U.S. Department of the Interior
Office of Inspector General

ADVISORY REPORT

ROYALTY-IN-KIND DEMONSTRATION PILOTS,
MINERALS MANAGEMENT SERVICE

REPORT NO. 99-I-371
MARCH 1999
ADVISORY REPORT

Memorandum

To: Director, Minerals Management Service

From: Robert J. Williams
Assistant Inspector General for Audits


INTRODUCTION

This report presents the results of our audit of the Minerals Management Service’s royalty-in-kind demonstration pilots. This audit was performed as part of our biennial audit requirement of the Federal Royalty Management System for fiscal years 1998 and 1999. The objective of our audit was to determine whether the royalty-in-kind pilots will result in an adequate feasibility test of the royalty-in-kind concept. A second report will contain the results of our audit of the oil royalty-in-kind program for small refiners.

BACKGROUND

Under the terms of Federal oil and gas leases, the Federal Government may choose to receive its royalty share of oil and gas production either in-kind (receiving a physical share of the production) or in-value (receiving a cash payment). This authority is established in the Mineral Leasing Act of 1920 and the Outer Continental Shelf Lands Act of 1953. Historically, the Minerals Management Service has chosen to receive cash payments. Since the 1980s, however, the Service and the oil and gas industry have frequently disagreed on the appropriate value to use in computing royalty payments under the royalty-in-value system. Consequently, oil and gas industry officials are advocating that the Service take its royalties in-kind. Industry officials state that a royalty-in-kind system would eliminate valuation disputes and appeals, increase revenue collections for the Government, require less audit verification, and reduce administrative costs for both the Government and industry. The oil and gas industry supports proposed legislation that would require that the Federal...

‘An exception applies to leases issued under Section 6 of the Outer Continental Shelf Lands Act. For these leases, the lessee has the option to pay its royalties in-kind. Section 6 leases account for less than 3 percent of total Federal production.

2 The Royalty Enhancement Act of 1998 was introduced in the second session of the 105th Congress in both the House of Representatives (H.R. 3334) and the Senate (S. 1930).
Government establish a royalty-in-kind system for all Federal leases, with only limited exceptions. Conversely, the Service maintains that a mandatory royalty-in-kind program would result in reduced revenue collections, and it therefore believes that the Government should retain its flexibility to choose between royalty-in-kind or royalty-in-value collections on a lease-by-lease basis to maximize overall revenue collections.

In an effort to determine whether a royalty-in-kind system might eliminate disputes and improve the royalty collection process, the Service conducted a demonstration pilot in 1995, known as the Royalty Gas Marketing Pilot. During the Pilot, natural gas was taken in-kind from 79 leases in the Gulf of Mexico, which represented 6 percent of the royalty gas volume in the Gulf. The Service concluded, in its September 1996 report “Minerals Management Service Royalty Gas Marketing Pilot,” that the Pilot was an operational success but that the amount of royalties collected was 6.5 percent less than what would have been collected under the in-value system. When projected to the Gulf of Mexico lease universe, the Service estimated that a royalty loss of $82 million would have resulted for the year.

Following the 1995 demonstration pilot, the Service continued to examine the royalty-in-kind concept. In its August 1997 report “1997 Royalty In Kind Feasibility Study,” the Service concluded that when managed correctly, royalty collections under a royalty-in-kind system could maintain or exceed the amounts collected under the in-value system and that the Service and industry could realize administrative efficiencies. The report recommended that pilots be conducted in areas considered to have the greatest potential for success, primarily the Gulf of Mexico for gas and the State of Wyoming for oil.

In accordance with the feasibility study, the Service plans to implement a royalty-in-kind program consisting of three demonstration pilots. The program, which was scheduled to begin in October 1998 and last for up to 6 years (September 2004), will take oil volumes in-kind in Wyoming and gas volumes in-kind from two offshore areas in the Gulf of Mexico. The Service anticipates that the three pilots will provide it with operational experience in managing a royalty-in-kind program and in evaluating the feasibility of a permanent royalty-in-kind program.

