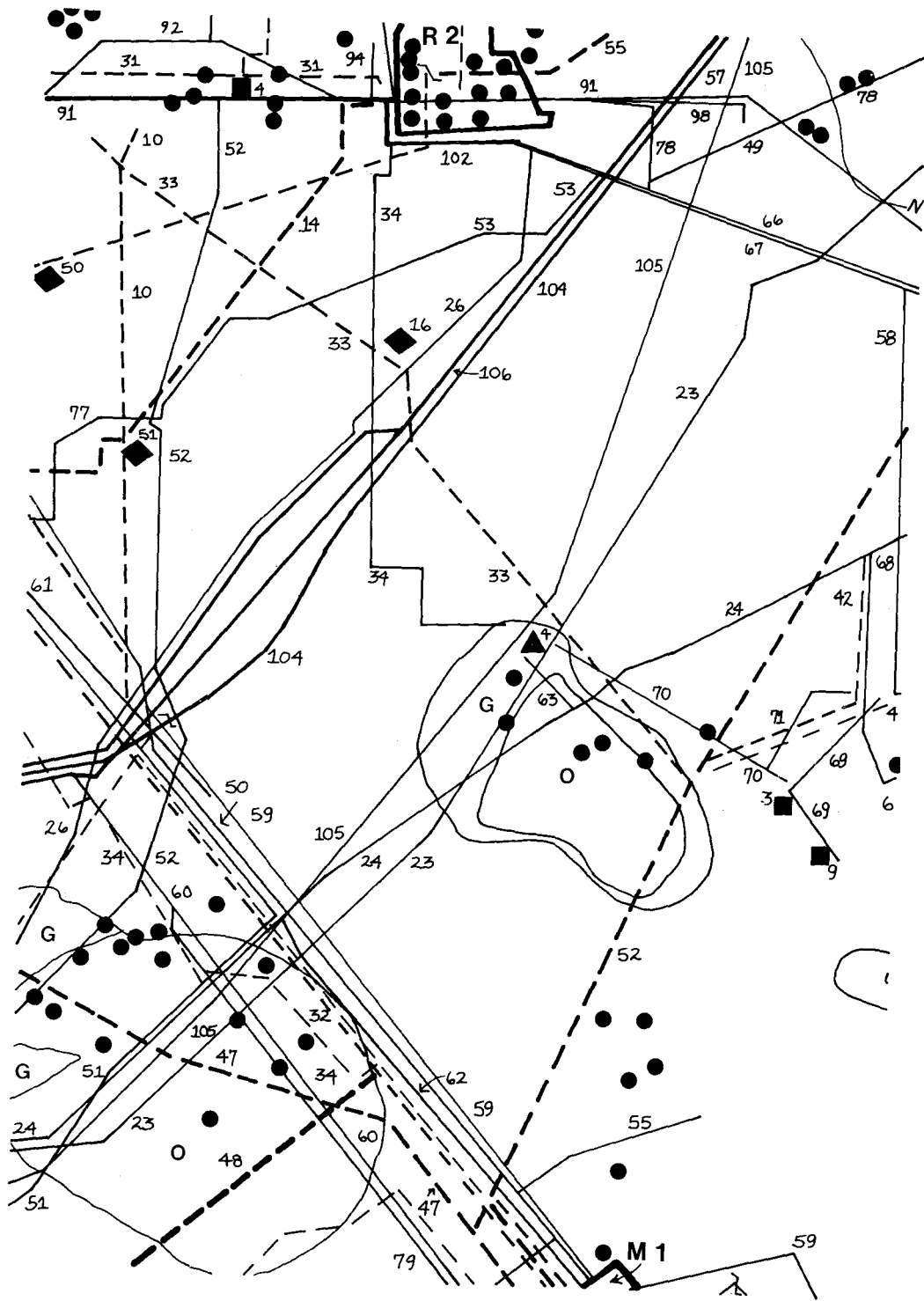


Figure 3. Houston Quadrangle segment.

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Maps Used

Aransas	Jackson
Bee	Jim Wells - 2 sheets
Brazoria - 2 sheets	Kenedy - 2 sheets
Brooks	Kleberg - 2 sheets
Calhoun	Liberty
Cameron - 2 sheets	Matagorda - 2 sheets
Chambers	Nueces - 2 sheets
Fort Bend	Refugio
Galveston	San Patricio
Goliad	Victoria
Harris - 2 sheets	Wharton
Hidalgo - 2 sheets	Willacy

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- Copano, St. Charles, Aransas and Red Fish Bays in Aransas and Nueces Counties. 1" = 1200 varas.

- Corpus Christi Bay in Nueces Co. Scale 1" = 1200 varas.

- Drum, Oyster & Bastrop Bays and Vicinity in Brazoria County. 1" = 600 varas.

- East Part of West Bay & SW Part of Galveston Bay in Galveston County. Scale 1" = 2000'.

- East Portion of Matagorda Bay in Matagorda County. 1" = 1200 varas.

- Galveston, Trinity & Turtle Bay & Portions of San Jacinto & East Bays in Chambers and Galveston Counties. Scale 1" = 1500 varas.

- Harbor Island in Nueces Bay. 1" = 300 varas.

- Laguna Madre: Sheet 1 Part of Laguna Madre in Nueces & Kleberg Counties. 1" = 1200 varas.

- Sheet 2 part of Laguna Madre in Kenedy & Kleberg Counties. 1" = 1200 varas.

- Sheet 3 part of Laguna Madre in Kenedy & Willacy Counties. 1" = 2000 varas.

- Sheet 4 part of Laguna Madre in Willacy and Cameron

- Counties. 1" = 1200 varas.
- Sheet 5 part of Laguna Madre in Cameron County. 1" = 2000'.
  - Sheet 6 part of Laguna Madre in Cameron County. No scale.
  - Matagorda Bay and vicinity in Matagorda and Calhoun Counties. Revised map (to March 1959). 1" = 4000'.
  - North Portion of Lavaca Bay and vicinity. Scale 1:20,000 or 1" = 600 varas.
  - Portions of Galveston and East Bays and the Gulf of Mexico in Galveston County. 1" = 1500 varas.
  - San Antonio Bay and vicinity in Aransas and Calhoun Counties. 1" = 4000'.

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MAP NARRATIVE DETAIL -- OIL, GAS INFRASTRUCTURE, MINERAL RESOURCES

ALLYNS BIGHT QUADRANGLE (Corpus Christi NE) including part of Aransas County

A. Oil and Gas Infrastructure

1. Oil pipelines: single dashed line, one pipeline; double-width dashed line, two or more pipelines

a) Onshore

No data

b) Offshore, number boxed

1 = Permit number O-4112-3 1/2", 10 3/4", Corpus Christi NW

2 = Permit number O-4112-6", 4", Corpus Christi NW

3 = Permit number O/G-80-212-12", 24" NW

4 = Permit number O-80-085-8", Tenneco NW

2. Gas pipelines: single line, one pipeline; double-width line, two or more pipelines

a) Onshore

No data

b) Offshore, number circled

1 = Permit number G-3414-6" NW

2 = Permit number G-1566-12", Valero gathering NW

3 = Permit number G-3450-4 1/2", McMoran NW

4 = Permit number G-4045-4 1/2" NW

5 = Permit number G-4130-4", FGT NW

3. Nodes (N) of offshore pipelines

- oil and gas

No data

4. Refineries

a) site

No data

b) area

No data

5. Gas processing plants

a) site

No data

b) area

No data

6. Compressor, pumping, and metering stations

a) site

No data

b) area

No data

7. Storage facilities

a) site

Present

b) area

No data

8. Platforms, offshore

Present

9. Platform fabrication yards

a) site

No data

b) area

No data

10. Dock facilities

a) site

No data

b) area

No data

11. Terminals

a) site

No data

b) area

No data

12. Helicopter service

a) site

No data

b) area  
No data

B. Mineral Resources

1. Oil fields  
No data  
2. Gas fields  
Present

3. Sand, gravel, clay, dirt pits  
No data  
4. Sulphur wells, mines  
No data  
5. Geopressured - geothermal area  
No data  
6. Groundwater source  
Present

MAP NARRATIVE DETAIL -- OIL, GAS INFRASTRUCTURE, MINERAL RESOURCES

ANAHUAC QUADRANGLE (Houston NE)  
including parts of Chambers, Galveston,  
and Harris counties

A. Oil and Gas Infrastructure

1. Oil pipelines: single dashed  
line, one pipeline; double-  
width dashed line, two or more  
pipelines

a) Onshore

- 1 = ARCO 8" NW
- 2 = Texas P/L 20" NW
- 3 = Gulf 2-8" NW
- 4 = EXXON 8" NW
- 5 = EXXON 8" NW
- 6 = EXXON 2-8", 10" 16"  
SW
- 7 = Sun 6" NE
- 8 = Permian NE
- 9 = EXXON 6" SW
- 10 = EXXON 8" SW
- 11 = EXXON 4" SW
- 12 = ARCO NW-SW
- 13 = Explorer 28" NW
- 14 = Sun 6" NE
- 15 = Sun NE
- 16 = Chevron 6" SW
- 17 = Sun 6" NW
- 18 = Sun 4" NW
- 19 = Sun 6" NW
- 20 = EXXON 8" NW
- 21 = Sun 6" NW
- 22 = Sun 4" NW
- 23 = Sun 6" NW-SW
- 24 = EXXON 6" NW
- 25 = EXXON 6" NW
- 26 = Sun 6" SW
- 27 = Scurlock 4" SW
- 28 = Gulf 4" NW
- 29 = Sun 10" NE
- 30 = Sun 4" SE
- 31 = Sun 4" SE
- 32 = Sun 6" SE

- 33 = Sun 3" NE
- 34 = Sun 4" NE
- 35 = Sun 7" NE
- 36 = Sun 6" NE
- 37 = Sun 4" NE
- 38 = Sun 6" NE

b. Offshore, number boxed

- 1 = Permit number 0-80-  
126-4" NW
- 2 = Permit number 0/G-  
3469-8", EXXON NW
- 3 = Permit number 0-1124-  
6", No name NW
- 4 = Permit number 0-2864-  
3", EXXON NW
- 5 = Permit number 0-2608-  
2", No name NW
- 6 = Permit number 0/G-  
840-3", Texaco SW
- 7 = Permit number 0-671-  
4", No name SW
- 8 = Permit number 0/G-  
3661-2 1/2", EXXON SW
- 9 = Permit number 0/G-  
1359-6", No name SW
- 10 = Permit number 0/G-  
3417-8", EXXON SW
- 11 = Permit number 0-3372-  
4", Sun SW
- 12 = Permit number 0-80-  
134-4", MGF SW
- 13 = Permit number 0-676-  
2", No name SW
- 14 = Permit number 4",  
Houston O/M SW
- 15 = Permit number 0-79-  
304-4 1/2", Getty SW
- 16 = Permit number 0/G-  
2977-6", EXXON SW
- 17 = Permit number 0/G-80-  
127-2 7/8", No name  
SW

- 18 = Permit number 0-2761-6", Chevron SW
  - 19 = Permit number 0/G-3372-4", Sun SW
  - 20 = Permit number 0/G-2345-2", 4", 8", EXXON SW
  - 21 = Permit number 0-3580-2-6 5/8", 4 1/2", No name SW
  - 22 = Permit number 0/G-2612-12, Houston O/M SW
  - 23 = Permit number 0-2071, EXXON SW
  - 24 = Permit number 0/G-3583-4", No name SW
  - 25 = Permit number 0/G-2225-12", 14", EXXON SW
  - 26 = Permit number ME-684-10", No data SW
  - 27 = Permit number 0/G-3621-6 5/8", Houston O/M SW
  - 28 = Permit number 0/G-3759-2-4", Hannah Island Gathering System SW
  - 29 = Permit number 0/G-1520-2 1/2", Houston O/M SW
  - 30 = Permit number 0/G-3334-2 1/2", Houston O/M SW
  - 31 = Permit number 0-2574-2-2 1/2", Sun SW
  - 32 = Permit number 0-2238-10", EXXON SW
  - 33 = Permit number 0-2345-2-4", 2-13", 2-2 1/2", 2-4", EXXON SW
  - 34 = Permit number 0/G-3582-4", EXXON SW
  - 35 = Permit number 0/G-3800-8", EXXON (Re of ME-1644 & 2428) SW
  - 36 = Permit number 0-79-246-4 1/2", Houston O/M SW
  - 37 = Permit number 0/G-4095-4", Houston O/M SW
  - 38 = Permit number 0/G-3435-6", 8", 12", Houston O/M SW
  - 39 = Permit number 0/G-3850-4", No name SW
  - 40 = Permit number 0/G-3581-3", Houston O/M SW
  - 41 = Permit number 0-79-313-10", SW
2. Gas pipelines: single line, one pipeline; double-width line, two or more pipelines
- a) Onshore
- 1 = Valero 12" NW
  - 2 = Bay NE
  - 3 = UTP 6" SW
  - 4 = Tenneco 30", NW
  - 5 = UTT 20", TET 2-30" NW
  - 6 = UTP 6", 12" NE
  - 7 = EXXON 30" NW
  - 8 = AMOCO gathering NW
  - 9 = AMOCO gathering NW
  - 10 = UTP 10" SW
  - 11 = UTP 10" SE
  - 12 = Tenneco 30" SW
  - 13 = AMOCO gathering NW
  - 14 = UTT 20", TET 2-30", EXXON 30" NW
  - 15 = UTT 20", TET 2-30", EXXON 30", Tenneco 30" NW
  - 16 = UTT 20", TET 2-30", EXXON 30" NW
  - 17 = UTT 8" NW
  - 18 = HPL 12" NW
  - 19 = EXXON 8" SW
  - 20 = Tenneco 8" SW
  - 21 = UTT 12" SW
  - 22 = AMOCO gathering NW
  - 23 = AMOCO gathering NW
  - 24 = UTT 24" NW
  - 25 = UTT 8" NE
  - 26 = UTP 4" NE
  - 23 = AMOCO gathering NW
  - 24 = UTT 24" NW
  - 25 = UTT 8" NE

26 = UTP 4" NE  
 27 = EXXON 30" NW  
 28 = Bayou 2" NW  
 29 = UTT 20" NW  
 30 = EXXON 8" NW-SW  
 31 = EXXON 4" SW  
 32 = AMOCO gathering NW  
 33 = AMOCO gathering NW  
 34 = AMOCO gathering NW  
 35 = AMOCO gathering NW  
 36 = HPL 6" NW  
 37 = Tenneco 30" NW  
 38 = Tejas 14" NW-SW  
 39 = UTT 8" NW-SW  
 40 = EXXON 2" SW  
 41 = Seagull 4" SW  
 42 = AMOCO gathering NW  
 43 = Seagull 12" SW  
 44 = FGT 24", Tejas 14" SW  
 45 = Seagull 12" SW  
 46 = UTP 2 1/2" SW  
 47 = UTP 2 1/2" SW  
 48 = UTP 4" SW  
 49 = UTP 8" SW  
 50 = HPL 12" NW  
 51 = EXXON 2-8" NW  
 52 = EXXON 10" NW  
 53 = EXXON 10" SE  
 54 = UTP 16" SE  
 55 = AMOCO 16" SW-NE  
 56 = UTP 6" SW  
 57 = UTP 6" SW  
 58 = UTP 2" SW  
 59 = TET 2-30" NW  
 60 = EXXON 30" NE  
 61 = Prudential 3" SE  
 62 = Tejas 2" SW  
 63 = UTP 16" NE  
 64 = Unnamed 14" NE  
 65 = 4" connection to UTP  
       20" NE  
 66 = UTT 10" NE  
 67 = UTT 8" NE  
 68 = Texaco 10" NE  
 69 = Texaco 12" NE  
 70 = UTT 10" NE  
 71 = UTP 20" NE  
 72 = 20" connection to No.  
       25, No. 34 SE  
 73 = Texaco 4" NE

74 = Unnamed 4" NW  
 75 = UTT 6", 8", NE  
 b) Offshore, number circled  
   1 = Permit number G-2197-  
       8", EXXON SW  
   2 = Permit number G-673-  
       8", No name SW  
   3 = Permit number G-2193-  
       6", EXXON SW  
   4 = Permit number G-2194-  
       2-6", No name SW  
   5 = Permit number G-2195-  
       2", No name SW  
   6 = Permit number G-80-  
       053-8", 10", Pennzoil  
       SW  
   7 = Permit number G-3677-  
       8 5/8", Tenggas  
       gathering SW  
   8 = Permit number G-2741-  
       4", EXXON SW  
   9 = Permit number G-1122-  
       4" Sun, G-1908-4" SW  
 10 = Permit number G-79-  
       256-4", Sun SW  
 11 = Permit number G-2345-  
       8 1/2", 2", 8", 2  
       1/2", EXXON SW  
 12 = Permit number G-972-  
       2", G-884-2", G-987-  
       2", No name SW  
 13 = Permit number G-2805-  
       4", EXXON SW  
 14 = Permit number G-3662-  
       2-4", Houston O/M SW  
 15 = Permit number G-80-  
       053-10", UTT SW  
 16 = Permit number G-80-  
       053-10", No name SW  
 17 = Permit number G-80-  
       053-8", 10", No name  
       SW  
 18 = Permit number G-884-  
       2", EXXON SW  
 19 = Permit number 18"  
       AMOCO SW  
 20 = Permit number G-673-  
       6", No name SW  
 21 = Permit number 6",  
       EXXON 10" SW

- 22 = Permit number G-2612-12", Seagull SW
- 23 = Permit number 12", UTT 10" SW
- 24 = Permit number 12", FGT 24" SW-NE
- 25 = Permit number G-825-2", EXXON SW
3. Nodes (N) of offshore pipelines - oil and gas  
Labeled clockwise from north by permit number. The many pipelines are represented by a few lines.
- NI includes, in order SW
- Permit number O/G-79-169-2" EXXON
  - Permit number O/G-2198-6" EXXON
  - Permit number 4114-2" EXXON
  - Permit number G-799 Texaco
  - Permit number 0-1223-2 1/2" EXXON
  - Permit number 0-1224-2 1/2" EXXON
  - Permit number O/G-2911-2 1/2" EXXON
  - Permit number 0-5650-2 1/2"-2"
  - Permit number 0-2016-2" EXXON
  - Permit number 0-1216-2" Abandoned
  - Permit number 0-224-2 1/2"
  - Permit number 0-1159
  - Permit number O/G-1144-2 1/2" EXXON
  - Permit number 0-2936-2" EXXON
  - Permit number O/G-3224-2" EXXON
  - Permit number 4171-2" EXXON
  - Permit number 0-2619-2 1/2" EXXON
  - Permit number 0-2071-2 1/2" EXXON
- Permit number O/G-1869-2 EXXON cancelled
- Permit number 0-3091-2 1/2" South Texas Petroleum, Inc.
- N2 includes, in order SW
- Permit number 0-1680-2 1/2" EXXON
  - Permit number 80-150-2 1/2" EXXON
  - Permit number 0-3026-2 1/2" EXXON
  - Permit number 0-1206-2" EXXON
  - Permit number 0-80-034-2" EXXON
- N3 includes, in order SW
- Permit number O/G-3224-2" EXXON
  - Permit number 4171-2" EXXON
  - Permit number 80-151 EXXON
- N4 includes, in order SW
- Permit number 0-2847-2 1/2" AMOCO
  - Permit number 0-3605-2" EXXON
  - Permit number G-1151-2" EXXON
  - Permit number 0-3605-2" EXXON
  - Permit number G-1000-2" Cities Service
  - Permit number 0-2922-2" (Re of ME-1123)
  - Permit number 0-2875-2" EXXON
  - Permit number 0-1678-2" EXXON
  - Permit number G-2945-2" EXXON
  - Permit number 0-2876-2" EXXON
- N5 includes, in order SW
- Permit number 0-3979 EXXON
  - Permit number 0-1661-2" EXXON

Permit number G-1180-2"  
EXXON  
Permit number 0-2074-2"  
EXXON  
Permit number 0-80-154-2"  
EXXON  
Permit number 0-2460-2"  
EXXON  
Permit number 0/G-3003-2"  
EXXON  
Permit number 0-80-138-2  
1/2" EXXON  
Permit number 0-1870-2"  
EXXON  
Permit number 0-2075-2  
1/2" EXXON  
Permit number 0-2423  
EXXON  
Permit number 0-3401-3"  
EXXON  
Permit number 0-2415-2"  
EXXON  
Permit number 0-2067-2  
1/2" EXXON  
Permit number 0-3606-2"  
EXXON  
Permit number G-2937  
EXXON  
Permit number 0-3253-6",  
4" EXXON  
Permit number G-3686-2"  
Cayuse  
Permit number 0-79-171  
EXXON  
Permit number 0-2072-2  
1/2" EXXON  
Permit number 0-1579-2"  
Permit number 0-3400-3"  
EXXON  
Permit number 0/G-2937-6"  
Permit number 0-2041-2"  
EXXON  
Permit number 0-1135-2"  
Permit number 0-2181  
Permit number 0-2847-2  
1/2" AMOCO  
Permit number 0-2171  
Permit number G-3174-2"  
EXXON

