United States General Accounting Office
Washington, DC 20548

October 24, 2000

The Honorable Carolyn B. Maloney
House of Representatives

Subject: Royalty Payments for Natural Gas From Federal Leases in the Outer-Continental Shelf

Dear Ms. Maloney:

As requested, we are providing you with information on how the Minerals Management Service (MMS) of the Department of the Interior determines and monitors royalty payments for gas produced from federal Outer-Continental Shelf leases (OCS). We used the enclosed material to brief your staff on August 25, 2000. (See enc. I.) A summary of the information follows.

In 1998, the last year that production data were available, about 5.8 trillion cubic feet of natural gas was produced in the OCS, accounting for about 24 percent of total U.S. natural gas production in that year. According to MMS, OCS gas production accounted for about $1.7 billion, or 46 percent, of the total mineral royalties received by the federal government in 1999. The Energy Information Administration projects that U.S. gas production will increase steadily from 1998 through 2020, compared with a slightly declining trend for oil production. Therefore, gas production from federal OCS leases will undoubtedly continue to account for a significant share of total federal mineral royalties.

Gas royalty payments are determined by the following calculation: the gross sales value, or "proceeds," from the sale of gas—after adjusting the sales value for allowable transportation and processing costs—is multiplied by the 16.67-percent royalty rate for gas produced from federal OCS leases. Although this calculation is straightforward, interpretations of "sales value" and adjustments to it are less clear and have created disagreement and litigation between MMS and industry.

For royalty purposes, the sales value equals the unit price received for the gas multiplied by the volume or quantity of gas produced and sold. Determining the sale price of gas produced and sold from federal OCS leases has become increasingly complex, as the gas market has evolved from a regulated to a largely unregulated market. The deregulation of key aspects of the gas industry and the resulting restructuring of the industry increased the number and complexity of transactions among end-users, producers, transporters, distributors, and providers of a host of related services. As such, MMS must determine if the sale of gas by industry involves an "arm's length" transaction—that is, a sale between parties that are not affiliated and have opposing financial interests. When such a transaction is found, MMS accepts the sale price for royalty calculation purposes. If the sale is "non-arm's length" (i.e., where the parties are affiliated and have similar financial interests), MMS requires the use of benchmarks, such as the prices under comparable arm's-length transactions in the OCS field or area to help establish an "arm's length" price. The volume of gas produced is measured through metering, and it is generally not an issue between MMS and industry.

In addition to price, MMS and industry dispute what allowable costs can be deducted from gross proceeds before royalties are paid. For example, MMS allows companies to deduct storage costs for up to 30 days. However, industry generally believes that it should be allowed to deduct all costs incurred to store gas for future sales. Some of these disputes have been the subject of litigation.

MMS monitors the accuracy of gas volumes reported by lessees by using its Production Accounting and Auditing System and monitors the accuracy of royalty payments through its Auditing and Financial System. Using these systems and its audit and compliance efforts, the agency has identified and collected about $2.2 billion in underpayments over the period 1982-99.

To help resolve these valuation disagreements and avoid continued litigation, the industry believes that the government should take its royalty payments in the form of physical gas, or, as it is commonly called, *royalty-in-kind*. MMS believes that royalty-in-kind payments can offer a potential solution to the disputes, but MMS and the industry acknowledge that these payments are not appropriate in all situations. MMS is currently pilot-testing the royalty-in-kind program by taking about 10 percent of the royalties for OCS gas in kind. MMS plans to assess these pilot tests for potential broader application.

To prepare the information in this report, we interviewed officials from MMS and relevant states, and representatives from the oil and gas industries. We also reviewed relevant documents and analyzed data from MMS, the oil and gas industries, and the Energy Information Administration. We did not verify the accuracy of the data, but we provided MMS officials, including the Chief, Royalty Valuation Division, with a draft of this report for review and comment. We also discussed the report with MMS officials, who agreed with the report's contents. We conducted our work from June through September 2000 in accordance with generally accepted government auditing standards.

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Unless you publicly announce its contents earlier, we plan no further distribution of this report until 7 days after the date of this letter. At that time, we will send copies to interested Members of Congress and make copies available to others on request.

