

ANNUAL REPORT OF THE ORIGIN OF NATURAL GAS LIQUIDS PRODUCTION FORM EIA-64A CALENDAR YEAR 2003

GENERAL INSTRUCTIONS

A. PURPOSE

The collection of basic, verifiable information on the Nation's reserves and production of natural gas liquids (NGL) is mandated by the Federal Energy Administration Act of 1974 (FEAA) (Public Law 93-275) and the Department of Energy (DOE) Organization Act of 1977 (Public Law 95-91). The data collected on the Energy Information Administration (EIA) Form EIA-64A includes the annual volumes of natural gas received and natural gas liquids extracted at gas processing plants by areas of origin. It also includes the total gas shrinkage resulting from the natural gas liquids extracted and the annual volume of natural gas utilized as fuel at the gas processing plants.

Gas shrinkage volumes reported by natural gas processing plant operators on Form EIA-64A are used with natural gas data collected on a "wet after lease separation" basis on Form EIA-23, *Annual Survey of Domestic Oil and Gas Reserves*, to estimate "dry" natural gas reserves and production volumes regionally and nationally. The shrinkage data are also used, along with the plant liquids production data reported on Form EIA-64A and lease condensate data reported on Form EIA-23, to estimate regional and national gas liquids reserves and production volumes. This information is the only comprehensive source of credible natural gas liquids data and is required by DOE to assist in the formulation of national energy policies.

The information collected on Form EIA-64A will be used:

- 1) as key input to the EIA publication entitled *U.S. Crude Oil, Natural Gas and Natural Gas Liquids Reserves*;
- 2) to estimate extraction loss volumes contained in the EIA publication *Natural Gas Annual*; and
- 3) as the replacement for the natural gas liquids data which were published in the past by the American Petroleum Institute (API) and the American Gas Association (AGA) in their annual statistical reports entitled, *Reserves of Crude Oil, Natural Gas Liquids and Natural Gas in the United States*.

B. WHO MUST SUBMIT

Each operator of one or more domestic natural gas processing plants is required to file a Form EIA-64A for each plant operated as of December 31, 2003. If a plant was operated during any part of calendar year 2003, a Form EIA-64A must be submitted for that plant. In cases in which two

or more operators during the calendar year operated a plant, the operator as of December 31, 2003 should file a Form EIA-64A that covers the entire calendar year.

If the current operator is unable to obtain from previous operators the information required to compile accurate data covering the entire calendar year, then each operator should file a Form EIA-64A covering only that portion of the calendar year during which he operated the plant.

If there is some question whether a plant is a "natural gas processing plant" or "field separation facility," contact your company's responsible preparer for Form EIA-23, *Annual Survey of Domestic Oil and Gas Reserves*, in order to internally coordinate your responses. This will ensure that double reporting or non-reporting of natural gas liquids data does not occur. If you need assistance, contact the EIA-64A Coordinator toll-free at 1-800-879-1470 from 8:30 a.m. to 5:00 p.m. CST.

C. WHAT MUST BE SUBMITTED

Each operator is required to complete a separate Form EIA-64A for each gas processing plant. If you had a plant in operation as of December 31, 2003 and did not receive a Form EIA-64A for it, a completed form should still be filed for that plant. Additional forms may be obtained on the Internet at <http://www.eia.doe.gov>, by contacting the EIA-64A Coordinator toll-free at 1-800-879-1470 or photocopies of the form may be used. Respondents need submit only one copy of the completed form for each plant. Form EIA-64A solicits annual data separated by area of origin not required on Form EIA-816, *Monthly Natural Gas Liquids Report*. Form EIA-64A does not replace or supersede Form EIA-816 that is still required on a monthly basis.

D. WHEN AND WHERE TO SUBMIT

Form EIA-64A must be submitted **on or before April 1, 2004** for the 2003 calendar year.

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

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

E-mail completed forms to: OOG.SURVEYS@eia.doe.gov

Mail completed forms to:

**United States Department of Energy
Energy Information Administration, EI-45
P O Box 8279
Silver Spring, MD 20907
Attention: EIA-64A**

To facilitate the processing of data, the use of EIA forms is requested (either hardcopies or Excel spreadsheets). Additional copies of the EIA-64A 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-64A, contact the EIA-64A Coordinator toll-free at 1-800-879-1470 from 8:30 a.m. to 5:00 p.m. CST.

E. RECORD KEEPING REQUIREMENTS

You are required to keep all records necessary to reconstruct the data reported on this form for a period of three (3) years.

F. SANCTIONS

The timely submission of Form EIA-64A 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 that 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.

G. CONFIDENTIALITY

The information reported on Form EIA-64A will be kept confidential and not disclosed to the public to the extent that it satisfies the criteria for exception 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 Secret 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-64A survey information to ensure that the risk of disclosure of identifiable information is very small.

Confidential identifiable information collected on Form EIA-64A will be considered as critical infrastructure information and may be provided to other Federal agencies for emergency planning and response.

H. DATA ENTRY STANDARDS

1. Total Operated Basis

All data are to be reported on a total operated basis (commonly known as the "gross operated" or "8/8ths" basis) by the operator of the natural gas processing plant.

2. Units of Measurement

Natural gas liquid volumes are to be reported in thousands of barrels (MBbls) of 42 U.S. gallons at 60° Fahrenheit. Natural gas volumes are to be reported in millions of cubic feet (MMCF) at 14.73 psia and 60° Fahrenheit.

3. Rounding

Liquid volumes should be rounded to the nearest thousand barrels. When rounding liquid volumes, round quantities of 500 barrels and above to the next higher MBbl and round quantities of less than 500 barrels down to the next lower MBbl. Similarly, when rounding natural gas volumes, round quantities of 500 MCF and above to the next higher MMCF and round quantities of less than 500 MCF down to the next lower MMCF.

