

ANNUAL REPORT OF THE ORIGIN OF NATURAL GAS LIQUIDS PRODUCTION FORM EIA-64A SURVEY YEAR 2009

GENERAL INSTRUCTIONS

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:

- as key input to the EIA publication entitled *U.S. Crude Oil, Natural Gas and Natural Gas Liquids Reserves*;
- to estimate extraction loss volumes contained in the EIA publication *Natural Gas Annual*
- 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*.

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, 2009. If a plant was

operated during any part of survey year 2009, a Form EIA-64A must be submitted for that plant. In cases in which two or more operators during the survey year operated a plant, the operator as of December 31, 2009 should file a Form EIA-64A that covers the entire survey year.

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

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, 2009 and did not receive a Form EIA-64A for it, a completed form should still be filed for that plant. 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.

WHEN AND WHERE TO SUBMIT

Form EIA-64A must be completed and submitted to EIA **on or before April 1, 2010** for the 2009 calendar year.

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 XLS format on the EIA website <http://www.eia.doe.gov/oss/forms.html#eia-64a>. Computer printouts on other than an exact duplicate of the form provided are not acceptable. Photocopies of the form may be used.

Completed forms may be submitted by Secure File Transfer, email, fax, or mail.

Secure File Transfer: Instructions are on page 4

Email completed forms to: oog.surveys@eia.doe.gov

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

Mail completed forms to:

**Oil and Gas Surveys
U. S. Department of Energy, EIA
Ben Franklin Station
P O Box 279
Washington DC 20044-0279**

Electronic filing (by Secure File Transfer, email or fax) is encouraged. When using the Excel spreadsheet, it is recommended you save the original form on your hard drive and then use it to make additional copies. When entering responses on hard copies, type or print in black ink using all capital letters.

If you need assistance filing your data or an extension of time to file, contact the EIA-64A Coordinator 1-800-879-1470 from 8:00 a.m. to 4:30 p.m. Central Time.

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.

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.

DISCLOSURE OF INFORMATION

The data reported on this forms will be protected 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 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 Government Accountability 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 nonstatistical 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 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.

DATA 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

RESPONDENT INFORMATION

Item 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 survey 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 Comments. 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.

Item 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.

Item 3.1 Plant Name: Enter the name of the natural gas processing facility covered by this report. (See **Natural Gas Processing Plant** in the Glossary, page 4)

Item 3.2 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** (page 6) and **Subdivision Maps** (page 7).)

Item 3.3 Operating Company Name: Enter the legal corporate name of the plant's operating company name. (See **Operating Company Name** in the Glossary, page 4)

Item 3.4 Address Information: Enter current room / suite number, street address or P O Box, city, state, and 9-digit zip code for the operating company.

Item 3.5 Operating Company Contact Name: Enter the name of the individual, their business phone number, fax number, and email address to whom inquiries regarding the submitted data will be directed and to whom Form EIA-64A will be sent in the future.

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 survey 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 4.7 Area of Origin Code, Column (A): Indicate the area of origin as specified in the list of **Areas of Origin Codes** (page 6) and **Subdivision Maps** (page 7). Please enter the correct four-letter/number code for each geographic area that contributed gas to be processed during the survey 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 4.7 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 survey 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, page 4).

Lines 4.1 through 4.7 Natural Gas Liquids Production (MBbls), Column (C): Estimate as accurately as possible the gross 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.

Line 4.8 Report the total natural gas liquids that were recovered from the natural gas processed by the plant during the survey year. The sum of the volumes 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, page 4)

Item 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 thousand 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.

<u>Component or Product</u>	<u>Conversion Factor</u> (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 800-879-1470 between 8:00 a.m. and 4:30 p.m. Central Time.

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:

$$(50 \text{ M Barrels}) \text{ times } (1.499) = 74.95 \text{ or } 75 \text{ MMCF.}$$

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.

Item 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, Comments.