Permit number 0-2037-2"  
EXXON  
Permit number 0-2917-2"  
EXXON  
Permit number G-1201  
Permit number G-2036-2"  
EXXON  
Permit number 0-1507-2"  
EXXON  
Permit number G-3825-2"  
EXXON  
Permit number G-2084-2"  
EXXON  
Permit number 0-1124-2"  
Texaco  
Permit number 0-2085  
EXXON  
Permit number 0-2390-2  
1/2" EXXON  
Permit number 0/G-4127-2"  
EXXON  
N6 includes, in order SW  
Permit number 0/G-1099-2"  
EXXON  
Permit number 0-2044-2  
1/2" EXXON  
Permit number 0/G-2191  
EXXON  
Permit number 0-2054-2"  
EXXON  
Permit number 0-1662-2"  
EXXON  
Permit number 0-2046-2"  
EXXON  
Permit number 0-2073-2",  
2 1/2" EXXON  
Permit number 0-2917-2"  
EXXON  
Permit number 0/G-1574-2"  
EXXON  
Permit number 0/G-1946  
EXXON  
Permit number 0-2076  
EXXON  
Permit number G-1143-2"  
Permit number G-1413, 80-  
017-2"  
Permit number G-1412-2"  
Permit number 0-1679-2"

Permit number 0-2086-2"  
 EXXON  
 Permit number 0-2948  
 EXXON  
 Permit number 0-34100-3"  
 connects to N-5  
 Houston O/M  
 Permit number G-1864-4"  
 Houston L/P  
 Permit number 0-80-071-1  
 EXXON  
 Permit number G-1140  
 Permit number 0-3668-2  
 1/2" connects to N-7  
 EXXON  
 N7 includes, in order SW  
 Permit number O/G-3618-2  
 1/2", G-80-151  
 Permit number G-1140  
 Permit number O/G-2627-  
 2", 2 1/2", EXXON, 0-  
 3867-2"  
 Permit number 0-2848-2"  
 EXXON  
 Permit number 0-2948-4"  
 EXXON  
 Permit number O/G-3977  
 EXXON  
 Permit number 0-2077-2"  
 EXXON  
 Permit number 0-3668-2  
 1/2" EXXON  
 Permit number G-1136-2"  
 Permit number O/G-2056  
 EXXON  
 Permit number 0-1137  
 Permit number 0-3978  
 EXXON  
 Permit number 0-2762  
 EXXON  
 Permit number G-3220  
 EXXON  
 Permit number G-2937-2"  
 EXXON  
 Permit number G-3696-2"  
 connects to N5  
 Central P/L  
 Permit number 0-3253-6",  
 4" connects to N5  
 EXXONS

Permit number G-1872  
 Permit number G-1871  
 Permit number G-80-155  
 EXXON  
 Permit number G-79-171  
 EXXON  
 Permit number G-1874

#### 4. Refineries

##### a) sites

- 1 = Enterprise Mont  
Belview Fractionation  
Plant NW
- 2 = Warren Mont Belview  
Fractionation Plant  
NW
- 3 = Union Texas Petroleum  
Winnie NE

##### b) areas

- R1 = EXXON Refinery
- R2 = Mont Belview  
Refinery Area

Many companies have holdings in  
 this area. Two large fraction-  
 plants and one gas plant have  
 been located and identified as  
 sites. The rest are listed  
 here as being within this area.  
 They are:

- Enterprise 2
- TET 7
- Dow
- Cilgo
- Warren
- ARCO 3
- Tenneco
- Conoco
- XRAL
- EXXON
- DIXIE
- Warren 3
- Mobil
- EXXON 2
- Diamond Shamrock 2
- Houston Oil & Mineral

For locational details consult  
 Mont Belview Detail A sheet of  
 the 1979 Texas County  
Pipeline and Industrial Atlas

5. Gas processing plants

a) sites

- 1 = Citgo Mont Belvieu Gas Plant NW
- 2 = UTT Galveston Bay Gas Plant NW
- 3 = U.G. Galveston Bay Plant NW
- 4 = Houston O/M, Smith Point Gas Plant SW
- 5 = Getty Umbrella Point Plant SW
- 6 = EXXON Anahuac Gas Plant NW

b) area

No data

6. Compressor, pumping, and metering stations

a) sites

- 1 = AMOCO Compressor Station NW
- 2 = Hankamer Station NW
- 3 = Mobay (Station) SW
- 4 = Jackson Pasture Station SW
- 5 = AMOCO gathering Station NW
- 6 = Permian Crude Pumping Station NE
- 7 = Belview Station NW

b) area

No data

7. Storage facilities

a) site

Present

b) area

S1 = High Island Storage

8. Platforms, offshore

Present

9. Platform fabrication yards

a) site

No data

b) area

No data

10. Dock facilities

a) site

No data

b) area

No data

11. Terminals

a) site

1 = Oak Pt. Terminal SW

b) area

No data

12. Helicopter service

a) sites

1 = Smith Point, Houston O/M SW

2 = Baytown, San Jacinto Methodist Hospital SW

3 = Baytown, Baytown Medical Center SW

4 = Baytown, Gulf Oil Chemicals NW

b) area

No data

B. Mineral Resources

1. Oil fields

Present

2. Gas fields

Present

3. Sand, gravel, clay, dirt pits

Present

4. Sulphur wells, mines

No data

5. Geopressured - geothermal area

No data

6. Groundwater source

Present

MAP NARRATIVE DETAIL -- OIL, GAS, INFRASTRUCTURE, MINERAL RESOURCES

ANGLETON QUADRANGLE (Houston SW)  
including parts of Galveston, Brazoria,  
Fort Bend, Wharton and Matagorda  
counties

A. Oil and Gas Infrastructure

1. Oil pipelines: single dashed  
line, one pipeline; double-  
width dashed line, two or more  
pipelines

a) Onshore

- 1 = Texas P/L 8" SW-SE-NE
- 2 = EXXON 4" SW-NW
- 3 = Scurlock 6" NW
- 4 = Scurlock 4" NW
- 5 = AMOCO NE
- 6 = EXXON 16" SW-NW-NE
- 7 = Texas P/L 6" SW
- 8 = Texas P/L 8" SW
- 9 = Scurlock 6" NW
- 10 = Phillips 6", Seaway  
30" SW
- 11 = Seaway 30" NW-SW
- 12 = Phillips 12" NW-SW
- 13 = Gulf 4" NW-NE
- 14 = Texas P/L 16" SW-NW-  
NE
- 15 = EXXON 6" NW
- 16 = EXXON 8" SW-NW-NE
- 17 = Phillips 8" SW-SE-NE
- 18 = EXXON 8" NW-NE
- 19 = Texas P/L 6" NE
- 20 = EXXON 4" NE
- 21 = Texas P/L 8" NE
- 22 = EXXON 2-8" NE
- 23 = ARCO 36" NE
- 24 = AMOCO 2-8", 12" NE
- 25 = Gulf 6" NW
- 26 = EXXON 4" NE
- 27 = AMOCO 26" NE
- 28 = Scurlock 4" NE
- 29 = Gulf 6" NW

30 = Gulf 6" NW

31 = AMOCO NW

b) Offshore, number boxed  
No data

2. Gas pipelines: single line,  
one pipeline; double-width  
line, two or more pipelines

a) Onshore

- 1 = NGPL 24" NW-SW
- 2 = FGT 22" NE-SW
- 3 = TGP 8" SW
- 4 = TGP 16" SW
- 5 = Dow 14" SW
- 6 = EXXON 30", 36" SW
- 7 = Dow 4" SW
- 8 = Tenneco 30" SW-NE
- 9 = TGP 12" SW
- 10 = Valero 6", 8" SW
- 11 = TET gathering 3" NE
- 12 = FGT 8" SW
- 13 = TGP 4" SW
- 14 = Phillips 4" SW
- 15 = NGPL 12" SW
- 16 = HPL 4" SW
- 17 = HPL 6" SW
- 18 = HPL 12" SW
- 19 = NGPL 12" SW
- 20 = Dow 12" SW
- 21 = Valero 20" SW
- 22 = EXXON 36" NW-SW
- 23 = EXXON 30" NW-SW
- 24 = HPL 8" SW
- 25 = UTT 8" SW
- 26 = Old Ocean 24" NW-SW
- 27 = UTT 20" SW
- 28 = Phillips 6" SW-SE-NE
- 29 = HNG 16" SE
- 30 = FGT 20" SW
- 31 = HPL 4" NW-SW
- 32 = TET 3" NW-NE-SE
- 33 = NGPL 12" SW-SE-NE
- 34 = AMOCO 16" SW-SE-NE

35 = Dow 4" SW	82 = HPL 16" SE
36 = Dow 14" SW	83 = HPL 6" SW
37 = HPL 4" SW	84 = TET 4" NE
38 = HNG 16" SW-SE	85 = gathering SE
39 = Phillips 6" SW	86 = NGPL 10" NE
40 = Phillips 4" SW	87 = NGPL 6" NE
41 = Phillips 6" SW	88 = HPL 6" NW
42 = Phillips 4" SW	89 = Phillips 8", Valero 20", AMOCO 16" SW
43 = Phillips 4" SE	90 = Seagull 3 1/2" SE
44 = Phillips 2" SE	91 = HNG 16" NE-SE
45 = Phillips 4" SE	92 = HNG 3" NE-SE
46 = Coronado 2" SW	93 = HPL 12" SE
47 = TET 30" SW-SE-NE	94 = HPL 4" SE
48 = Delhi 2" SW	95 = UTT 18" NW
49 = Phillips 10" SW	96 = UTT 30" NW
50 = NGPL 6" SW	97 = HPL 24" NW-NE
51 = HNG 12" SW	98 = HPL 12" NW
52 = Red Rooster NE	99 = UTP 6" SW
53 = UTT 6" SW	100 = UTP 10" SW
54 = HPL 18" NE	101 = UG 4" NW
55 = HPL 16", 30" NE	102 = UG 30" NW
56 = Dow 8" SE	103 = Mobil 14" NW
57 = Dow 24" SE	104 = TET 16" NW
58 = HPL 4" SE-NE	105 = Enserch 16" NW
59 = HPL 6" SE	106 = UTT 8" NW
60 = gathering SE	107 = TET 4" NW
61 = Trunkline gathering NE	108 = HPL 10" NW
62 = Trunkline gathering NE	109 = HNG 2" gathering NW
63 = HPL 8" SE	110 = UTT 8" NW
64 = Dow 4" SE	111 = UTT 20" NW
65 = HPL 6" SW	112 = NGPL 24", AMOCO 20" NW-NE-SE
66 = Unnamed NE	113 = Trunkline 12" NE
67 = HPL 16" NE-SE	114 = TET 8" NE
68 = HPL 3" SE	115 = H&H 4 1/2" NE
69 = HPL 6" SE	116 = TGP NE
70 = Dow 24" SE	117 = Valero 10" NE
71 = UTT 20" SE	118 = HPL 16" NE
72 = HPL 6" SE	119 = UTT 20" NE
73 = NGPL gathering to Trunkline NE	120 = Valero 16" NE
74 = Tejas 4" SW	121 = AMOCO 20" NE
75 = EXXON 24" NE	122 = AMOCO 12" NE
76 = Phillips 12" SW	123 = Gulf Tide 3" NE
77 = HPL 6" NE-SE	124 = UTT 24" NE
78 = AMOCO 8" SE	125 = EXXON 10" NE
79 = AMOCO 8" SE	126 = HPL 4" NE
80 = HPL 16" NE-SE	127 = EXXON 3" NE
81 = Unnamed SW	128 = Trunkline 16" NE
	129 = UTT 18", 30" NW

- 130 = Valley 3" SW
- 131 = Trunkline 16" NE
- b) Offshore, number circled
  - 1 = G-3294-2 7/8" General SE
  - 2 = G-4020-4 1/2" General SE
- 3. Nodes (N) of offshore pipelines - oil and gas
  - Not applicable
- 4. Refineries
  - a) site
    - 1 = Phillips Refinery SW
  - b) area
    - No data
- 5. Gas processing plants
  - a) sites
    - 1 = Enserch HRU Needville Gas Plant NW
    - 2 = EXXON Pledger Gas Plant SW
    - 3 = AMOCO East Bay City Plant SW
    - 4 = AMOCO Old Ocean Gas Plant SW
    - 5 = EXXON Gas Plant NW
    - 6 = Rowan Field HRU Plant NE
    - 7 = Phillips Brazoria Plant NE
    - 8 = Charter Oil Alta Loma Gas Plant NE
    - 9 = Mobil Martin Ranch Plant SE
  - b) areas
    - G1 = Conoco Plant SE
    - G2 = Monsanto Chocolate Bayou Plant SE
    - G3 = AMOCO Chocolate Bayou Plant SE
    - G4 = Stratton Ridge Dome SE
- 6. Compressor, pumping, and metering stations
  - a) sites
    - 1 = Big Creek Station NW
    - 2 = Boling Pumping Station NW
    - 3 = South Boling Pumping Station NW
  - b) area
    - No data
- 4 = Compressor Station 4 SW
- 5 = Bay City Pumping Station SW
- 6 = Phillips Pumping (Gas) Station SW
- 7 = Old Ocean Station SW
- 8 = Chocolate Bayou Station NE
- 9 = Thompson Field Station NW
- 10 = HPL Meter Station NE
- 11 = W. Columbia Station SW
- 12 = Unnamed facility NE
- 13 = Unnamed facility NW-SW
- 14 = Unnamed facility SW
- 15 = Unnamed facility SW
- b) area
  - No data
- 7. Storage facilities
  - a) site
    - Present
  - b) area
    - No data
- 8. Platforms, offshore
  - No data
- 9. Platform fabrication yards
  - a) site
    - No data
  - b) area
    - No data
- 10. Dock facilities
  - a) site
    - No data
  - b) area
    - No data
- 11. Terminals
  - a) site
    - 1 = San Bernard Terminal SW
  - b) area
    - No data
- 12. Helicopter service
  - a) sites
    - 1 = Freeport, Freeport Base SE
    - 2 = West Columbia, Columbia Lakes SW

3 = Alta Loma, Pee Wee's  
SE

b) area  
No data

B. Mineral Resources

1. Oil fields

Present

2. Gas fields

Present

3. Sand, gravel, clay, dirt pits  
Present

4. Sulphur wells, mines

1 = Boling Active 1975 NW

2 = Long Point Salt Dome  
Well Active 1975 NW

3 = Damon Mound NW

4 = Nash Dome NW

5 = Clemens SW

6 = Hoskins Mound SE

5. Geopressured - geothermal area

1 = Brazoria Fairway,  
Frio Formation

6. Groundwater source

Present

MAP NARRATIVE DETAIL -- OIL, GAS INFRASTRUCTURE, MINERAL RESOURCES

BAFFIN BAY QUADRANGLE (Corpus Christi SW) including parts of Kenedy, Kleberg, and Brooks counties

A. Oil and Gas Infrastructure

1. Oil pipelines: single dashed line, one pipeline; double-width dashed line, two or more pipelines

a) Onshore

- 1 = Mobil 8" NW
- 2 = Permian 4" and gathering NW
- 3 = EXXON 8" NW
- 4 = Permian 4" NE
- 5 = Chevron 6" NE
- 6 = Permian 3" NW
- 7 = EXXON 8" NW
- 8 = EXXON 6" SW
- 9 = EXXON 4" SW

b) Offshore, number boxed

- 1 = Permit number O-1067-3" Central P/L NW
- 2 = Permit number ME-4150-20" No name NE
- 3 = Permit number No number, no name 6" NE
- 4 = Permit number No number, no name 8" NE

2. Gas pipelines: single line, one pipeline; double-width line, two or more pipelines

a) Onshore

- 1 = CSGP 6" NW-SW
- 2 = TET 30" NW-SW
- 3 = Tenneco 10" SW
- 4 = Tennogas 16" SW
- 5 = EXXON 8" SW
- 6 = EXXON 6" SW
- 7 = EXXON 8" SW
- 8 = EXXON 2" SW
- 9 = EXXON 10" NW-SW

- 10 = Valero 16" NW-SW
- 11 = EXXON 6" SW
- 12 = FGT 12" NW-SW
- 13 = Delhi 4" SW
- 14 = EXXON 4" NW
- 15 = TET 10" NW
- 16 = EXXON 6" SW
- 17 = NGPL 16" NW
- 18 = EXXON 6" NW
- 19 = CSGP 4" NW
- 20 = EXXON 8" SW
- 21 = HPL 12" NE
- 22 = HPL 8" NE
- 23 = CSGP 12" NW
- 24 = EXXON 4" SW
- 25 = EXXON 8" SW
- 26 = EXXON 20", 24" NW-NE
- 27 = EXXON 24" NW
- 28 = EXXON 6" SW
- 29 = TET 4" NW
- 30 = TET 8" NW
- 31 = CSGP 3" NW
- 32 = HPL 8" NW
- 33 = Valley 6" NW
- 34 = CSGP 2 1/2" NW
- 35 = Celanese 10" NW
- 36 = HPL 16" NW
- 37 = TGP 16", 26" NW
- 38 = CSGP 10" NW
- 39 = FGT 6" NW
- 40 = CSGP 2" NW
- 41 = Cities Service 4" NW
- 42 = CSGP 8" NW
- 43 = Coronado 2" NW
- 44 = NGPL 36", 26" NW
- 45 = Transco 24" NW
- 46 = EXXON 3" NW
- 47 = EXXON 10" NW
- 48 = EXXON 6" SW
- 49 = CSGP 4" NW
- 50 = HPL 4", CSGP 2", TET 30" NW

- 51 = HPL 2" NW
- 52 = Gas 6" Connects TET  
and Tenngas lines SW
- 53 = TET 4" NW
- 54 = EXXON connector SW
- 55 = EXXON 6" SW
- 56 = Tenngas 8" (stops at  
27° N)
- 57 = CSGP 10"
- 58 = Delhi 6" NW
- 59 = Valero 16" NW-SW
- 60 = CSGP 20" NW
- b) Offshore, number circled
  - 1 = Permit number G-2419-  
8 5/8", FGT SE
  - 2 = Permit number G-79-  
227-4 1/2", FGT SE
  - 3 = Permit number G-2174-  
3 1/2", Haas NE
  - 4 = Permit number G-4165-  
4", HPL NE
  - 5 = Permit number G-2618-  
10", FGT NE
  - 6 = Permit number G-1346-  
4", Texaco NE
  - 7 = Permit number G-1697-  
4", TET NE
  - 8 = Permit number G-2790-  
3 1/2", King NE
  - 9 = Permit number G-2849-  
10", Chevron NE
  - 10 = Permit number G-3821-  
10", TET NE
  - 11 = Permit number G-3545-  
12", TET 12" NE
  - 12 = Permit number G-3860-  
8" CSGP NW
  - 13 = Permit number G-3520-  
4" CSGP NW
  - 14 = Permit number G-991-6  
5/8" UTT NW
- 3. Nodes (N) of offshore pipelines  
- oil and gas  
None
- 4. Refineries
  - a) site  
No data
  - b) area  
No data
- 5. Gas processing plants
  - a) sites
    - 1 = Chevron Gas Plant NW
    - 2 = EXXON Sarita Gas  
Plant NW
    - 3 = Cities Service May  
Gas Plant NE
  - b) area  
No data
- 6. Compressor, pumping, and  
metering stations
  - a) sites
    - 1 = Simico Compressor  
Station NW
    - 2 = Alazon Station NW
    - 3 = Sarita Station SW
    - 4 = Rita Station SW
    - 5 = Cities Service  
Separation Plant NW
  - b) area  
No data
- 7. Storage facilities
  - a) site  
Present
  - b) area  
No data
- 8. Platforms, offshore  
Present
- 9. Platform fabrication yards
  - a) site  
No data
  - b) area  
No data
- 10. Dock facilities
  - a) site  
No data
  - b) area  
No data
- 11. Terminals
  - a) site  
No data
  - b) area  
No data
- 12. Helicopter service
  - a) site
    - 1 = Corpus Christi -  
Chevron USA, Inc.  
Padre Island NE

b) area  
No data

B. Mineral Resources

1. Oil fields  
Present
2. Gas fields  
Present
3. Sand, gravel, clay, dirt pits  
Present

4. Sulphur wells, mines  
No data
5. Geopressured - geothermal  
area  
1 = Armstrong fairway,  
Frio formation SW
6. Groundwater source  
Present

MAP NARRATIVE DETAIL -- OIL, GAS INFRASTRUCTURE, MINERAL RESOURCES

BEEVILLE QUADRANGLE (Beeville SW)  
including parts of Aransas, Bee,  
Goliad, Jim Wells, Refugio and San  
Patricio counties