**SCOPE**

We reviewed the Minerals Management Service’s royalty-in-kind activities conducted since the Service’s 1995 Royalty Gas Marketing Pilot. The audit was performed from April through October 1998 at the Service’s Royalty Management Program offices in Lakewood, Colorado. To accomplish the audit objective, we interviewed Service officials who were involved in planning and administering the pilots. We interviewed other Service officials and officials from the state governments of Texas and Wyoming and the oil and gas industry who were knowledgeable of the pilots or of the royalty-in-kind concept. We also reviewed reports and other documents that the Service used to support the planning and implementation of the pilots.
The audit was conducted, as applicable, in accordance with the “Government Auditing Standards,” issued by the Comptroller General of the United States. Accordingly, we included such tests of records and other auditing procedures that were considered necessary under the circumstances. As part of the audit, we reviewed the internal controls to the extent considered necessary to accomplish our audit objective. We also reviewed the Secretary’s Annual Statements and Reports to the President and the Congress for fiscal years 1993 through 1995, which are required by the Federal Managers’ Financial Integrity Act; the Departmental Reports on Accountability for fiscal years 1996 and 1997, which include information required by the Act; and the Service’s annual assurance statement on management controls for fiscal year 1997. We determined that none of the reported weaknesses were directly related to the objective and scope of this audit.

PRIOR AUDIT COVERAGE

The General Accounting Office has issued one report on royalty-in-kind activities of the Service during the past 5 years. The report “Federal Oil Valuation, Efforts to Revise Regulations and an Analysis of Royalties in Kind” (No. GAO/RCED-98-242) was issued in August 1998 in response to a Congressional request to address the following: “(1) the information used by MMS [the Minerals Management Service] to justify the need for revising its oil valuation regulations; (2) how MMS has addressed concerns expressed by the oil industry and states in developing these regulations; and (3) the feasibility of the federal government’s taking its oil and gas royalties in kind, as indicated by existing studies and programs.” The report stated that the Service (1) “relied heavily” on an interagency task force report to justify revising its oil valuation regulations and (2) solicited public comments on its proposed regulations in five “Federal Register” notices and revised its proposed regulations three times in response to the comments received. The report further stated that available information “indicates that it would not be feasible for the federal government to take its oil and gas royalties in kind except under certain conditions. These conditions include having relatively easy access to pipelines to transport the oil and gas, leases that produce relatively large volumes of oil and gas, competitive arrangements for processing gas, and expertise in marketing oil and gas. However, these conditions are currently lacking for the federal government and for most federal leases.” The report contained no recommendations.

The Office of Inspector General has issued one audit report during the past 5 years on royalty-in-kind activities. The report “Royalty Gas Marketing Pilot, Minerals Management Service” (96-I-786), issued in May 1996, stated that the Service effectively administered the 1995 Royalty Gas Marketing Pilot and had demonstrated the feasibility of taking gas royalties in-kind as an alternative to the royalty-in-value system. However, the report noted that there were weaknesses in the areas of pilot design, revenue collections, marketing strategies, and administrative controls. We also concluded that the 1995 pilot was too limited in scope to accurately represent gas operations in the Gulf of Mexico. Although the report contained no recommendations, it did contain suggestions for the Service to consider in the design of future royalty-in-kind pilots, such as conducting larger scale pilots with mandatory lease holder participation.
DISCUSSION

We found that the Minerals Management Service’s royalty-in-kind pilots in the Gulf of Mexico to test gas and in Wyoming to test oil will provide the Service with the knowledge and practical experience to implement a permanent royalty-in-kind system for those particular regions and products. However, because the United States oil and gas industry operates in distinct regions, we believe that the limited geographic coverage and products included under the pilot program will not provide a conclusive royalty-in-kind feasibility assessment for all Federal oil and gas production. The pilot program is limited because the Service’s strategy is to conduct pilots in those areas where the Service expects to maintain or exceed the revenues collected under the royalty-in-value system. Service officials said that this strategy was consistent with the recommendations contained in the Service’s “1997 Royalty In Kind Feasibility Study” and that resources were not available to expand the planned pilot program. As a result of the Service’s decision to limit the scope of its pilots, we believe that any conclusions concerning the feasibility of a royalty-in-kind program will apply solely to the geographic regions and products specifically studied and should not be used to evaluate the concept on a nationwide basis.