Item 7.0 Comments: You may comment on any reported data item in order to enhance its clarity. If additional space is needed to continue comments, report them on another sheet of paper of equal size and attach it to the form.

GLOSSARY

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**.

Note: The parameters for measurement are cubic feet at 60 degrees Fahrenheit and 14.73 pounds per square inch absolute (psia).

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**.

Dry natural gas: Also known as consumer-grade natural gas. The natural gas that remains after:

- the liquefiable hydrocarbon portion has been removed from the gas stream (i.e., gas after lease, field and/or plant separation)
- any volumes of non-hydrocarbon gases have been removed where they occur in sufficient quantity to render the gas unmarketable.

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

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**.

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.

Operating Company Name: The Company responsible for the management and day-to-day operation of one or more natural gas processing plants as of December 31 of the survey 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 survey year are also considered "operated" as of December 31.

Natural Gas Plant Liquids: Those volumes of natural gas liquids recovered in natural gas processing plants.

Production, 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.

Secure File Transfer System Instructions

EIA is ensuring the security of your transactions by using the latest Internet security technology. The technology being used to protect your data is encryption which is the scrambling of data into a code that is unreadable to anyone who does not have the key that deciphers it. The secure hypertext transfer protocol (https) is a communications protocol designed to transfer this encrypted information between computers over the World Wide Web. All information is protected by 128-bit encryption to maintain the privacy and confidentiality of your data. The only thing you need to take advantage of strong encryption technology is a secure browser, one that supports 128-bit encryption.

To use the EIA https secure file transfer system:

1. Open your browser and type in the URL:
<https://signon.eia.doe.gov/upload/noticeoog.jsp>
The EIA Secure File Transfer Notice to Users page appears.
2. Read and then click the Accept button.
The Secure File Transfer System page appears.
At the bottom of this page, in blue text, click on [Instructions for Secure File Transfer](#).

If you have any trouble transferring your files, please call the EIA User Services Center at 202-586-8959 or email them at User-Services-Center@eia.doe.gov.