A. Oil and Gas Infrastructure

1. Oil pipelines: single dashed  
line, one pipeline; double-  
width dashed line, two or more  
pipelines

a) Onshore

- 1 = EXXON 4" NE
- 2 = Sun 6" NE-SE
- 3 = EXXON 16" NE-SE
- 4 = Sun 4" SW
- 5 = EXXON 10", 12" NE
- 6 = EXXON 3" NW-NE
- 7 = Sigmor 8" NW-NE
- 8 = FINA 10" NW-NE
- 9 = Sun 8" SE
- 10 = EXXON 2-8", 12", 16"  
SE
- 11 = Sun 6" SE
- 12 = Sun 4" SE
- 13 = Permian 3" SE
- 14 = Sun 4" SE
- 15 = Sigmor 8" NW
- 16 = Sun 6" SE
- 17 = Permian 3" SE
- 18 = Sun 6" SE
- 19 = Sun 4" SE
- 20 = Sun 4" SE
- 21 = Union Pacific 8" SE
- 22 = Sun 4" SE
- 23 = EXXON 2-10" SW-NW
- 24 = Sun 4" SW
- 25 = gathering for Sun 4"  
SW
- 26 = Sun 8" NW-NE-SE
- 27 = Sun 6" SW

- 28 = Sun 4" SW
- 29 = EXXON 6" SE
- 30 = gathering for EXXON  
10", 12" NE
- 31 = Permian 8" SE
- 32 = Burke 3" NE
- 33 = Sun 2" NE
- 34 = Permian 6" NW
- 35 = Permian 6" NW
- 36 = Sun 4" SE
- 37 = Sun 4" SW
- 38 = Sun 10" NE
- 39 = Sun 4", 8" SE
- 40 = Permian 4" SE

b) Offshore, number boxed

- 1 = Permit number O/G-  
1462, 1/2", 3",  
EXXON SE
- 2 = Permit number O-80-  
085-8", Tenneco SE
- 3 = Permit number O-80-  
085-8", Tenneco SE
- 4 = Permit number O/G-  
1463-1 1/2", 3",  
EXXON SE
- 5 = Permit number O/G-  
79-1150-3", Getty SE
- 6 = Permit number O-3637-  
4", Houston O/M SE
- 7 = Permit number O/G-  
4006-2", CSGP SE
- 8 = Permit number O/G-  
1465 1 1/2", 3" SE
- 9 = Permit number O/G-  
4151-6", Corpus  
Christi SE
- 10 = Permit number O/G-  
2942-2 1/2", Hunt Oil  
Co. SE

- |  |                                   |
|--|-----------------------------------|
| 11 = Permit number 0-4164-<br>2 1/2", Hunt Oil Co.<br>SE                                   | 4 = Delhi 4 1/2" NE               |
| 12 = Permit number 0/G-<br>3289-2 1/2", Hunt Oil<br>Co. SE                                 | 5 = TGP 6" SE                     |
| 13 = Permit number 0-870-<br>2", 3", Hunt Oil Co.<br>SE                                    | 6 = Valero 30" NW-SE              |
| 14 = Permit number 0-4108-<br>2 7/8", McMoran SE   | 7 = HPL 16" NE                    |
| 15 = Permit number 0/G-<br>4036-6", Phillips SE  | 8 = Enserch 12" SE                |
| 16 = Permit number 0/G-<br>3754-8", 4", Phillips<br>SE                                     | 9 = NGPL SE                       |
| 17 = Permit number 0-1753-<br>6" SE  | 10 = Enserch 4" SE                |
| 18 = Permit number 0-975-3<br>1/2" SE  | 11 = Texana 4" SE                 |
| 19 = Permit number 0/G-<br>3500-4", McCormick<br>0/G SE                                    | 12 = Connecting Texana &<br>UG SE |
| 20 = Permit number 0/G-<br>534-2" SE   | 13 = TGP 4" SW                    |
| 21 = Permit number 0/G-<br>2852-2-2", Perry R.<br>Bass SE                                  | 14 = Texana gathering SE          |
| 22 = Permit number 0-3881-<br>3 1/2", EXXON SE   | 15 = Transco 26" NE               |
| 23 = Permit number 0/G-<br>3791-3 1/2", Houston<br>O/M SE                                  | 16 = TGP 2-30", 24" SW            |
| 24 = Permit number 0/G-<br>4151-6", Sun SE   | 17 = TGP 6" NE                    |
| 25 = Permit number 0-4115-<br>4" SE  | 18 = NGPL 26", 30" SW             |
| 26 = Permit number 0-1722-<br>6" SE  | 19 = NGPL 10" NW-NE               |
| 27 = Permit number 0-1515-<br>2-4", 8" SE  | 20 = TET 30" SE-NE                |
| 2. Gas pipelines: single line,<br>one pipeline; double-width line<br>two or more pipelines | 21 = Tenneco 30" SE-NE            |
| a) Onshore   | 22 = FGT 20" SE-NE                |
| 1 = Enserch 6" NE  | 23 = EXXON 30", 36" SW-SE-<br>NE  |
| 2 = UG NE  | 24 = HPL 18" NE                   |
| 3 = UG NE  | 25 = UG 18" NW-NE                 |
|  | 26 = HPL 4" NE                    |
|  | 27 = NGPL 10" NE                  |
|  | 28 = UTT 10" NE                   |
|  | 29 = UG 16", 30" NE               |
|  | 30 = UG 16" SE-NE                 |
|  | 31 = UG 24" SW-SE-NE              |
|  | 32 = Enserch 8" SE                |
|  | 33 = HPL 4" SE                    |
|  | 34 = HPL 16" NW-NE                |
|  | 35 = UTT 10" NE                   |
|  | 36 = UTT gathering NE             |
|  | 37 = EXXON 14" NE                 |
|  | 38 = Texana SE                    |
|  | 39 = TGP 10" SE                   |
|  | 40 = UG 20" SE                    |
|  | 41 = Seagull 4 1/2" SE            |
|  | 42 = TGP 10" NE                   |
|  | 43 = TGP 4" NE                    |
|  | 44 = UG gathering NE              |
|  | 45 = Enserch 3" NE                |
|  | 46 = Delhi NE                     |
|  | 47 = HPL gathering 4" NE          |
|  | 48 = Bexar 4" NE                  |
|  | 49 = Unnamed SE                   |

50 = Unnamed SE  
 51 = Enserch 14" SE  
 52 = Enserch 14" SE  
 53 = UG gathering NE  
 54 = UG gathering NE  
 55 = UG gathering NE  
 56 = FGT 6" SE  
 57 = Unnamed SE  
 58 = UG 4" SE  
 59 = Transco 14" NW-SW  
 60 = Unnamed SW  
 61 = TGP 8" SE  
 62 = TET 8" SE  
 63 = TGP 6" SE  
 64 = TET 4" SE  
 65 = HPL 18" SE  
 66 = HPL 16" SE  
 67 = HNG 6" SE  
 68 = HNG 4" SE  
 69 = Delhi 2", 4" SE  
 70 = Delhi 4" SW  
 71 = CSGP 6" SW  
 72 = CSGP 6" SW  
 73 = Trunkline 20" NE-NW-  
     SW  
 74 = HPL 18" NW-SW  
 75 = Valero 3"  
 76 = UG 14" NW-SW  
 77 = Seadrift 8" NE  
 78 = Gas Systems 3 1/2" NE  
 79 = HPL 16" NW  
 80 = Valero 3" SW  
 81 = CSGP gathering NW  
 82 = CSGP gathering NW  
 83 = CSGP 30" NW  
 84 = Delhi 2" NE  
 85 = CSGP 6" NW  
 86 = HPL 2" NW  
 87 = Ferguson Crossing 2"  
     NW  
 88 = CSGP 8" NW  
 89 = TET 14" NW  
 90 = Transco 24" NW  
 91 = Ferguson Crossing 2"  
     NW  
 92 = Transco 6" NW  
 93 = CSGP gathering 4" NW  
 94 = Malone NW  
 95 = HNG NW  
 96 = CSGP 6" NW  
 97 = Delhi 6" SW  
 98 = Delhi 4" SW  
 99 = Seagull NW  
 100 = Tenneco 12" SE  
 101 = NGPL 4" SE-NE  
 102 = HNG 12" SE  
 103 = CSGP 6" NW  
 104 = Valero 14" SE  
 105 = Aransas 4" SE  
 106 = Seagull SE  
 107 = Valley 8" SW  
 108 = Delhi 4" SW  
 109 = Seagull 3" SW  
 110 = Alamos SW  
 111 = Valero SW  
 112 = Valero 6" NW  
 113 = Valley 3" SW  
 114 = Esperanza 2" SW  
 115 = Valero SW  
 116 = Transco 2 1/2" NW  
 117 = Valley 6" SW  
 118 = Unnamed SE  
 119 = Seagull connection SE  
 120 = UG NE  
 121 = Unnamed SE  
 122 = Delhi 2" SE  
 123 = HPL 2" SW  
 124 = Alamos abandoned NW  
 125 = Alamos 4" SW  
 126 = Coronado 2" SW  
 127 = HPL 4" NW  
 128 = Connection between  
     Transco 14" & CSGP  
     30" SW  
 129 = TET 8" SE  
 130 = Aransas 3" SE  
 131 = UG gathering NE  
 132 = UG gathering NE  
 133 = gathering SE & NE  
 134 = gathering SE  
 135 = UG gathering NW  
 136 = Delhi gathering SE  
 137 = Valero 3" SW  
 138 = Valero 3" SW  
 139 = Enserch 14" NE  
 140 = Delhi 4" NE

141 = UG gathering NE  
 142 = UG NE  
 143 = CSGP 2" SW  
 144 = UG SW  
 145 = NGPL 8" SE-NE  
 146 = NGPL 8" SE-NE  
 147 = TGP 4" NE  
 148 = Transco 24" SW-NE  
 149 = HPL 18" NW  
 150 = Valero 3" SW  
 151 = Valero 5" SW  
 152 = Valero 6" SW  
 153 = UG 20" SE  
 154 = CSGP gathering SW  
 155 = Tenneco 12" NE  
 156 = TET 30" NE  
 157 = Enserch 8" NE  
 158 = CSGP 4" SW  
 159 = CSGP 3" SW  
 160 = CSGP 2" SW  
 161 = CSGP 3" SW  
 162 = CSGP 2" SW  
 163 = CSGP 2" SW  
 164 = Coronado 2" SW  
 165 = Delhi 4" SW  
 166 = Delhi 4" SW  
 167 = CSGP 6" NW  
 168 = CSGP 6" NW  
 169 = Valero 20" SE  
 170 = CSGP gathering NW  
 171 = CSGP gathering NW  
 172 = CSGP gathering NW  
 173 = CSGP gathering NW  
 174 = CSGP gathering NW  
 175 = UG gathering NE  
 176 = UG gathering NE  
 177 = UG 30" NE  
 178 = UG gathering NE  
 179 = UG gathering NE  
 180 = HPL 6" NE  
 181 = UG gathering NE  
 182 = UG gathering NE  
 183 = UG gathering NE  
 184 = UG gathering NE  
 185 = UG gathering NE  
 186 = UG gathering NE  
 187 = UG gathering NE  
 188 = gathering for EXXON  
 30", 36" SE  
 189 = Valero gathering SE  
 190 = Enserch 7" SE

191 = Enserch 6" SE  
 b) Offshore, number circled  
 1 = Permit number G-3503-  
 10 3/4", NGPL SE  
 2 = Permit number ME-  
 4028-4 1/2", EXXON SE  
 3 = Permit number G-3472-  
 6 5/8", NGPL SE  
 4 = Permit number G-2179-  
 3" SW  
 5 = Permit number G-2357-  
 3", HPL SE  
 6 = Permit number G-2357-  
 3" SE  
 7 = Permit number G-1749-  
 2 1/2", EXXON SE  
 8 = Permit number G-79-  
 178 6", Tenneco SE  
 9 = Permit number G-2179-  
 8", HPL SE  
 10 = Permit number G-1749-  
 2 1/2", EXXON SE  
 11 = Permit number G-697-  
 12", No data SE  
 12 = Permit number G-3425-  
 12", Tenneco SE  
 13 = Permit number G-1757-  
 2" SE  
 14 = Permit number G-1756-  
 2" SE  
 15 = Permit number G-1825-  
 4 1/2", Tejas  
 abandoned SE  
 16 = Permit number G-2357-  
 3", HPL SE  
 17 = Permit number G-2375-  
 3", HPL SE  
 18 = Permit number G-12",  
 Tenneco  
 19 = Permit number G-12",  
 Tenneco  
 3. Nodes (N) of offshore pipelines  
 - oil and gas  
 N1 includes in order SE  
 Permit number G-1017-2  
 1/2", Cities Service  
 Permit number O-1022-2  
 1/2", Cities Service  
 Permit number O-2502-2  
 1/2", O-1023-2 1/2",  
 Cities Service

Permit number 0-3158-2  
     1/2"-2, Cities  
     Service  
 Permit number 0-3953-2  
     1/2", Cities Service  
 Permit number 0-3027-2  
     1/2"-3, Cities  
     Service  
 Permit number 0-3952-2  
     1/2", Cities Service  
 Permit number 0-1106-2  
     1/2", Cities Service  
 Permit number 0-1107-2  
     1/2", Cities Service  
 Permit number 0-3959-2  
     1/2"-2  
 Permit number 0-2647-2  
     1/2"-1, Cities  
     Service  
 Permit number 0-3954-2-2  
     1/2", Cities Service  
 Permit number 0/G-2996-8  
     5/8", ALCOA  
 Permit number 0-3504-2-2  
     1/2", Cities Service  
 Permit number 0-2583-2  
     1/2"  
 Permit number 0-2610-2-2  
     1/2", Cities Service  
 Permit number 0-2 1/2"  
 Permit number 0-1376-3",  
     Royal Oil and Gas  
     Corp.  
 Permit number 0-3280-2"  
     ALCOA  
 Permit number 0-3604-2  
     1/2"-2, Cities  
     Service  
 Permit number 0-1313-4",  
     Wm. Herbert Hunt  
     Trust Estate  
 Permit number 0-1313-3  
     1/2", Wm. Herbert  
     Hunt Trust Estate  
 N2 includes, in order SE  
     Permit number 0/G-1112-2  
         1/2", Phillips  
     Permit number 0-1757-4",  
         Phillips  
     Permit number 0/G-1112-2  
         1/2", Phillips  
     Permit number 0-650-2",  
         Phillips  
     Permit number 0-2050-4",  
         Phillips  
     Permit number 0-1514-2-4"  
         8"  
     Permit number 0-662-2-2",  
         Phillips  
 N3 includes, in order SE  
     Permit number G-1756-2",  
         Phillips G-2116-2",  
         G-1757-2"  
     Permit number 0/G-4036-  
         2", Phillips  
     Permit number 0/G-2", 6",  
         8"  
     Permit number 0-2509-2  
         1/2"-2, Powers  
         Operating Co.  
     Permit number 0/G-620-3",  
         Phillips  
     Permit number 0-1757-2",  
         Phillips  
 N4 includes, in order SE  
     Permit number 0-1758-3",  
         Phillips 3", 3" No  
         data  
     Permit number 0-1758-2"  
     Permit number 0-1758-3"  
 N5 includes, in order SE  
     Permit number 0/G-3497-  
         4", Houston O/M  
     Permit number 0-3664-4",  
         Phillips  
     Permit number 0/G-3496-  
         4", Houston O/M  
     Permit number 0-3609-4",  
         0-3498-4", Houston  
         O/M  
     Permit number 0-3613-4",  
         0-3702-4", Houston  
         O/M  
     Permit number 0-3655-4",  
         Houston O/M  
     Permit number 0-3502-4"  
         Houston O/M  
 4. Refineries  
     a) site  
         No data  
     b) area  
         No data

5. Gas processing plants
    - a) sites
      - 1 = Hewitt & Daugherty Roche Gas Plant SE
      - 2 = Marathon Welder Gas Plant SE
      - 3 = Warren Encinal Gas Plant SE
      - 4 = Superior Portilla Gas Plant SE
      - 5 = AMOCO Larosa Plant SE
      - 6 = ARCO Refugio Gas Plant NE
      - 7 = U.G. Refugio Plant NE
      - 8 = HNG Refugio Plant NE
      - 9 = Mellon Pasture Gas Plant NE
      - 10 = Hewitt & Dougherty Lambert Plant NE
      - 11 = EXXON Tom O'Conner and United Gas Greta NE
      - 12 = U.G. Refugio Plant NE
      - 13 = Lake Pasture Gas Plant NE
      - 14 = Tenneco Pearce Gas Plant SE
    - b) area
 

No data
  6. Compressor, pumping, and metering stations
    - a) sites
      - 1 = Wilman Station SW
      - 2 = E. Mathis Station SW
      - 3 = Christman Station SW
      - 4 = North Pasture Station SW
      - 5 = Sim Station SW
      - 6 = Encino Station SE
      - 7 = Welder Station SE
      - 8 = Taft Station SE
      - 9 = Powers Station NE
      - 10 = Refugio Station NE
      - 11 = Transco Station No. 20 NE
      - 12 = Refugio Station, No. 2 Station NE
      - 13 = New Quintana Station NE
      - 14 = Defense Station SE
      - 15 = Unnamed Station SE
      - 16 = Unnamed Station SE
      - 17 = Unnamed Station SE
      - 18 = Unnamed Station NE
      - 19 = Unnamed Station NW
      - 20 = Mathis Station NE
      - 21 = Unnamed Station NE
    - b) areas
 

No data
  7. Storage facilities
    - a) sites
 

Present
    - b) areas
 

No data
  8. Platforms, offshore
 

No data
  9. Platform fabrication yards
    - a) sites
 

No data
    - b) areas
 

No data
  10. Dock facilities
    - a) sites
 

No data
    - b) areas
 

No data
  11. Terminals
    - a) sites
 

No data
    - b) areas
 

No data
  12. Helicopter service
 

No data
- B. Mineral Resources
1. Oil fields
 

Present
  2. Gas fields
 

Present
  3. Sand, gravel, clay, dirt pits
 

Present
  4. Sulphur wells, mines
 

No data
  5. Geopressed - geothermal area
 

1 = Corpus Christi Fairway, Frio Formation
  6. Groundwater source
 

Present

MAP NARRATIVE DETAIL -- OIL, GAS INFRASTRUCTURE, MINERAL RESOURCES

BROWNSVILLE QUADRANGLE (Brownsville N/2, S/2) including part of Cameron County

A. Oil and Gas Infrastructure

1. Oil pipelines: single dashed line, one pipeline; double-width dashed line, two or more pipelines
  - a) Onshore  
No data
  - b) Offshore, number boxed  
No data
2. Gas pipelines: single line, one pipeline; double-width line, two or more pipelines
  - a) Onshore
    - 1 = CSGP (RGV) 10" NW-NE
    - 2 = CSGP (RGV) 10" NW
    - 3 = Seadrift 16" NE
    - 4 = CSGP (RGV) 6" NE
    - 5 = CSGP (RGV) 6" NE
  - b) Offshore, number circled  
No data
3. Nodes (N) of offshore pipelines - oil and gas  
No data
4. Refineries
  - a) site
    - 1 = Union Carbide  
Brownsville Plant NE
  - b) area  
No data
5. Gas processing plants
  - a) site
    - 1 = Brownsville Gulf NE
  - b) area  
No data
6. Compressor, pumping, and metering stations
  - a) site  
No data

- b) area  
No data
7. Storage facilities
  - a) site  
Present
  - b) area  
No data
8. Platforms, offshore  
No data
9. Platform fabrication yards
  - a) site
    - 1 = Marathon - Le  
Touneau, Port of  
Brownsville NE
  - b) area  
No data
10. Dock facilities
  - a) sites
    - 1 = Oil Dock No. 1 NE
    - 2 = Oil Dock No. 2 NE
    - 3 = Oil Dock No. 4 NE
    - 4 = Oil Dock No. 3 NE
    - 5 = Liquid Cargo Dock NE
  - b) area  
No data
11. Terminals
  - a) site
    - 1 = EXXON Brownsville  
Terminal NE
  - b) area  
No data
12. Helicopter service
  - a) site
    - 1 = Brownsville  
International Airport  
NE
  - b) area  
No data

B. Mineral Resources

- I. Oil fields  
Present

- 2. Gas fields  
Present
- 3. Sand, gravel, clay, dirt pits  
No data
- 4. Sulphur wells, mines  
No data

- 5. Geopressured - geothermal area  
1 = Hidalgo fairway, Frio  
formation
- 6. Groundwater source  
Present

MAP NARRATIVE DETAIL -- OIL, GAS INFRASTRUCTURE, MINERAL RESOURCES

CORPUS CHRISTI QUADRANGLE (Corpus Christi NW) including all or parts of Aransas, Jim Wells, Kleberg, Nueces and San Patricio counties