While we believe that the Service’s strategy to maintain or exceed prior revenue collection levels for the pilot leases has merit, we also believe that additional factors warrant consideration. We view the pilots as an opportunity to gain knowledge through operational experience of how a royalty-in-kind program should be managed, as well as to demonstrate whether any advantages exist over the in-value system. We believe that by including leases in the pilots which are not anticipated to yield the desired revenues, the Service may obtain valuable information and learn methods to maximize the collections. This would be consistent with the Service’s objectives of the pilots, which are “to test the propriety of the [royalty-in-kind] concept for collecting federal ... royalties.” Further, we believe that the Service should be prepared to effectively implement a permanent royalty-in-kind program for Federal leases in anticipation of the proposed legislation becoming law. Our conclusions and suggestions to enhance the effectiveness of the pilot program are discussed in the paragraphs that follow.

Pilot Program Progress Update

The Service was successfully managing the pilot program at the time of our review. The pilot team was making satisfactory progress to ensure that the pilots will begin on schedule, a representative sample of leases in each tested area will be selected, the sampled leases will have a smooth transition from the royalty-in-value system to the royalty-in-kind system, and the pilot results will be evaluated. The team coordinated the Wyoming crude oil pilot with appropriate officials from the State of Wyoming and held public meetings to explain the proposed oil royalty-in-kind program. Additionally, the Service incorporated into its pilot program certain comments and suggestions that were contained in our audit report of the 1995 pilot. For example, the current pilot program will consist of larger scale pilots with mandatory participation by lease holders and will improve the marketing strategies by using longer contract periods and include various production volume sizes in the bids. These
improvements should increase revenue collections and the information and data obtained by the Service.

In preparing for the Wyoming pilot, the team conducted a survey analysis of the crude oil market and consulted with industry experts to select a representative sample of Federal oil leases in the State. The team structured the Wyoming pilot in two phases: one phase that will test the royalty-in-kind values by holding a sealed lease bid sale and a second phase that will involve a contract marketing agent to maximize royalty revenues. The team received bids on 182 properties representing 621 leases in Wyoming and accepted bids on 97 of the properties representing 315 leases. According to the team, the bids on the other 85 properties affecting 306 leases were rejected because the anticipated revenues would not equal or exceed those expected under the royalty-in-value system.

The team was also preparing for the start of the two gas pilots in the Gulf of Mexico. For example, the Service and the state government of Texas entered into a cooperative agreement that details the responsibilities and expectations for the pilot to be conducted offshore Texas. A public meeting was also held to discuss the details of the pilot.

Industry Position

Under an in-kind system, the Service would assume sole responsibility for selling the Federal Government’s royalty share of production. As such, the valuation method used to determine the Government’s share of production, which is a major factor in determining royalty payments under the royalty-in-value system, would not apply. The royalty-in-kind concept has received widespread support from the oil and gas industry. Based on our review, we confirmed that the industry officials we contacted strongly supported the proposed legislation, which would mandate a royalty-in-kind system for Federal leases. The officials we contacted, representing individual oil and gas companies and industry trade associations, told us that an in-kind system would more efficiently collect royalties from Federal leases. For example, under the in-value system, the Service may audit prior year collections from a company and determine that additional royalties are owed because the company had not paid on the market value of the oil or gas. If the company disagrees with the Service’s determination, an expensive and time-consuming process of formal appeals and litigation to resolve the dispute may ensue. According to industry officials, a royalty-in-kind program would avoid these valuation disputes by introducing "certainty" into Federal royalty payment determinations. Overall, the industry, in meetings and through correspondence, has urged the Service to forego the pilot program and adopt a nationwide royalty-in-kind system without delay.