AREA OF ORIGIN CODES

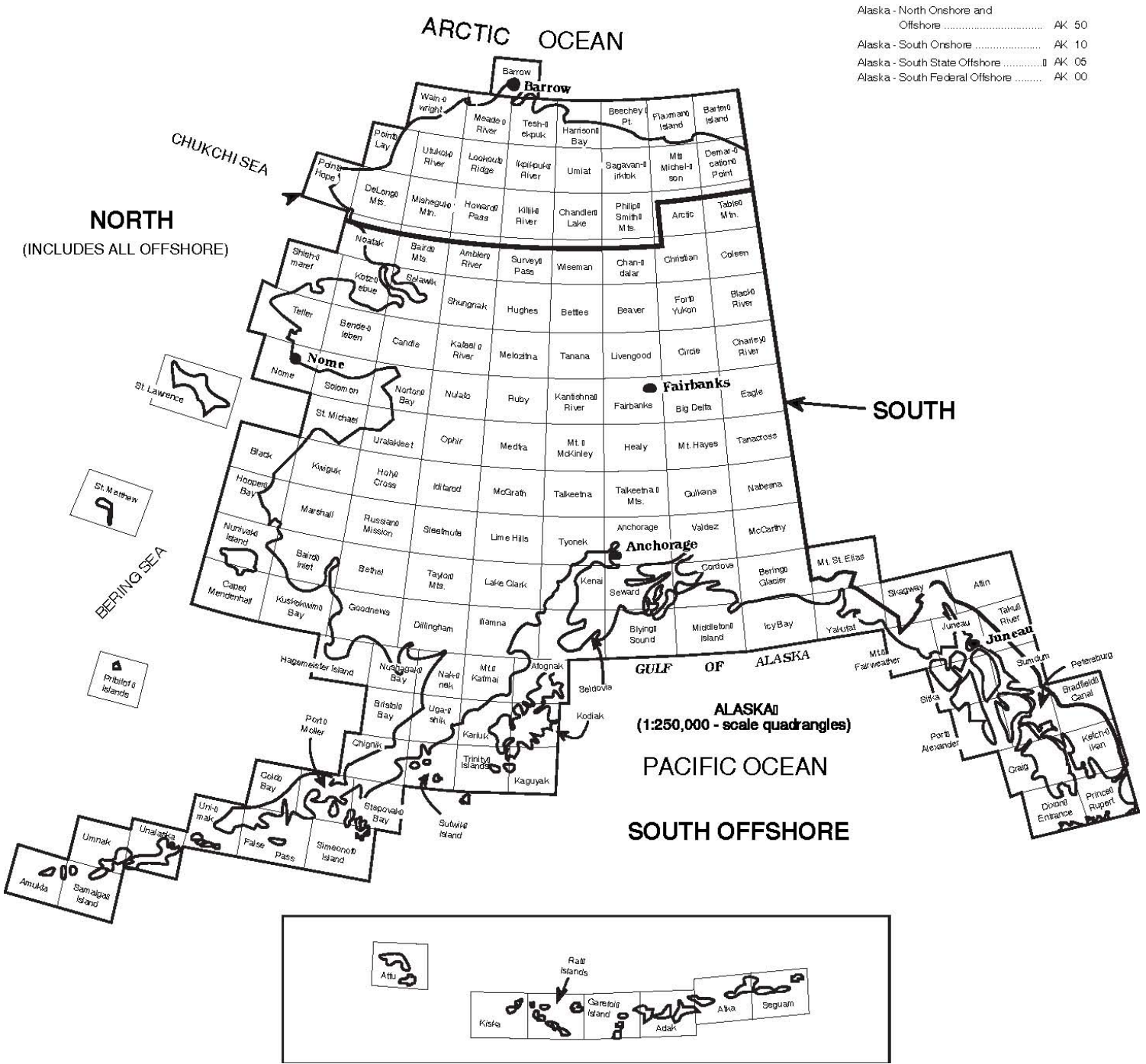
<u>State Name and Geographic Subdivision</u> ¹	<u>Code</u>	<u>State Name and Geographic Subdivision</u> ¹	<u>Code</u>
Alabama Onshore.....	ALXX	New Mexico - West	NM50
Alabama – State Offshore	AL05	New York.....	NYXX
Alaska - North Onshore and Offshore ²	AK50	North Carolina	NCXX
Alaska - South Onshore	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.....	CTX	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 of Selected State Subdivisions* (page 7) for boundaries in the States of Alaska, California, Louisiana, New Mexico, and Texas.

²Includes both State and Federal domain.