A. Oil and Gas Infrastructure

1. Oil pipelines: single dashed line, one pipeline; double-width dashed line, two or more pipelines

a) Onshore

- 1 = Mobil 8" NW
- 2 = CSGP 5 1/2" NW
- 3 = CSGP gathering NW
- 4 = CSGP 4" NW
- 5 = gathering for CSGP NW
- 6 = gathering for CSGP 6" NW
- 7 = Sun 2-4" NW
- 8 = Sun NW
- 9 = Sun 10" SW-NW-NE
- 10 = EXXON 12" NE
- 11 = EXXON 2-8", 12", 16" NE
- 12 = EXXON 10", 12", SW-NW-NE
- 13 = Sun 10" NE
- 14 = Sun 6", 8" SW-NW-NE
- 15 = Sun 6" NE
- 16 = Permian 8" NE
- 17 = Champlin 8" NE
- 18 = Sun 6" NW-NE
- 19 = CSGP 8" NW
- 20 = EXXON 2-8" SW-NW-NE
- 21 = CSGP 6" SW
- 22 = Permian 6" SW-NW-NE
- 23 = Permian 3" SW
- 24 = Permian 3" SW
- 25 = Permian 3" SW
- 26 = gathering for Sun 4" SW
- 27 = CSGP gathering 4" SW

- 28 = CSGP gathering 4" SW
- 29 = CSGP gathering SW
- 30 = gathering for Permian 6" SW
- 31 = gathering for Permian 6" SW
- 32 = EXXON 4" SE
- 33 = EXXON 8" SW
- 34 = Permian 4" SW
- 35 = CSGP 3", 4", 5 1/2" NW-SW
- 36 = Sun 4" SW
- 37 = Mobil 8" SW-NW-NE
- 38 = gathering for Sun 4" NW
- 39 = Sun 6" SW-SE-NE
- 40 = EXXON 6" SE-NE
- 41 = EXXON 2-10", 12" NE
- 42 = gathering for Sun 6" SW
- 43 = Sun 6" NE
- 44 = Sun 8" NE
- 45 = Sun 6" NE
- 46 = Permian 4" NE
- 47 = Sun NW
- 48 = gathering for CSGP SW
- 49 = CSGP NW
- 50 = gathering for EXXON 12" SW
- 51 = Sun 6" NW
- 52 = Sun 4" NW
- 53 = Sun gathering NW
- 54 = Sun 3" NW
- 55 = Sun 2" NW
- 56 = Permian 6" NE
- 57 = Sun 6" NE
- 58 = EXXON 6", 10", 16" NE
- 59 = Unnamed SW
- 60 = Unnamed SW
- 61 = Unnamed SW
- 62 = Southern 4" NW
- 63 = FINA 10" NE

- 64 = Sun 6" NW
  - 65 = Sun 6" NW
  - 66 = CSGP 4" SW
  - 67 = CSGP 4" SW
  - 68 = Sun 6" SW
  - 69 = Sun 4 1/2" SW
  - 70 = gathering Sun 4" SW
  - 71 = Sun 4" NW
  - 72 = Permian 8" NE
  - 73 = Tesoro 4" SW
  - 73 = CSGP 8" NE
- b) Offshore, number boxed
- 1 = Permit number O/G-3148-4", McMoRan SE
  - 2 = Permit number 0-1763-2" SE
  - 3 = Permit number 0-779-4"
  - 4 = Permit number 0-2176-6" 1
  - 5 = Permit number ME-4150-8" SE
  - 6 = Permit number O/G-3531-6 5/8" McMoRan SE
  - 7 = Permit number ME-4150-20" SE
  - 8 = Permit number O/G-3496-2-8", Houston O/M NE
  - 9 = Permit number 0-80-085-8", Tenneco NE
  - 10 = Permit number 0-2024-2 7/8" NE, 0-3524-2 1/2", Gulf NE
  - 11 = Permit number 0-2662-2 7/8", ALCOA NE
  - 12 = Permit number 0-2519-2 1/2" Culberson Well Service NE
  - 13 = Permit number 0-3462-2-2 7/8", Mobil NE
  - 14 = Permit number O/G-3848-3 1/2" Tamarack Pet. NE
  - 15 = Permit number O/G-3620-3 1/2", O/G-3787-3 1/2" Tamarack Pet. NE
  - 16 = Permit number 0-1512-2", Phillips NE
  - 17 = Permit number O/G-3940-2 7/8", McMoRan
  - 18 = Permit number 0-4064-4", C. B. Marino SE
  - 19 = Permit number 0-4065-2 1/2"-2, C. B. Marino SE
  - 20 = Permit number 0-4174-2 1/2", Cities Service NE
  - 21 = Permit number 0-1438-2 1/2", Cities Service NE
  - 22 = Permit number 0-3383-2 1/2" NE
  - 23 = Permit number 0-3382-2 1/2", Cities Service NE
  - 24 = Permit number 0-1837-2 1/2"-2, Cities Service NE
  - 25 = Permit number 0-1498-2 1/2", Cities Service NE
  - 26 = Permit number 0-1499-2 1/2", Cities Service, 0-1842-2 1/2", Cities Service NE
  - 27 = Permit number 0-1496-2 1/2" NE
  - 28 = Permit number 0-1845-2 1/2", Cities Service NE
  - 29 = Permit number 0-1844-2 1/2", Cities Service NE
  - 30 = Permit number 0-1838-2 1/2", Cities Service NE
  - 31 = Permit number 0-4175-2 1/2"-2, Cities Service NE
  - 32 = Permit number 0-4066-2 1/2", C. B. Marino NE
  - 33 = Permit number O/G-3250-2 1/2", Shell NE
  - 34 = Permit number O/G-3805-2 1/2", McMoRan NE

- 35 = Permit number 0-2488-2", Shell NE
- 36 = Permit number 0-2648-2 7/8"-2, Valero gathering NE
- 37 = Permit number 0/G-2441-2", Perry R. Bass NE
- 38 = Permit number 0-1068-2 1/2", Gulf SE
- 39 = Permit number 0-2457-4", Shell SE
- 40 = Permit number 0-1027-3", Gulf SE
- 41 = Permit number 0-3945-4", Transco SE
- 42 = Permit number 0-3415-6", Energy SE
- 43 = Permit number 0-2892, Sun SE
- 44 = Permit number 0-1594-2 1/2", Cities Service SE
- 45 = Permit number 0-3279-2 7/8", C. B. Marino NE
- 46 = Permit number 0-3883-3", Cities Service SE
- 47 = Permit number 0-2724-2", Sun NE
- 48 = Permit number 0-2735-2", Sun NE
- 49 = Permit number 0-3182-2 1/2", EXXON SE
- 50 = Permit number 0-1298-2 1/2", EXXON SE
- 51 = Permit number 0-3176-2 1/2", Shell, EXXON, 0-1113-2 1/2", 2", EXXON SE
- 52 = Permit number 0-1906-2", CSGP gathering SE
- 53 = Permit number 0-1295-2 1/2", EXXON SE
- 54 = Permit number 0-1299-2 1/2", EXXON SE
- 55 = Permit number 0-2775-2-2 1/2", EXXON SE
- 56 = Permit number 0-1267-2 1/2", EXXON SE
- 57 = Permit number 0-2450-4 1/2", McMoRan SE
- 58 = Permit number 0-1270-2 1/2", EXXON SE
- 59 = Permit number 0-1271-2 1/2", EXXON, 0-667-4", 0-1268-2 1/2", EXXON SE
- 60 = Permit number 0-1265-2 1/2", EXXON SE
- 61 = Permit number 0-3159-2", EXXON SE
- 62 = Permit number 0/G-4105-8", 6", 3 1/2", EXXON SE
- 63 = Permit number 0/G-3534-3 1/2" McMoRan NE
- 64 = Permit number 0/G-4105-6", 8"; EXXON, 0/G-3973-7 5/8", 0/G-3980-6" SE
- 65 = Permit number 0-3165-2 1/2", EXXON, 0-1255-2 1/2", EXXON, 0-1251-2 1/2", EXXON, 0-3164-2", EXXON SE
- 66 = Permit number 0-3163-2 1/2", EXXON, 0-1683-2", EXXON, 0-1259-2 1/2", EXXON, 0-3161-2 1/2", EXXON, 0-3160-2 1/2", EXXON SE
- 67 = Permit number 0-1666-3-3 1/2", 2", EXXON, 0-3178-2 1/2", 8", EXXON SE
- 68 = Permit number 0-1302-2", EXXON SE
- 69 = Permit number 0-1675-8", Permian NE
- 70 = Permit number 0-1675-8", Permian NE
- 71 = Permit number 0-3870-8", Permian NE
2. Gas pipelines: single line, one pipeline; double-width line, two or more pipelines
- a) Onshore

1 = FGT 6" NE	50 = HPL 8" NW
2 = Texana 4" NE	51 = TET 3" NW
3 = HNG gathering 8" SW	52 = HPL 12" makes loop in Corpus Christi and continues NW-NE
4 = HNG 12" NE	53 = Delhi 7" NE
5 = TET 8" NE	54 = Delhi 4" NW
6 = Valero 14" NE	55 = Unnamed 3" NW
7 = Valero 8" NE	56 = CSGP 4" NW
8 = Seagull NE	57 = TET 4" NE
9 = Unnamed NE	58 = TET 3" NE
10 = Valero 12" SW	59 = gathering for HPL 18" SW
11 = Valero 6" NE	60 = Energy gathering SW
12 = TET 6" NE	61 = gathering for TET 4" SW
13 = Valero 4" NE	62 = Trunkline 20" NW
14 = Valero 4" NE	63 = UG 14" NW
15 = Valero 2 1/2" NE	64 = Valley 8" NW
16 = Valero 2" NE	65 = UG 18" NW-SW
17 = Valero 2 1/2" NE	66 = Valley 6" NW
18 = Valero 4" NE	67 = UG 8" NW
19 = Delhi 4" NW	68 = TMA, Allan Gas Line NW
20 = TGP 4" NW	69 = CSGP 4" NW
21 = HPL 6" NE	70 = Summitt NW
22 = HPL 16" NE	71 = NGPL 20" NW
23 = UG 20" NE	72 = Cities Service 8" NW
24 = TET 3" NE	73 = CSGP 6" NW
25 = UG 16" NW-NE	74 = Nue-wells 4" NW
26 = TET 30" SW-NW-NE	75 = Cities Service 4" NW
27 = Valero 6" NE	76 = CSGP 8" SW
28 = Delhi NE	77 = Southern Natural 20" SW
29 = HPL 16"	78 = HPL 8" SW
30 = HNG 4" NE	79 = HPL 4" SW
31 = HPL 4" NE	80 = Delhi 8" SW
32 = Valero 6" NE	81 = HPL 8" SE
33 = Valero 2 1/2" NE	82 = Haas 4" SE
34 = FGT 12" NW	83 = TET 12" SE-SW
35 = Valero 10" NW-NE	84 = HPL 12" SE
36 = UG NE	85 = Valley 6" SW
37 = HPL 18" NE	86 = EXXON 3" SW
38 = UG 4" NE	87 = EXXON 20", 24" SE
39 = UG 6" NW-NE	88 = Delhi 8" SW-NW
40 = CSGP 20" SW-NW-NE	89 = EXXON 10" SE
41 = FGT 20" NE-NW	90 = HPL 12" SE
42 = Tenneco 30" NW-SW	91 = Coronado
43 = HPL 14" NE	92 = Delhi 6" NW
44 = Coronado NE	93 = Valero 10" SE
45 = TGP 12", 16", 26" NW- SW	
46 = NGPL 26", 36" NW-SW	
47 = Transco 24" NW-SW	
48 = UG 24" NW	
49 = EXXON 30", 36" NW-SW	

94 = Valero 8" SE	137 = FGT 2 1/2" SE
95 = HNG 8" SW	138 = gathering for EXXON 6" NW
96 = HPL 6" SW	139 = Energy gathering SW
97 = FGT 12" SW	140 = Valero gathering NW
98 = HPL 8" SW	141 = Esperanza 6" NE-SW
99 = Celanese 10" SW	142 = Valero 2" NE
100 = NGPL 16" SW	143 = UG 20" NE
101 = TGP 16", 26" SW	144 = Ferguson Crossing 4" SW
102 = HPL 16" SW	145 = Valero gathering NE
103 = EXXON 20" NW-SW	146 = HNG 4" Ne
104 = gathering for TET 30" SW	147 = Valero 14" SE
105 = TGP connector between Tenneco 30" NW and Transco 34" NW	148 = Delhi 6" NW
106 = Valero 16"	149 = FGT 6" SE
107 = Sun 3", 4" NW	150 = CSGP 3" NW
108 = Valero 16" NW	151 = Unnamed 3" NW
109 = gathering for HNG 8" SW	152 = CSGP 2" NW
110 = FGT 4" NE	153 = CSGP 4" NW
111 = gathering for HNG 8" SW	154 = CSGP 3" NW
112 = Texaco 8" SW	155 = EXXON 10" SE
113 = Valero 4" SW-SE	156 = EXXON 12" SE
114 = CB 6" SW-SE-NE	157 = TET 4" SE
115 = Delhi 10" NW-NE	158 = TET 4" SE
116 = Valley 2" NW	159 = HPL 6" SE
117 = Valero 4" NW	160 = HPL 6" SE
118 = Delhi 4" NW-SW	161 = Transco SW
119 = Valero 8" NW-NE	162 = Delhi 4" SW
120 = Transco 8" SW	163 = Transco 4" SW
121 = HPL 6" SW	164 = Valero 4" SW
122 = HPL 12" SW	165 = Valley 8" SW
123 = Sun 4" NW-SW	166 = Energy gathering SW
124 = UG 3" SW	167 = HNG gathering SW
125 = Delhi 3" SW	168 = Energy gathering SW
126 = EXXON 6" SW	169 = HPL 8" SW
127 = EXXON 6" NW	170 = Cities Service 8" NW
128 = Coronado 2" NW	171 = Cities Service NW
129 = UG gathering lines 3" SW	172 = TGP 12" SW
130 = FGT 6" SE	173 = Cities Service SW
131 = Cities Service 4", 8" NE	174 = Delhi 4" SW
132 = TET 4" NE	175 = TGP 12", 16", 24" SW- NW
133 = HPL 18" NE	176 = NGPL 30" SW
134 = Cities Service 4" NW	177 = TET 3" NW
135 = Cities Service 4" NW	178 = CSGP 6" NW
136 = Valero 6" SE	179 = UG gathering NW
	180 = UG gathering NW
	181 = UG gathering NW
	182 = UG gathering NW
	183 = UG gathering NW

- 184 = Unnamed 4" NW
  - 185 = Unnamed 4" NW
  - 186 = Unnamed 4" NW
  - 187 = Unnamed 4" NW
  - 188 = Delhi 4" NW
  - 189 = UG gathering NE
  - 190 = Valley 6" NE
  - 191 = UG 24" NE
  - 192 = gathering for TET 30"  
NE
  - 193 = UG 20" NE
  - 194 = Valero 4" SE
  - 195 = TET 6" NE
  - 196 = HPL 6" NE
  - 197 = FGT 6" SE
  - 198 = FGT 6" SE
  - 199 = HPL 12" NE
- b) Offshore, number circled
- 1 = Permit number G-902-  
3"-1, Carre SE
  - 2 = Permit number G-1965-  
3 1/2", FINA SE
  - 3 = Permit number G-2192-  
8", Trunkline SE
  - 4 = Permit number G-79-  
311-4 1/2", NGPL SE
  - 5 = Permit number G-1697-  
4", TET SE
  - 6 = Permit number G-79-  
133-6", EXXON SE
  - 7 = Permit number G-1879-  
4 1/2", EXXON SE
  - 8 = Permit number G-2217-  
3", EXXON
  - 9 = Permit number G-4131-  
6", FGT SE
  - 10 = Permit number G-2513-  
6", FGT SE
  - 11 = Permit number G-2561-  
5.548", Reynolds SE
  - 12 = Permit number G-1803-  
6", FGT SE
  - 13 = Permit number G-1807-  
8", FGT SE
  - 14 = Permit number G-2791-  
2 1/2" NE
  - 15 = Permit number G-3341-  
10 3/4", Reynolds SE-  
NE
  - 16 = Permit number G-1522-  
12 3/4", FGT NE
  - 17 = Permit number G-80-  
084-4" & 10", HPL NE
  - 18 = Permit number G-3886-  
6", FGT NE
  - 19 = Permit number G-2895-  
12 3/4", HPL G-1461-2  
1/2"-2, NE-SE
  - 20 = Permit number G-4045-  
4 1/2" NE
  - 21 = Permit number G-4031-  
4", FGT NE
  - 22 = Permit number G-3545-  
12", TET 12" SE
  - 23 = Permit number gather-  
ing for Haas SE
  - 24 = Permit number gather-  
ing for Haas SE
  - 25 = Permit number G-3414-  
6, NE
  - 26 = Permit number G-2893-  
6 5/8", HPL SE
  - 27 = Permit number G-2885-  
6", EXXON SE
  - 28 = Permit number G-2058-  
12", Tenngas NE-SE
  - 29 = Permit number G-08-  
084-16" & 4", HPL NE
  - 30 = Permit number G-1541-  
12", UG NE
  - 31 = Permit number G-2349-  
16", UG NE
  - 32 = Permit number G-3876-  
12", UG NE-SE
  - 33 = Permit number G-2078-  
6", UG NE
  - 34 = Permit number G-1952-  
10", UG NE
  - 35 = Permit number G-2359-  
10", UG NE
  - 36 = Permit number G-1414-  
12", G-3371-12",  
Tenngas NE
  - 37 = Permit number G-3641-  
2 7/8", Jake L. Hamon  
NE

- 38 = Permit number G-3493-  
2 7/8", Jake L. Hamon  
NE
- 39 = Permit number G-4176-  
2 1/2", Cities  
Service NE
- 40 = Permit number G-1371-  
3 1/2", ARCO NE
- 41 = Permit number G-740-  
2 1/2", Cities  
Service NE
- 42 = Permit number G-739-  
2 1/2", Cities  
Service NE, G-1841-2  
1/2", Cities Service  
NE
- 43 = Permit number G-2281-  
2 1/2", Cities  
Service NE
- 44 = Permit number G-2463-  
2 1/4", Cities  
Service NE
- 45 = Permit number G-1840-  
2 1/2", Cities  
Service G-738-2 1/2",  
Cities Service NE
- 46 = Permit number G-3292-  
3", Jake L. Hamon NE
- 47 = Permit number G-3293-  
2 1/2", Jake L. Hamon  
NE
- 48 = Permit number G-1383-  
4 1/2" NE
- 49 = Permit number G-1321-  
2 1/2" NE
- 50 = Permit number G-2909-  
4 1/2", HPL SE
- 51 = Permit number G-2457-  
3" SE
- 52 = Permit number G-3179-  
2 1/2", EXXON SE
- 53 = Permit number G-3181-  
2", EXXON SE
- 54 = Permit number G-3781-  
2", EXXON SE
- 55 = Permit number G-3780-  
2 1/2", Dow SE
- 56 = Permit number G-2283-  
2-2", EXXON SE
- 57 = Permit number G-3203-  
2 1/2", EXXON SE
- 58 = Permit number G-2839-  
2 1/2", G-2840-2  
1/2", EXXON SE
- 59 = Permit number G-3414-  
6", Energy SE
- 60 = Permit number G-3152-  
2 1/2", EXXON SE
- 61 = Permit number G-80-  
084-4", 10", HPL SE
- 62 = Permit number G-2563-  
6 5/8", McMoRan NE
- 63 = Permit number G-3596-  
3 1/2", McMoRan NE
- 64 = Permit number G-2347-  
2-3", McMoRan NE
- 65 = Permit number G-2880-  
8", Southwestern Bell  
Telephone NE
- 66 = Permit number G-1116-  
2" NE
- 67 = Permit number G-3564-  
12", HPL NE
- 68 = Permit number G-896-  
6" NE, G-2440-6" NE
- 69 = Permit number G-3882-  
2 1/2", H. E. Hunt  
Estate NE
- 70 = Permit number G-1449-  
2 7/8"-2, Scurlock NE
- 71 = Permit number G-1562-  
12", Valero gathering  
NE
- 72 = Permit number G-3611-  
3 1/2", Tamarack Pet.  
NE
- 73 = Permit number G-3676-  
3 1/2", Tamarack Pet.  
NE
- 74 = Permit number G-1563-  
12" NE
- 75 = Permit number G-3342-  
2", Mobil NE
- 76 = Permit number G-1477-  
12 1/2", CSGP  
gathering NE
- 77 = Permit number G-1565-  
12", Valero gathering  
NE
- 78 = Permit number G-2164-  
4", Valero gathering  
NE

