

**ANNUAL SURVEY  
OF  
DOMESTIC OIL AND GAS RESERVES  
FORM EIA-23**

**Summary Survey Instructions  
2003**

U.S. Department of Energy  
Energy Information Administration  
Office of Oil and Gas

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**ANNUAL SURVEY OF DOMESTIC OIL AND GAS RESERVES  
FORM EIA-23  
CALENDAR YEAR 2003**

**Summary Survey Package**

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**For information, Assistance, or Additional Forms, Contact the  
EIA-23 Coordinator at  
1-800-879-1470  
8:30 a.m. - 5:00 p.m. CST  
FAX (202) 586-1076**

**ANNUAL SURVEY OF DOMESTIC OIL AND GAS RESERVES  
FORM EIA-23  
CALENDAR YEAR 2003**

**GENERAL INSTRUCTIONS**

**A. PURPOSE**

The Energy Information Administration (EIA) of the Department of Energy (DOE) seeks, with Form EIA-23, to gather and summarize credible and timely data regarding proved reserves and production of crude oil, natural gas, lease condensate and other related matters. The Government will use the resulting information to develop national and regional estimates of proved reserves of domestic crude oil, natural gas and natural gas liquids and to facilitate national energy policy decisions.

**B. WHO MUST SUBMIT FORM EIA-23**

Each operator of domestic oil and/or gas wells as of December 31, 2003 that has been selected **must file** Form EIA-23. The definition of an operator as used in these instructions and forms is as follows:

**Operator:** The person responsible for the management and day-to-day operation of one or more crude oil and/or natural gas wells on December 31, 2003. The operator is generally a working interest owner or a company under contract to the working interest owner(s). Wells included are those that have proved reserves of crude oil, natural gas and/or lease condensate in the reservoirs associated with them, whether or not they are producing. Wells abandoned during the year are also to be considered "operated" on December 31.

Note that as defined, day-to-day physical operation of a well or wells does not alone qualify a person as the operator. Physical operation may occasionally be divorced from operatorship, such as in the instance of manipulation of swing wells by a gas pipeline company representative or the manipulation and maintenance of wells located on an offshore platform by the platform manager. While the operator's own personnel usually perform such duties, the key factor is that the operator is the person who makes management decisions regarding the well(s) in question on behalf of the owner(s). For example, such decisions might include deciding the following:

- 1) what flow rates can be sustained without reservoir damage;
- 2) whether well(s) should be shut-in, worked over or abandoned;
- 3) whether additional or replacement wells should be drilled into a reservoir;
- 4) whether a waterflood program should be initiated; or
- 5) whether additional or different production equipment should be installed.

Filing requirements are based on operator category or size, which is determined by the total or gross (8/8ths) annual operated production rate. Production refers to the total calendar year production from all domestic oil and/or gas wells operated on December 31, 2003, including wells abandoned during the year.

Each operating affiliate of a parent company must file its own Form EIA-23. The parent company must file only if it is an operator itself. If no parent company exercises ultimate control over your company, please indicate that on the Cover Page.

**If you have received the Summary Form, but your total gross operated production exceeds 400 thousand barrels (400 MBarrels) of crude oil or 2 billion cubic feet (2,000 MMCF or 2 BCF) of natural gas or you operate wells in the federal offshore or coalbed methane gas wells, contact the EIA-23 Coordinator to obtain the appropriate form and instructions.**

If in a particular instance you are **not** certain whether you are the operator, contact the EIA-23 Coordinator for assistance in making this determination. If you are **not** the operator of oil and/or gas wells on December 31, 2003 (perhaps a former operator or solely a working or royalty interest owner), you should:

- 1) complete and sign the Cover Page and return it to DOE along with
- 2) a letter stating when operations ceased and what became of the wells you previously operated.

**C. WHEN AND WHERE TO SUBMIT**

The completed 2003 forms must be submitted **on or before April 15, 2004**.

Completed forms may be submitted by mail, fax or e-mail.

Mail completed forms to:

**United States Department of Energy  
Energy Information Administration  
P O Box 8279  
Silver Spring, MD 20907  
Attention: Form EIA-23**

Fax completed forms to: **(202) 586-1076**

E-mail completed forms to: [OOG.SURVEYS@eia.doe.gov](mailto:OOG.SURVEYS@eia.doe.gov)

To facilitate the processing of data, the use of EIA forms is requested (either hardcopies or Excel spreadsheets).

Additional copies of the EIA-23 form and instructions are available in PDF or Excel Spreadsheet (XLS) format on the EIA Website at <http://www.eia.doe.gov>. (After logging on the EIA website, highlight the *By Fuel* category; select *Petroleum or Natural Gas*; then select *Survey Forms* on the sidebar at the left of the screen; then scroll to *Reserves Survey Forms*).

In addition, filing electronically, when possible (i.e., using e-mail or by fax), is encouraged. When using the Excel spreadsheet, saving the original form on your hard drive then using it to make additional copies is recommended. When entering responses on hard copies, type or print in black ink using all capital letters. **Computer printouts on other than an exact duplicate of the forms provided are not acceptable.**

For information concerning requests for extension of time to file or for exception from filing Form EIA-23, contact the EIA-23 Coordinator toll-free at 1-800-879-1470 from 8:30 a.m. to 5:00 p.m. CST.

## D. RECORD KEEPING REQUIREMENTS

All records necessary to reconstruct the data on this form must be kept at the reporting site or on file and available for a period of three (3) years from the filing due date.

EIA will follow this survey with efforts to perform Quality Assurance on the data, assessing the accuracy of the resulting information. Respondents may encounter two principal Quality Assurance activities:

- 1) government personnel will make or supervise independent reserve estimates on a sample basis or
- 2) a sample of operators will be visited to review the data submitted.

EIA recognizes that the judgment of geologists and petroleum engineers is required in the reserve estimation process and that as a result, proved reserves are estimates rather than precise quantitative measurements.

## E. SANCTIONS

The timely submission of Form EIA-23 by those required to report is mandatory under Section 13 (b) of the Energy Information Administration Act of 1974 (FEAA) (Public Law 93-275), as amended. Failure to respond may result in a civil penalty of not more than \$2,750 a day for each violation or a fine of not more than \$5,000 a day for each willful violation. The government may bring a civil action to prohibit reporting violations, which may result in a temporary restraining order or a preliminary or permanent injunction without bond. In such civil action, the court may also issue mandatory injunctions commanding any person to comply with these reporting requirements.

## F. CONFIDENTIALITY

The calendar year production of crude oil and natural gas data reported on Form EIA-23 are not considered as

confidential and may be publicly released in identifiable form. In addition to the use of the information by EIA for statistical purposes, the information may be used for any non-statistical purposes such as administrative, regulatory, law enforcement, or adjudicatory purposes.

All other information reported on Form EIA-23 will be kept confidential and not disclosed to the public to the extent that it satisfies the criteria for exemption under the Freedom of Information Act (FOIA), 5 U.S.C. §552, the DOE regulations, 10 C.F.R. §1004.11, implementing the FOIA, and the Trade Secrets Act, 18 U.S.C. §1905. The Energy Information Administration (EIA) will protect your information in accordance with its confidentiality and security policies and procedures.

The Federal Energy Administration Act requires the EIA to provide company-specific data to other Federal agencies when requested for official use. The information reported on this form may also be made available, upon request, to another component of the Department of Energy (DOE); to any Committee of Congress, the General Accounting Office, or other Federal agencies authorized by law to receive such information. A court of competent jurisdiction may obtain this information in response to an order. The information may be used for any non-statistical purposes such as administrative, regulatory, law enforcement, or adjudicatory purposes.

Disclosure limitation procedures are applied to the statistical data published from EIA-23 survey information to ensure that the risk of disclosure of identifiable information is very small.

Confidential information collected on Form EIA-23 will be provided to United States Department of Interior offices (the Mineral Management Service and the United States Geological Survey) for statistical purposes only, in conducting their resource estimation activities. In addition, company-specific data considered as critical infrastructure information may be provided to other Federal agencies for emergency planning and response.

## G. REPORTING STANDARDS

### 1. Proved Reserves

Proved reserves of oil and gas as of December 31, 2003 are the estimated quantities of oil and/or gas, which geological and engineering data demonstrate with reasonable certainty to be recoverable in future years from known reservoirs under current economic and operating conditions.
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Oil and gas reservoirs are considered "proved" if economic producibility is supported by actual production or conclusive formation tests (drill stem or wire line), or if economic producibility is supported by core analyses and/or electric or other log interpretations. The area of a reservoir considered "proved" includes:

- 1) that portion delineated by drilling and defined by gas-oil, gas-water and/or oil-water contacts, if any; and
- 2) the immediately adjoining portions not yet drilled, but which can be reasonably judged as economically

productive on the basis of available geological and engineering data.

In the absence of information on fluid contacts, the lowest known structural occurrence of hydrocarbons controls the lower proved limit of the reservoir.

Reserves that can be produced economically through application of improved recovery techniques (such as fluid injection) are included in the "proved" classification when:

- 1) successfully tested by a pilot project, or
- 2) operation of an installed program in the reservoir provides support for the engineering analysis on which the project or program was based.

For natural gas reserves, wet after lease separation, an appropriate reduction in the reservoir gas volume shall be made to cover the removal of:

- 1) liquefiable portions of the gas in lease and/or field separation facilities, and
- 2) non-hydrocarbon gases where they occur in sufficient quantity to render the gas unmarketable.