MAPS OF SELECTED STATE SUBDIVISIONS

Alaska Subdivisions and U.S. Geological Survey Quadrangles



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

ALASKA
 (1:250,000 - scale quadrangles)
 PACIFIC OCEAN
 SOUTH OFFSHORE

Source: After U.S. Geological Survey

Subdivisions of California



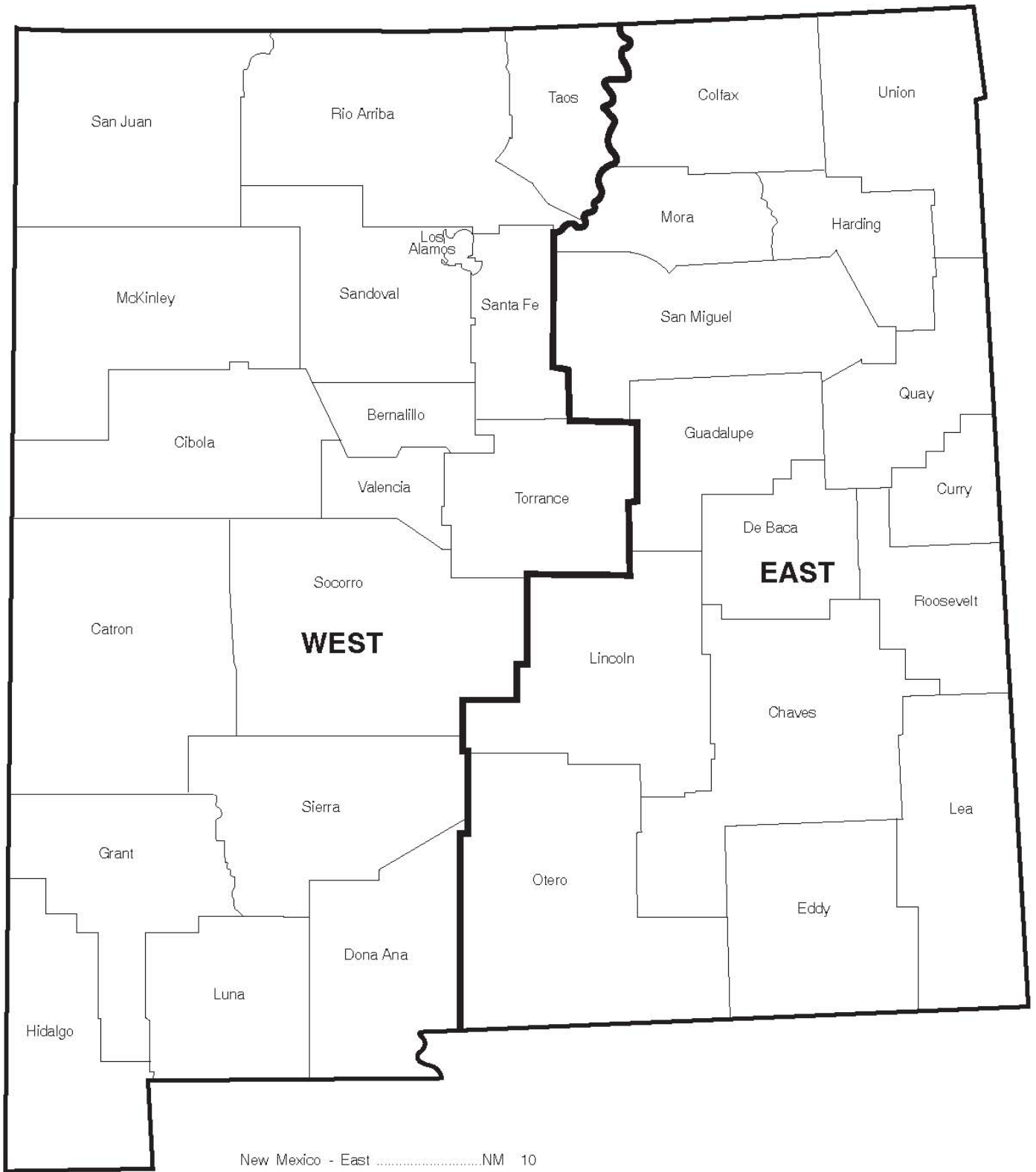
Source: Energy Information Administration, Office of Oil and Gas.