- 79 = Permit number G-79-166-8", Valero gathering NE  
 80 = Permit number G-1967-2 7/8", King NE  
 81 = Permit number G-4032-4", Davis NE  
 82 = Permit number G-1968-2 7/8", King NE  
 83 = Permit number G-1966-2 7/8", King NE  
 84 = Permit number G-3706-2 1/2", Getty NE  
 85 = Permit number G-3533-6 5/8", McMoran SE  
 86 = Permit number G-4005-4 1/2", 2 3/8", Texaco SE  
 87 = Permit number G-2560-6", Reynolds SE  
 88 = Permit number G-3946-8", UG SE  
 89 = Permit number G-1630-8", UG SE  
 90 = Permit number G-1836-2-4", Shell G-4109-2-6", Gulf SE  
 91 = Permit number G-3875-8" NE
3. Nodes (N) of offshore pipelines - oil and gas  
 Labeled clockwise from north by permit number  
 Node 1 includes, in order NE  
 0-3861-2 1/2"  
 0-3528-2-2 1/2"  
 0-3790-2-2 1/2"  
 0-3530-2-2 1/2"  
 0-3527-2-2 1/2"  
 0-3526-2-2 1/2"  
 0-3524-3-2 1/2"  
 0-3525-2-2 1/2"  
 0-4063-2-2 1/2", C. B. Marino  
 G-2188-2"  
 G-2189-2"  
 G-2190-2 1/2"  
 0-1442-2 1/2"  
 0-4062-2 1/2"
- 0-4061-2-2 1/2", C. B. Marino  
 0-1437-3-2 1/2"  
 Node 2 includes, in order NE  
 0-1495-2-2 1/2"  
 0-1461-2-2 1/2"  
 0/G-3449-2-2 1/2"  
 0-2946-4 1/2"  
 G-2168-2 1/2"  
 G-1743-2 1/2"  
 G-3967-2 1/2"  
 G-3385-2 1/2"  
 G-3391-2-2 1/2"  
 0-3391-2-2 1/2"
4. Refineries  
 a) sites  
 1 = Champlin Petroleum Co. Refinery NE  
 2 = Union Oil Refinery NE  
 3 = Tipperary Refinery NE  
 4 = Sun Refinery NW  
 5 = Southwestern Oil & Refining Corp. NE  
 6 = Quintana-Howell Joint Venture Refinery NE  
 7 = Coastal States Crude Gathering Co.  
 8 = Suntide Refining Co. NW  
 9 = Saber Refinery NW  
 b) area  
 No data
5. Gas processing plants  
 a) sites  
 1 = Tenneco Oil Dean Gas Plant SW  
 2 = United Gas Aqua Dulce Gas Plant SW  
 3 = Cities Service Robstown Gas Plant SW  
 4 = HNG Robstown Gas Plant (& pumping station) SW  
 5 = Champlin Petroleum Gulf Plains Gas Plant SW  
 6 = Texaco Odem Gas Plant  
 7 = Sun Luby Gas Plant SW

- 8 = AMOCO Luby Gas Plant SW
  - 9 = ARCO Taft Gas Plant NE
  - 10 = HNG Gregory Gas Plant NE
  - 11 = Cities Service Corpus Bay Gas Plant NE
  - 12 = Valero gathering Corpus Christi Gas Plant NE
  - 13 = Sun Oil Redfish Bay Gas Plant NE
  - 14 = EXXON Flour Bluff Gas Plant SE
  - 15 = Celanese Bishop Plant SW
  - 16 = Valero Shoup Plant NE
  - 17 = Mitchell Energy Corpus Christi SE
- b) areas
- G1 = Natural Gas P/L Company NE
  - G2 = El Paso Natural Gas Co. NE
6. Compressor, pumping, and metering stations
- a) sites
- 1 = CSGP Alfred Station NW
  - 2 = Richard King Station NW
  - 3 = Reynet Compressor Station NW
  - 4 = Banquete Station NW
  - 5 = Aqua Dulce Station SW
  - 6 = McCoy Station SW
  - 7 = Unnamed Station SW
  - 8 = Champlin Wardner Compressor Station SW
  - 9 = Sullivan Trunk Station SW
  - 10 = NGPL line Station 34 NW
  - 11 = Riverside Station NW
  - 12 = Mobil Compressor Station No. 1 NW
  - 13 = Rektorik Station NW
  - 14 = Robstown Station NW
  - 15 = Bryant Station SW
  - 16 = FGT line Station No. 2 SW
  - 17 = Minnie Bock Station SW
  - 18 = HPL Metering Station SW
  - 19 = Clara Driscoll Station SW
  - 20 = Houser Station SW
  - 21 = Arnold David Compressor Station SW
  - 22 = Viola Station NW
  - 23 = Hunter Station NW
  - 24 = Texas Saxet Station NW
  - 25 = Knight Station SW
  - 26 = Geistman Station SW
  - 27 = Midway Station (1) NE
  - 28 = Midway Station (2) NE
  - 29 = Estes Cove Station NE
  - 30 = Meter Station, Nueces Co. NE
  - 31 = Summitt Gas Meter NW
  - 32 = Wade City Oil Field Station NW
  - 33 = Stratton Station NW
  - 34 = EXXON P/L Co. Station NE
  - 35 = Unnamed Station NW
  - 36 = Unnamed Station SW
  - 37 = Unnamed Station NW
  - 38 = Unnamed Station NW
  - 39 = Unnamed Station NW
  - 40 = Unnamed Station NW
  - 41 = Unnamed Station SW
  - 42 = Unnamed Station SW
  - 43 = Unnamed Station SW
  - 44 = Unnamed Station NW
  - 45 = Unnamed Station NW
  - 46 = Unnamed Station NE
  - 47 = Unnamed Station NE
  - 48 = Unnamed Station SW
  - 49 = Unnamed Station NW
  - 50 = Unnamed Station SW
- b) area  
No data
7. Storage facilities
- a) site  
Present

- b) area
  - S1 = C.P.&L. Storage Facility SE
- 8. Platforms, offshore
  - Present
- 9. Platform fabrication yards
  - a) site
    - 1 = Baker Marine Corp., Ingleside NE
  - b) area
    - PI = Brown and Root, Ingleside/Aransas Pass NE
- 10. Dock facilities
  - a) sites
    - 1 = Sun Terminal Docks NE
    - 2 = Unnamed Oil Dock NE
    - 3 = Oil dock 8&9 NE
    - 4 = Oil dock 14 NE
    - 5 = Oil dock No. 6 NE
    - 6 = Coastal States Oil docks NE
    - 7 = Champlin Oil NE
    - 8 = South West Oil Docks NE
    - 9 = Oil dock No. 5
    - 10 = Oil dock 12
  - b) area
    - No data
- 11. Terminals
  - a) sites
    - 1 = Sun Ingleson Terminal NE
    - 2 = Sun Terminal NE
    - 3 = Sun Terminal NE
    - 4 = Sigmor Terminal NE
    - 5 = Permian Terminal NE
    - 6 = Mobil Terminal NE
    - 7 = Coastal States Terminal NE
    - 8 = Conoco Terminal NE
    - 9 = FINA NE
    - 10 = EXXON NE
    - 11 = Baker Marine Corp.
  - b) areas
    - T1 = Harbor Island Terminal
    - T2 = Corpus Christi Terminal
    - T3 = San Patricio Terminal
- 12. Helicopter service
  - a) sites
    - 1 = Corpus Christi NE
    - 2 = Corpus Christi - Memorial Medical Center NE
    - 3 = Port Aransas - Mustang Island SE
    - 4 = Ingleside Northshore Dock NE
  - b) area
    - No data
- B. Mineral Resources
  - 1. Oil fields
    - Present
  - 2. Gas fields
    - Present
  - 3. Sand, gravel, clay, dirt pits
    - Present
  - 4. Sulphur wells, mines
    - No data
  - 5. Geopressed - geothermal area
    - 1 = Corpus Christi Fairway - Frio Formation NE
  - 6. Groundwater source
    - Present

MAP NARRATIVE DETAIL -- OIL, GAS INFRASTRUCTURE, MINERAL RESOURCES

EL CAMPO QUADRANGLE (Seguin SE)  
including parts of Colorado, Dewitt,  
Fort Bend, Jackson, Lavaca, Matagorda,  
Victoria, and Wharton counties

A. Oil and Gas Infrastructure

1. Oil pipelines: single dashed  
line, one pipeline; double-  
width dashed line, two or more  
pipelines

a) Onshore

- 1 = Tesoro 4" SW-SE
- 2 = Texas P/L 4" SE
- 3 = Texas P/L 6" SE
- 4 = Texas P/L 6" SE
- 5 = Scurlock 3" SE
- 6 = Harrison 2 1/2" SE
- 7 = Mobil 8" SW
- 8 = Mobil 6" SW
- 9 = Scurlock 4" SE
- 10 = EXXON 4" SE
- 11 = Texas P/L 8" SE
- 12 = Mobil 8", 10" NE-SE-  
SW
- 13 = Scurlock 3" SE
- 14 = EXXON 16" SE

b) Offshore, number boxed  
Not applicable

2. Gas pipelines: single line,  
one pipeline; double-width  
line, two or more pipelines

a) Onshore

- 1 = TGP 4" NE
- 2 = Mobil 14" SE-NE
- 3 = TET 16" NE
- 4 = Seagull NE
- 5 = Ka-hugh NE
- 6 = TGP 4" NE
- 7 = NGPL 12" NE
- 8 = TGP 16" NE
- 9 = UG 4" SE
- 10 = HPL 12"

- 11 = Enserch 16" SE-NE
- 12 = HPL 12" NE
- 13 = Enserch 4" SE
- 14 = Delhi 4" NE
- 15 = NGPL 2-30" NE
- 16 = Transco 30" NE
- 17 = Valley 3" NE
- 18 = meter station 2" NE
- 19 = HPL 6" NE
- 20 = HPL 4" NE
- 21 = Enserch 4" NE
- 22 = HPL 4" NE
- 23 = HPL 12" NE
- 24 = HPL 24" SW-SE-NE
- 25 = NGPL 24" NE
- 26 = UTT 18", 30", UG 30",  
Enserch 16" SE
- 27 = UTT 18", 30" SE-NE
- 28 = UG 30" SE-NE
- 29 = UTT 6", 8" NE
- 30 = Esperaza 3" NE-SE
- 31 = Tejas 3" SE
- 32 = UG 4" NE-SE
- 33 = HPL 4" NE
- 34 = Tejas 2" SE
- 35 = Texaco SE
- 36 = EXXON 10" SE
- 37 = UTT 6", 8" SE
- 38 = Dow 4" SE
- 39 = Dow 14" SE
- 40 = Dow 4" SE
- 41 = HPL 16" SE
- 42 = Delhi 4" SE
- 43 = Texaco SE
- 44 = FGT 4" SE
- 45 = UTT 6" SE
- 46 = UTT 10", 16" SE
- 47 = EXXON 2 3/8" SE
- 48 = Transco 4", 30" NE-SE
- 49 = Intrastate Gathering  
2" SE

- 50 = Intrastate Gathering  
3" SE
  - 51 = Transco 14" SE
  - 52 = Intrastate Gathering  
2" SE
  - 53 = Intrastate Gathering  
2" SE
  - 54 = Intrastate Gathering  
4" SE
  - 55 = Intrastate Gathering  
3" SE-NE
  - 56 = Intrastate Gathering  
6" SE
  - 57 = FGT 3" SE-NE
  - 58 = Dow 12" SE-NE
  - 59 = Dow 4" SE
  - 60 = Delhi 4" SE
  - 61 = Delhi 6" NE
  - 62 = TGP 6" SE
  - 63 = TGP 8" NE-SE
  - 64 = TGP 4" SE
  - 65 = Delhi 6" NE
  - 66 = Delhi gathering NE
  - 67 = Intrastate Gathering  
4" SE
  - 68 = TGP 6" SE
  - 69 = Delhi SE
  - 70 = Jones Creek 2" SE
  - 71 = Enserch 4" SE
  - 72 = Paloma 2" SE
  - 73 = Holly SE
  - 74 = Enserch 3" SE
  - 75 = Enserch 2" SE
  - 76 = NGPL gathering SE
  - 77 = Delhi gathering SE
  - 78 = HPL 4" SE
  - 79 = HPL 2" SE
  - 80 = NGPL 26", 30" SW-SE-  
NE
  - 81 = Transco 26" SW-SE-NE
  - 82 = Gulf Tide 3" SE
  - 83 = Gulf Tide 3" SE
  - 84 = Delhi 4" SE
  - 85 = Delhi 6" SE
  - 86 = TGP 24", 2-30" SW-SE-  
NE
  - 87 = Transco 24" SE-NE
  - 88 = Delhi 4" SE
  - 89 = Delhi 6" SE
  - 90 = Delhi 4 1/2" SE
  - 91 = Delhi 6" SE-NE
  - 92 = General Enterprises  
NE
  - 93 = Tejas 3" SE-NE
  - 94 = HDC SE-NE
  - 95 = Delhi NE
  - 96 = Tubb/Stephenson 2"  
SE-NE
  - 97 = Delhi 8" SE
  - 98 = Trunkline 24", 26" NE
  - 99 = HPL 18" NE
  - 100 = TET 24" SE-SW
  - 101 = Enserch 6" SW
  - 102 = HPL 4" SW
  - 103 = Enserch 6" SE-SW
  - 104 = Enserch 4" SE
  - 105 = Enserch feeder 2" SE
  - 106 = Enserch feeder 2" SE
  - 107 = Delhi 4" SE
  - 108 = HPL 18" SW-SE
  - 109 = Delhi 4" SW
  - 110 = TGP 10" SW
  - 111 = Transco 30" SE
  - 112 = Dow 4" SE
  - 113 = HPL 4" SE
  - 114 = Tejas 4" SE
  - 115 = Tejas 2" SE
  - 116 = FGT 20" SE
  - 117 = EXXON 30", 36" SE
  - 118 = Valero 12" SE
  - 119 = UTT 6" SE
  - 120 = multiple Marathon  
lines SE
  - 121 = HPL 4" SE
  - 122 = HPL 12" SW
- b) Offshore, number circled  
No data
  - 3. Nodes (N) of offshore pipelines  
- oil and gas  
Not applicable
  - 4. Refineries
    - a) site  
No data
    - b) area  
No data
  - 5. Gas processing plants
    - a) sites
      - 1 = Marathon Markham Gas  
Plant SE

- 2 = Getty Bay City Plant  
SE
- b) area  
No data
- 6. Compressor, pumping, and  
metering stations
  - a) sites
    - 1 = Ganado Station SW
    - 2 = HPL Meter Station SW
    - 3 = Hillji Station SE
    - 4 = Louise Station SE
    - 5 = HPL Meter Station SE
    - 6 = HPL Meter Station SE
    - 7 = Meter Station NE
    - 8 = EXXON Magnet Withers  
Station SE
    - 9 = Unnamed Station SE
    - 10 = Unnamed Station SE
    - 11 = Unnamed Station SE
    - 12 = Unnamed Station SE
    - 13 = Unnamed Station NE
    - 14 = Unnamed Station NE
    - 15 = Unnamed Station NE
  - b) area  
No data
- 7. Storage facilities
  - a) site  
Present
  - b) area  
No data
- 8. Platforms, offshore  
Not applicable
- 9. Platform fabrication yards
  - a) site  
Not applicable

- b) area  
Not applicable
- 10. Dock facilities
  - a) site  
No data
  - b) area  
No data
- 11. Terminals
  - a) site  
No data
  - b) area  
No data
- 12. Helicopter service
  - a) site
    - 1 = Freeport, Police No.  
1 SE
  - b) area  
No data
- B. Mineral Resources
  - 1. Oil fields  
Present
  - 2. Gas fields  
Present
  - 3. Sand, gravel, clay, dirt pits  
Present
  - 4. Sulphur wells, mines  
No data
  - 5. Geopressured - geothermal area  
No data
  - 6. Groundwater source  
Present

MAP NARRATIVE DETAIL -- OIL, GAS INFRASTRUCTURE, MINERAL RESOURCES

FREEMPORT QUADRANGLE (Bay City NW)  
including parts of Brazoria and  
Matagorda counties

A. Oil and Gas Infrastructure

1. Oil pipelines: single dashed  
line, one pipeline; double-  
width dashed line, two or more  
pipelines

a) Onshore

- 1 = Seaway 30" NE
- 2 = Seaway 30" NE
- 3 = Seaway 30" NE
- 4 = Seaway 30" NE
- 5 = Scurlock 2 1/2" NW
- 6 = Scurlock 2 1/2" SW
- 7 = Texas P/L 6" NW
- 8 = Texas P/L 8" NW

b) Offshore, number boxed

- 1 = Permit number 0-2597-  
6", No name SW
- 2 = Permit number 0/G-  
3483-4", No name NE
- 3 = Permit number 0-2565-  
8 5/8", Mobil NE
- 4 = Permit number 0-2605-  
8 5/8", Mobil NE
- 5 = Permit number 0/G-  
3000-20"-1, Blue  
Dolphine NE

2. Gas pipelines: single line,  
one pipeline; double-width  
line, two or more pipelines

a) Onshore

- 1 = Dow 12" NW
- 2 = Dow 16" NW
- 3 = HPL 8" NE
- 4 = Blue Dolphin 20" NE
- 5 = HPL 3" NE
- 6 = Dow 8" NE
- 7 = Dow 24" NE
- 8 = HPL 12" NE-NW

- 9 = HPL 8" NW
- 10 = HPL 10" NE
- 11 = HPL 6" NE
- 12 = HPL 8" NE
- 13 = Phillips 10" NW
- 14 = Dow 14" NW-NE
- 15 = Dow 8", 16" NW-NE
- 16 = Dow 16" NW-NE
- 17 = Dow 8" NE
- 18 = TGP 12" NW
- 19 = UTT 3-20"; Dow 16";  
HPL 6"
- 20 = UTT 20" NE
- 21 = J. S. Michael 4" NW
- 22 = Townsend 4" NW
- 23 = HPL 12" NW
- 24 = HNG 12" NW
- 25 = HPL 8" SW
- 26 = Valero 16" NW
- 27 = HPL SW
- 28 = Transco 30" NW-SW
- 29 = HNG 8" NW
- 30 = Valero 8" SW
- 31 = TET 30" NW
- 32 = FGT 8" NW-SW
- 33 = HNG 4" NW
- 34 = HPL 4" NW
- 35 = Dow 16" NW
- 36 = TGP 16" NW
- 37 = Dow 12" NW
- 38 = HNG 3" NW
- 39 = Valero 12" NW
- 40 = TGP 12" NW
- 41 = NGPL 12" NW
- 42 = Valero 20" NW
- 43 = Dow 12" NW
- 44 = Dow 4" NW
- 45 = Valero 6", 8" NW
- 46 = FGT 3" NW
- 47 = HNG 8" NW
- 48 = Dow 6" NW
- 49 = Dow 8" NE

- 50 = UTT 15", 18", 20" NE
  - 51 = Dow 16" NE
  - 52 = HPL 6" NE
  - 53 = Dow 8" NW-NE
  - 54 = Connection between  
Texcol & Dow lines NE
  - 55 = Blue Dolphin 20" NE
  - 56 = UTT 20" NE
  - 57 = Valero 14" NW
  - 58 = TGP 10" NW
  - 59 = TGP 8" NW
  - 60 = TGP 5" NW
- b) Offshore, number circled
- 1 = Permit number G-3673-12", Valero gathering SW
  - 2 = Permit number G-80-091-6", Valero gathering SW
  - 3 = Permit number G-2587-5 5/8"-2, ties to HPL SW
  - 4 = Permit number G-2588-5 5/8"-2, ties to HPL SW
  - 5 = Permit number G-2114-30", ties to HNG SW
  - 6 = Permit number G-3225-8 5/8", Texcol SW
  - 7 = Permit number G-3305-4 1/2", Texcol SW
  - 8 = Permit number G-4170-8", Dow SE-NE
  - 9 = Permit number G-3249-3", 8", HPL NE
  - 10 = Permit number G-79-243-2 7/8", HPL feeder, NE
  - 11 = Permit number G-79-243-2 7/8", HPL feeder, NE
  - 12 = Permit number G-243-2 7/8", HPL feeder, NE
  - 13 = Permit number G-79-243-2 7/8", HPL feeder, NE
  - 14 = Permit number G-79-244, 3-4 1/2", 3 1/2", HPL feeder, NE
  - 15 = Permit number G-3209-8", HPL NE
  - 16 = Permit number G-2857-8 5/8", Texcol NW-SW
  - 17 = Permit number No number, Valero 16" SW
  - 18 = Permit number No number, Valero 10" SW
  - 19 = Permit number No number, Valero 8" SW
  - 20 = Permit number No number, Valero 8" SW
3. Nodes (N) of offshore pipelines - oil and gas
    - None
  4. Refineries
    - a) site
      - No data
    - b) area
      - No data
  5. Gas processing plants
    - a) sites
      - 1 = Lovaca Bay City Gas Plant NW
      - 2 = Shell Gas Plant NE
    - b) area
      - No data
  6. Compressor, pumping, and metering stations
    - a) sites
      - 1 = Hannan Station NW
      - 2 = Markham Station NE
      - 3 = Texas Gulf Sulphur SW
    - b) area
      - No data
  7. Storage facilities
    - a) site
      - Present
    - b) area
      - No data
  8. Platforms, offshore
    - Present
  9. Platform fabrication yards
    - a) site
      - 1 = Fish Engineering and Construction, Inc. NE
    - b) area
      - No data
  10. Dock facilities
    - a) site
      - 1 = Phillips Docks NE
    - b) area
      - No data