EXAMPLES:

For Liquids, 7,500 barrels as: 8 MBbls
467 barrels as: 0 MBbls

For Gas, 8,500,000 cubic feet or 8,500 MCF as: 9 MMCF
10,459,000 cubic feet or 10,459 MCF as: 10 MMCF

SPECIFIC INSTRUCTIONS

PART I: PLANT AND PRODUCTION REPORT IDENTIFICATION

SECTION 1.0, "Does this report reflect..." - Insert an "X" in the appropriate box to indicate whether this Form EIA-64A report reflects active natural gas processing at the facility for the entire calendar year. If you checked "No", enter the months to which the data filed in this report pertain and provide a detailed explanation in Section 7.0. Specify if the plant was shut down and the anticipated start-up date, if known. Specify if the plant was dismantled. If there was a change in operators during the year and this report does not cover operations for the entire year, please supply any specific information concerning the previous operator which you may have, such as corporate name, mailing address and telephone number. Specify the facility type (e.g., fractionator, compressor station, etc.); if the facility is not a natural gas processing plant as defined in the Glossary and no data are, therefore, being filed.

SECTION 2.0 "Submission Status" – Insert an "X" in the appropriate box to indicate whether this Form EIA-64A report reflects an original submission or amends a previously submitted report.

SECTION 3.0, "LABEL INFORMATION (If label is incorrect . . .)" - Enter correct information in the following subitems, 3.1 - 3.14, if the label does not reflect current information.

Item 3.1, Parent Company's Name – Enter the legal name of the parent company, if any, which exercises ultimate control over the respondent. (See **Parent Company** in the Glossary)

Item 3.2, Operator's Name - Enter the legal corporate name of the plant operator. (See **Operator** in the Glossary)

Item 3.3, Plant Name – Enter the name of the natural gas processing facility covered by this report. (See **Natural Gas Processing Plant** in the Glossary)

Item 3.4, Geographic Location – Enter the appropriate four-letter/number code pertaining to the State or State subdivision which would identify where the reporting plant is physically located. (See **Area of Origin Codes and Subdivision Maps**)

Items 3.5 through 3.8, Operator Address - Enter current street address or P O Box, city, state and 9-digit zip code.

Item 3.9, Contact Name - Enter the name of the individual to whom inquiries regarding the submitted data will be directed, if necessary, and to whom Form EIA-64A will be sent in the future at the above address.

Item 3.10, Title – Enter the title of the contact person.

Item 3.11, Date – Enter the date the information on this form was completed.

Item 3.12, Telephone Number - Enter the business telephone number of the contact person.

Item 3.13, Fax Number – Enter the business fax number, if available, utilized by the contact person.

Item 3.14, E-mail Address – Enter the company E-mail address, if available, of the contact person.

PART II: ORIGIN OF NATURAL GAS RECEIVED AND NATURAL GAS LIQUIDS PRODUCED

Report the total volume of natural gas received by this natural gas processing plant and the natural gas liquids extracted from this gas during the calendar year. These total volumes should further be attributed to the State(s) or State subdivision(s) of origin as accurately as possible.

Lines 4.1 through 4.8, Area of Origin Code, Column (A) - This column is to be used to indicate the areas of origin as specified in the list of areas contained in **Areas of Origin Codes and Subdivision Maps** beginning on page 7. Please enter the correct four-letter/number code for each geographic area that contributed gas to be processed during the calendar year. If there are more than seven areas of origin involved for the same plant, complete an additional Form EIA-64A schedule and return the two schedules as one filing.

Lines 4.1 through 4.8, Natural Gas Received (MMCF), Column (B) - Estimate as accurately as possible the volumes of gas, in millions of standard cubic feet (MMCF), received for processing by area of origin. Report these volumes in Column (B) adjacent to the appropriate Area of Origin Code in Column (A). These estimates should consider all relevant information available to the respondent and should be as precise as possible. Do not include refinery off gases. The total gas processed by the plant during the calendar year should be entered on line 4.8. The sum of the volumes that were reported on lines 4.1 through 4.7 should be the same as the total volume reported on line 4.8. (See **Natural Gas** in the Glossary).

Lines 4.1 through 4.8, Natural Gas Liquids Production (MBbls), Column (C) - Estimate as accurately as possible the volume of natural gas liquids in thousands of barrels (MBbls) attributable to the gas volumes reported in Column (B). Enter these amounts on the appropriate line of Column (C). The estimates of

natural gas liquids recovered by area of origin should consider, to the fullest extent practical, all information available to the respondent concerning the relative liquid yields of the gas processed. Include only liquids production resulting from on-site gas processing. Include all volumes of plant condensate and scrubber oil recovered from natural gas at the plant.

Report on line 4.8 the total natural gas liquids that were recovered from the natural gas processed by the plant during the calendar year. The sum of the volumes that were reported on lines 4.1 through 4.7 should be the same as the total volume on line 4.8. This total should also equal the sum of the monthly volumes of "Production During Month" minus the sum of monthly volumes of "Inputs During Month" reported on Form EIA-816, *Monthly Natural Gas Liquids Report*. (See **Natural Gas Liquids** in the Glossary)

SECTION 5.0, Gas Shrinkage Resulting From Natural Gas Liquids Extracted - Estimate the volumes of gas shrinkage in millions of cubic feet (MMCF) resulting only from the removal of natural gas liquids from the natural gas received at the plant. Do not include gas shrinkage attributable to non-hydrocarbon gases, gas used for fuel, gas which was vented or flared or gas which was unaccounted for.

The ratio of the shrinkage volume to the total plant NGL volume reported in Line 4.8 (Column C) should range between 1.558 MMCF per thousand barrels and about 0.940 MMCF per thousands barrels. These are the approximate vapor equivalents for pure ethane and for natural gasolines and plant condensate, respectively (see table below).

Calculate the equivalent gas volumes for the natural gas liquids components by multiplying the specific liquid product by the appropriate conversion factor listed in the table below.

Component or Product	Conversion Factor (MCF/Bbl or MMCF/MBbls)
Methane*	2.468
Ethane	1.558
Propane	1.499
Isobutane	1.245
Normal Butane	1.288
Isopentane	1.095
Natural Gasoline	0.940
Plant Condensate	0.940
Other Products	0.940

*Not an NGL.

Conversion factors for other natural gas liquid components may be obtained from the EIA-64A Coordinator toll-free at 1-800-879-1470 between 8:30 a.m. and 5:00 p.m. CST.

EXAMPLE:

To convert 50,000 barrels of propane to the equivalent gas volume:

$$(50,000 \text{ barrels}) \text{ times } (1.499) = 74,950 \text{ MCF}$$

Or utilizing the correct reporting units:

$$(50 \text{ MBarrels}) \text{ times } (1.499) = 74.95 \text{ or } 75 \text{ MMCF}$$

After converting each of the individual plant components or products (i.e., ethane, propane, isobutane, normal butane, isopentane, natural gasoline, plant condensate and other products) to their equivalent gas volume, they should then be summed to determine the total plant shrinkage volume.