Estimates of proved reserves do not include the following:

- 1) oil and/or gas, the recovery of which is subject to reasonable doubt because of uncertainty as to geology, reservoir characteristics or economic factors;
- 2) oil and/or gas that may occur in undrilled prospects;
- 3) oil that may be recovered from oil shales, coal, gilsonite and other such sources; and
- 4) volumes placed in underground storage.

It is not necessary that production, gathering or transportation facilities are installed or operative for a reservoir to be considered proved.

## 2. Calendar Year Production

Production data are required from all operators. If the actual 2003 production data are not available at the time Form EIA-23 is prepared, estimate production.

If any properties were acquired during the Calendar Year, production data from the acquired properties should be reported from the date of purchase. If any properties were sold during the Calendar Year, production data should be reported until the date of sale.

## 3. Total Operated Basis

All data (production and/or reserves) are to be reported on an 8/8ths or Total Operated Basis. When reporting on this basis, **production and reserves data for any properties on which operations were acquired during the Calendar Year should be reported from the date of transfer or purchase. If any properties were sold or transferred to a new operator during the Calendar Year, production and reserves data should be reported until the date of sale or transfer.**

### EXAMPLES:

Of the total 8/8ths interest, respondent's share is 50 percent and the associated royalty share is 6.25 percent. Respondent operates property. Respondent reports 100 percent of proved reserves and production.

Of the total 8/8ths interest, respondent's share is zero but it operates the property (i.e., a contract operator). Respondent reports 100 percent of proved reserves and production.

## 4. States and Geographic Subdivisions

The determination of which state or geographic subdivision within which to report proved reserves and production data is based on the location of the field(s) containing the oil and/or gas. If a field overlaps two or more states or subdivisions, the proved reserves data must be subdivided into the appropriate geographic components. Refer to the maps in the **Glossary** for the subdivision boundaries in the States of Alaska, California, Louisiana, New Mexico and Texas.

Offshore proved reserves data are required separately for the State and Federal domains. If an offshore field lies on or between disputed boundaries, include all data in the State offshore area.

## 5. Reporting Units

All volumes are to be reported in the appropriate reporting units as shown below.

### a. Crude Oil

All crude oil volumes are to be reported in **thousands of barrels (MBarrels)** (42 U.S. gallons per barrel at atmospheric pressure corrected to 60° Fahrenheit) and excluding basic sediment and water.

### b. Natural Gas

All natural gas volumes are to be reported in **millions of cubic feet (MMCF)** at **14.73 psia** and **60° Fahrenheit**, wet after lease separation.

It is recognized that the operator in many instances has no knowledge of the ultimate reduction of the gas stream produced from his properties, which may result from further downstream processing. The operator is requested to report volumes of natural gas, which remain after processing through lease and field separation facilities. Volumes of gas that are flared are also considered production.

The EIA obtains data from gas processing plants separately. Gas volumes reported on Form EIA-23 should not be corrected for liquids removed by these plants. If you do not know if a field facility through which your gas is processed is currently reporting data to the EIA or not, contact the EIA-23 Coordinator to obtain information on those plants which report.

### c. Lease Condensate

All lease condensate volumes are to be reported in **thousands of barrels (MBarrels)** (42 U.S. gallons per barrel, at atmospheric pressure corrected to 60° Fahrenheit).

### d. Rounding

When rounding liquid volumes, round 500 barrels and above up to "1" MBbls, and less than 500 barrels down to "0" MBbls. For gas volumes, round 500 MCF and above up to "1" MMCF, and less than 500 MCF down to "0" MMCF. **Blank entries should not be completed with "0".**

Volumes should be reported in whole numbers. Volumes containing decimals should be rounded to the nearest whole number.

# SPECIFIC INSTRUCTIONS

## H. OPERATOR IDENTIFICATION AND DETAILED REPORT

This information is to be reported on the Cover Page submitted. You are required to enter those items that are incorrect or missing from the preprinted form.

### 1. COVER PAGE - Operator Identification

#### Part I. Identification

**EIA Identification Number:** This item is for DOE use only.

**Company Name, Address, City, State, ZIP Code.** Enter the legal name and address of the operator. Use standard State abbreviations found in the Glossary on page 17. If a foreign address, enter city, local equivalent of State name (e.g., province), and country on the second address line.

**EIN:** Enter the operating firm's IRS Employer Identification Number (EIN), if it has one.

#### Item Instructions:

**Item 1: Contact Information.** Name, telephone number, fax number and e-mail address of the person most knowledgeable about the reported data. This person should be familiar with the data provided and will be the person to whom inquiries will be directed, if necessary.

**Item 2: "Was your company an oil and gas field operator...?"** Check the appropriate box and follow the instructions for completing the rest of the form.

**Item 3: Company Status, Name, and/or Address Change or Correction.** If there was a change to the company name or address or if the company was sold, merged with another company or the company went out of business, check the appropriate box and complete Item 4.

**Item 4: Change Company Name, Address, EIN, and/or Contact Information.** If any box in Item 3 was checked, enter the new or correct company name, address, EIN or contact person here.

#### Part II. Parent Company Identification

**Item 5. Is there a parent company...?"** Check the appropriate box. If Box 2 is checked, provide parent company information in Items 6 through 11.

**Item 6. Company Name.** Enter the legal name and address of the parent company, if any, that exercises ultimate control over the respondent.

**Example:** You are Company A, which takes direction from Company B, which in turn takes direction from Company C. Report Company C as the parent company, rather than Company B.

**Item 7: Parent Company EIN** - Enter the EIN of the parent company, if any.

**Items 8-11: Address, City, State, and Zip Code.** Enter the address, City, State, and Zip Code of the parent company.

#### Part III. Attestation

**Items 12 thru 15: Attestation** - Enter the name and title of the individual designated by the respondent company to sign the attestation and the date of the signing. This report must be sworn to or affirmed by a responsible officer or the office responsible for regulatory filings.

### 2. SUMMARY REPORT (Pages 1 of 2 and 2 of 2)

All proved reserves and production data on the Summary Report are to be reported on a Total Operated Basis (See **Total Operated Basis** in Section G.3 and I) for each area in which the respondent operated oil and/or gas wells on December 31, 2003, including abandonments during the year.

#### SECTION 1.0: Operator and Report Identification Data

The information in this section is to be reported on both pages 1 and 2 of the Summary Report.

**Item 1.1: Operator I.D. Code** - If the operator ID from the preprinted form on the Cover Page is incorrect, enter the correct 10-digit number.

**Item 1.2: Operator Name** - If the name of the operator from the preprinted form on the Cover Page is incorrect, enter the first 35 characters of the operator name. If the name exceeds 35 characters, do not abbreviate, but simply truncate the extra characters from the right.

**Item 1.3: Original** - Enter an 'X' if this is the first submission of this schedule for the report year. Otherwise, leave blank.

**Item 1.4: Amended** - Enter an 'X' if this schedule amends a previously submitted schedule. Otherwise, leave blank.

#### SECTION 2.0: Production and Reserves Data

Production data and/or estimates of proved reserves of crude oil, natural gas and lease condensate are required of each operator selected. This survey segregates selected operators into three categories, according to the annual production of hydrocarbons from wells which they operated on December 31, 2003. The three size categories are as follows:

**Category I - Large Operators:** Operators who produced 1.5 million barrels or more of crude oil or 15 billion cubic feet or more of natural gas or both.

**Category II - Intermediate Operators:** Operators who produced at least 400,000 barrels of crude oil or 2 billion cubic feet of natural gas or both but less than Category I operators.

**Category III - Small Operators:** Operators who produced less than the Category II operators.

Production refers to the total report year production from all domestic oil and/or gas wells you operated on December 31, 2003, including wells abandoned during the year.

Production data are required from all operators. Proved reserves estimates are required from Category III operators only if such data exist in company records. To the extent that Category III operators do not have proved reserves estimates associated with one or more specific properties, they must report separately the following:

- 1) production data from properties for which proved reserves have been estimated (Columns B, E and H), and
- 2) production data from properties for which proved reserves have not been estimated (Columns C, F and I).

Provide data in Columns A through I for each State or geographic subdivision in which you were an operator of oil and/or gas wells as of December 31, 2003. Proved reserves and production for 2003 are to be reported on a **Total Operated Basis**. (See Section G, **Reporting Standards**)

You are not required to complete entries with zeros for state or geographic subdivisions in which you **do not** operate wells. **Leave these entries blank.**

The determination of which State or geographic subdivision within which to report proved reserves and production data is based on the location of the field(s) containing the oil and/or gas. If a field overlaps two or more States or subdivisions, the proved reserves data must be subdivided into the appropriate geographic components. Refer to the maps in the **Glossary** for the subdivision boundaries in the States of Alaska, California, Louisiana, New Mexico and Texas.

Offshore proved reserves data are required separately for the State and Federal domains. If an offshore field lies on or between disputed boundaries, include all data in the State offshore area.

Specify the two-letter postal codes in the line, labeled "Other States" for all States in which you operate but which were not listed in the preceding lines. Enter the combined production and reserves for all specified "Other States" in Columns A through I.