Subdivisions of Louisiana



Source: Energy Information Administration, Office of Oil and Gas

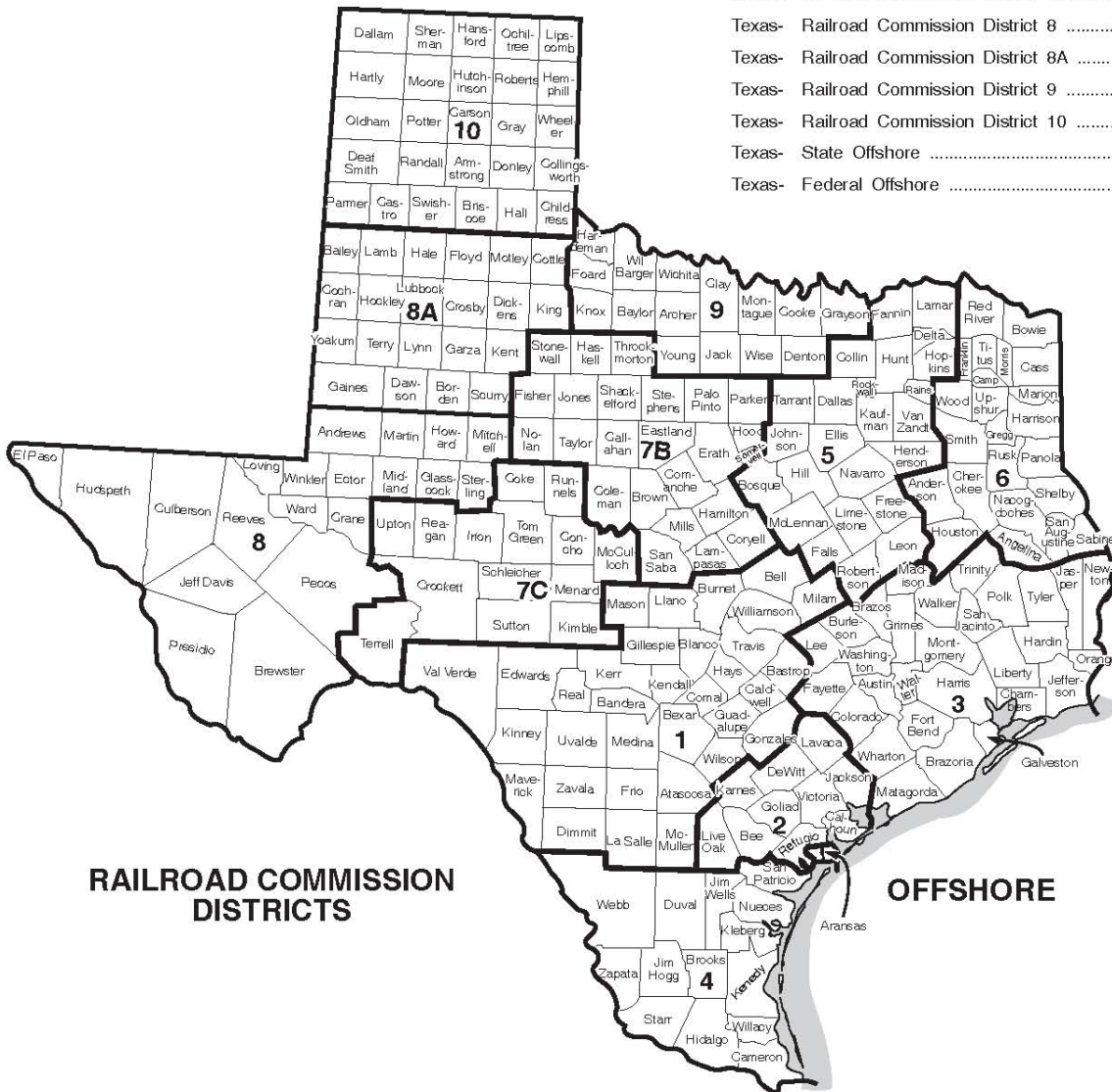
Subdivisions of New Mexico