SECTION 6.0, Natural Gas Used as Fuel in Processing (MMCF) - Report the volume of natural gas utilized as fuel at the natural gas processing plant. If fuel use was not metered, please provide your best estimate. If the plant utilizes some other type of fuel, such as electricity, report 0 (zero) and indicate the reason in Section 7.0, Explanatory Notes.

SECTION 7.0, Explanatory Notes - You may comment on any reported data item in order to enhance its clarity. If additional space is needed continue comments on another sheet of paper of equal size and attach it to the form.

GLOSSARY

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.

Natural Gas - A gaseous mixture of hydrocarbon compounds, the primary one being methane. Note: The Energy Information Administration measures **wet natural gas** and its two sources of production, **associated/dissolved natural gas** and **non-associated natural gas**, and **dry natural gas**, which is produced from **wet natural 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 render the gas 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**.

Natural Gas Liquids - Those hydrocarbons in natural gas that are separated from the gas through the processes of

absorption, condensation, adsorption or other methods in gas processing or cycling plants. Generally such liquids consist of propane and heavier hydrocarbons and are commonly referred to as condensate, natural gasoline and liquefied petroleum gases. Where hydrocarbon components lighter than propane are recovered as liquids, these components should also be included with natural gas liquids.

Natural 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.

Operator - The person responsible for the management and day-to-day operation of one or more natural gas processing plants as of December 31 of the calendar year. The operator is generally a working interest owner or a company under contract to the working interest owner(s). Plants shut down during the calendar year are also considered "operated" as of December 31. (See **Person**)

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.

AREA OF ORIGIN CODES

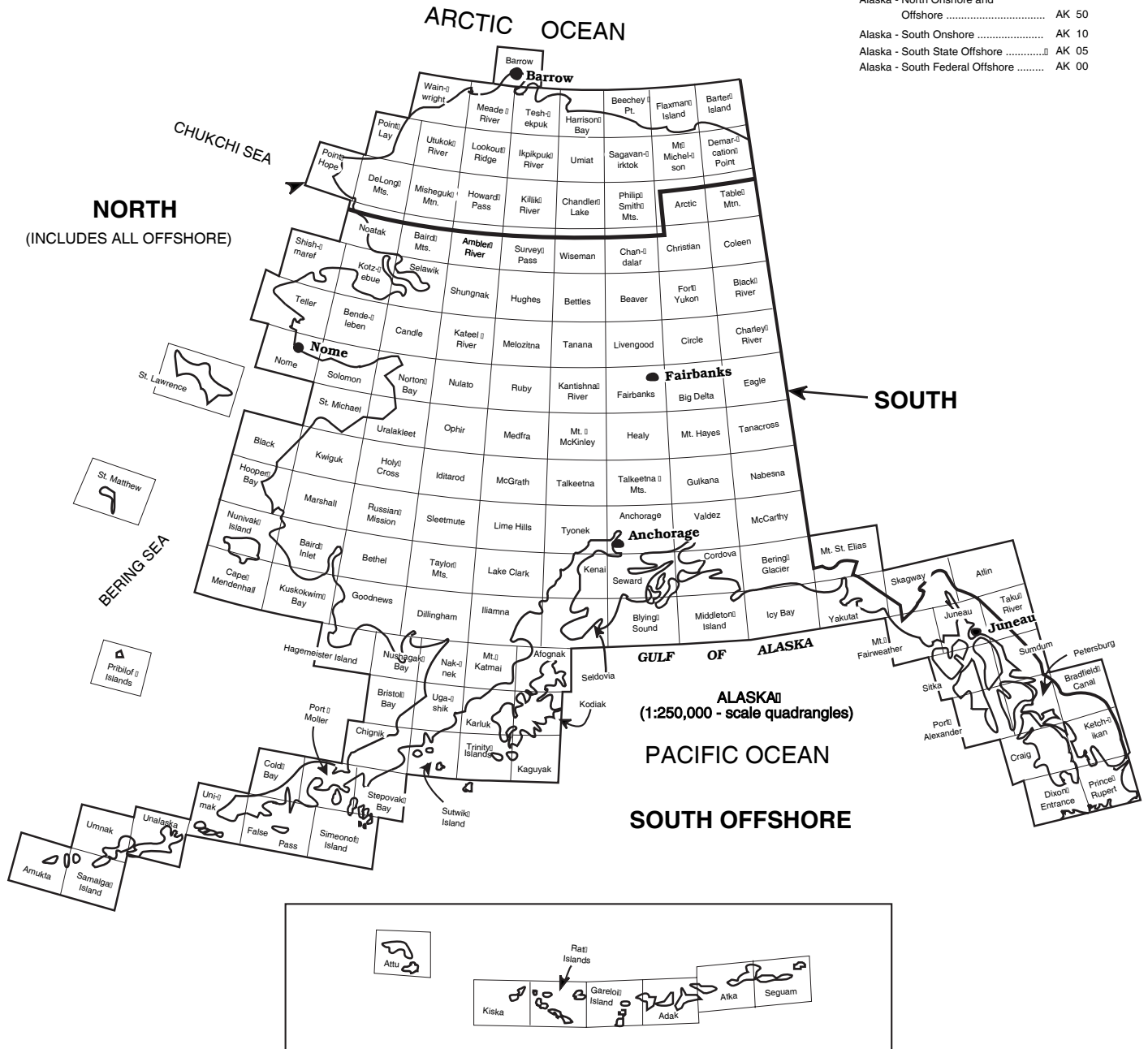
<u>State Name and Geographic Subdivision¹</u>	<u>Code</u>	<u>State Name and Geographic Subdivision¹</u>	<u>Code</u>