## REPORTING INSTRUCTIONS

### December 31, 2003 Proved Reserves Information

Enter estimates of total proved reserves for operated properties if estimates are available. The estimates should be based on your most recent evaluations, adjusted for production through December 31, 2003, and for any other relevant factors. If reserves were

depleted during 2003, enter zero. The resulting estimates for reserves should be consistent with the definitions of proved reserves. (See Section I, **Definitions**, page 7)

**Column A:** Crude Oil Reserves

**Column D:** Natural Gas Reserves

**Column G:** Lease Condensate Reserves

**Note:** If no proved reserves estimates are available, enter "NA" in Column(s) A, D and/or G. Then enter, in appropriate production columns C, F and/or I, the production for 2003 from operated properties for which proved reserves estimates are NOT available in existing company records and were therefore NOT reported in Columns A, D or G.

### Annual 2003 Production Information

Production data are required from all operators. If the actual calendar year production data are not available at the time the Form EIA-23 is prepared, estimate production. **Lease use, flared and vented gas are also considered production and should be included in the volumes reported.**

#### Production from Properties for Which Reserves Were Estimated:

Enter the production for 2003 for those operated properties for which proved reserves data were reported in Columns A, D or G.

**Column B:** Crude Oil Production

**Column E:** Natural Gas Production

**Column H:** Lease Condensate Production

#### Production from Properties for Which Reserves Were NOT Estimated:

Enter the production for 2003 from operated properties for which proved reserves estimates are NOT available in existing company records and were therefore NOT reported in Columns A, D or G.

**Column C:** Crude Oil Production

**Column F:** Natural Gas Production

**Column I:** Lease Condensate Production

### U.S. TOTALS

Sum the entries in each column and enter the total on the last line of page 2 - "TOTALS".

# GLOSSARY

## I. DEFINITIONS

The definitions contained herein have been formulated with reference to the particular purposes to be served by Form EIA-23. They are not necessarily synonymous with the same or similar terms as used in DOE regulations, and are not to be constructed as definitions applicable for any purposes other than the collection and reporting of data on Form EIA-23.

**Crude Oil (excluding Lease Condensate):** A mixture of hydrocarbons that exists primarily in the liquid phase in natural underground reservoirs and remains liquid at atmospheric pressure after passing through surface separating facilities. Such hydrocarbons as lease condensate and natural gasoline recovered as liquids from natural gas wells in lease or field separation facilities and later mixed into the crude stream are excluded. Depending upon the characteristics of the crude stream, it may also include:

- 1) small amounts of hydrocarbons that exist in gaseous phase in natural underground reservoirs but are liquid at atmospheric pressure after being recovered from oil well (casinghead) gas in lease separators and are subsequently commingled with the crude stream without being separately measured and/or
- 2) small amounts of non-hydrocarbons produced with the oil, such as sulfur and various metals.

When a State regulatory agency specifies a definition of crude oil, which differs from that set forth above, the State definition is followed.

**Field:** An area consisting of a single reservoir or multiple reservoirs all grouped on or related to the same individual geological structural feature and/or stratigraphic condition. There may be two or more reservoirs in a field, which are separated vertically by intervening impervious strata or laterally by local geologic barriers or by both.

**Field Separation Facility:** A surface installation designed to recover lease condensate from a produced natural gas stream usually originating from more than one lease and managed by the operator of one or more of these leases. (See **Lease Condensate**)

**Gas Processing Plant:** Facilities designed to recover natural gas liquids from a stream of natural gas that may or may not have passed through lease separators and/or field separation facilities. These facilities also control the quality of the natural gas stream to be marketed. Cycling plants are classified as natural gas processing plants.

**Lease Condensate:** A mixture consisting primarily of pentanes and heavier hydrocarbons which is recovered as a liquid from natural gas in lease or field separation facilities. This category excludes natural gas plant liquids, such as butane and propane, which are recovered at downstream natural gas processing plants or facilities. The output of natural gas processing plants is reported on Form EIA-64A, "Annual Report of the Origin of Natural Gas Liquids Production," and Form EIA-816, "Monthly Natural Gas Liquids Report."

**Lease Separator:** A facility installed at the surface for the purpose of separating gases from:

- 1) produced crude oil and water at the temperature and pressure conditions of the separator, and/or
- 2) that portion of the produced natural gas stream that liquefies at the temperature and pressure conditions of the separator.

**Natural Gas:** A gaseous mixture of hydrocarbon compounds, the primary one being methane. Note: The Energy Information Administration measures **wet natural gas** and its sources of production, **associated/dissolved natural gas** and **non-associated natural gas**, and **dry natural gas**, which is produced from **wet natural gas**. This EIA survey does not include landfill gas (biomass gas), synthetic natural gas, coke oven gas or manufactured gas.

**Wet natural gas:** A mixture of hydrocarbon compounds and small quantities of various non-hydrocarbons existing in the gaseous phase or in solution with crude oil in porous rock formations at reservoir conditions. The principal hydrocarbons normally contained in the mixture are methane, ethane, propane, butane and pentane. Typical non-hydrocarbon gases that may be present in reservoir natural gas are water vapor, carbon dioxide, hydrogen sulfide, nitrogen and trace amounts of helium. Under reservoir conditions, natural gas and its associated liquefiable portions occur either in a single gaseous phase in the reservoir or in solution with crude oil and are not distinguishable at the time as separate substances. Note: The Securities and Exchange Commission and The Financial Accounting Standards Board refer to this product as **natural gas**.

**Associated-dissolved natural gas:** Natural gas that occurs in crude oil reservoirs either as free gas (associated) or as gas in solution with crude oil (casinghead gas). See **natural gas**.

**Non-associated natural gas:** Natural gas that is not in contact with significant quantities of crude oil in the reservoir. See **natural gas**.

**Dry natural gas:** Natural gas that remains after:

- 1) the liquefiable hydrocarbon portion has been removed from the gas stream (i.e., gas after lease, field and/or plant separation); and
- 2) any volumes of non-hydrocarbon gases have been removed where they occur in sufficient quantity to reduce the gas quality below minimum pipeline specifications (rendering it unmarketable).

Note: Dry natural gas is also known as consumer-grade natural gas. The parameters for measurement are cubic feet at 60 degrees Fahrenheit and 14.73 pounds per square inch absolute (psia). See **natural gas**.

**Operator:** The person responsible for the management and day-to-day operation of one or more crude oil and/or natural gas wells as of December 31, 2003. The operator is

generally a working interest owner or a company under contract to the working interest owner(s). Wells included are those which have proved reserves of crude oil, natural gas and/or lease condensate in the reservoirs associated with them, whether or not they are producing. Wells abandoned during 2003 are also to be considered "operated" as of December 31, 2003. (See **Person, Proved Reserves of Crude Oil, Proved Reserves of Natural Gas, Proved Reserves of Lease Condensate and Reservoir**)

**Parent Company:** A firm that directly or indirectly controls another entity.

**Person:** An individual, a corporation, a partnership, an association, a joint-stock company, a business trust or an unincorporated organization.

**Production, Crude Oil:** The volumes of crude oil that was extracted from oil reservoirs during 2003. These volumes are determined through measurement of the volumes delivered from lease storage tanks or at the point of custody transfer with adjustment for:

- 1) net differences between opening and closing lease inventories, and
- 2) basic sediment and water.

Crude oil used on the lease is considered production.

**Production, Lease Condensate:** The volume of lease condensate produced during 2003. Lease condensate volumes include only those volumes recovered from lease or field separation facilities. (See **Lease Condensate**)

**Production, Natural Gas:** The volume of natural gas withdrawn from reservoirs during 2003 less:

- 1) the volume returned to such reservoirs in cycling, repressuring of oil reservoirs and conservation operations,
- 2) shrinkage resulting from the removal of lease condensate and
- 3) shrinkage resulting from the removal of non-hydrocarbon gases where they occur in sufficient quantity to render the gas unmarketable.

Volumes of gas withdrawn from gas storage reservoirs and native gas, which have been transferred to the storage category, are not considered production. Flared and vented gas is also considered production. (This definition differs from that of "Marketed Production" which excludes flared and vented gas.)

**Proved Reserves of Crude Oil:** Proved reserves of crude oil as of December 31, 2003 are the estimated quantities of all liquids defined as crude oil, which geological and engineering data demonstrate with reasonable certainty to be recoverable in future years from known reservoirs under existing economic and operating conditions.

Reservoirs are considered proved if economic producibility is supported by actual production or conclusive formation test (drill stem or wire line), or if economic producibility is supported by core analyses and/or electric or other log interpretations. The area of an oil reservoir considered proved includes:

- 1) that portion delineated by drilling and defined by gas-oil and/or oil-water contacts, if any; and
- 2) immediately adjoining portions not yet drilled, but which can be reasonably judged as economically productive on the basis of available geological and engineering data.

In the absence of information on fluid contacts, the lowest known structural occurrence of hydrocarbons is considered to be the lower proved limit of the reservoir.

Volumes of crude oil placed in underground storage are not considered proved reserves.

Reserves of crude oil, which can be produced economically through application of improved recovery techniques (such as fluid injection), are included in the "proved" classification when:

- 1) successfully tested by a pilot project, or
- 2) operation of an installed program in the reservoir provides support for the engineering analysis on which the project or program was based.

Estimates of proved crude oil reserves do not include the following:

- 1) oil that may become available from known reservoirs but is reported separately as "indicated additional reserves";
- 2) natural gas liquids (including lease condensate);
- 3) oil, the recovery of which is subject to reasonable doubt because of uncertainty as to geology, reservoir characteristics or economic factors;
- 4) oil that may occur in undrilled prospects; and
- 5) oil that may be recovered from oil shales, coal, Gilsonite and other such sources.