- 11. Terminals
    - a) site
      - T1 = Shell Terminal SW
    - b) area
      - No data
  - 12. Helicopter service
    - a) sites
      - 1 = Freeport, National Bank NE
      - 2 = Freeport, Dresser Magcobur NE
    - b) area
      - No data
- B. Mineral Resources
- 1. Oil fields
    - Present
  - 2. Gas fields
    - Present
- 3. Sand, gravel, clay, dirt pits
    - Present
  - 4. Sulphur wells, mines
    - 1 = Clemens No. 1 NW
    - 2 = Clemens No. 2 NW
    - 3 = Bryan Mound
  - 5. Geopressured - geothermal areas
    - 1 = Matagorda Fairway 1, Frio Formation
    - 2 = Matagorda Fairway 2, Frio Formation
    - 3 = Brazoria Fairway, Frio Formation
  - 6. Groundwater source
    - Present

MAP NARRATIVE DETAIL -- OIL, GAS INFRASTRUCTURE, MINERAL RESOURCES

GALVESTON QUADRANGLE (Houston SE)  
including parts of Galveston County

A. Oil and Gas Infrastructure

1. Oil pipelines: single dashed line, one pipeline; double-width dashed line, two or more pipelines

a) Onshore

- 1 = EXXON 4" NW
- 2 = AMOCO NW
- 3 = Houston O/M 4" NW
- 4 = AMOCO 26" NW
- 5 = AMOCO 2-8", 12" NW
- 6 = AMOCO 12" NW
- 7 = ARCO 36" NW
- 8 = Texas P/L 8" NW
- 9 = EXXON 2-8" NW
- 10 = ARCO 2-42" NW

b) Offshore, number boxed

- 1 = Permit number O/G-1210-2 1/2", John W. Mecom NW
- 2 = Permit number O/G/W-3804-14", AMOCO NW
- 3 = Permit number O/G-3272-6 5/8", Houston O/M NW
- 4 = Permit number O/G-3273-6 5/8", Houston O/M NW
- 5 = Permit number O/G-3278-6 5/8", Texas Electric NW
- 6 = Permit number O/G-3274-6 5/8", Houston O/M NW
- 7 = Permit number O/G-3391-3 1/2", Houston O/M NW
- 8 = Permit number O/G-7463-6 5/8", Houston O/M NW

9 = Permit number O-3095-2 7/8" NW

10 = Permit number No number, Mitchell 3" NW

11 = Permit number O/G-4013-4 1/2" NW

12 = Permit number O/G-3759-2-4" NW

13 = Permit number O/G-3287-12", Houston O/M NW

14 = Permit number O-79-313-10" NW

15 = Permit number O-2612-12" NW

16 = Permit number O-3089-6 5/8", Houston O/M SW

17 = Permit number O-2465-4" NW

18 = Permit number O-2461-2 3/8" NW

19 = Permit number O/G-3413-8", 2 7/8", Houston O/M NW

20 = Permit number O/G/W-3859-3-3", 2", Mitchell NW

2. Gas pipelines: single line, one pipeline; double-width line, two or more pipelines

a) Onshore

- 1 = EXXON 10" NW
- 2 = UTT 24" NW
- 3 = FGT 22" NW
- 4 = EXXON 3" NW
- 5 = HPL 24" NW
- 6 = UTP 6" NE
- 7 = Tejas 6" NW
- 8 = AMOCO 18" NW
- 9 = Black Marlin 16" NW-NE

- 10 = HPL 14" NW
- 11 = Seagull NW
- 12 = HPL 18" NW
- 13 = HPL 12" NW
- 14 = Valero 10" NW
- 15 = AMOCO 16" NW
- 16 = Valero 16" NW
- 17 = HPL 6" SW
- 18 = Black Marlin 16" NW  
offshore
- 19 = AMOCO 12" NW
- 20 = HPL 8" NW-SW
- 21 = Seagull 6" SW
- 22 = Valero gathering NW
- 23 = AMOCO 20" NW
- 24 = HPL 16" NW
- 25 = Big Three NW
- 26 = Big Three NW
- 27 = EXXON 24" NW
- 28 = FGT 22" NW

b) Offshore, number circled

- 1 = Permit number G-2040-4", Clinton NW
- 2 = Permit number G-1220-2 1/2", Pan American NW
- 3 = Permit number HPL 8" NW
- 4 = Permit number G/ME-3804 14" Seagull SW
- 5 = Permit number G-79-200-10", Shell NW
- 6 = Permit number G-79-317-10 3/4", No data NW
- 7 = Permit number G-79-175-16", Houston O/M NW
- 8 = Permit number G-3667-8 5/8", Houston O/M NE-NW
- 9 = Permit number G-3252-6 5/8", Tejas SW
- 10 = Permit number G-3715-3 1/2", Mitchell NW
- 11 = Permit number G-2470-8", NGPL NW
- 12 = Permit number G-80-023-10 3/4", No name NW

- 13 = Permit number G-2373-4", Houston O/M NW
- 14 = Permit number No number, Black Marlin NW
- 15 = Permit number G-80-125-18", AMOCO NW
- 16 = Permit number No number 24", FGT NW
- 17 = Permit number G-2612-12", Seagull NW
- 18 = Permit number No number 16", Black Marlin NW-NE
- 19 = Permit number No number, HPL 18" NW

3. Nodes (N) of offshore pipelines - oil and gas  
Labeled clockwise from north by permit number

N1 includes, in order NW

- Permit number O/G-3328-3 1/2"
- Permit number O/G-3464-3 1/2"
- Permit number O/G-3281-3 1/2", Houston O/M
- Permit number O/G-3398-3 1/2"
- Permit number O/G-3468-3"
- Permit number O/G-3330-2 1/2"

N2 includes, in order NW

- Permit number O-3506-6"
- Permit number O/G-3275-4 1/2"
- Permit number O/G-3395-4 1/2"
- Permit number O/G-3467-4 1/2"
- Permit number O/G-3515-4 1/2"
- Permit number O/G-3948
- Permit number O/G-3762-4"
- Permit number O-3763-4"
- Permit number O-3693-3"
- Permit number O/G-3468-3 1/2"
- Permit number O/G-3393-3 1/2"

Permit number O/G-3421-3  
 1/2"  
 Permit number O/G-3473-6  
 5/8"  
 Permit number G-3397-3  
 1/2"  
 Permit number O/G-3392-3  
 1/2", Houston O/M  
 Permit number O/G-3394-4  
 1/2" Houston O/M  
 Permit number O/G-3396-3  
 1/2"

N3 includes, in order NW

Permit number O-3703-4  
 1/2"  
 Permit number O/G-4012-6", 10"  
 Permit number O/G-4011-3  
 1/2"  
 Permit number O/G-3989-3  
 1/2"  
 Permit number O/G-4024-3  
 1/2"  
 Permit number O/G-4015-3  
 3 1/2"  
 Permit number O/G-4014-2-4"  
 Permit number O/G-3880-2  
 1/2"  
 Permit number O/G-3329-6  
 5/8"  
 Permit number O/G-3402-4"  
 Permit number O/G-2371-6"  
 Permit number O/G-3465-2  
 1/2"  
 Permit number O/G-3599-2  
 1/2"  
 Permit number O/G-3516-2  
 1/2"  
 Permit number O/G-2370-3-2"  
 Permit number O/G-3058-4  
 1/2"  
 Permit number O/G-2559-3  
 1/2"  
 Permit number O/G-2369-2"  
 Permit number G-2141-4"  
 Permit number O/G-3691-4  
 1/2"  
 Permit number O/G-3648-4  
 1/2"

N4 includes, in order NW

Permit number O/G-3490-4  
 1/2", Houston O/M  
 Permit number O-3716-4  
 1/2", Houston O/M  
 Permit number O/G-3692-4  
 1/2", Houston O/M  
 Permit number O/G-3681-4  
 1/2", Houston O/M  
 Permit number O/G-3678-4  
 1/2", Houston O/M  
 Permit number O/G-3816-4  
 1/2", Houston O/M  
 Permit number O/G-3682-6  
 5/8", Houston O/M

N5 includes, in order NW

Permit number O/G-3585-4  
 1/2"  
 Permit number O/G-3950-2  
 7/8"  
 Permit number O-3559-2-4  
 1/2"  
 Permit number O-3559-2-3  
 1/2"  
 Permit number O/G-3467-8-3 1/2"  
 Permit number G-3403-16"  
 Permit number O/G-3412-4  
 1/2"  
 Permit number O/G-3408-4  
 1/2"  
 Permit number O/G-3411-4  
 1/2"  
 Permit number O/G-3409-4  
 1/2"  
 Permit number O/G-3410-4  
 1/2"  
 Permit number O/G-3714-2-4"  
 Permit number O/G-3406-3  
 1/2"  
 Permit number O/G-63413-8", 2 7/8"

4. Refineries

- a) site
  - No data
- b) area
  - R1 = Texas City Refinery Complex NW including Union Carbide, Mobil Oil, AMOCO, Texas

- City Refining,  
Marathon Oil Co.
5. Gas processing plants
    - a) sites
      - 1 = AMOCO S. Gillock Gas Plant NW
      - 2 = N. Texas L. P. G. Galveston Gas Plant NW
    - b) area  
No data
  6. Compressor, pumping and metering stations
    - a) sites
      - 1 = Unnamed Station NW
      - 2 = ARCO Pump Station NW
      - 3 = Meter Station, Texas City NW
      - 4 = Sun Station NW
      - 5 = Unnamed facility SW
    - b) area  
No data
  7. Storage facilities
    - a) site  
Present
    - b) area  
No data
  8. Platforms, offshore  
Present
  9. Platform fabrication yards
    - a) site  
1 = Todd Shipyards
    - b) area  
No data
  10. Dock facilities
    - a) site  
No data
    - b) area  
No data
  11. Terminals
    - a) sites
      - 1 = Mobil Terminal NW
      - 2 = Union Carbide, CSGP States NW
      - 3 = New Port Marine Terminal NW
      - 4 = Western Geophysical Corp. NW
      - 5 = Tenneco NW
      - 6 = Pennzoil NW
      - 7 = Shell NW
      - 8 = Dresser Ind. NW
  - 9 = Galveston Yacht Basin NW
  - 10 = Monsanto Dock 1 NW
  - 11 = Unnamed Oil Dock Facility NW
  - 12 = American Oil Tanker Docks NW
  - 13 = AMOCO Chemical Dock 50 NW
  - 14 = Texas City Liquid Cargo Dock NW
- b) area  
No data
  12. Helicopter service
    - a) sites
      - 1 = Galveston, UT Medical Branch Hospital NW
      - 2 = Galveston, Pelican Island, Shell NW
      - 3 = Galveston, Dresser Industries, Magcobar NW
      - 4 = Galveston, University of Texas, Medical Branch NW
      - 5 = Lamarque/Texas City, Hospital NW
      - 6 = Port Bolivar, Houston Oil and Minerals No. 1 NW
      - 7 = Port Bolivar, Houston Oil and Minerals No. 2 NW
      - 8 = Galveston, Baroid NW
    - b) area  
No data
- B. Mineral Resources
1. Oil fields  
Present
  2. Gas fields  
Present
  3. Sand, gravel, clay, dirt pits  
No data
  4. Sulphur wells, mines  
No data
  5. Geopressed - geothermal areas
    - 1 = Brazoria Fairway, Frio Formation
  6. Groundwater source  
Present

MAP NARRATIVE DETAIL -- OIL, GAS INFRASTRUCTURE, MINERAL RESOURCES

GOLIAD QUADRANGLE (Beeville NW)  
including Bee, Karnes, Dewitt, Refugio,  
Goliad and Victoria counties

A. Oil and Gas Infrastructure

1. Oil pipelines; single dashed line, one pipeline; double-width dashed line, two or more pipelines

a) Onshore

- 1 = Permian 3" NE
- 2 = Permian 6" SE
- 3 = Sun 3", 4" SE
- 4 = Scurlock 3" SW
- 5 = Scurlock 4" SW
- 6 = EXXON 4" SE
- 7 = Sun 2" SE
- 8 = Sun gathering 4" SE
- 9 = Scurlock gathering 3" SW
- 10 = Scurlock gathering 4" SW
- 11 = Sun gathering 3" SE

b) Offshore, number boxed  
Not applicable

2. Gas pipelines: single line, one pipeline; double-width line, two or more pipelines

a) Onshore

- 1 = Enserch 8" NE
- 2 = Enserch 12" NE
- 3 = Valero 6" NE
- 4 = HPL 12" NE
- 5 = HPL 12" NE
- 6 = Enserch 6" NE
- 7 = Intrastate Gathering 6" NE
- 8 = Valero 4", 3 1/2" NE
- 9 = TET 16" NE
- 10 = HPL 24" SE
- 11 = TPG 6" SE
- 12 = Trunkline 20" SE-NE

- 13 = HPL 18" SE-NE
- 14 = HPL 4" SE
- 15 = Delhi 4" SE
- 16 = Outline 2" SE
- 17 = Intramerica 2" SE
- 18 = Eagle 3" SE
- 19 = HPL 4" SW
- 20 = Coronado 2" SW
- 21 = Delhi 8" SE-SW
- 22 = Vaquero 2" SE
- 23 = Transco 24" SE-NE
- 24 = Delhi 4" SE
- 25 = Enserch 6 5/8" NE-SE
- 26 = Delhi 6" NE
- 27 = Tejas 4" NE
- 28 = Delhi 4" SE
- 29 = Regis 4" SE
- 30 = Seagull 2 7/8" SE
- 31 = Delhi 3" SE
- 32 = Seagull 3 1/2" NE
- 33 = Transco 3 1/2" NE
- 34 = HPL 6" NE
- 35 = Transco 3", 4" NE
- 36 = Delhi 4" NE
- 37 = FGT 6" NE
- 38 = Cologne Production 4" SE
- 39 = Enserch 14" NE
- 40 = Transco 6" NE
- 41 = TGP 6" NE
- 42 = Valero 4" NE
- 43 = HNG 4" NE
- 44 = CB NE
- 45 = Delhi 4" NE
- 46 = HPL 4" SE
- 47 = CSGP 2" NE-SE
- 48 = Transco 26" SE
- 49 = TGP 24", 2-30" SE
- 50 = Tenngas 12" SE
- 51 = Cologne Production 4" SE
- 52 = NGPL 26", 30" SE

- 53 = Enserch 14" SE
  - 54 = UG 16" SE
  - 55 = Union Pacific 6" SE
  - 56 = HPL 16" SE
  - 57 = UTT 30", UG 30" SE
  - 58 = Enserch 8" SE
  - 59 = Seadrift 8" SE
  - 60 = TGP 4" SE
  - 61 = HPL 4" SE
  - 62 = UG SE
  - 63 = UG SE
  - 64 = Delhi SW
  - 65 = Dow gathering SW
  - 66 = Valero 6" SW
  - 67 = Delhi gathering 4" SE
  - 68 = Intrastate Gathering 6" NE
  - 69 = Delhi 14" NE
  - 70 = HPL 4" gathering SE
  - 71 = TGP 4" SE
  - 72 = CSGP 2" NE
  - 73 = Valero 2" NE
  - 74 = Delhi 2", SE
  - 75 = HPL 4" SE
  - 76 = CSGP 8" NE
  - 77 = Delhi 8" NE
  - 78 = Delhi 4 1/2" SE
  - 79 = Cologne Production 4" SE
  - 80 = Outline 2" SE
  - 81 = HPL 4" NE
  - 82 = Delhi 6" NE
  - 83 = HPL 4" NE
  - 84 = HPL 4" NE
  - 85 = Outline 2" SE
  - 86 = Regis 4" SE
  - 87 = Dow gathering SW
  - 88 = Coronado 2" SW
  - 89 = Delhi gathering SE
  - 90 = TGP 4" SE
- b) Offshore, number circled  
Not applicable
- 3. Nodes (N) of offshore pipelines  
- oil and gas  
Not applicable
- 4. Refineries
    - a) site  
No data
    - b) area  
No data
- 5. Gas processing plants
    - a) sites
      - 1 = Lone Star Meyersville HRU, Gas plant NE
      - 2 = Sun Victoria Gas Plant NE
    - b) area  
No data
- 6. Compressor, pumping, and metering stations
    - a) sites
      - 1 = Dow Ajax Compressor Station SE
      - 2 = Station 24 NE
      - 3 = Victoria Station NE
      - 4 = Meter Station SE
      - 5 = McFaddin Compressor Station SE
    - b) area  
No data
- 7. Storage facilities
    - a) site  
Present
    - b) area  
No data
- 8. Platforms, offshore  
Not applicable
- 9. Platform fabrication yards
    - a) site  
Not applicable
    - b) area  
Not applicable
- 10. Dock facilities
    - a) site  
Not applicable
    - b) area  
Not applicable
- 11. Terminals
    - a) site  
No data
    - b) area  
No data
- 12. Helicopter service
    - a) site
      - 1 = Victoria, Victoria Bank & Trust Motor Garage NE
    - b) area  
No data

B. Mineral Resources

1. Oil fields

Present

2. Gas fields

Present

3. Sand, gravel, clay, dirt pits

Present

4. Sulphur wells, mines

No data

5. Geopressured - geothermal area

No data

6. Groundwater source

Present

MAP NARRATIVE DETAIL -- OIL, GAS INFRASTRUCTURE, MINERAL RESOURCES

HARLINGEN QUADRANGLE (Brownsville S/2, N/2) including parts of Cameron, Hidalgo, and Willacy counties

A. Oil and Gas Infrastructure

1. Oil pipelines: single dashed line, one pipeline; double-width dashed line, two or more pipelines

a) Onshore

1 = Big Heart 8" NW-NE-SE

b) Offshore, number boxed

1 = Permit number 0-2646-4", EXXON SE

2 = Permit number 0/G-3115-8 5/8", Mobil NE

3 = Permit number 0-2933-4 1/2", Mobil NE

4 = Permit number 0-2933-4 1/2", Mobil NE

5 = Permit number 0-2933-4 1/2"-2, Mobil NE

2. Gas pipelines: single line, one pipeline; double-width line, two or more pipelines

a) Onshore

1 = CSGP (RGV) 6" SW-SE

2 = Seadrift 16" SW-SE

3 = CSGP (RGV) 8" SW

4 = CSGP (RGV) 10" SE

5 = Seagull NE

6 = EXXON 4" NE

7 = Padre Resources 3" NE

8 = CSGP (RGV) 6" SE

9 = CSGP (RGV) 4" SW-SE-NE

10 = Tejas SE

11 = Intrastate Gathering 8" SW

12 = CSGP (RGV) 12" SW

13 = CSGP (RGV) 10" NW-SW

14 = CSGP (RGV) 4" NW-SW

15 = Celanese 4" SW

16 = TET 6" SW

17 = Delhi gathering 2", 3", 4", 6", 8", NW-SW

18 = CSGP (RGV) 2" NW

19 = Transco 10" NW-SW

20 = NGPL 12" NW

21 = NGPL 4" NW

22 = Tejas NW-NE

23 = Coronado 2" NW

24 = Unnamed gathering 4"-8" NW

25 = TGP 3" NW

26 = Tejas NW

27 = gathering for Seadrift 16" SW

28 = gathering for Seadrift 16" SW

29 = CSGP (RGV) 8" NW

30 = CSGP (RGV) 6" SW

31 = Seadrift 2" SW

32 = CSGP (RGV) 4" SW

33 = CSGP gathering 3" SW

34 = CSGP gathering 2" SW

35 = Coronado 2" NE

36 = Seadrift 4" SW

37 = CSGP (RGV) 4" SW

38 = Celanese 4" NW

39 = TGP 4" NW

40 = CSGP (RGV) 6" SW

41 = Superior 2", 4" NW

42 = Intrastate Gathering 6" SE

43 = TGP 4" NW

44 = TGP 4" NW

45 = CSGP (RGV) 8" SE

46 = CSGP feeder SE

47 = Intrastate Gathering 6" SE

48 = CSGP (RGV) gathering 8" SE

49 = CSGP (RGV) SE

- 50 = CSGP (RGV) 6" SE
- b) Offshore, number circled
- 1 = Permit number G-2401-6 5/8", UG SE
  - 2 = Permit number G-2405-2 1/2", Gulf
  - 3 = Permit number G-989-4" NE
  - 4 = Permit number NE/G 3629-6 5/8", Houston O/M NE
3. Nodes (N) of offshore pipelines - oil and gas  
No data
4. Refineries
- a) site  
No data
  - b) area  
No data
5. Gas processing plants
- a) sites
    - 1 = Superior Chase Gas Plant NW
    - 2 = AMOCO Willamar Gas Plant NW
  - b) area  
No data
6. Compressor, pumping, and metering stations
- a) sites
    - 1 = Russelltown Junction SW
    - 2 = Port Isabel Station SE
    - 3 = EXXON East Three Islands Separating Station NE
    - 4 = Unnamed Station NW
    - 5 = Unnamed Station NW
    - 6 = Unnamed Station NW
    - 7 = Unnamed Station NW
    - 8 = Unnamed Station NW
  - b) area  
No data