Alabama Onshore	ALXX	New Mexico - West	NM50
Alabama – State Offshore	AL05	New York	NYXX
Alaska - North Onshore and Offshore ²	AK50	North Carolina	NCXX
Alaska - South Onshore	AK10	North Dakota	NDXX
Alaska - South State Offshore	AK05	Ohio	OHXX
Arizona	AZXX	Oklahoma	OKXX
Arkansas	ARXX	Oregon	ORXX
California – Coastal Region Onshore	CA50	Pennsylvania	PAXX
California – Los Angeles Basin Onshore	CA90	Rhode Island	RIXX
California – San Joaquin Basin Onshore	CA10	South Carolina	SCXX
California – State Offshore	CA05	South Dakota	SDXX
Colorado	COXX	Tennessee	TNXX
Connecticut	CTXX	Texas - Railroad Commission District 1	TX10
Delaware	DEXX	Texas - Railroad Commission District 2 Onshore	TX20
District of Columbia	DCXX	Texas - Railroad Commission District 3 Onshore	TX30
Florida – Onshore	FLXX	Texas - Railroad Commission District 4 Onshore	TX40
Florida - State Offshore	FL05	Texas - Railroad Commission District 5	TX50
Georgia	GAXX	Texas - Railroad Commission District 6	TX60
Hawaii	HIXX	Texas - Railroad Commission District 7B	TX70
Idaho	IDXX	Texas - Railroad Commission District 7C	TX75
Illinois	ILXX	Texas - Railroad Commission District 8	TX80
Indiana	INXX	Texas - Railroad Commission District 8A	TX85
Iowa	IAXX	Texas - Railroad Commission District 9	TX90
Kansas	KSXX	Texas - Railroad Commission District 10	TX95
Kentucky	KYXX	Texas - State Offshore	TX05
Louisiana – North	LA50	Utah	UTXX
Louisiana – South Onshore	LA10	Vermont	VTXX
Louisiana – South State Offshore	LA05	Virginia	VAXX
Maine	MEXX	Washington	WAXX
Maryland	MDXX	West Virginia	WVXX
Massachusetts	MAXX	Wisconsin	WIXX
Michigan	MIXX	Wyoming	WYXX
Minnesota	MNXX	Federal Offshore - Atlantic	AC00
Mississippi – Onshore	MSXX	Federal Offshore - Gulf of Mexico (Alabama)	AL00
Mississippi – State Offshore	MS05	Federal Offshore - Gulf of Mexico (Florida)	FL00
Missouri	M0XX	Federal Offshore - Gulf of Mexico (Louisiana)	LA00
Montana	MTXX	Federal Offshore - Gulf of Mexico (Mississippi)	MS00
Nebraska	NEXX	Federal Offshore - Gulf of Mexico (Other Gulf)	OG00
Nevada	NVXX	Federal Offshore - Gulf of Mexico (Texas)	TX00
New Hampshire	NHXX	Federal Offshore - Pacific (Alaska)	AK00
New Jersey	NJXX	Federal Offshore - Pacific (California)	CA00
New Mexico – East	NM10	Federal Offshore - Pacific (Oregon)	OR00