It is not necessary that production, gathering or transportation facilities are installed or operative for a reservoir to be considered proved.

**Proved Reserves of Lease Condensate:** Proved reserves of lease condensate, as of December 31, 2003, are the volumes of lease condensate expected to be recovered in future years in conjunction with the production of proved reserves of natural gas as of December 31 of the calendar year, based on:

- 1) recovery efficiency of the lease and/or
- 2) field separation facilities installed as of December 31 of the calendar year.

(See **Lease Condensate** and **Proved Reserves of Natural Gas**)

**Proved Reserves of Natural Gas:** Proved reserves of natural gas as of December 31, 2003 are the estimated quantities that analysis of geologic and engineering data demonstrate with reasonable certainty to be recoverable in future years from known reservoirs under existing economic and operating conditions.

Reservoirs are considered proved if economic producibility is supported by:

- 1) actual production or conclusive formation test (drill stem or wire line) or
- 2) core analyses and/or electric or other log interpretations.

The area of a gas reservoir considered proved includes:

- 1) that portion delineated by drilling and defined by gas-oil and/or gas-water contacts, if any; and
- 2) immediately adjoining portions not yet drilled but which can be reasonably judged as economically productive on the basis of available geological and engineering data.

In the absence of information on fluid contacts, the lowest known structural occurrence of hydrocarbons is considered to be the lower proved limit of the reservoir.

Volumes of natural gas placed in underground storage are not considered proved reserves.

For natural gas reserves, wet after lease separation, an appropriate reduction in the reservoir gas volume must be made to cover the removal of:

- 1) liquefiable portions of the gas in lease and/or field separation facilities and
- 2) exclusion of non-hydrocarbon gases where they occur in sufficient quantity to render the gas unmarketable.

It is not necessary that production, gathering or transportation facilities are installed or operative for a reservoir to be considered proved. It is to be assumed that compression will be initiated if and when economically justified.

**Reserves:** (See **Proved Reserves**)

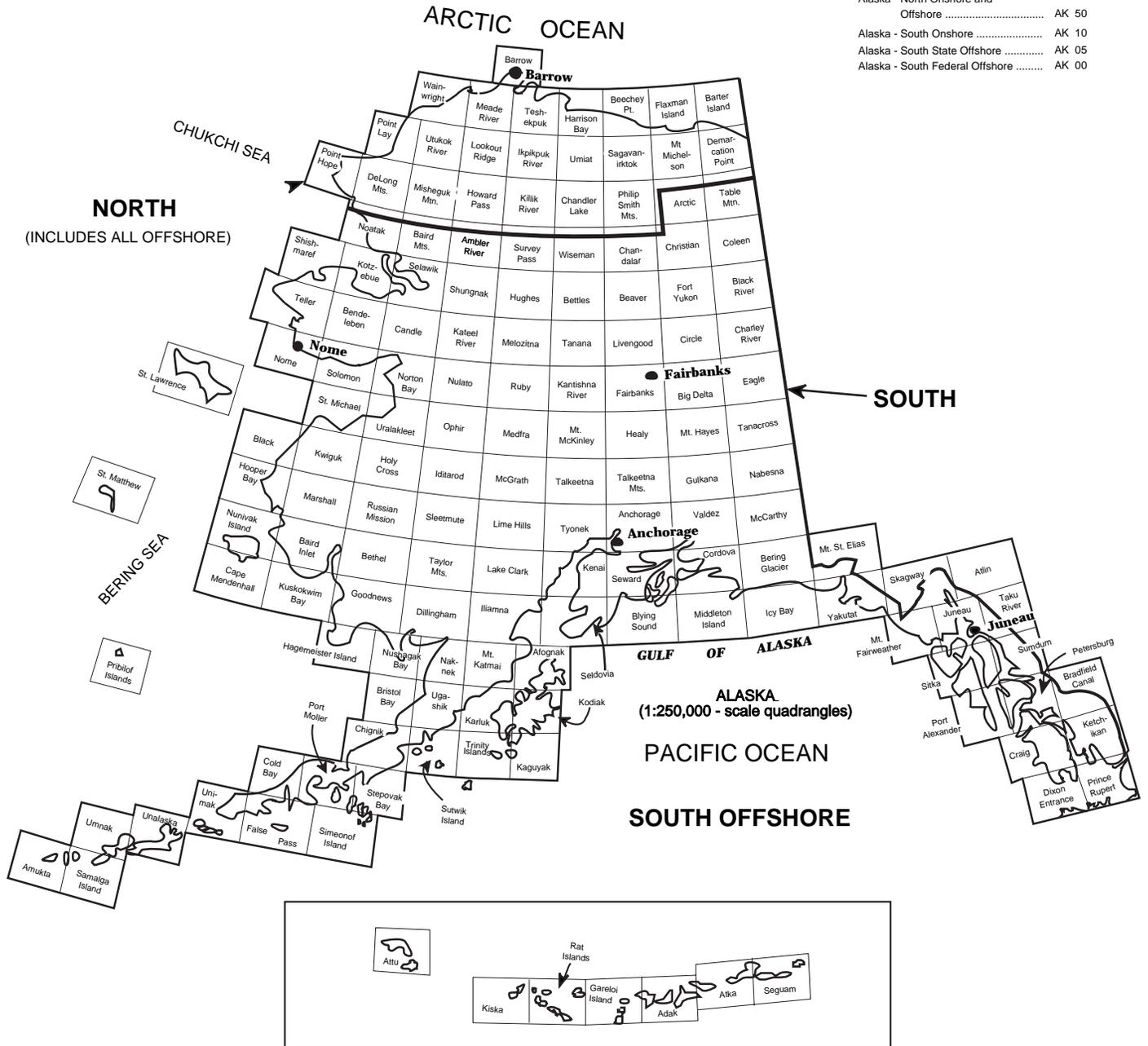
**Reservoir:** A porous and permeable underground formation containing an individual and separate natural accumulation of producible hydrocarbons (oil and/or gas) which is confined by impermeable rock or water barriers and is characterized by a single natural pressure system.

**Subdivision:** A prescribed portion of a given State or other geographical region defined in this publication for statistical reporting purposes.

**Total Operated Basis:** The total reserves or production associated with the wells operated by an individual operator. This is also commonly known as the "gross operated" or "8/8ths" basis.

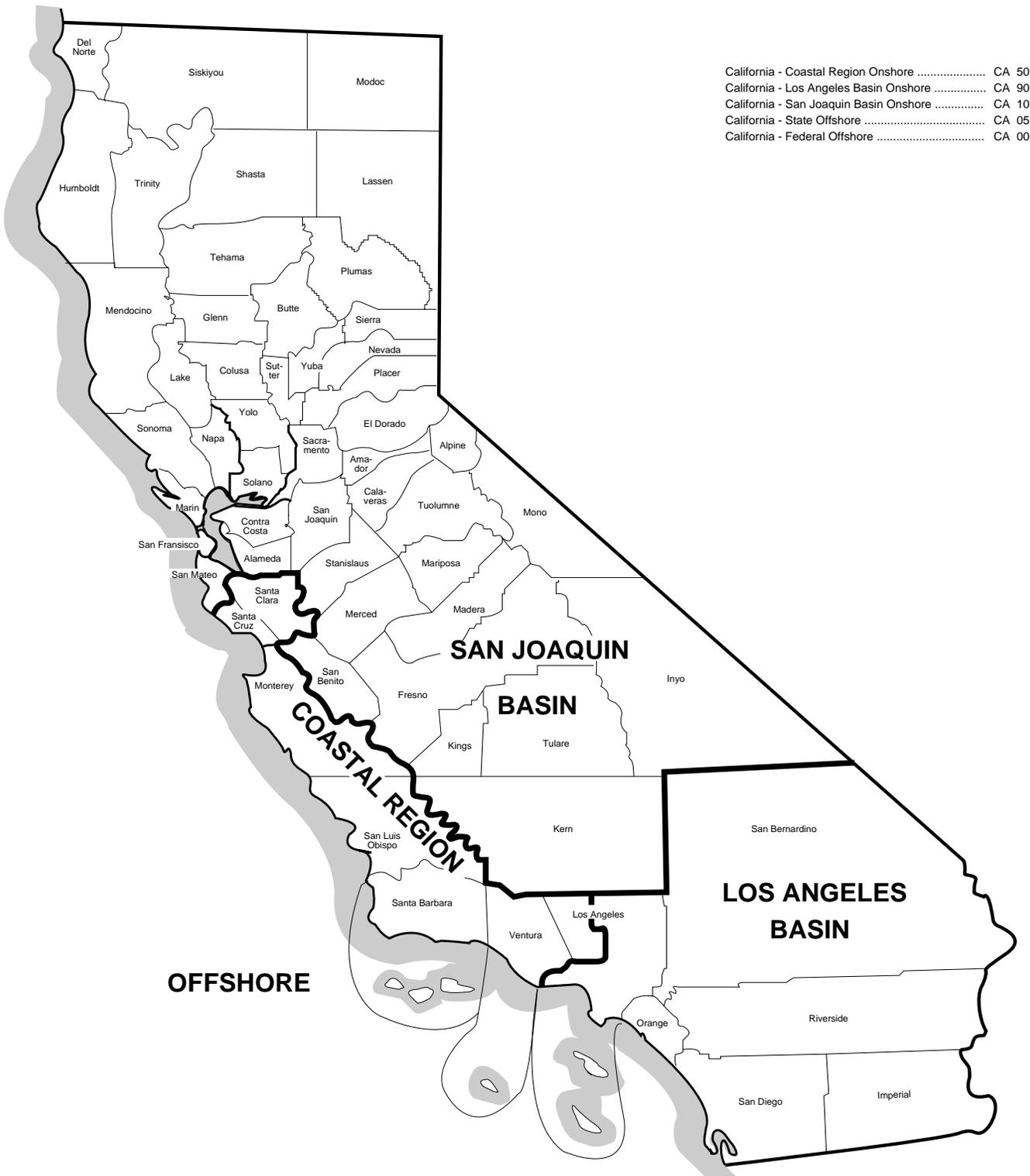
# J. MAPS OF SELECTED STATE SUBDIVISIONS