If you have any questions about this report or need additional information, please call me at (202) 512-3841. Major contributors to this report included Daniel Haas, Godwin Agbara, Paul Lacey, and Philip Farah.

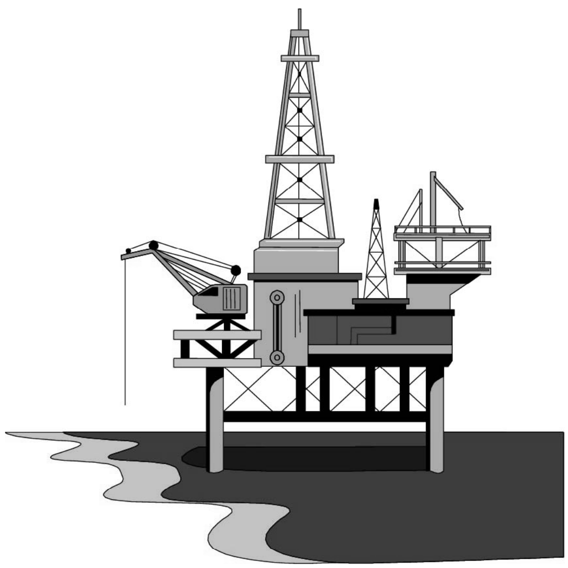
Sincerely yours,

Jim Wells

Jim Wells
Director, Natural Resources
and Environment

Enclosure

Briefing on Natural Gas Royalty Payments



Prepared for:
Rep. Carolyn B. Maloney
August 25, 2000

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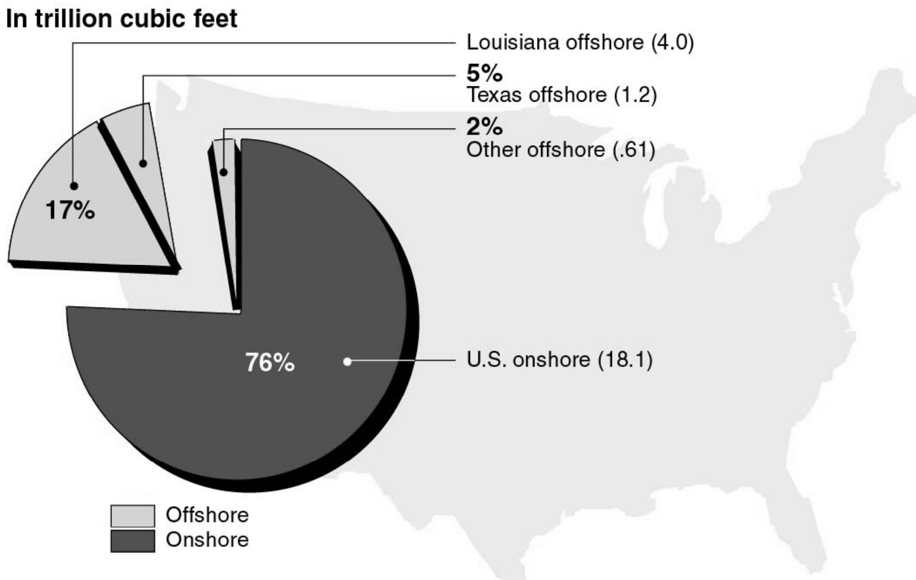
Objectives, Scope, and Methodology

- Objectives
  - What processes does the Minerals Management Service (MMS) use to determine and monitor royalty payments on gas produced from federal leases in the Outer-Continental Shelf (OCS)?
  - What processes are producing companies using in determining their royalty payments for gas they produce from federal OCS leases?
- Scope
  - Review focuses primarily on federal OCS gas.
- Methodology
  - Interviewed officials from MMS, relevant states, and representatives from the oil and gas industry.
  - Reviewed relevant documents and analyzed data from MMS, oil and gas industries, and the Energy Information Administration.
  - GAO did not verify the accuracy of the data but discussed the contents of these slides with MMS officials.