¹Refer to maps for subdivision boundaries in the States of Alaska, California, Louisiana, New Mexico, and Texas.

²Includes both State and Federal domain.

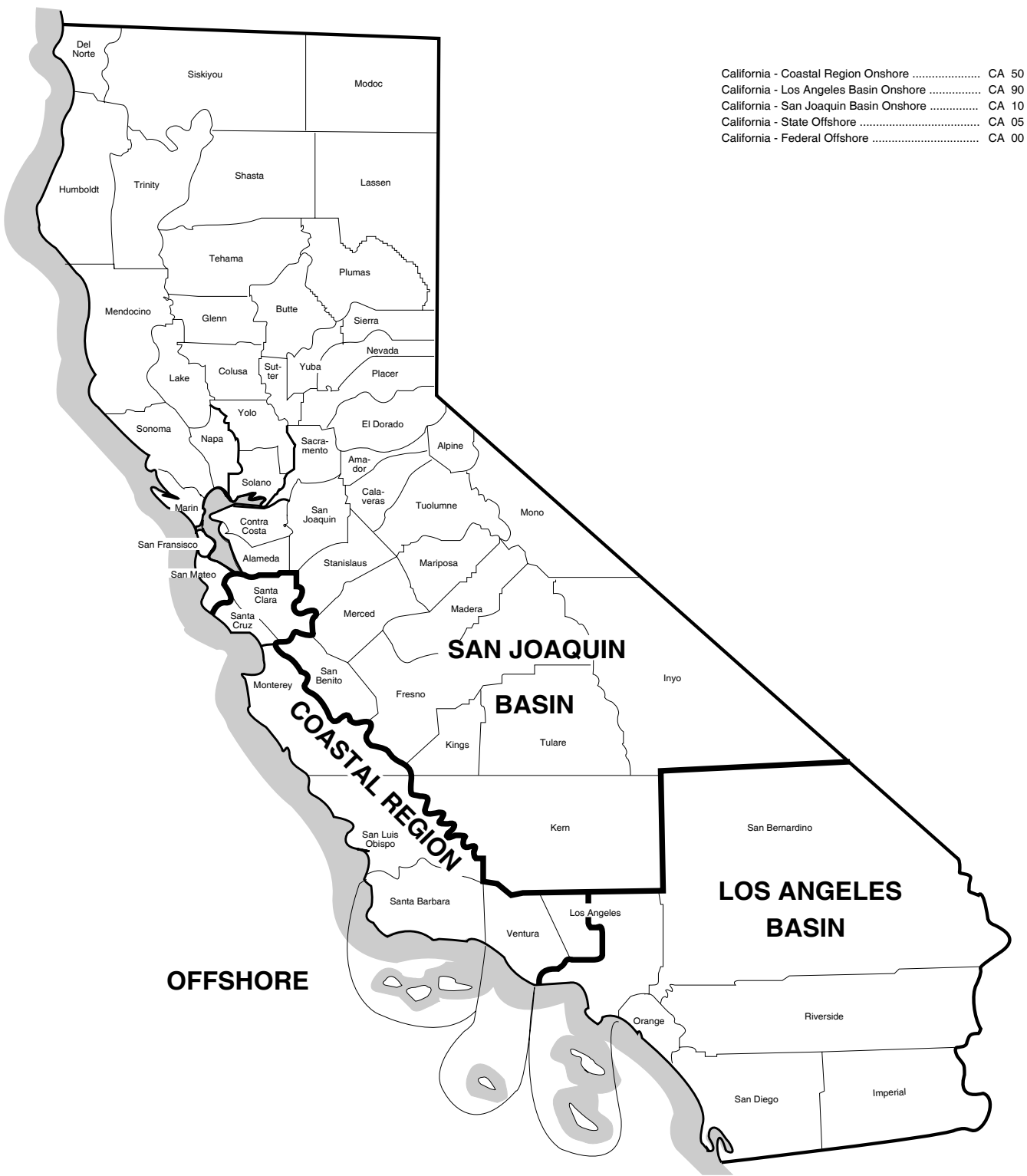
MAPS OF SELECTED STATE SUBDIVISIONS

- 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

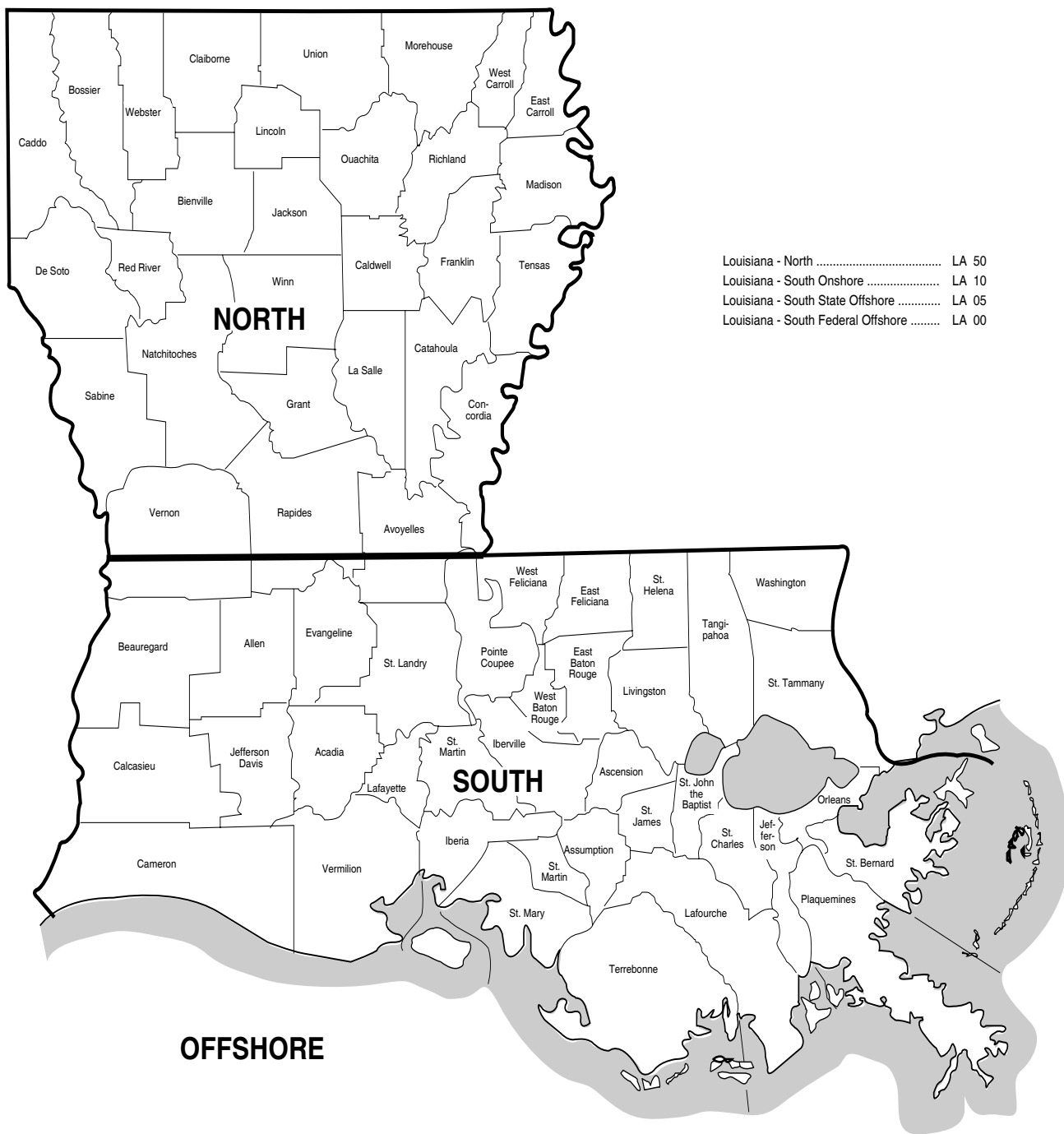
Alaska Subdivisions and U.S. Geological Survey Quadrangles



California - Coastal Region Onshore	CA 50
California - Los Angeles Basin Onshore	CA 90
California - San Joaquin Basin Onshore	CA 10
California - State Offshore	CA 05
California - Federal Offshore	CA 00