- Alaska - North Onshore and Offshore ..... AK 50
- Alaska - South Onshore ..... AK 10
- Alaska - South State Offshore ..... AK 05
- Alaska - South Federal Offshore ..... AK 00



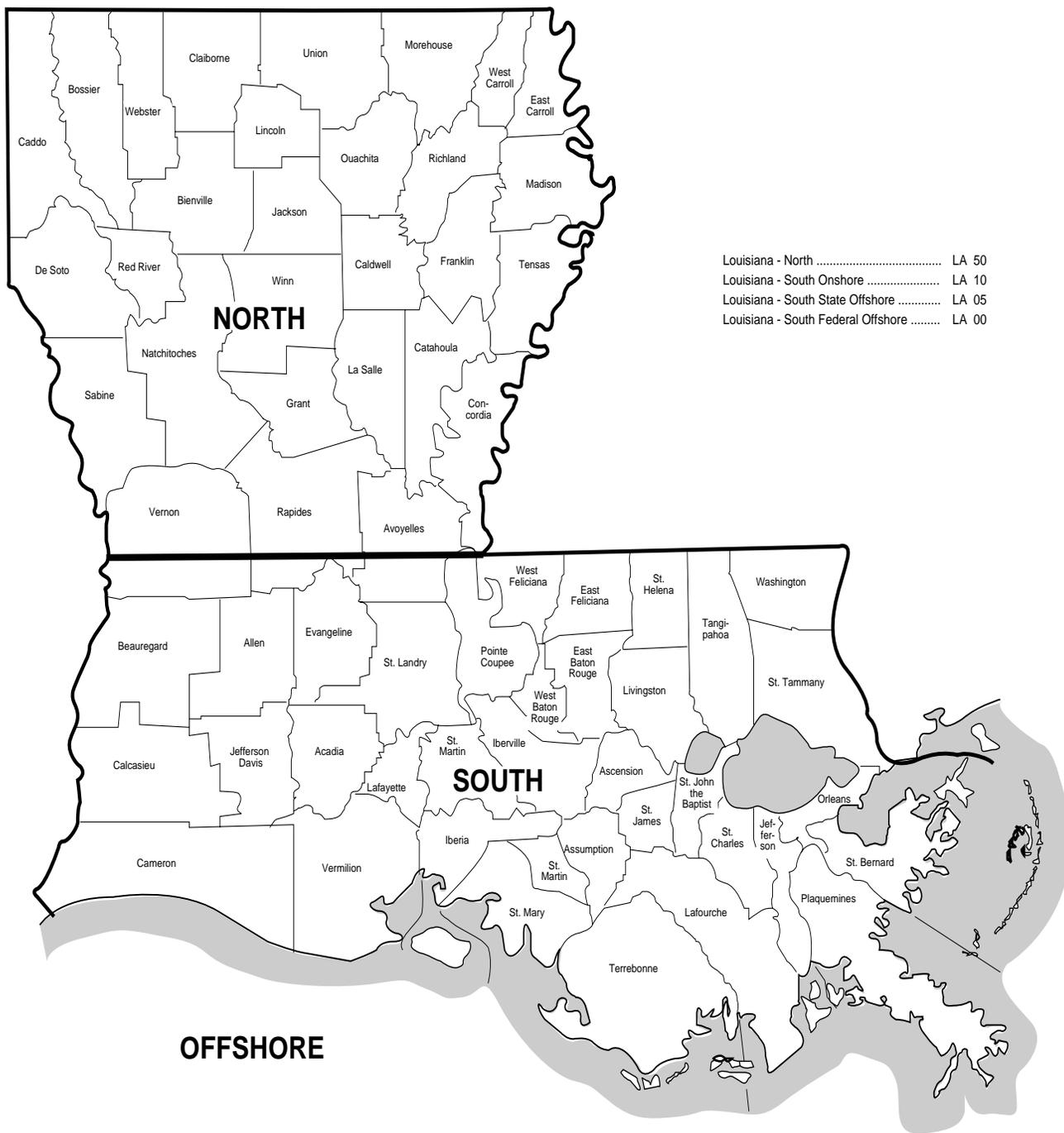
Source: After U.S. Geological Survey

## Alaska Subdivisions and U.S. Geological Survey Quadrangles



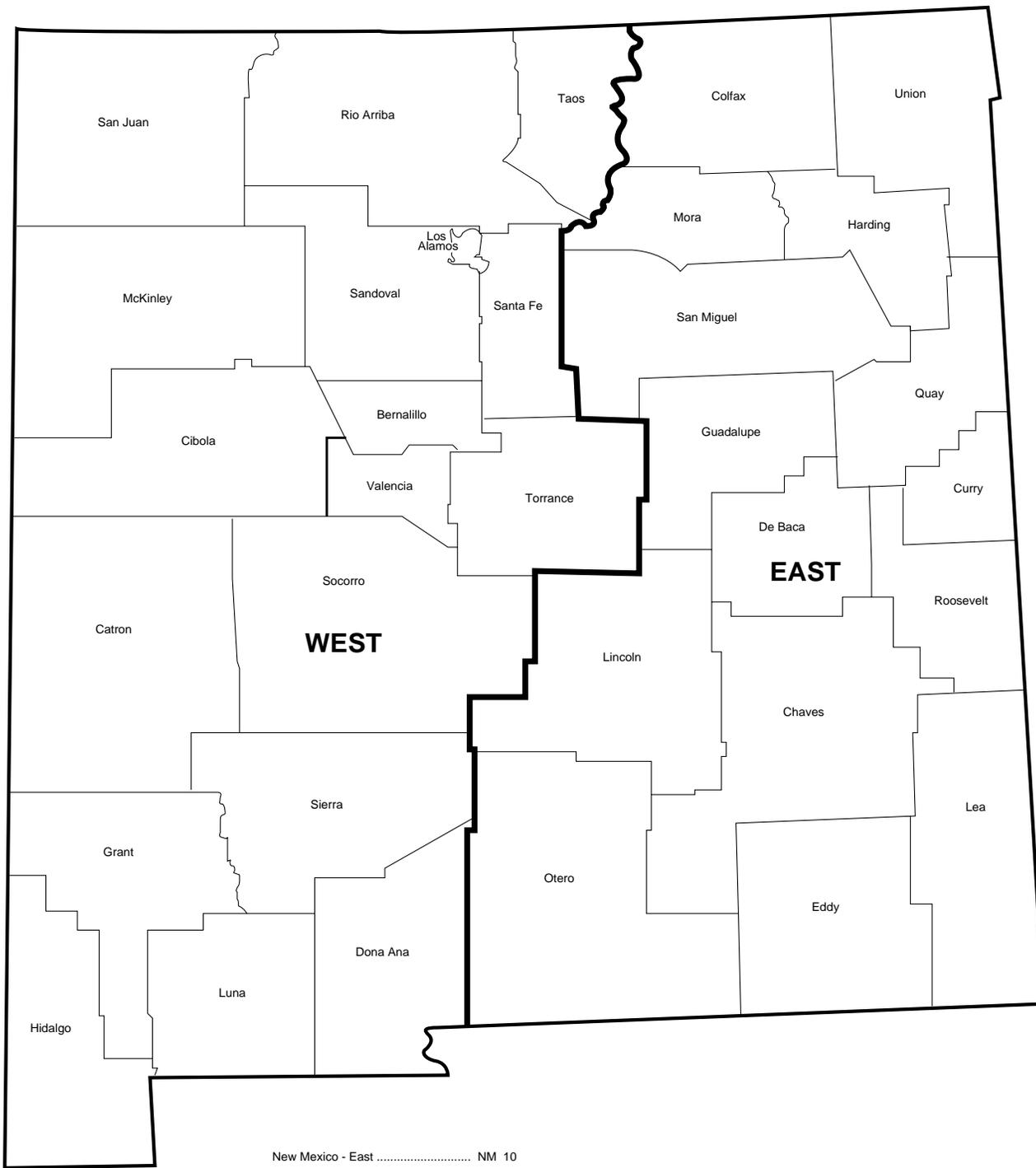
Source: Energy Information Administration, Office of Oil and Gas.