3"Certainty" means that the value of oil and gas for royalty payments would be established at the time of production with no subsequent audit adjustments.
Scope of Pilot Program

In our opinion, the Service’s pilot program will not provide sufficient information and data to determine whether a royalty-in-kind system would be appropriate for all Federal leases because of the limited coverage of individual oil and gas producing regions. The oil and gas industry and the Service recognize three distinct oil-producing regions or markets (see Appendix 1) in the United States as follows: the States of California and Alaska; the six “Rocky Mountain Area” States of Colorado, Montana, North Dakota, South Dakota, Utah, and Wyoming; and the remaining states and the Gulf of Mexico. The Service identified the three producing regions during its efforts in 1998 to revise the oil valuation regulations, which was affirmed by written comments received from industry representatives. Similarly, the natural gas market is not generally considered to operate uniformly in each producing area of the country (see Appendix 2). For example, the availability and ownership of processing plants and the relative access to a pipeline for transporting the gas to a final market can affect sales prices in a specific production area.

We believe that the Service will not obtain sufficient information and data to implement a mandatory nationwide royalty-in-kind program if the proposed legislation is enacted because the royalty-in-kind pilots will not adequately test each of the distinct regions. Specifically, we found the following:

- The royalty-in-kind concept for crude oil will not be fully tested. The only pilot scheduled for oil will be conducted in Wyoming. While Wyoming represents a major oil-producing state, accounting for 8.5 percent of total Federal oil production in fiscal years 1994 through 1996, the Gulf of Mexico accounted for 65.1 percent and California/Alaska (onshore and offshore) accounted for 16.8 percent (see Appendix 1). Consequently, the Service will not be able to determine the feasibility of taking royalties in-kind in those regions that produce most of the oil involving royalties to the Federal Government. We suggest that the Service consider including additional geographic areas in the pilot program.

- The royalty-in-kind concept for natural gas also will not be fully tested. The two pilots scheduled in the Gulf of Mexico, which accounted for 72 percent of Federal gas production in fiscal years 1994 through 1996, will enable the Service to determine the feasibility of taking royalties in-kind for most Federal gas (see Appendix 2). However, a pilot is not scheduled for Federal onshore gas, which accounted for about 27 percent of the production. Consequently, the Service will not be able to determine the feasibility of taking royalties in-kind for onshore gas production. We suggest that the Service continue to pursue

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4 An oil royalty-in-kind program, which the Federal Government has operated for the benefit of small and independent refiners, has provided the Minerals Management Service with experience in collecting royalties in-kind; however, the objective of the program is to ensure a steady supply of oil for the eligible refiners regardless of the amount of royalties collected. The program was not designed to explore different concepts in collecting royalty payments or to make any comparisons to the revenues that would have been received under the royalty-in-value system. In short, the program does not evaluate the feasibility of an in-kind system.
conducting pilots in New Mexico' and/or Wyoming. New Mexico accounted for about 15 percent and Wyoming accounted for about 7 percent of Federal gas production.

We believe that unless the pilot program is expanded, the Service will not obtain the information and data needed to operate a royalty-in-kind program for oil produced in California/Alaska or the Gulf of Mexico or for gas produced onshore. As currently designed, the results of the pilot will provide information and data for the Service to learn how to operate a royalty-in-kind program only for those regions and products specifically tested. Consequently, we do not believe that the results of the pilots, such as an increase or a decrease in Federal royalty revenues, should be extrapolated or extended to the universe of Federal leases. Accordingly, we suggest that the Service consider conducting pilots in each region for both oil and gas.