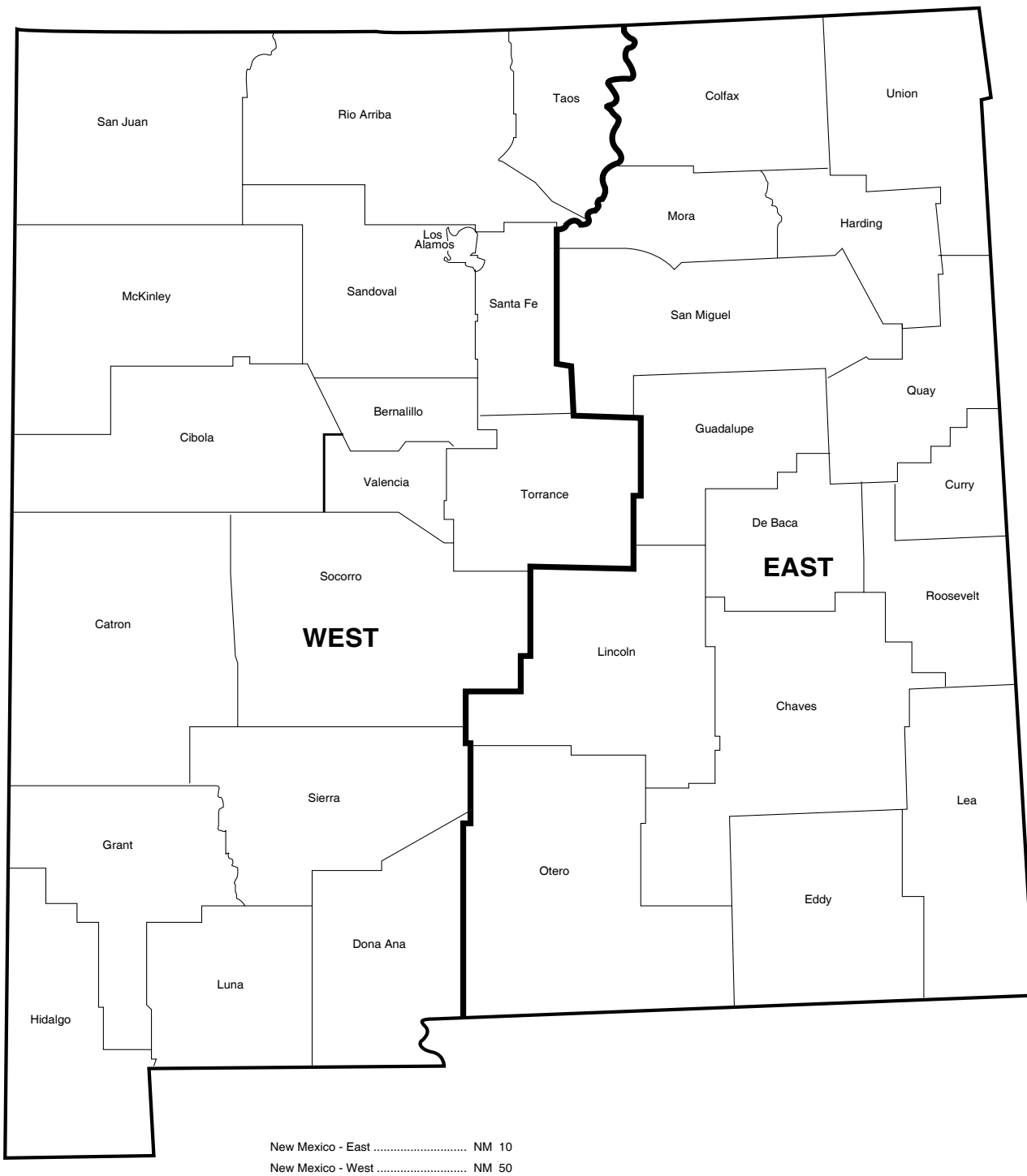
Source: Energy Information Administration, Office of Oil and Gas.