## Subdivisions of California



Source: Energy Information Administration, Office of Oil and Gas

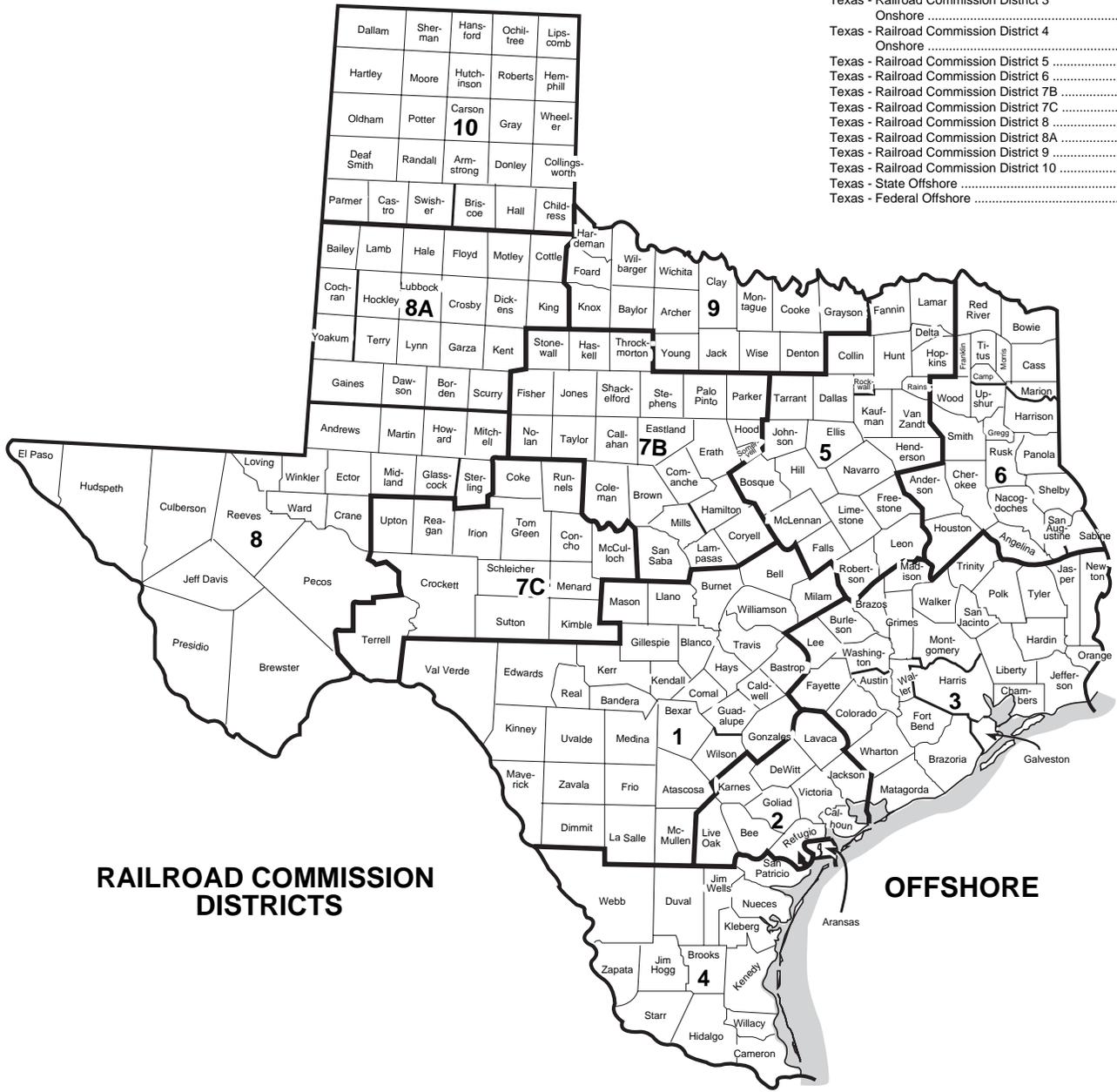
## Subdivisions of Louisiana



Source: Energy Information Administration, Office of Oil and Gas

## Subdivisions of New Mexico

Texas - Railroad Commission District 1 .....	TX 10
Texas - Railroad Commission District 2 Onshore .....	TX 20
Texas - Railroad Commission District 3 Onshore .....	TX 30
Texas - Railroad Commission District 4 Onshore .....	TX 40
Texas - Railroad Commission District 5 .....	TX 50
Texas - Railroad Commission District 6 .....	TX 60
Texas - Railroad Commission District 7B .....	TX 70
Texas - Railroad Commission District 7C .....	TX 75
Texas - Railroad Commission District 8 .....	TX 80
Texas - Railroad Commission District 8A .....	TX 85
Texas - Railroad Commission District 9 .....	TX 90
Texas - Railroad Commission District 10 .....	TX 95
Texas - State Offshore .....	TX 05
Texas - Federal Offshore .....	TX 00



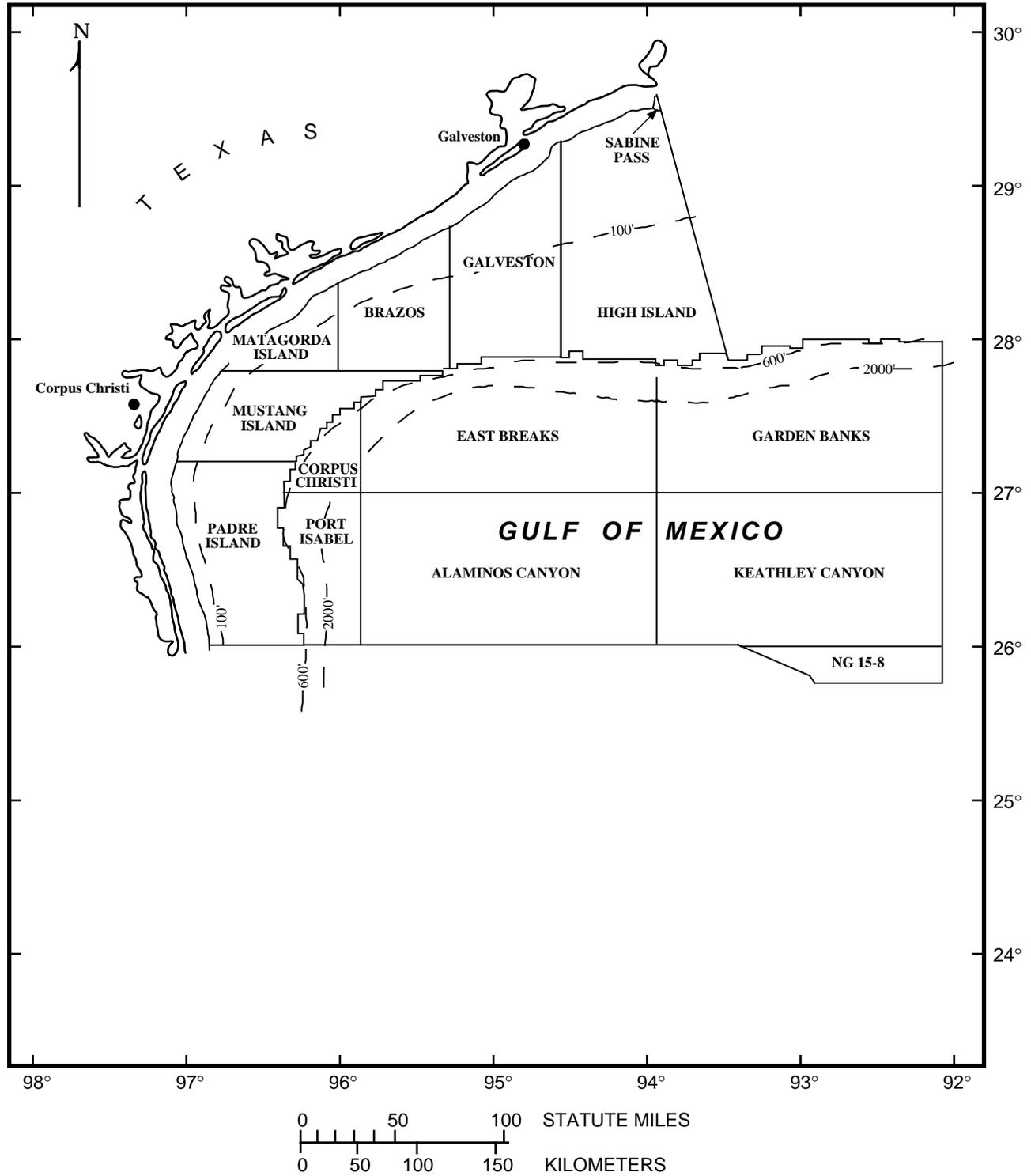
**RAILROAD COMMISSION DISTRICTS**

**OFFSHORE**

Source: Energy Information Administration, Office of Oil and Gas.