Source: Energy Information Administration, Office of Oil and Gas

Subdivisions of Texas

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

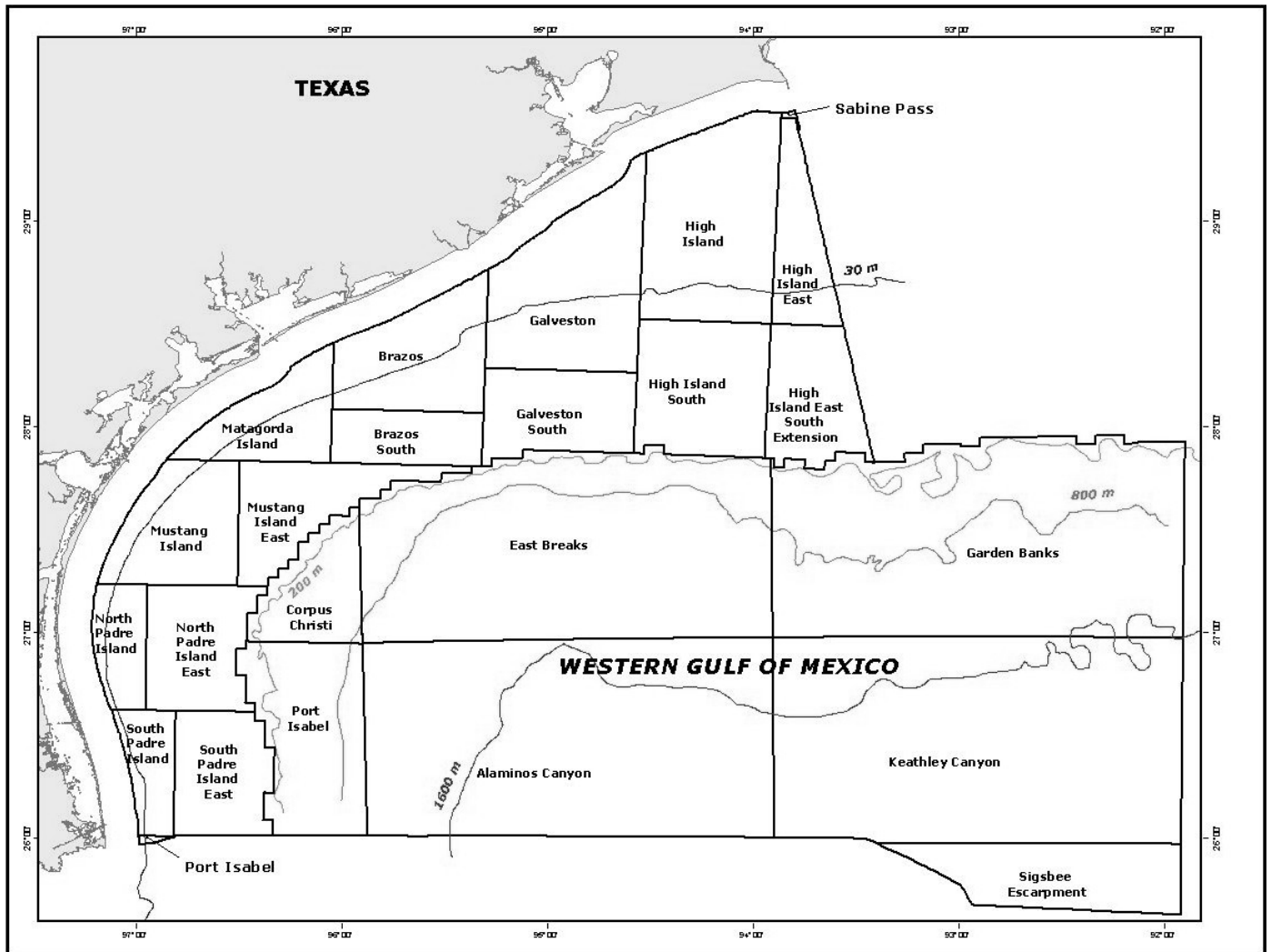