Other Pilot Program Issues

In addition to considering whether to perform additional pilots in each market area, we believe that the Service should also consider the following issues when it determines specific areas and products to include in future pilots:

- The pilots will not test the taking of both oil and gas from the same lease. Since pending royalty-in-kind legislation (see footnote 2) in the U.S. Congress would require both products to be taken simultaneously, we suggest that the Service take both products simultaneously to identify whether any problem areas or special considerations exist.

- In our opinion, the time frames for completing the pilots should be shortened. By the time the last pilot is completed in fiscal year 2004, the Service will have spent 10 years studying the royalty-in-kind concept and the program may become mandated prior to that date. While we recognize that personnel resources are limited and that the pilot team members are maximizing their efforts, we suggest that the Service develop alternatives to shorten the time frames by, for example, operating the separate phases of the Wyoming pilot concurrently instead of in succession. Also, the Gulf of Mexico pilot could be shortened from the 5 years currently planned.

- We believe that the Service should consider the possible cost savings to the Federal Government and to industry associated with a reduction in the number of appeal and litigation cases filed and the reduction in the Service’s costs (approximately $34 million in fiscal year 1997) to administer the mineral revenue compliance program.

We agree with the Service’s position that the royalty-in-kind concept needs to be studied carefully before full implementation is considered. The Federal lease universe consists of almost 22,000 leases capable of production distributed among 30 states, the Gulf of Mexico, and offshore Alaska and California. Federal leases represent about 25 percent of the oil and

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5At the time of our review, the State of New Mexico had not accepted the Service’s proposal to conduct a royalty-in-kind pilot in that state.
35 percent of the gas produced domestically in the United States. These leases are connected to a vast and complex infrastructure consisting of pipelines and other transportation systems, oil refineries, gas processing plants, and market centers. Moreover, the Service collects about $3.3 billion each year in royalties from Federal leases, with about $500 million of this amount distributed to state governments. Therefore, considering the complexities of the oil and gas business, the monetary significance of Federal lease revenues, the proposed legislation that would mandate a royalty-in-kind program, and the Service’s limited experience in collecting royalties in-kind, we believe that the Service should proceed expeditiously to obtain information and data on how an in-kind program should be designed and managed and to determine whether the presumed efficiencies over the in-value system exist.

Minerals Management Service Response and Office of Inspector General Reply

In the February 16, 1999, response (see Appendix 3) to the draft report from the Director, Minerals Management Set-vice, the Service generally agreed with the report’s findings and conclusions. In the response, the Service included additional comments regarding the royalty-in-kind pilot program. These comments and our replies to these comments are provided in the paragraphs that follow.

Minerals Management Service Comment. The Service said that the report incorrectly assumed that the Service established the pilot program to gain experience in case a royalty-in-kind program became mandatory through legislation. The Service stated that instead, the purpose of the pilot program was “to test the RIK [royalty-in-kind] concept in several strategic areas within existing staff resources to determine whether and under what conditions taking RIK is a prudent method of managing public resources.”

The Service said that it "agree[d] with the report’s conclusion that the ... financial results” of the three pilots “cannot be extrapolated” to the universe of Federal leases. However, the Service said that experience gained in administrating the pilots will provide the agency with certain basic operational information for implementing royalty-in-kind systems in other market areas of the country. Additionally, the Service said that the pilots will sufficiently evaluate each of the three study areas. Specifically, the response stated that the pilots are designed to “test the RIK concept across all reasonable lease, transportation, and sales types.” Additionally, the Service stated, “Because we [the Service] reject bids resulting in lower royalties than would be received in value, we maintain or increase revenues at the same time as receiving valuable data on all types of leases.”

The Service said that it agreed with the report’s statement that expanding the pilot program to each producing region “would increase” the overall knowledge acquired regarding the feasibility of the royalty-in-kind concept. However, the Service reiterated that resources were unavailable to conduct additional pilots.
The Service stated that the Office of Inspector General “may wish to update” the references in the report concerning the legislation that would make a royalty-in-kind system mandatory because, according to the Service, the oil and gas industry “changed [its] view on a mandatory, comprehensive RIK program” and “is no longer actively lobbying for passage” of this legislation.