7. Storage facilities
- a) site  
Present
  - b) area  
No data
8. Platforms, offshore  
No data
9. Platform fabrication yards
- a) site  
No data
  - b) area  
No data
10. Dock facilities
- a) site  
No data
  - b) area  
No data
11. Terminals
- a) site  
No data
  - b) area  
No data
12. Helicopter service
- a) site
    - 1 = South Padre Island - Southeastern Helicopters SE
  - b) area  
No data
- B. Mineral Resources
1. Oil fields  
Present
2. Gas fields  
Present
3. Sand, gravel, clay, dirt pits  
Present
4. Sulphur wells and mines  
No data
5. Geopressured - geothermal area
- 1 = Hidalgo fairway--Frio formation
6. Groundwater source  
Present

MAP NARRATIVE DETAIL -- OIL, GAS INFRASTRUCTURE, MINERAL RESOURCES

HOUSTON QUADRANGLE (Houston NW),  
including parts of Brazoria, Fort Bend,  
Galveston and Harris counties

A. Oil and Gas Infrastructure

1. Oil pipelines: single dashed  
line, one pipeline; double-  
width dashed line, two or more  
pipelines

a) Onshore

- 1 = Seaway 30" SW
- 2 = Gulf 6" SW
- 3 = Shell-Rancho 24" SW-  
SE
- 4 = EXXON 6" SW
- 5 = Phillips 12" SW
- 6 = Gulf 4" SE
- 7 = Scurlock 4" SW-SE
- 8 = Texas P/L 16" SE
- 9 = Texas P/L 6" SE
- 10 = Crown Central 6" SE
- 11 = EXXON 8" SE
- 12 = EXXON 8", 10" SW
- 13 = Tex.-N. Mex 12" NE
- 14 = Shell 6", 8", 10" SW-  
SE
- 15 = EXXON 4", 8" NE-NW
- 16 = EXXON 20" NE
- 17 = AMOCO 2-10" NE
- 18 = Texas P/L 8", 16" NE
- 19 = Explorer 28" NE
- 20 = Texas P/L 8", 12",  
16" NE
- 21 = ARCO 20" NE
- 22 = AMOCO 12" NE
- 23 = ARCO 2-12" NE
- 24 = Texas P/L 20" NE
- 25 = ARCO 8" NE
- 26 = Cities Service 12" NE
- 27 = Shell 10" NE
- 28 = Oil Tanking 24" NE
- 29 = Explorer 28" NE

- 30 = Explorer 12" NE
- 31 = Shell 24" NE-SE
- 32 = ARCO 36" NE-SE
- 33 = EXXON 8" SE
- 34 = AMOCO 26" SE
- 35 = EXXON 2", 4-8" SE
- 36 = EXXON 16" SE
- 37 = EXXON 8" SE
- 38 = Texas P/L 8" SE
- 39 = Gulf 6" SW
- 40 = Explorer 28" NE
- 41 = EXXON 8" SE
- 42 = EXXON 16" SE
- 43 = AMOCO 2-8", 12" SE
- 44 = AMOCO 26" SE
- 45 = Tex.-N. Mex. 12" NE-  
NW
- 46 = Explorer 28", AMOCO  
12", Cities Service  
30", Shell 8", ARCO  
36", and Texas P/L  
8", 12" NE-SE
- 47 = EXXON 2", 4-8" SE-NW
- 48 = EXXON 2-8" SE
- 49 = Gulf 8" SW-NE
- 50 = Explorer 28", Texas  
P/L 8", Oil Tanking  
24" NE
- 51 = Oil Tanking 24" NE
- 52 = EXXON 2-8", 10", 16"  
SW
- 53 = Gulf 3-6" SW
- 54 = Gulf 6" SW
- 55 = Gulf 8" NE
- 56 = Gulf 2-6" SW

b) Offshore, number boxed  
No data

2. Gas pipelines: single line, one  
pipeline; double-width line,  
two or more pipelines

a) Onshore

- 1 = UG 30" SW

2 = Mobil 14" SW	50 = AMOCO 12" SE
3 = UTT 8" SW	51 = Valero 20" SE
4 = Coronado 2" SW	52 = Phillips 6" SE
5 = UTT 16" NE	53 = HPL 18", 30" SE
6 = TET 16" SW-SE	54 = Enserch 4" SE
7 = UTT 12" SW	55 = HPL 6" SE
8 = Enserch 18" SW	56 = UTT 20" NE
9 = Dow 30" SW	57 = EXXON 30" NE-SE
10 = HPL 30" SW-SE	58 = AMOCO 8" SE
11 = HPL 18" SW-SE	59 = UTT 24" SE
12 = AMOCO 20" SW-SE	60 = UTT 20" SE
13 = Trunkline 16" SW	61 = HPL 24" SE
14 = Enserch 16" SW-SE	62 = EXXON 24" SE
15 = UTT 18" SW	63 = Tenneco feeder SE
16 = UTT 24" SW	64 = UTT 2-12" NE
17 = UTT 30" SE	65 = UTT 8" NE
18 = UTT 24" SE	66 = Tenneco 30" SE
19 = UTT 8" SW	67 = AMOCO 12" SE
20 = UTT 20" SW	68 = HPL 6" SE
21 = EXXON 36" SW	69 = HPL gathering SE
22 = HPL 16" SE	70 = EXXON 8" SE
23 = EXXON 30" SE	71 = EXXON gathering SE
24 = Tenneco 30" SE	72 = HPL gathering SE
25 = TET 2-30" SE	73 = HPL 18" feeder SW
26 = TET 8" SE	74 = HPL 18" feeder SW
27 = AMOCO 4" SE	75 = HPL 18" feeder SW
28 = HPL 12" SW	76 = HPL 4" feeder SE
29 = UTT 12" NW	77 = HPL 30" SE
30 = Enserch 7" gathering NE	78 = HPL 18" SE
31 = Mobil 14" NW	79 = UTT 24" SE
32 = EXXON 18" NE	80 = Enserch 12" SE
33 = UTT 10", 12" NE	81 = HPL 18" feeder SE
34 = UTT 12" NE	82 = Enserch 4" NE
35 = Enserch 8" and Loop NE	83 = HPL 12" NE
36 = UTT 12" NW	84 = UTT 18" SE-SW
37 = HPL 12" NE-SE	85 = UTT 20" SE
38 = HNG 6" NE	86 = HPL 6" feeder SW
39 = Extex 10" NE	87 = UTT 16" NE
40 = Enserch 4" NE	88 = Phillips 10" NE
41 = HPL 12" SE	89 = HPL 18"
42 = Enserch 10" NE	90 = Enserch gathering 6" NE
43 = Valero 3" NE	91 = Pipeline corridor: HPL 18", Tenneco 20", HPL 18", Phillips 10", HPL 12" NE
44 = Enserch 6" NE	92 = HPL 18" SE
45 = HNG 6" SW-SE	93 = HPL 6" SE
46 = HPL 6" NE	94 = Tenneco 20" SE
47 = UTT 3" NE	95 = Enserch 14" SE
48 = Valero 12" NE	
49 = HPL 12" NE-SE	

- 96 = Pipeline Corridor:  
HPL 12", UTT 16", HPL  
16", Valero 12",  
Enserch 10", Enserch  
8", HPL 30", AMOCO  
12", Enserch 12",  
Valero 20" NE
- 97 = HPL 4" SE
- 98 = UTT 30" SW
- 99 = Enserch 12" SE
- 100 = Enserch 12" SE
- 101 = HPL 4" SE
- 102 = Tenneco 30", AMOCO  
12" SE
- 103 = UTT 12", 18" NW
- 104 = EXXON 30", 14" NE-SE
- 105 = TET 30" SE
- 106 = UTT 24", TET, 16" NE
- 107 = HPL 16" NE
- b) Offshore, number circled  
No data
- 3. Nodes (N) of offshore pipelines  
- oil and gas  
Not applicable
- 4. Refineries
  - a) sites (Highly generalized  
Refer to Dewitt Atlas for  
details. Houston Ship  
Channel is lined with  
refineries, terminals,  
docks, etc.)
    - 1 = Eddy Refining Co. SE
    - 2 = Crown Refinery SE
    - 3 = Olin Plant Refinery  
SE
    - 4 = Phillips Plant SE
  - b) areas
    - R1 = EXXON Refinery NE-SE
    - R2 = Shell Refinery SE
    - R3 = Atlantic Richfield  
Refinery SE
    - R4 = Charter Internation-  
al Oil Refinery SE
- 5. Gas processing plants
  - a) sites
    - 1 = AMOCO Hastings Gas  
Plant SE
    - 2 = Big Three Industries,  
Inc. SE
    - 3 = Tenneco Oil Co. Gas  
Plant SE
  - b) area  
No data
- 4 = EXXON Clear Creek Gas  
Plant SE
- 5 = Big Three Industries,  
Inc. NE
- b) area  
No data
- 6. Compressor, pumping, and  
metering stations
  - a) sites
    - 1 = Seaway Crude Station  
No. 2 SW
    - 2 = Alameda Station SE
    - 3 = Meter Station SE
    - 4 = Pasadena Station SE
    - 5 = Houston Explorer  
Station NE
    - 6 = Englewood Station NE
    - 7 = EXXON Webster Station  
SE
    - 8 = Manvel Station SE
    - 9 = Unnamed Pumping  
Station SE
  - b) area
    - M1 = Webster Stations  
including EXXON,  
Houston Light & Power  
SE
- 7. Storage facilities
  - a) site  
Present
  - b) area  
No data
- 8. Platforms, offshore  
Present
- 9. Platform fabrication yards
  - a) sites
    - 1 = Brown and Root, Green  
Bayou Harbor NE
    - 2 = Platzer Shipyard NE
  - b) area  
No data
- 10. Dock facilities
  - a) site  
No data
  - b) area  
No data
- 11. Terminals
  - a) sites
    - 1 = Manchester Terminal  
SE

- 2 = Warren Gas Terminal SE
  - 3 = Hess Terminal SE
  - 4 = GATX Terminal SE
  - 5 = Olin Terminal SE
  - 6 = Texaco Terminal SE
  - 7 = Paktank and GATX Galena Park Terminal SE
  - 8 = Intercontinental Tank Terminal SE
  - 9 = Paktank Deer Park Terminal SE
  - 10 = GATX Terminal
  - 11 = EXXON Terminal SE
  - 12 = Shell Terminal SE
  - 13 = Adams Terminal SE
  - 14 = Gulf Oil Corp. SE
  - 15 = ARCO SE
  - 16 = Petro Tex SE
  - 17 = Charter (Signal) Oil SE
  - 18 = Petco Terminal SE
- b) area
- No data
12. Helicopter service
- a) sites
- 1 = Pearland, Pearland SE
  - 2 = Pearland, Joe Rye SE
  - 3 = Stafford, G. H. Hart, Heliport No. 2 SW
  - 4 = Belaire, Prudential SE
  - 5 = Channelview, ARCO NE
  - 6 = Houston, Total Health Care Center Pad SE
  - 7 = Houston, Dew-Drop-In SW
  - 8 = Houston, Vorn Sand Exterprises SE
  - 9 = Houston, Exec Jet SE
  - 10 = Houston, You asked for it - you got it SW
  - 11 = Houston, Post Oak Central SE
  - 12 = Houston, American Ship SE
  - 13 = Houston, Ball Park SW
  - 14 = Houston, Memorial Plaza Holiday Inn SE
  - 15 = Houston, Hyco SE
  - 16 = Houston, Diamond SE
  - 17 = Houston, Village Developers SW
  - 18 = Houston, Emergency No. 2: Houston Center NE
  - 19 = Houston, Metro Helipad SE
  - 20 = Houston, Ragland SE
  - 21 = Seabrook, Hoechst Bayport SE
  - 22 = Houston, Police Helicopter Patrol SE
  - 23 = Houston, City Post Oak SE
  - 24 = Houston, Citizens General Hospital NE
  - 25 = Houston, Greenway Plaza SE
  - 26 = Houston, G. H. Hart SW
  - 27 = Houston, Lift Crane SE
  - 28 = Houston, Pearce Industries SE
  - 29 = Houston, Medical Center SE
  - 30 = Houston, Rowan SE
  - 31 = Houston, Regency Square Helistop SW
  - 32 = Houston, S. & C. Construction Company, Inc. NE
  - 33 = Houston, Owl's Roost SE
  - 34 = Houston, Warren NE
  - 35 = Houston, Tenneco Lab Helistop SE
  - 36 = Houston, Tenneco Post Oak Park NE
  - 37 = Houston, Emergency No. 1 Houston Center NE
  - 38 = Houston, Southwest Police Station No. 4 SE

- 39 = Houston, NE Police Station No. 2 NE
- 40 = Houston, Department of Public Safety Helistop NE
- 41 = Houston, J. S. Dunn Helistop NE
- 42 = Houston, Margaret Westerman Bldg./City Hall Annex NE
- 43 = Houston, Houston V. A. Medical Center NE
- 44 = Houston, Gulf Building NE
- 45 = Houston, Houston Post, Helistop No. 1 NE
- 46 = Houston, Police Headquarters NE
- 47 = Houston, Powers' Helistop SW

- 48 = Pasadena, Police NW
- 49 = Pasadena, 3321 West Side SE
- 50 = Pasadena, Diamond SE
- 51 = Pasadena, Police 3321 Westside SE

b) area  
No data

B. Mineral Resources

1. Oil fields  
Present
2. Gas fields  
Present
3. Sand, gravel, clay, dirt pits  
Present
4. Sulphur wells, mines  
No data
5. Geopressured - geothermal area  
No data
6. Groundwater source  
Present

MAP NARRATIVE DETAIL -- OIL, GAS INFRASTRUCTURE, MINERAL RESOURCES

PORT LAVACA (Beeville NE) including parts of Victoria, Jackson, Calhoun, Matagorda, Wharton and Refugio counties

A. Oil and Gas Infrastructure

1. Oil pipelines: single dashed line, one pipeline; double-width dashed line, two or more pipelines

a) Onshore

- 1 = Texas P/L 6" NE
- 2 = Scurlock 5" NE
- 3 = Scurlock 4" NE
- 4 = Permian 4" NE
- 5 = Texas P/L 2-6" NE
- 6 = EXXON 16" NE-NW
- 7 = Texas P/L 8" NE
- 8 = Scurlock 3" SW
- 9 = Permian 6" SW
- 10 = Permian 4" SW
- 11 = Scurlock 2 1/2" NE.
- 12 = Permian 6" NW-NE
- 13 = Sun 4" SW
- 14 = Mobil 8" NW
- 15 = Mobil 6" NW
- 16 = Texas P/L 6" NE
- 17 = Texas P/L 6" NE
- 18 = Sun 4" SW
- 19 = Sun 6" SW
- 20 = Sun 6" SW
- 21 = Sun 6" SW
- 22 = Sun gathering SW
- 23 = Scurlock 2 1/2" NE
- 24 = Scurlock feeder NE
- 25 = Sun gathering NW
- 26 = Sun gathering SW
- 27 = Texas P/L 6" NE
- 28 = Scurlock 2 1/2" NE
- 29 = Scurlock 3" NE
- 30 = Texas P/L 4" NE
- 31 = Permian 4" SW
- 32 = Permian 4" NE

b) Offshore, number boxed

- 1 = Permit number O/G-3658-4", May Pet. SE
  - 2 = Permit number O-2490-2 1/2", Enserch SE
  - 3 = Permit number O-2491-2 1/2", Enserch SE
  - 4 = Permit number O-2641-3", Enserch SE
  - 5 = Permit number O-614-3" SE
  - 6 = Permit number O/G-3272-2 7/8", Houston O/M SE
  - 7 = Permit number O-3204-4 1/2", Sun SE
  - 8 = Permit number O-2476-4 1/2", McMoran SE
  - 9 = Permit number O-3513-6", Corpus Christi SE
  - 10 = Permit number O/G-3282-3 1/2" SE
2. Gas pipelines: single line, one pipeline; double-width line, two or more pipelines
- 1 = Valero 3" SE
  - 2 = Delhi 4" NE
  - 3 = CSGP 8" NE
  - 4 = Seadrift 4" SW
  - 5 = Valero 8" SW
  - 6 = Delhi 4" SW
  - 7 = UTT 6" SW
  - 8 = UTT 10" SW
  - 9 = HNG 8" NE
  - 10 = TET 30" SW-SE-NE
  - 11 = Dow 12" SE-NE
  - 12 = Dow 16" SE-NE
  - 13 = HPL 12" NW
  - 14 = Valero 20" NE-NW
  - 15 = Dow 6" NE
  - 16 = Transco 30" NE
  - 17 = Valero 12" NE

18 = Tenneco 30" SW-NE	64 = Delhi 6" NE-NW
19 = TGP 12" NE	65 = Delhi 4" and gathering NW
20 = Tenneco 8" NE	66 = CSGP 10" NW-NE-SE
21 = HPL 4" NE	67 = HPL 18" NW-SW
22 = Nueces 6" SW-SE	68 = CSGP 6" SE
23 = Delhi 4" NE	69 = Sun 2", 4" NW-SW
24 = Tenneco 8" NE	70 = Delhi 8" SW-NW
25 = TGP 4" NE	71 = Tenneco 12" NW-SW
26 = HPL 6" NE	72 = EXXON 6" NW
27 = FGT 20" NE-SW	73 = Delhi 6" NW
28 = EXXON 30", 36" SW- NW-NE	74 = Enterprise Resources and gathering NW-NE
29 = Scurlock 4" NE	75 = CSGP 16" NW
30 = HPL 2" SE	76 = Enserch 10" NW
31 = TET 4" NE	77 = Trunkline 20" NW
32 = Esperanza 3 1/2" NE	78 = UG 6" NW
33 = HNG 6" NE	79 = TGP 24", 30" NW
34 = Texaco 10" NE	80 = NGPL 26", 30" NW-SW
35 = TET 24" NE	81 = Transco 26" NW-SW
36 = Delhi 12" NW-NE	82 = Enserch 16", UG 30", UTT 18", UTT 30" NW- SW
37 = FGT 6", 8" NE	83 = FGT 20" SW
38 = HNG 4" NE	84 = UTT 4" SW
39 = Valero 4" and gathering NE	85 = Valero gathering SE
40 = HNG 4" NE	86 = Tenngas 6" NW
41 = Dow 12" NE	87 = Transco 24" NW
42 = HPL 20" NE-SE	88 = Tenngas 6" NW
43 = HNG 2" NE	89 = FGT 6" NW-SW
44 = Marathon 2", 2 1/2", 3" NE	90 = Tejas 3" NW
45 = HNG 12" NE	91 = Delhi 4" NW
46 = Seadrift 6" SW	92 = Intrastate Gathering 6" NW
47 = Sun 2", 3" SW	93 = HPL 12" NW
48 = Sun 2", 3", 4 1/2", 6" SW	94 = HNG 6 5/8" NW-SW
49 = Texaco 2" NE	95 = Enserch 14" NW
50 = Valero 8" SE-NE	96 = Tenngas 6" NW
51 = HPL 24" NW	97 = Delhi 6" and gathering NW
52 = HPL 16" NW-SW	98 = Delhi 8" NW-SW
53 = HPL 18" NW	99 = HPL NW
54 = Enserch 6" NE	100 = TGP 2-30", 24" NW-SW
55 = FGT 4" NW-SE	101 = TGP 4" NW-SW
56 = CSGP 20" NW-NE-SE	102 = HPL 4" NW
57 = Mobil 14" NE-NW	103 = HNG 4" NW
58 = HPL 12" NW	104 = Delhi 4" NW
59 = TGP 4" NW	105 = UG 6" NW
60 = UG 10" NW-NE	106 = HPL 4" SW
61 = UTT 6" NW-NE	107 = Enserch 6" NW-SW
62 = FGT 6" NW-NE	
63 = Coronado 4" NE	