RAILROAD COMMISSION DISTRICTS

OFFSHORE

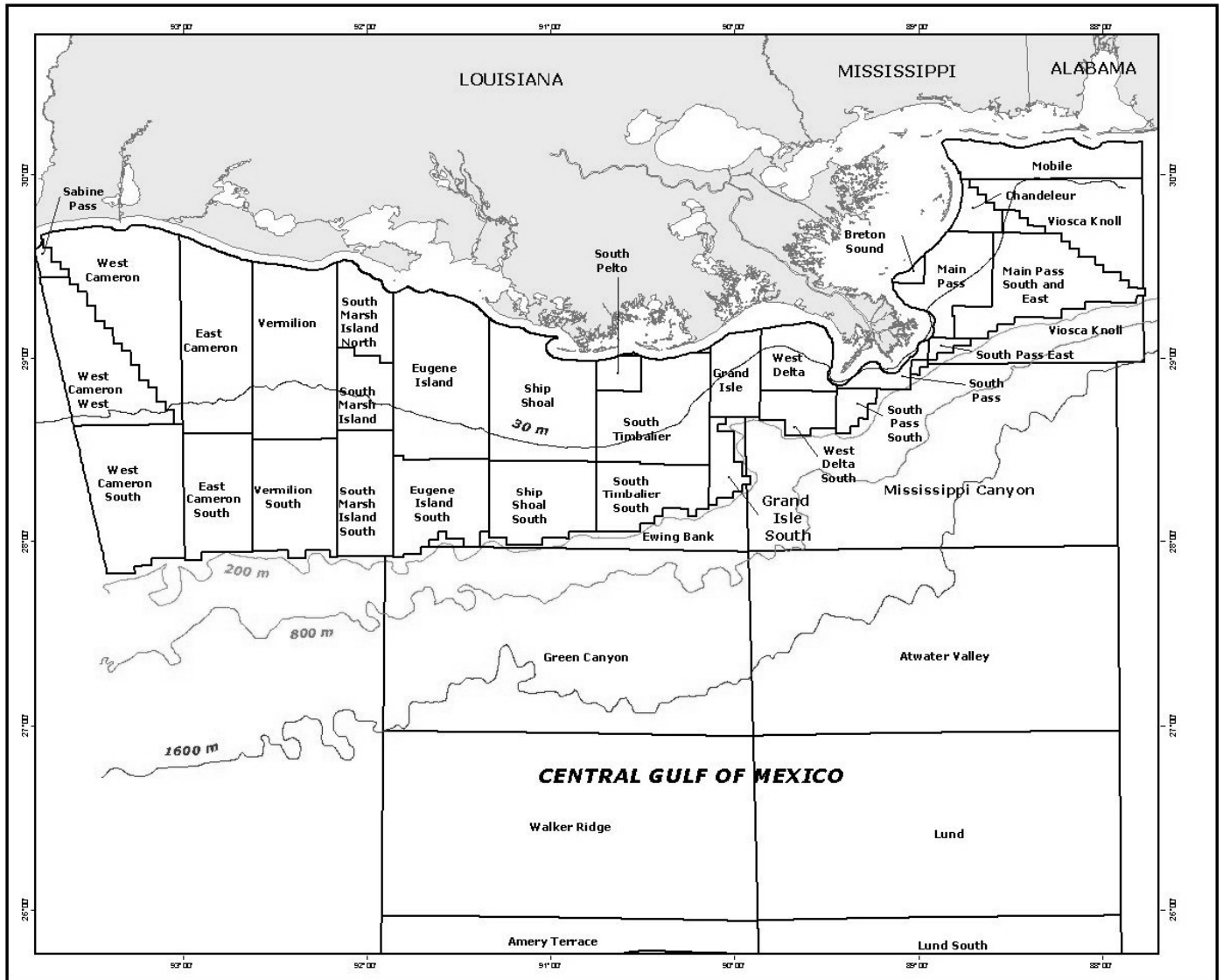
Source: Energy Information Administration, Office of Oil and Gas