The Service acknowledged the report’s suggestion to complete the pilot program within a shorter time frame, stating, “We would also like to complete the pilots and make decisions on their results as soon as possible. However, it is our view that a robust, defensible test of RIK concepts needs to be conducted over several business cycles to avoid the effects of short-term market distortions.” The Service further stated that “it is possible that the pilot results will be clear enough in a shorter time frame to base decisions on project termination or broader application.”

**Office of Inspector General Reply.** We believe the Service’s response did not accurately reflect our understanding of the Service’s objectives for the pilot program. In the Discussion section of the report, we quoted the Service’s written objectives as published on its Web site (http://www.rmp.mms.gov/rikweb) for the pilot program. Although the Service stated that we assumed that the pilots were developed as a result of the proposed royalty-in-kind legislation, our discussion regarding proposed legislation was included solely for the complete disclosure of current events involving the royalty-in-kind matter. Further, we believe that the extent of the proposed legislation warrants the Service’s continued attention to review the royalty-in-kind concept on a nationwide basis.

We agree the pilot program will adequately test the various leases contained in each area tested by the three pilots, and the report clearly states that the pilots were properly designed. However, our discussion regarding adequate scope coverage was directed to evaluating the feasibility of implementing a royalty-in-kind system on a nationwide basis. Therefore, in our view, a complete analysis must consist of a pilot being conducted in each of the major producing regions in the country.

Finally, the oil and gas industry was promoting the proposed royalty-in-kind legislation at the end of our fieldwork in October 1998. However, to gain support for the proposed royalty-in-kind legislation, the bills’ sponsors had made modifications to the legislation such as eliminating the mandatory in-kind provisions for certain marginally producing wells and for Alaska leases. Although the bills were not passed in the 105th Congress, we believe that the strong support for a mandatory royalty-in-kind system expressed by the oil and gas industry during our audit exists and that industry will continue to promote such legislation.

Since this report does not contain any recommendations, a response is not required.

The legislation, as amended, creating the Office of Inspector General requires semiannual reporting to the Congress on all audit reports issued, actions taken to implement audit recommendations, and identification of each significant recommendation on which corrective action has not been taken.

We appreciate the assistance of Service personnel in the conduct of our review.
### FEDERAL OIL SALES VOLUMES’ 3-YEAR AVERAGE (1994-1996)

<table>
<thead>
<tr>
<th>GEOGRAPHIC PRODUCING REGIONS</th>
<th>Offshore Sales Volume (Barrels)</th>
<th>Offshore Percent of Total Volume</th>
<th>Onshore Sales Volume (Barrels)</th>
<th>Onshore Percent of Total Volume</th>
<th>Total Sales Volume (Barrels)</th>
<th>Total Percent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>California/Alaska</td>
<td>65,429,368</td>
<td>16.1</td>
<td>23,132,006</td>
<td>19.1</td>
<td>88,561,374</td>
<td>16.8</td>
</tr>
<tr>
<td>Rocky Mountain Area^2</td>
<td>0</td>
<td>0</td>
<td>64,115,820</td>
<td>53.1</td>
<td>64,115,820</td>
<td>12.2</td>
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<tr>
<td>All Other States, including</td>
<td>340.02 1.626</td>
<td>83.9</td>
<td>33,536,254</td>
<td>27.8</td>
<td>373,557,880</td>
<td>71.0</td>
</tr>
<tr>
<td>Gulf of Mexico’</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>405,450,994</td>
<td>100.0</td>
<td>120,784,080</td>
<td>100.0</td>
<td>526,235,074</td>
<td>100.0</td>
</tr>
</tbody>
</table>

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‘Consists of Colorado (1.3%), Montana (5%), North Dakota and South Dakota (1.1%), Utah (8%), and Wyoming (8.5%).