Subdivisions of California



Source: Energy Information Administration, Office of Oil and Gas

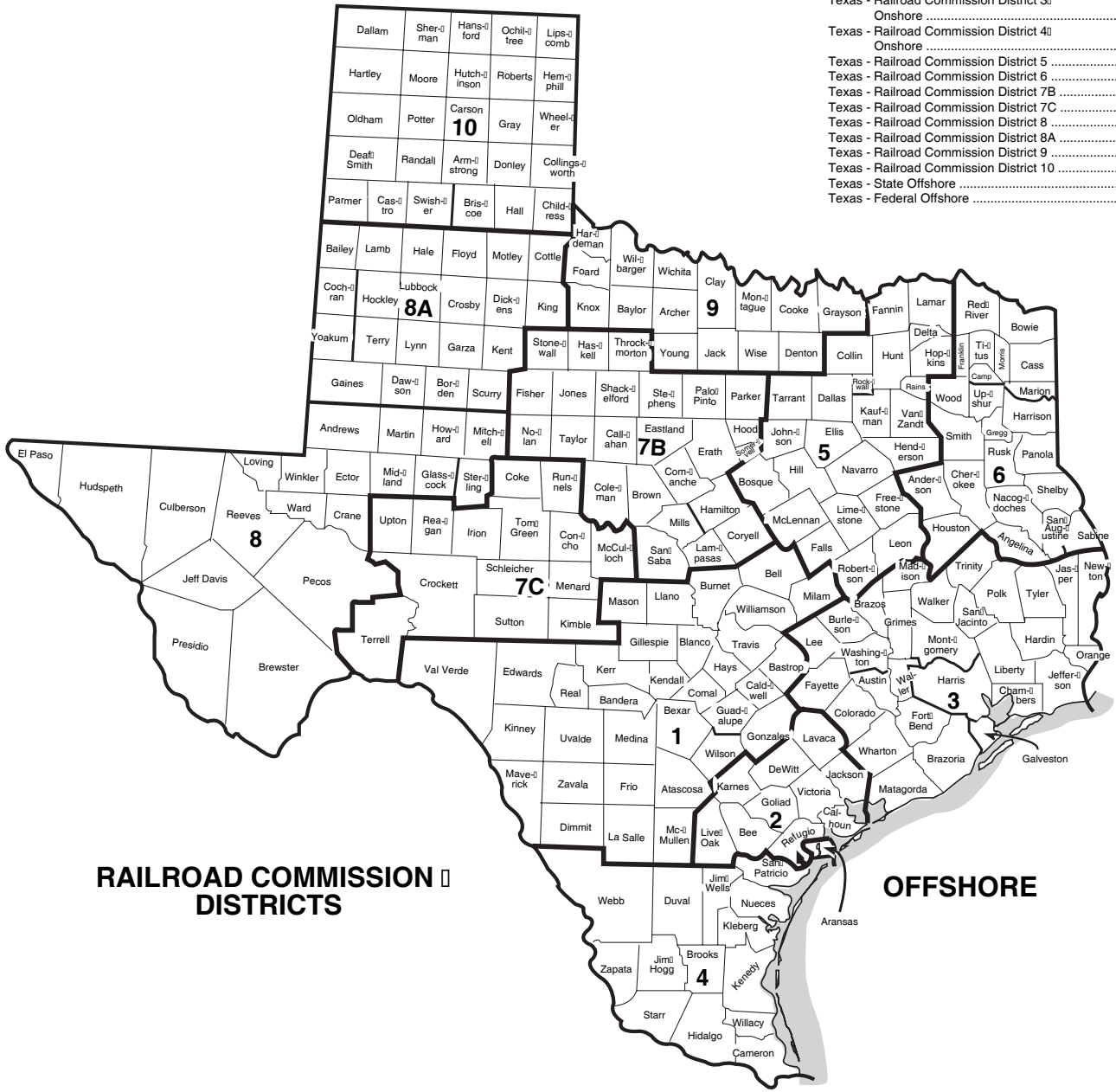
Subdivisions of Louisiana



Source: Energy Information Administration, Office of Oil and Gas

Subdivisions of New Mexico

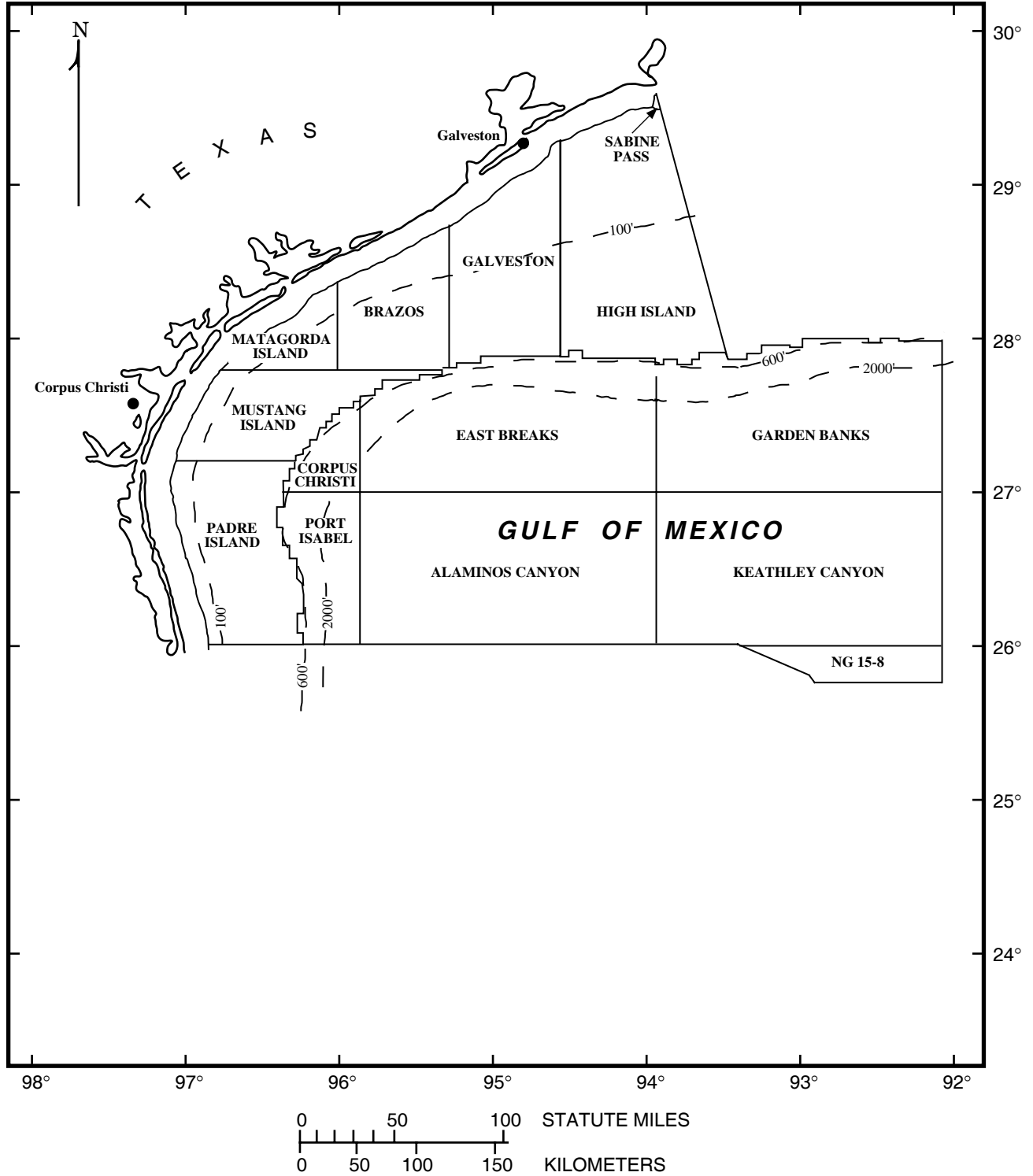
- Texas - Railroad Commission District 1 □ TX 10
- Texas - Railroad Commission District 2 □ TX 20
- Onshore □ TX 20
- Texas - Railroad Commission District 3 □ TX 30
- Onshore □ TX 30
- Texas - Railroad Commission District 4 □ TX 40
- Onshore □ TX 40
- Texas - Railroad Commission District 5 □ TX 50
- Texas - Railroad Commission District 6 □ TX 60
- Texas - Railroad Commission District 7A □ TX 70
- 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