Western Planning Area, Gulf of Mexico Outer Continental Shelf Region



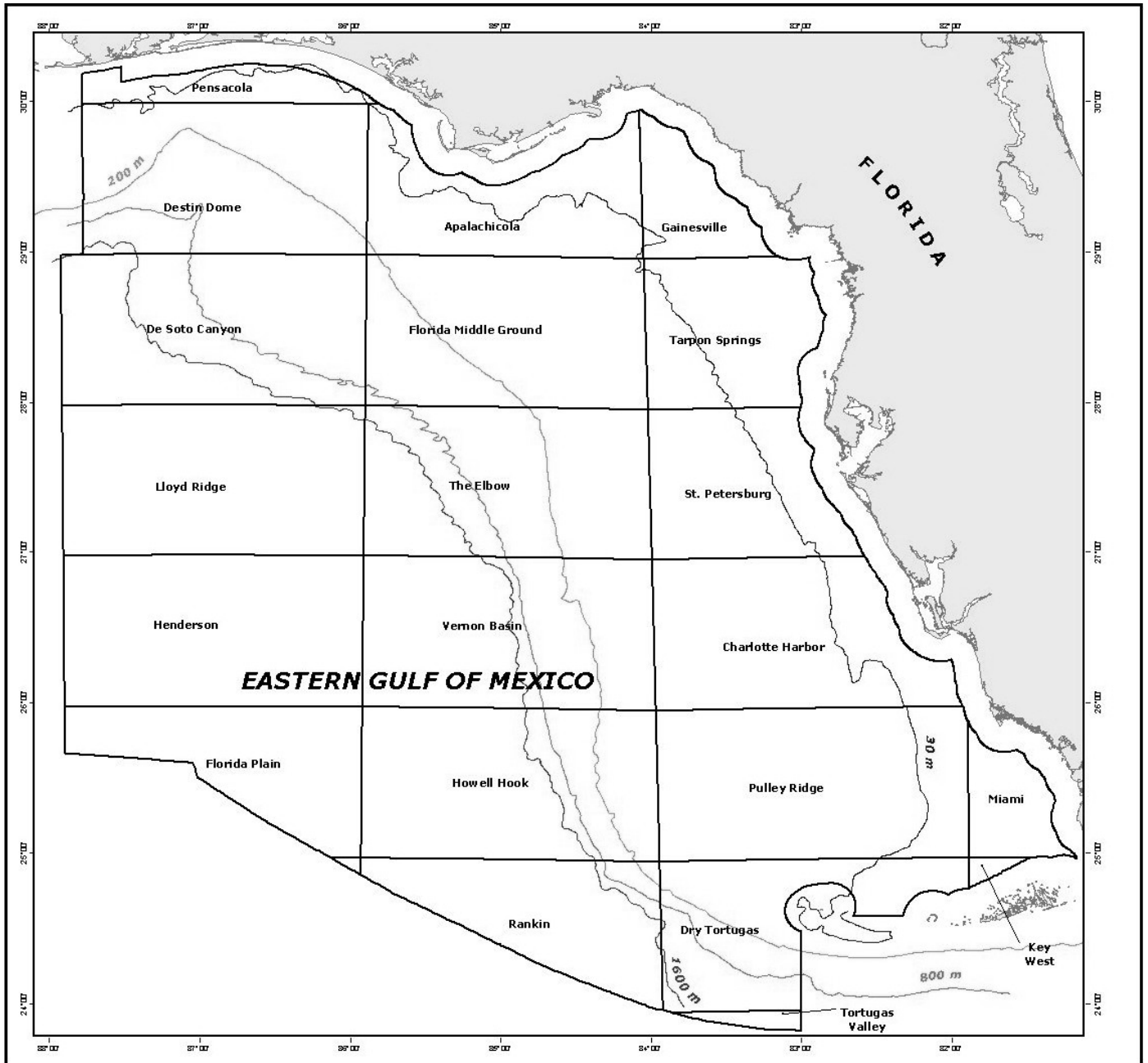
Source: After Minerals Management Service, U.S. Department of the Interior

Central Planning Area, Gulf of Mexico Outer Continental Shelf Region



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.