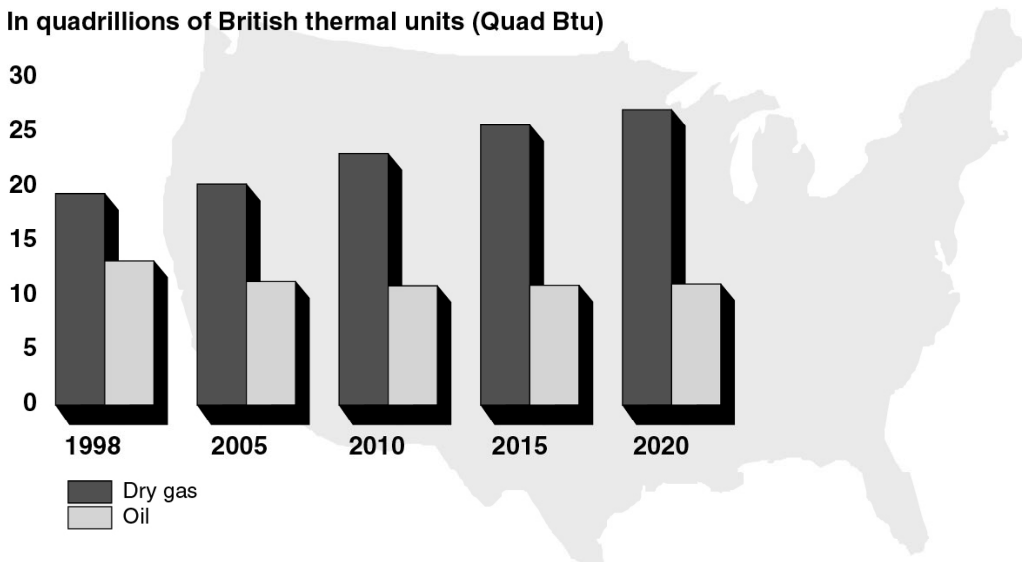
Background

U.S. Natural Gas Production (1998)



Source: Natural Gas Annual, 1998, EIA.

Background
Forecast of U.S. Gas and Crude Oil Production (1998-2020)



Source: Annual Energy Outlook, 2000, EIA's.

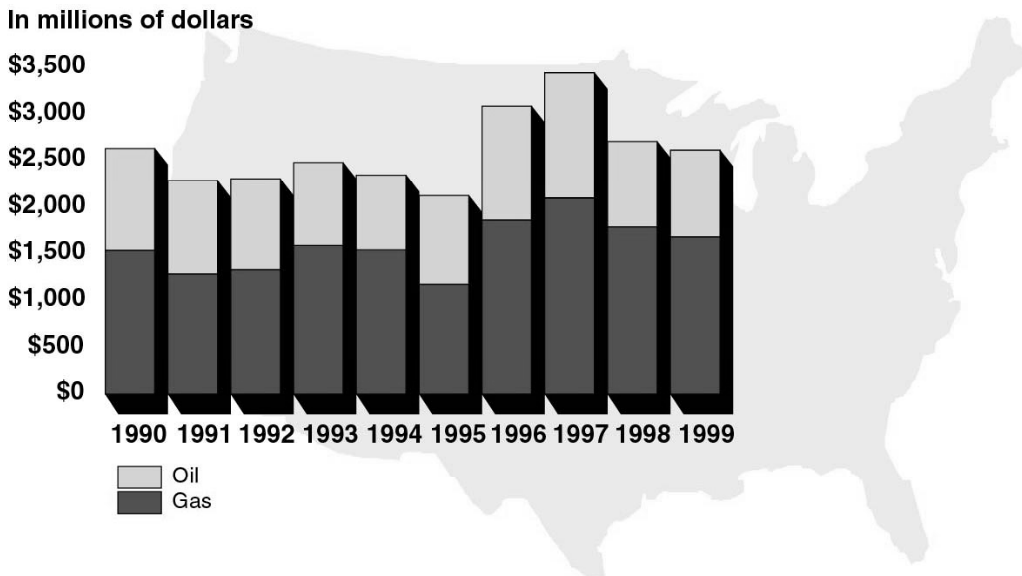
Background

Gas Producers and Pipeline Operators in the OCS

- Gas Producers (Operators)
    - 126 companies (operators) produced gas in the OCS (1999)
    - Top 5 companies produced 35% of OCS gas
    - Top 10 companies produced 51% of OCS gas
    - Top 20 companies produced 70% of OCS gas
- Pipeline Operators
    - 315 companies operated in the OCS

Background

Federal offshore royalties (1990-99)



Source: Mineral Revenues, 1998 and 1999, MMS.