## Subdivisions of Texas

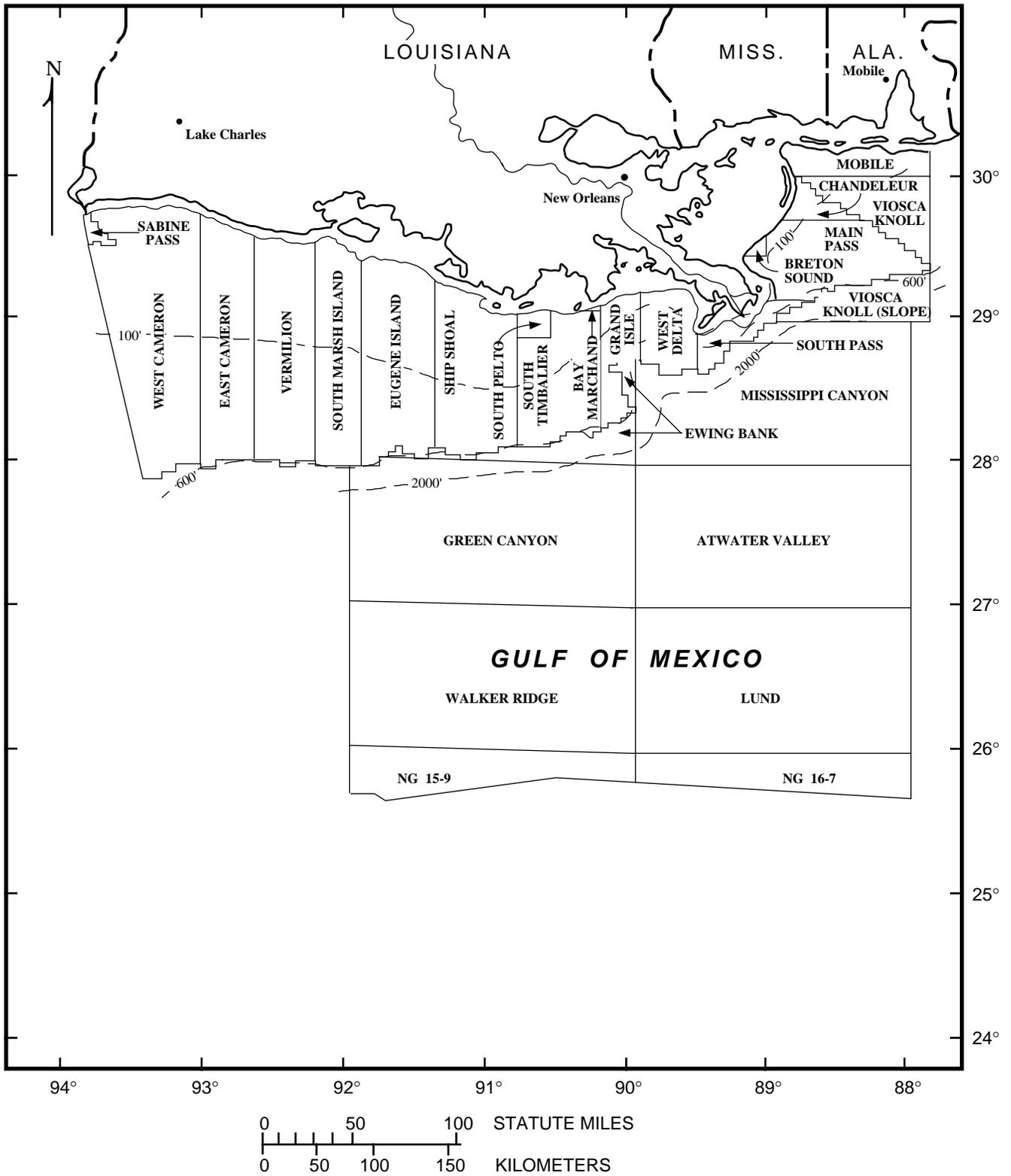
**Western Planning Area, Gulf of Mexico Outer Continental Shelf Region**



(Dashed lines indicate water depths in feet.)

Source: After Minerals Management Service, U.S. Department of the Interior

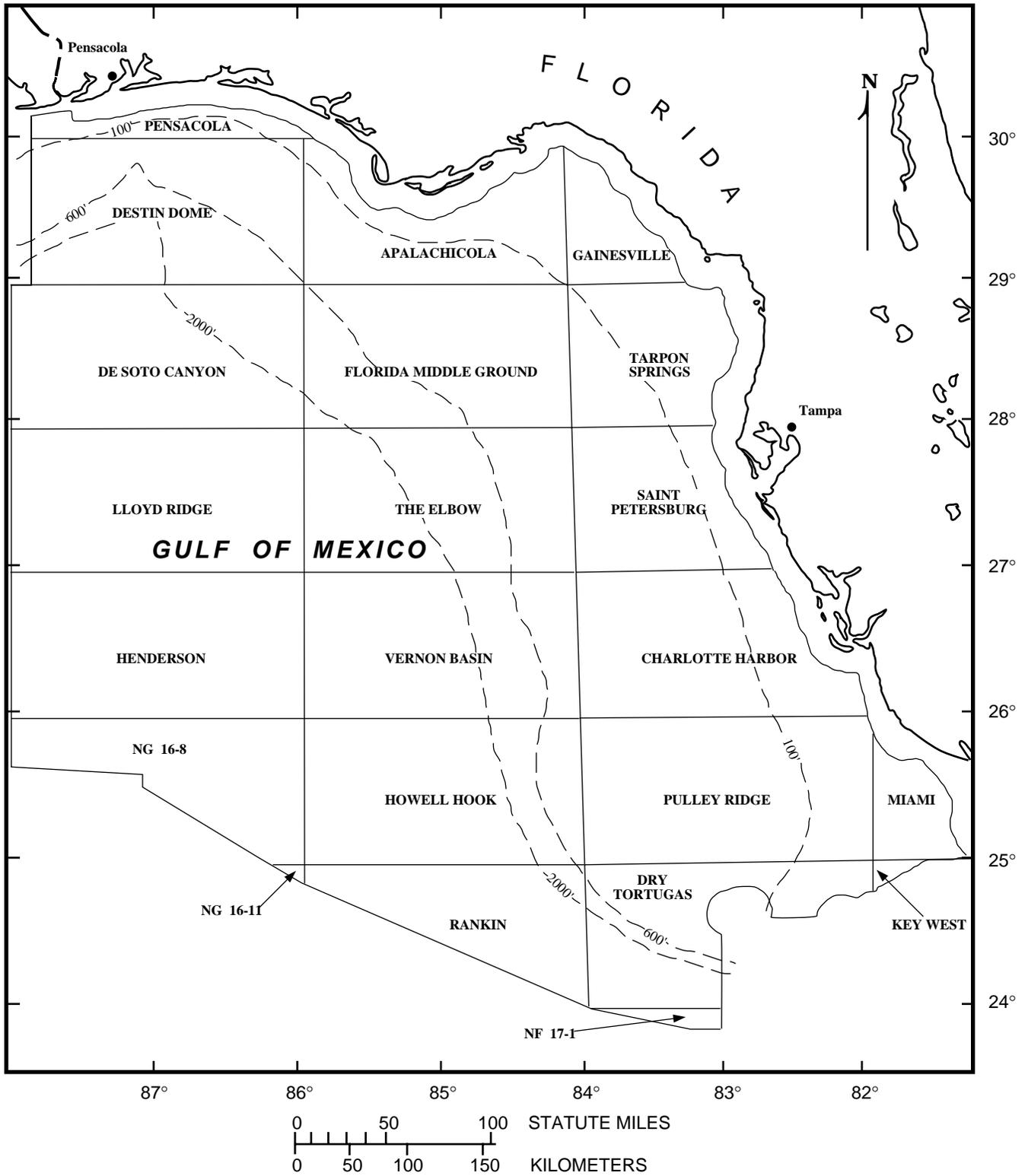
**Central Planning Area, Gulf of Mexico Outer Continental Shelf Region**



(Dashed lines indicate water depths in feet.)

Source: After Minerals Management Service, U.S. Department of the Interior

Eastern Planning Area, Gulf of Mexico Outer Continental Shelf Region



(Dashed lines indicate water depths in feet.)

Source: After Minerals Management Service, U.S. Department of the Interior.

**FORM EIA-23  
ANNUAL SURVEY OF DOMESTIC OIL AND GAS RESERVES  
REPORT YEAR 2003**

This report is mandatory under the Federal Energy Administration Act of 1974 (Public Law 93-275). For the provisions concerning the confidentiality of information and sanction statements, see Section VII and VIII of the instructions.

Resubmission?

**PART I. IDENTIFICATION**

Complete and return by April 15, 2004 to:

Energy Information Administration  
U.S. Department of Energy  
P O Box 8279  
Silver Spring, MD 20907  
Attn: Form EIA-23  
OR  
Fax to: (202) 586-1076/ATTN: FORM EIA-23

Questions? Call 1-800-879-1470

EIA Identification Number:

Affix mailing label or enter mailing address

						0	0	0	0
--	--	--	--	--	--	---	---	---	---

Company Name:

Street or P.O. Box:

City, State, Zip Code:

EIN:

1. Contact Information (*person most knowledgeable about the reported data*)

Contact Person (Please Print): Billy Joe Smith  
Phone Number: ( 777 ) 555-5555 Ext. 189  
Fax Number: ( 777 ) 555-5000  
E-mail Address: bjsmith@office.com

2. Was your company an oil and gas field operator at any time during calendar year 2003? (See definition of an operator, page 1)

- (1)  No... Complete only items 3 through 15 below and return this page.  
(2)  Yes... Complete rest of form.

3. Company Status, Name, and/or Address Change or Correction. (Check appropriate box.)

- Name and address on mailing label are correct.  
 Change company name, contact person, and/or mailing address as indicated below.  
 Company was sold to or merged with company entered below.  
 Company went out of business. Operations transferred to company entered below..

Contact person should be familiar with reserves and production information.

4. Change Company Name, Address, Employer Identification Number (EIN), and/or Contact Information to:

Make any corrections from the mailing label here.

Company Name: Star Spangled Oil Industries  
Street or P. O. Box: 50 Banner Way  
City, State, Zip Code: \_\_\_\_\_  
EIN: 12-3456780

Add Employer Identification Number (EIN) if not present, incorrect or changed.