108 = UTT 10" SW  
 109 = Galaxy Energies SW  
 110 = Enserch 14" SW  
 111 = UG 1 1/2", 30" SW  
 112 = UG 30", UTT 30" SW  
 113 = HPL 10" SW  
 114 = Tenngas 12" SW  
 115 = NGPL 10" SW  
 116 = UTT 6" NE-NW  
 117 = Valero 14" SE  
 118 = Valero 6 5/8" SW-SE  
 119 = FGT 4" SE  
 120 = Valero 4 1/2" SE  
 121 = Tenneco 4" SW  
 122 = Valero 8" SE  
 123 = Valero 8" SE  
 124 = Valero 10" SW  
 125 = EXXON 4" SW-SE  
 126 = Valero 2", 2 1/2", 4"  
         and gathering SW  
 127 = Nueces 6" SW-SE  
 128 = CSGP 8" NW  
 129 = UG 6" feeder SW  
 130 = Sun 4", 8 1/2" SW  
 131 = Unnamed SW  
 132 = Delhi gathering NW  
 133 = HNG 3 1/2" NW-SW  
 134 = HPL 6" NW  
 135 = CSGP 6" NW  
 136 = CSGP 2 1/2" NW  
 137 = Delhi 3" NW  
 138 = Delhi gathering NW  
 139 = UG feeder SW  
 140 = UG SW  
 141 = UG feeder SW  
 142 = HPL 16" NE  
 143 = Unnamed SW  
 144 = HPL SW  
 145 = Delhi gathering NW  
 146 = Intrastate Gathering  
         2" NW  
 147 = Intrastate Gathering  
         3" NW  
 148 = Delhi 2" NW  
 149 = Delhi SW  
 150 = Enserch 6" NW  
 151 = Valero 4" SW  
 152 = HPL 6" NW  
 153 = Delhi 2" NW  
 154 = Delhi 2" NW  
 155 = HPL 4" NE  
 156 = Unnamed NE  
 157 = Connection UTT 10" SW  
 158 = UTT 10" SW  
 159 = HPL 4" NE  
 160 = Coronado 2" SW  
 161 = Valero feeders SW  
 162 = Nueces 6" SW  
 163 = Valero 4" SW  
 164 = Delhi NW  
 165 = HPL 3", 2 1/2" NE  
 166 = Valero 4 1/2" SW-SE  
 167 = TET feeder NE  
 168 = UTT feeder NW  
 169 = Valero 3" SW  
 170 = Valero 2" SW  
 171 = Delhi gathering NW  
 172 = Delhi gathering NW  
 173 = CSGP 2 1/2" NW  
 174 = Scurlock gathering NE  
 175 = HNG 4" NE  
 176 = HNG 4" NE  
 177 = CSGP 6" NW  
 178 = Halbouty 2 abandoned  
         lines NE  
 179 = Halbouty 10 lines, 3  
         active NE  
 180 = Halbouty 2 lines, one  
         active 1 not active  
         NE  
 181 = HNG 6" NE  
 182 = Delhi NW  
 183 = HPL 6" NW  
 184 = HPL 6" NW  
 185 = Delhi gathering NW  
 186 = HPL 12" NW-NE  
 187 = Sun gathering SE  
 188 = Delhi NW  
 189 = CSGP 4" SE  
 190 = Valero 10" SW  
 191 = Valero 8" SE-NE  
 192 = Valero 3" SE  
 193 = Southern Gas 4" SE  
 194 = Southern Gas 4" SE  
 195 = UTT feeder NW  
 196 = Dow feeder NE  
 b) Offshore, number circled  
     1 = Permit number G-ME-  
        3306-2 1/2" SE

- 2 = Permit number G-3242-16", Dow SE
  - 3 = Permit number G-79-298-2 1/2" Genesis Petroleum SE
  - 4 = Permit number G-4060-4", May Pet. SE
  - 5 = = Permit number G-2498-12", Enserch SE
  - 6 = Permit number G-79-266-2 1/2", Integral Energy SE
  - 7 = Permit number G-3659-4", May Pet. SE
  - 8 = Permit number G-3130-2 7/8", King SE
  - 9 = Permit number G-2604-3", Enserch SE
  - 10 = Permit number G-3022-34, N. A. Royalties SE
  - 11 = Permit number G-3640-2", Integral Energy SE
  - 12 = Permit number G-3639-2 1/2", Integral Energy SE
  - 13 = Permit number G-4070-4", Integral Energy SW
  - 14 = Permit number G-3711-4", EXXON SE
  - 15 = Permit number G-677-2", G-1521-2" SE
  - 16 = Permit number G-1615-2 1/2" SE
  - 17 = Permit number G-1934-4", EXXON SE
  - 18 = Permit number G-1034-2", Southern Mineral Sw
  - 19 = Permit number G-1203-2 1/2", Cities Service Sw
  - 20 = Permit number G-1165-2 1/2", Cities Service Sw
  - 21 = Permit number G-3511-20", HPL SE
  - 22 = Permit number G-3923-2-3 1/2", Superior SE
  - 23 = Permit number G-3591-2-3", Mitchell SE
  - 24 = Permit number G-610-8", Valero 79-207-8", Valero SE
  - 25 = Permit number G-3170-6" SE
  - 26 = Permit number G-3283-8" SE
  - 27 = Permit number G-3283-6" CSGP SW
  - 28 = Permit number G-80-110-6" Nueces SW-SE
3. Nodes (N) of offshore pipelines - oil and gas  
Labeled clockwise from north by permit number
- N1 includes, in order SE  
Permit number G-1766-3" Valero  
Permit number G-4034-3" Valero  
14 Unnumbered Lavaca gathering  
Permit number G-3702-2-7/8"
- N2 includes, in order SE  
Permit number O/G-2555-4" Unnumbered 4"  
Permit number G-338-4"  
Permit number O-1682  
Unnumbered unsized line
4. Refineries  
a) site  
No data  
b) area  
No data
5. Gas processing plants  
a) sites  
1 = HNG Victoria Gas Plant NW  
2 = Bobby M. Burns Estate Una West Gas Plant NW  
3 = EXXON Heyser Gas Plant SW  
4 = Alcoa Gas Plant (closed) SW  
5 = UG Edna Gas Plant NW  
6 = Vandervilt Gas Plant NW

- 7 = EXXON Kellers Bay Gas Plant SW
  - 8 = East McFadden Gas Plant SW
  - 9 = Texaco Blessing Plant NE
  - 10 = Blessing HRU Plant NE
  - 11 = Tenneco Leabo Plant NE
  - 12 = Huber W. Lucky Gas Plant NE
  - 13 = Oyster Lake Plant SE
  - 14 = Monsanto El Maton Plant shut down
- b) area  
No data
6. Compressor, pumping, and metering stations
- a) sites
- 1 = HPL Meter Station No. 6 NW
  - 2 = Magnolia Beach Compressor Station SW
  - 3 = Swan Lake Station SW
  - 4 = UG Meter Station NE
  - 5 = East Mauritz Station NE
  - 6 = Midfield Station NE
  - 7 = Olivia Compressor Station SE
  - 8 = Carancahua Compressor Station SE
  - 9 = Sand Point Compressor Station SW
  - 10 = Point Comfort Station SW
  - 11 = Blessing City Gate Station NE
  - 12 = Lovaca Blessing Station NE
  - 13 = Blessing Station NE
  - 14 = Foley Addition Gate Station SE
  - 15 = Palacios City Gate Station 14 SE
  - 16 = Markham Station NE
  - 17 = Mauritz Station NE
  - 18 = Placedo Station SW
  - 19 = Francitas Station NE
  - 20 = Heyser Station SW
  - 21 = Barge Canal Station SE
  - 22 = Unnamed Station NE
  - 23 = Unnamed Station NE
  - 24 = Unnamed Station NE
  - 25 = Unnamed Station SW
  - 26 = Unnamed Station SW
  - 27 = Unnamed Station NE
- b) area  
No data
7. Storage facilities
- a) site  
Present
- b) area  
No data
8. Platforms, offshore  
No data
9. Platform fabrication yards
- a) site  
No data
- b) area  
No data
10. Dock facilities
- a) site  
No data
- b) area  
No data
11. Terminals
- a) site  
No data
- b) area  
No data
12. Helicopter service
- a) site  
1 = Victoria - Citizens Memorial Hospital NW
- b) area  
No data
- B. Mineral Resources
1. Oil fields  
Present
2. Gas fields  
Present
3. Sand, gravel, clay, dirt pits  
Present
4. Sulphur wells, mines  
No data
5. Geopressured - geothermal area  
No data
6. Groundwater source  
Present

MAP NARRATIVE DETAIL -- OIL, GAS INFRASTRUCTURE, MINERAL RESOURCES

PORT MANSFIELD QUADRANGLE (Brownsville N/2, N/2) including parts of Kenedy, Willacy, Hidalgo and Brooks counties

A. Oil and Gas Infrastructure

1. Oil pipelines: single dashed line, one pipeline; double-width dashed line, two or more pipelines

a) Onshore

1 = EXXON 4", 6" NW

b) Offshore, number boxed

1 = Permit number O/G-3115-8 5/8" Mobil SE

2 = Permit number O-2452 NE

3 = Permit number O-2855-6 5/8" Kilroy NW

4 = Permit number O-2693-2 7/8" Kilroy NE

5 = Permit number O-2933-4 1/2" SE

6 = Permit number O-2933-4 1/2" Mobil SE

7 = Permit number O-2933-4 1/2-2 Mobil SE

8 = Permit number O-2547-2 3/8", H&H NE

9 = Permit number O-2694-2 7/8", Kilroy NE

10 = Permit number O/G-3565-2 3/4", H&H NE

11 = Permit number O-2453-2 7/8 McMoran NE

12 = Permit number O-2454-2 7/8" McMoran NE

13 = Permit number O/G-3115-8 5/8" Mobil SE

2. Gas pipelines: single line, one pipeline; double-width line, two or more pipelines

a) Onshore

1 = Transco 10" SW

2 = TET 30" NW-SW

3 = Tejas 8" SW

4 = NGPL 16" NW

5 = EXXON 14" NW-SW

6 = TGP 8" SW

7 = EXXON 6" NW

8 = EXXON 6" NW

9 = NGPL 10" SW

10 = NGPL 12" SW

11 = EXXON 10" NW-SW

12 = EXXON 14" NW

13 = Superior 2", 4" SW

14 = EXXON gathering 4" SW

15 = EXXON gathering 10" SW

16 = EXXON 6" SE

17 = Tejas 4" SW

18 = Tejas 3" SW

b) Offshore, number circled

1 = Permit number G-1964-3" Occidental Pet. NE-SE

2 = Permit number G-865-3" McWood NE

3 = Permit number G-2419-2 3/8" FGT NE

4 = Permit number G-2918-2 3/8" NE-SW; G-3429-2-2 3/8" H&H NE

5 = Permit number G-3019-4 South Texas Petroleum NE

3. Nodes (N) of offshore pipelines - oil and gas

None

4. Refineries

a) site

No data

b) area

No data

5. Gas processing plants

a) site

- 1 = North Texas LPG Corp,  
La Sal Vieja Gas  
Plant SW
- b) area  
No data
- 6. Compressor, pumping, and  
metering stations
  - a) sites
    - 1 = Stillman Station NW
    - 2 = Julian Station NW
    - 3 = Candelaria Station NW
    - 4 = Unnamed Station SW
  - b) area  
No data
- 7. Storage facilities
  - a) site  
Present
  - b) area  
No data
- 8. Platforms, offshore  
No data
- 9. Platform fabrication yards
  - a) site  
No data
  - b) area  
No data
- 10. Dock facilities
  - a) site  
No data
  - b) area  
No data

- 11. Terminals
  - a) site  
No data
  - b) area  
No data
- 12. Helicopter service
  - a) site  
No data
  - b) area  
No data
- B. Mineral Resources
  - 1. Oil fields  
Present
  - 2. Gas fields  
Present
  - 3. Sand, gravel, clay, dirt pits  
Present
  - 4. Sulphur wells, mines  
No data
  - 5. Geopressured - geothermal areas
    - 1 = Hidalgo fairway, Frio  
formation SW-SE
    - 2 = Armstrong fairway,  
frio formation NW
    - 3 = Unidentified fairway  
NE-SE
  - 6. Groundwater source  
Present

MAP NARRATIVE DETAIL -- OIL, GAS INFRASTRUCTURE, MINERAL RESOURCES

SAN ANTONIO BAY QUADRANGLE (Beeville SE) including parts of Aransas, Calhoun, Refugio, and Victoria counties

A. Oil and Gas Infrastructure

1. Oil pipelines: single dashed line, one pipeline; double-width dashed line, two or more pipelines

a) Onshore

- 1 = Sun 4" gathering SW
- 2 = Sun 6" SW
- 3 = Sun 10" NW-SW
- 4 = Scurlock 3" NW-NE
- 5 = Permian 4" NW
- 6 = Scurlock 3" NE
- 7 = EXXON 16" NW
- 8 = Sun 6" NW
- 9 = Permian feeder NW
- 10 = Scurlock 3" NW

b) Offshore, number boxed

- 1 = Permit number O/G-79-1150-3", Getty SW
- 2 = Permit number O-80-085-8", Tenneco SW
- 3 = Permit number O-2025-2 7/8", Getty SW
- 4 = Permit number O/G-4151-6", Corpus Christi SW
- 5 = Permit number O-2639-3", Monsanto NE
- 6 = Permit number 79-177-6", Corpus Christi SW
- 7 = Permit number O/G-3649-2 1/2", Mitchell SW
- 8 = Permit number O-80-212, 12", 24", Southern Natural SW
- 9 = Permit number O-80-166- 4 1/2", Getty SW

- 10 = Permit number O-3824-2 1/2", Victoria NW
- 11 = Permit number O-2822-2 1/2", Texas Oil & Gas NW
- 12 = Permit number O-926-2", Enserch NW
- 13 = Permit number O/G-3424-3 1/2", G. R. Brown NW
- 14 = Permit number O-3220-4 1/2", Cities Service NW
- 15 = Permit number O-1352-2", Cities Service NW
- 16 = Permit number O-2290-2", Getty NW
- 17 = Permit number O-2420-2", 3", Getty NW
- 18 = Permit number O/G-3966-4 1/2", Cities Service NW
- 19 = Permit number O/G-80-212-12", 24", Southern Natural SW
- 20 = Permit number O/G-4046-6 5/8", 10 3/4", Corpus Christi NE
- 21 = Permit number O/G-4047-6 5/8", Corpus Christi SW
- 22 = Permit number O/G-3906-2 7/8", Utah Int. NE
- 23 = Permit number O/G-3797-2 1/2", Utah Int. NW
- 24 = Permit number O-2638-3", Monsanto NE
- 25 = Permit number O-3512-6", El Gordo Products Pipe Line NE

- 26 = Permit number O/G-4139-16", Houston O/M NE
- 27 = Permit number O/G-4138-6", Houston O/M NE
- 28 = Permit number O-80-085-8", Tenneco SW
- 29 = Permit number O/G-3479-2 7/8", Houston O/M NW
- 30 = Permit number O/G-4158-2 1/2", Neumin
- 31 = Permit number O/G-3333-2 7/8", Houston O/M NW
- 32 = Permit number O/G-4059-4 1/2" SW
- 33 = Permit number O/G-4059-2", Cities Service NW

2. Gas pipelines: single line, one pipeline; double-width line, two or more pipelines

a) Onshore

- 1 = Tenneco 12" SW
- 2 = NGPL 8" SW
- 3 = HNG 12" SW
- 4 = HNG 12" SW
- 5 = TET 30" SW
- 6 = Mitchell 10" SW
- 7 = HPL 6" NW
- 8 = NGPL 6" NW
- 9 = Cities Service 6" NW
- 10 = TET 30" NW
- 11 = Energy 6" NW
- 12 = NGPL 10" NW
- 13 = Tenneco 30" NW
- 14 = HPL 12" NW
- 15 = FGT 20" NW
- 16 = EXXON 30", 36" NW
- 17 = Delhi 4 1/2" NW
- 18 = Enserch 6" NW
- 19 = UG NW
- 20 = Seadrift 4" NW
- 21 = Dow 4" NE
- 22 = UTT 10" NW
- 23 = NGPL 8" NW
- 24 = Valero 4 1/2" NW
- 25 = Valero 8" NW
- 26 = Valero 8", Texaco NW

- 27 = UTT gathering NW
- 28 = Delhi 4" NW
- 29 = Dow 4" NW
- 30 = R. B. Mitchell 4" NE
- 31 = NGPL 4" NW
- 32 = Dow 16" NE

b) Offshore, number circled

- 1 = Permit number G-80-085-8", Tenneco SW
- 2 = Permit number G-3971-3", Mitchell SW
- 3 = Permit number G-2542-4 1/2", ARCO SW
- 4 = Permit number G-2925-10" SW
- 5 = Permit number G-1655-8", HPL NW
- 6 = Permit number G-3999-2 1/2", Cities Service SW
- 7 = Permit number G-1115-4", Tidewater SW
- 8 = Permit number G-1993-6", EXXON NW
- 9 = Permit number G-4009-4 1/2" SW
- 10 = Permit number G-3518-3 1/2" NE
- 11 = Permit number G-79-297-2 1/2", Genesis Pet. NW
- 12 = Permit number G-3242-16", Dow NE
- 13 = Permit number G/ME-3306-2 1/2", Valero NE
- 14 = Permit number G-3450-4 1/2", McMoRan SW
- 15 = Permit number G-3452-4 1/2", McMoRan SW
- 16 = Permit number G-3453-3", McMoRan SW
- 17 = Permit number G-3454-6", McMoRan SW
- 18 = Permit number G-3226-10 3/4", Corpus Christi SW
- 19 = Permit number G-4010-10", Corpus Christi SW

- 20 = Permit number G-3286-10 3/4", Corpus Christi SW
  - 21 = Permit number G-2926-10", Corpus Christi SW
  - 22 = Permit number G-2927-8 5/8", Corpus Christi SW
  - 23 = Permit number 12", HPL NW
  - 24 = Permit number G-3511-20", HPL NE
  - 25 = Permit number G-3923-2-3 1/2", Superior NE
  - 26 = Permit number G-3672-12", Valero gathering NE
  - 27 = Permit number G-3170-6", Superior NE
  - 28 = Permit number G-3673-12", Valero gathering NE
  - 29 = Permit number G-3477-3", Valero NW
  - 30 = Permit number G-3477-8", Valero NW
  - 31 = Permit number G-2132-4" NW
  - 32 = Permit number 10" Mitchell NW
  - 33 = Permit number 10 5/8" Mitchell SW
  - 34 = Permit number 12" Tenneco SW
  - 35 = Permit number G-2179-8" HPL SW
  - 36 = Permit number G-2179-3" HPL SW
  - 37 = Permit number G-690-12" HNG SW
  - 38 = Permit number G-1431-4 1/2" SW
  - 39 = Permit number G-3632-2-2 1/2" NW
  - 40 = Permit number G/ME-3748-6" NW
  - 41 = Permit number G-3835-4" Mitchell NW
  - 42 = Permit number G-3448-30" TET NW
  - 43 = Permit number Getty NW
  - 44 = Permit number Marathon NW
  - 45 = Permit number Getty NW
3. Nodes (N) of offshore pipelines - oil and gas  
Labeled clockwise from north by permit number  
N1 includes, in order SE  
Permit number No number  
8" Valero  
Permit number G-1339-2" Texaco  
Unidentified  
Permit number G-3477-3" Valero  
Permit number G-3477-3" Valero  
Permit number G-3477-3" Valero  
Permit number G-3477-5" Tidewater
  4. Refineries
    - a) site  
No data
    - b) area  
No data
  5. Gas processing plants
    - a) sites
      - 1 = Hunt Zoller Gas Plant NW
      - 2 = Cities Services San Antonio Bay Gas Plant NW
      - 3 = Cities Services San Antonio Bay Central Separation Plant NW
    - b) area  
No data
  6. Compressor, pumping and metering stations
    - a) sites
      - 1 = Tivoli Station NW
      - 2 = Unnamed Station NE
      - 3 = Unnamed Station on Aransas Refuge
    - b) area  
No data

- 7. Storage facilities
    - a) site Present
    - b) area No data
  - 8. Platforms offshore Present
  - 9. Platform fabrication yards
    - a) site No data
    - b) area No data
  - 10. Dock facilities
    - a) sites
      - D1 = Scurlock Station and Dock facilities NE
      - D2 = Baroid Dock
    - b) area No data
  - 11. Terminals
    - a) site No data
    - b) area No data
  - 12. Helicopter service
    - a) sites
      - 1 = Port O'Connor, Port O'Connor Pirate NE
      - 2 = Port O'Connor, Baroid Dock Area NE
    - b) area No data
- B. Mineral Resources
- 1. Oil fields Present
  - 2. Gas fields Present
  - 3. Sand, gravel, clay, dirt pits No data
  - 4. Sulphur wells, mines No data
  - 5. Geopressured - geothermal area No data
  - 6. Groundwater source Present

REPORT DOCUMENTATION PAGE	1. REPORT NO. FWS/OBS-82/17 *	2. MMS 84-0005 *	3. Recipient's Accession No.
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7. Author(s) Clarissa T. Kimber, Kenneth L. White, Fred S. Hendricks		6.	
9. Author's Affiliation:  Texas A and M University F.E. Box H College Station, TX 77843		8. Performing Organization Rept. No.	
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15. Supplementary Notes  *Minerals Management Service Report 84-0005			
16. Abstract (Limit: 200 words) This report is a descriptive explanation of data presented on 16 maps (maps not available from NTIS) produced at a scale of 1:100,000 for the Texas Barrier Islands Region from the eastern end of East Bay, Chambers County, Texas, to the Texas-Mexico border. Topics mapped include pipelines, refineries, gas processing plants, oil and gas storage facilities, helicopter ports, and dock (port) facilities.			
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c. COSATI Field/Group			
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**DEPARTMENT OF THE INTERIOR**  
**U.S. FISH AND WILDLIFE SERVICE**



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

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