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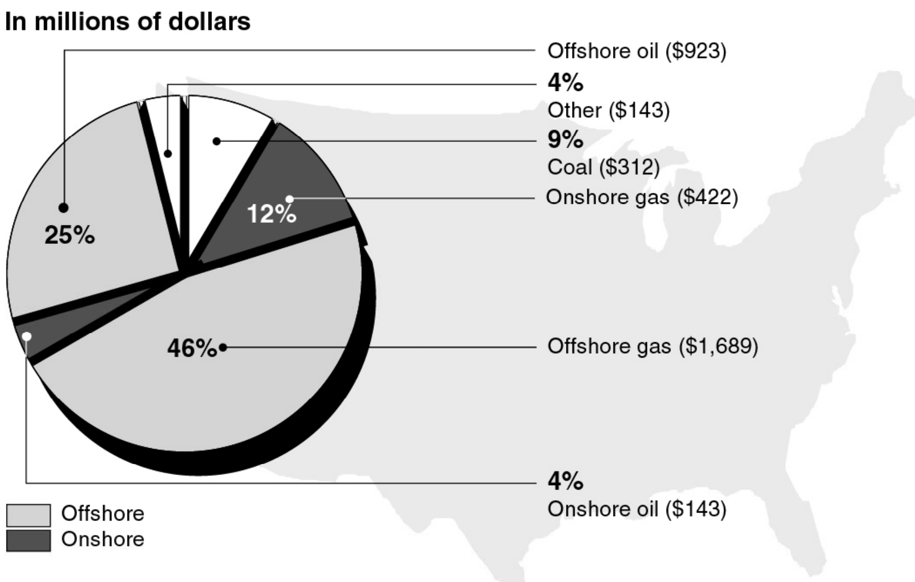
Background
Federal Mineral Royalties (1999)



Source: Mineral Revenues, 1999, MMS.

How MMS Determines and Monitors OCS Gas Royalty Payments

Royalty Formula

Volume x price	=	**gross proceeds**
Gross proceeds – allowances	=	**net proceeds**
Net proceeds x royalty rate (16.67%)	=	**royalty payment**

Determining Gas Royalties
(continued)

- Gross proceeds are overriding principle
  - Volume determined by meter
  - Price
    - If “arms length,” sales prices generally accepted for royalty payment purposes
    - If “non-arms length,” benchmarks apply
      - Benchmark 1 (gross proceeds based on comparable arms-length transactions in the area, plant, or nearby plants)
      - Benchmark 2 (any or combination of gross proceeds, index prices, etc.)
      - Benchmark 3 (Net-back or other reasonable method)

Determining Gas Royalties
(continued)

- Allowances
  - Transportation
    - Lessee’s actual costs to transport production from the lease to the sales point or point of value determination
    - Limitation of 50% of value at each sales outlet is allowed (exceptions can be approved by MMS)
- Processing (for gas plant products)
  - Lessee’s actual costs, limited to 66.67% of tailgate value of each gas plant product (exceptions can be approved by MMS)