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

Subdivisions of Texas

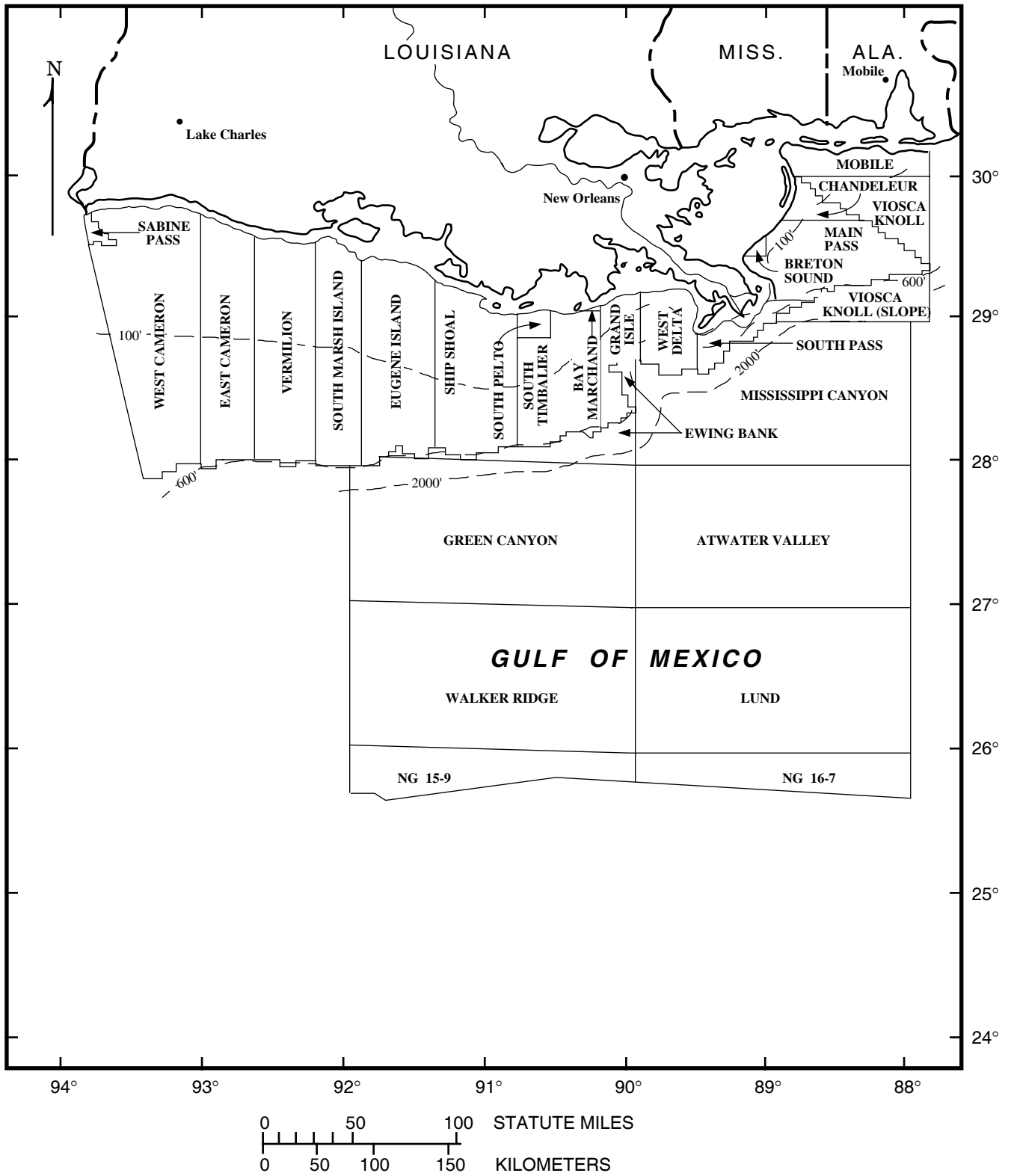
Western Planning Area, Gulf of Mexico Outer Continental Shelf Region



(Dashed lines indicate water depths in feet.)

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

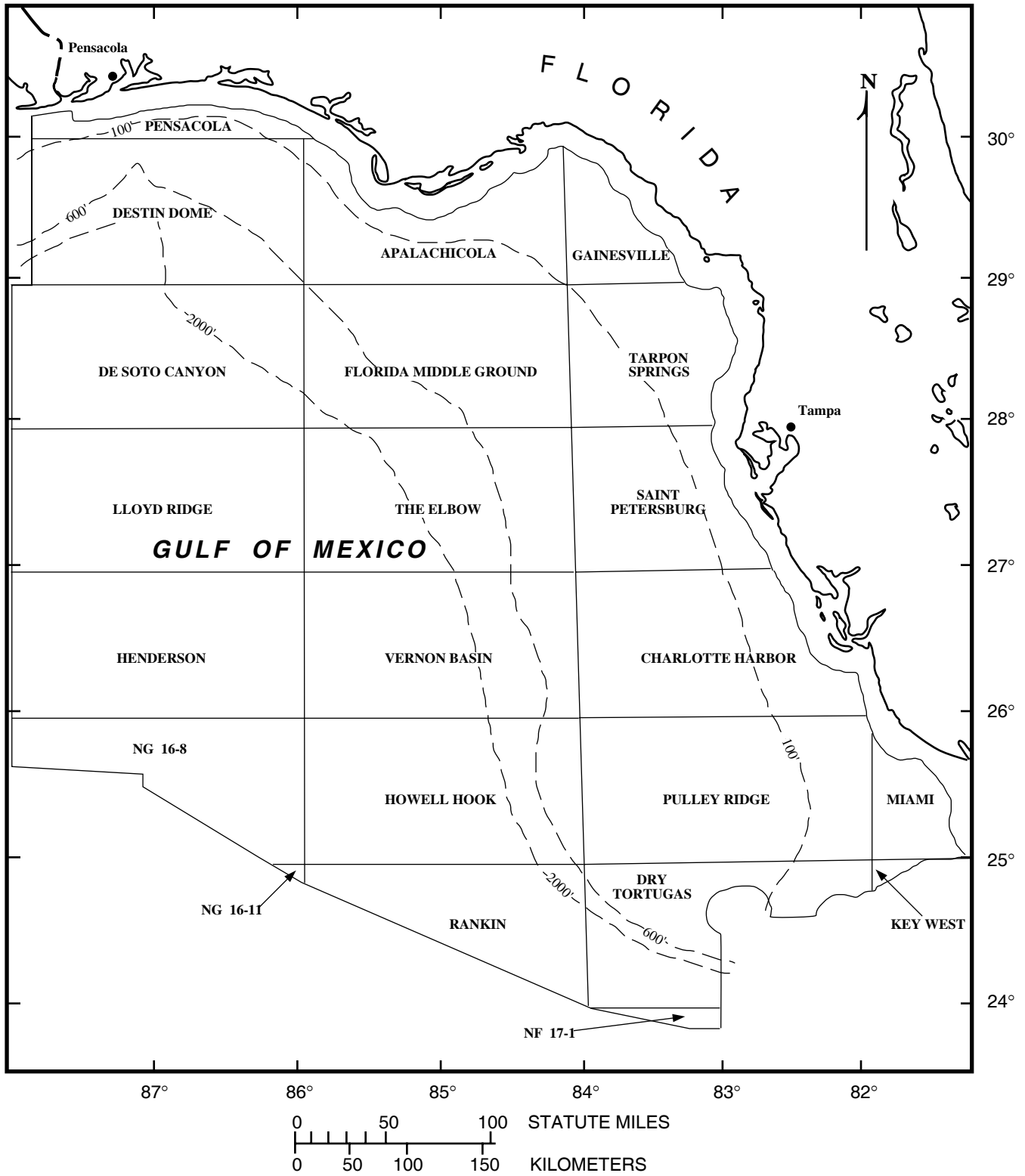
Central Planning Area, Gulf of Mexico Outer Continental Shelf Region



(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



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