Contact Person (Please Print): \_\_\_\_\_

Phone Number: ( ) - Ext. Fax Number: ( ) - E-Mail Address: \_\_\_\_\_

Comments:

**PART II. PARENT COMPANY IDENTIFICATION**

5. Is there a parent company that exercises ultimate control over your company?

- (1)  No... Answer 12 through 15.  
(2)  Yes... Answer 6 through 15.

6. Company Name

7. Parent Company EIN

8. Address

9. City

10. State

11. Zip Code

**PART III. ATTESTATION (I hereby swear or affirm that I have reviewed this Form EIA-23 report and am familiar with its contents, and that to the best of my knowledge, information, and belief, the information provided and appended is true and complete.)**

12. Attestor (Please Print) Jane Doe

13. Title: Petroleum Engineer

14. Signature Jane Doe

15. Date: April 15, 2004

2003

ANNUAL SURVEY OF DOMESTIC OIL AND GAS RESERVES

SUMMARY REPORT  
PAGE 1 OF 2

Report All Volumes of Crude Oil and Lease Condensate in Thousands of Barrels [MBbls] at 60°F  
Report All Volumes of Natural Gas in Millions of Cubic Feet [MMCF] at 14.73 psia and 60°F

1.0 OPERATOR AND REPORT IDENTIFICATION DATA		1.1 OPERATOR I.D. CODE		1.2 OPERATOR NAME		REPORT DATE		1.3 ORIGINAL		1.4 RESUBMISSION	
1234560000		STAR SPANGLED OIL INDUSTRIES				12	31	03	X		
2.0 PRODUCTION AND RESERVES DATA		CRUDE OIL			NATURAL GAS			LEASE CONDENSATE			
STATE OR GEOGRAPHIC SUBDIVISION		RESERVES	2003 PRODUCTION		RESERVES	2003 PRODUCTION		RESERVES	2003 PRODUCTION		
		Proved Reserves Dec. 31, 2003 (MBbls) (A)	(From properties for which reserves were Estimated) (MBbls) (B)	(From properties for which reserves were Not Estimated) (MBbls) (C)	Proved Reserves Dec. 31, 2003 (MMCF) (D)	(From properties for which reserves were Estimated) (MMCF) (E)	(From properties for which reserves were Not Estimated) (MMCF) (F)	Proved Reserves Dec. 31, 2003 (MBbls) (G)	(From properties for which reserves were Estimated) (MBbls) (H)	(From properties for which reserves were Not Estimated) (MBbls) (I)	
		ALABAMA-ONSHORE	AL								
ALABAMA-STATE OFFSHORE	AL05										
ALASKA-NORTH ONSHORE AND OFFSHORE	AK50										
ALASKA-SOUTH ONSHORE	AK10										
ALASKA-SOUTH STATE OFFSHORE	AK05										
ARIZONA	AZ										
ARKANSAS	AR										
CALIFORNIA-COASTAL REGION ONSHORE	CA50										
CALIFORNIA-LOS ANGELES BASIN ONSHORE	CA90										
CALIFORNIA-SAN JOAQUIN BASIN ONSHORE	CA10										
CALIFORNIA-STATE OFFSHORE	CA05										
COLORADO	CO										
FLORIDA-ONSHORE	FL										
FLORIDA-STATE OFFSHORE	FL05										
ILLINOIS	IL										
INDIANA	IN										
KANSAS	KS										
KENTUCKY	KY										
LOUISIANA-NORTH	LA50										
LOUISIANA-SOUTH ONSHORE	LA10	NA		7	NA		85	NA		0	
LOUISIANA- STATE OFFSHORE	LA05										
MARYLAND	MD										
MICHIGAN	MI										
MISSISSIPPI-ONSHORE	MS										
MISSISSIPPI-STATE OFFSHORE	MS05										
MISSOURI	MO										
MONTANA	MT										
NEBRASKA	NE										
NEVADA	NV										
NEW MEXICO-EAST	NM10										
NEW MEXICO-WEST	NM50										
NEW YORK	NY										
NORTH DAKOTA	ND										
OHIO	OH										

For Louisiana South Onshore (LA10), operator has no reserves estimate for **CRUDE OIL**. Thus "Not Available" (NA) is reported in Reserves Column A. Operator produced 7,136 barrels of oil. 7,136 is converted to 7 MBbls by dividing by 1000 and then rounding. 7 MBbls is reported under Production Column C. Column B is left blank.

For Louisiana South Onshore (LA10), operator has no reserves estimate for **NATUTAL GAS**. Thus "Not Available" (NA) is reported in Reserves Column D. Operator produced 85,222 MCF of gas. 85,222 MCF is converted to 85 MMCF by dividing by 1000 and then rounding. 85 MMCF is reported in Production Column F. Column E is left blank.

For Louisiana South Onshore (LA10), operator has no reserves estimate for **LEASE CONDENSATE**. Thus "Not Available" (NA) is reported in Reserves Column G. Operator produced 482 barrels of lease condensate. 482 is converted to 0 MBbls by dividing by 1,000 and then rounding. 0 MBbls is reported in Production Column I. Column H is left blank.

ANNUAL SURVEY OF DOMESTIC OIL AND GAS RESERVES

SUMMARY REPORT  
PAGE 2 OF 2

Report All Volumes of Crude Oil and Lease Condensate in Thousands of Barrels [MBbls] at 60°F  
Report All Volumes of Natural Gas in Millions of Cubic Feet [MMCF] at 14.73 psia and 60°F

1.0 OPERATOR AND REPORT IDENTIFICATION DATA		1.1 OPERATOR I.D. CODE		1.2 OPERATOR NAME		REPORT DATE		1.3 ORIGINAL		1.4 AMENDED	
1234560000		STAR SPANGLED OIL INDUSTRIES				12 31 03		X			
2.0 PRODUCTION AND RESERVES DATA											
STATE OR GEOGRAPHIC SUBDIVISION		CRUDE OIL			NATURAL GAS			LEASE CONDENSATE			
		RESERVES	2003 PRODUCTION		RESERVES	2003 PRODUCTION		RESERVES	2003 PRODUCTION		
		Proved Reserves Dec. 31, 2003 (MBbls) (A)	(From properties for which reserves were Estimated) (MBbls) (B)	(From properties for which reserves were Not Estimated) (MBbls) (C)	Proved Reserves Dec. 31, 2003 (MMCF) (D)	(From properties for which reserves were Estimated) (MMCF) (E)	(From properties for which reserves were Not Estimated) (MMCF) (F)	Proved Reserves Dec. 31, 2003 (MBbls) (G)	(From properties for which reserves were Estimated) (MBbls) (H)	(From properties for which reserves were Not Estimated) (MBbls) (I)	
OKLAHOMA	OK										
PENNSYLVANIA	PA										
SOUTH DAKOTA	SD										
TENNESSEE	TN										
TEXAS-RRC DISTRICT 1	TX10	650	48	3							
TEXAS-RRC DISTRICT 2 ONSHORE	TX20										
TEXAS-RRC DISTRICT 3 ONSHORE	TX30										
TEXAS-RRC DISTRICT 4 ONSHORE	TX40										
TEXAS-RRC DISTRICT 5	TX50										
TEXAS-RRC DISTRICT 6	TX60										
TEXAS-RRC DISTRICT 7B	TX70										
TEXAS-RRC DISTRICT 7C	TX75				1156	143					
TEXAS-RRC DISTRICT 8	TX80										
TEXAS-RRC DISTRICT 8A	TX85										
TEXAS-RRC DISTRICT 9	TX90										
TEXAS-RRC DISTRICT 10	TX95										
TEXAS-STATE OFFSHORE	TX05										
UTAH	UT										
VIRGINIA	VA										
WEST VIRGINIA	WV										
WYOMING	WY										
FEDERAL OFFSHORE-GULF OF MEXICO (ALABAMA)	AL00										
FEDERAL OFFSHORE-GULF OF MEXICO (FLORIDA)	FL00										
FEDERAL OFFSHORE-GULF OF MEXICO (LOUISIANA)	LA00										
FEDERAL OFFSHORE-GULF OF MEXICO (MISSISSIPPI)	MS00										
FEDERAL OFFSHORE-GULF OF MEXICO (TEXAS)	TX00										
FEDERAL OFFSHORE-PACIFIC (ALASKA)	AK00										
FEDERAL OFFSHORE-PACIFIC (CALIFORNIA)	CA00										
FEDERAL OFFSHORE-PACIFIC (OREGON)	OR00										
OTHER STATE (SPECIFY)											
TOTAL (SUM EACH COLUMN)	US	650	48	10	1156	143	85	NA			0

For Texas-RRC District 1 (TX 10), operator has proved reserves as of December 31, 2003 of 650,123 barrels of oil. Divided by 1,000 and rounded to convert to 650 MBbls. This is reported in Column A. Production from these reserves is 48 MBbls which is reported in Column B. Additionally, the operator produced 3 MBbls from a well for which reserves were not estimated and enters the amount in Column C.

For Texas-RRC District 7C (TX75), all of operator's natural gas production is from reserves which are estimated as of December 31, 2003. Gas reserves of 1,156,000 MCF is converted to 1,156 MMCF and reported in column D. Production from which reserves were estimated of 143,000 MCF is converted to 143 MMCF and is reported in Column E. Column F is left blank

Sum each column and remember to add both pages

# Overview of Domestic Oil and Gas Reserves Types Within Total U.S. Oil and Gas Resources