Monitoring Gas Royalties

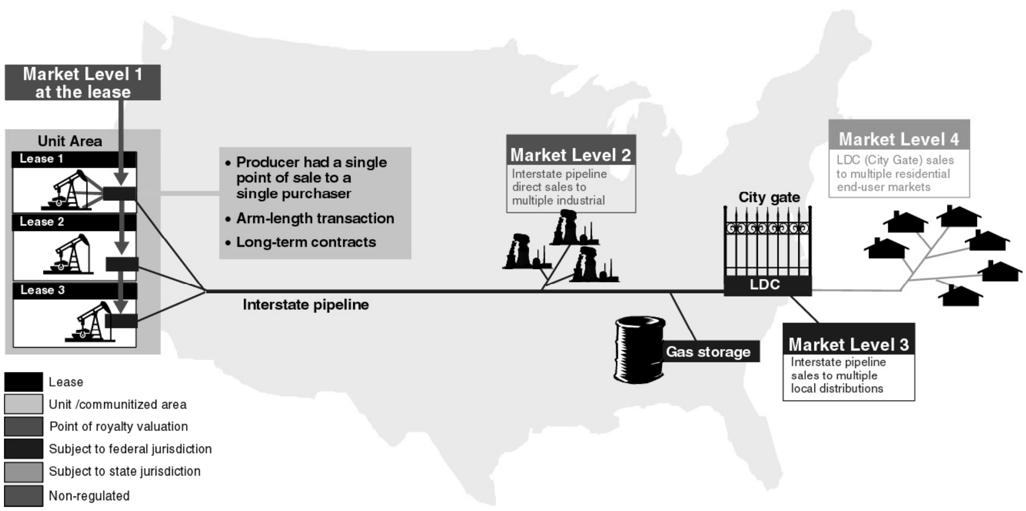
- Two systems involved
  - Production Accounting and Auditing System
    - Used to monitor the accuracy of gas volumes reported by companies
  - Auditing and Financial System
    - Used to monitor the accuracy of royalty payments reported by companies
- About $2.2 billion in underpayments collected (1982 through 1999)

How Oil and Gas Companies (Lessees) Determine Their Gas Royalty Payments

- According to industry representatives:
  - Basically follow MMS' royalty formula
    - Volume x price = Gross proceeds - allowances = net proceeds x royalty rate = royalty payment
    - Volume is metered
    - Sales price used for "arms length"
    - Benchmark for "non-arms length"
    - Each company determines its own "appropriate" benchmark
    - Companies may use different benchmarks even if producing in the same lease area

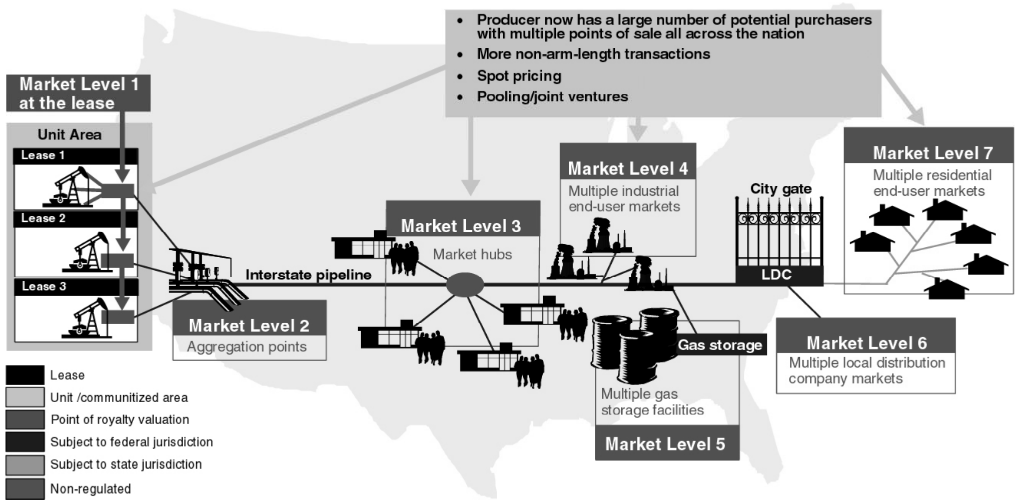
Gas Market Environments Affecting Royalty Determination

Regulated Market



Changing Gas Market Environments Affecting Royalty Determination

Deregulated Market



Contentious Issues

- Volume mostly a non-issue
- Valuation
  - Price
    - Arms length vs. non-arms length
  - Allowances
    - Marketing costs
    - Storage costs
- Litigation

What to Do?

- Proposed negotiated regulations “REG-NEG” published in 1995 by MMS
  - Based, in part, on indexed pricing
  - Included representatives of federal government, states, Indian tribes, and industry
  - Withdrawn in 1997 (not revenue neutral)
- Reengineering (MMS)
  - Will help identify areas of disagreements more expeditiously but not necessarily resolve them

What to Do? *(continued)*

- Industry strongly favors royalty in kind (RIK) (acknowledges that RIK is not appropriate in all situations)
- MMS believes RIK has a potential as a solution but not in all situations
  - Currently pilot-testing RIK (About 10% OCS gas royalties)

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