^1All other states consist of Alabama, Arkansas, Florida, Illinois, Kansas, Kentucky, Louisiana, Michigan, Mississippi, Nebraska, Nevada, New Mexico, Ohio, Oklahoma, Pennsylvania, Texas, and West Virginia (5.9% in total) and the Gulf of Mexico (65.1%).
# APPENDIX 2

## FEDERAL GAS SALES VOLUMES’

### 3-YEAR AVERAGE

(1994-1996)

<table>
<thead>
<tr>
<th>State</th>
<th>Sales Volume (Mcf)²</th>
<th>Percent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OFFSHORE PRODUCTION</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gulf of Mexico</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alabama</td>
<td>107,679,995</td>
<td>1.6</td>
</tr>
<tr>
<td>Louisiana</td>
<td>3,675,569,617</td>
<td>55.7</td>
</tr>
<tr>
<td>Mississippi</td>
<td>4,145,058</td>
<td>.1</td>
</tr>
<tr>
<td>Texas</td>
<td>965,199,315</td>
<td>14.6</td>
</tr>
<tr>
<td>Total Gulf of Mexico</td>
<td>4,752,593,985</td>
<td>72.0</td>
</tr>
<tr>
<td>California</td>
<td>38,642,502</td>
<td>.6</td>
</tr>
<tr>
<td>Total Offshore³</td>
<td>4.79 1.236,487</td>
<td><strong>72.6</strong></td>
</tr>
<tr>
<td><strong>ONSHORE PRODUCTION</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Mexico</td>
<td>1,001,806,371</td>
<td>15.2</td>
</tr>
<tr>
<td>Wyoming</td>
<td>475,552,092</td>
<td>7.2</td>
</tr>
<tr>
<td>All Other States</td>
<td>331,563,468</td>
<td><strong>5.0</strong></td>
</tr>
<tr>
<td>Total Onshore</td>
<td>1,808,921,931</td>
<td><strong>27.4</strong></td>
</tr>
<tr>
<td>Total</td>
<td>6,600,158,418</td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

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*Thousand cubic feet. The standard unit for measuring the volume of natural gas.

³The five states listed for offshore production also had onshore production of 103,516,660 Mcf, or 1.6 percent of total production. The onshore production for these five states was included in the Onshore Production - All Other States category.
Memorandum

To: Assistant Inspector General for Audits

Through: pobliżu Baca Acting Assistant Secretary, Land and Minerals Management

From: Cynthia Quarterman Director, Minerals Management Service


We appreciate this opportunity to comment on the subject draft report. Overall, we believe that the report is well-done and will be helpful to us as we continue with testing the royalty-in-kind (RIK) concept in our pilot projects.

We offer the following comments:

- **Objective of the Pilots:** The draft report appears to assume that the intent of the RIK pilots is to provide experience so that a mandatory RIK program could be effectively implemented for all leases, if such a program were to be legislated.

  This is not the intent of the RIK pilots— we currently have compelling information that a mandatory RIK program for all leases cannot be effectively implemented. We have shared this with Congress and the industry. The intent of the RIK pilots is to test the RIK concept in several strategic areas within existing staff resources to determine whether and under what conditions taking RIK is a prudent method of managing public resources.

- **Application of Pilot Results:** We agree with the report’s conclusion that the full results of the pilots— especially the financial results— cannot be extrapolated to all regions for all commodities due to regional market and infrastructure differences. However, it is clear to us that experience gained in many of the broad operational factors involved in taking RIK— operator requirements, reporting, imbalances, bidding, and sales methods— will apply to most, if not all, markets across the country. It is possible that such information will lead us to test the concept in other areas in the future (see below).
• **Expansion of the Pilots:** In concept, we agree that operating the projects in each of the major producing regions for each commodity would increase our knowledge of RIK feasibility. In fact, as the report notes, we have explored expanding the pilots to include a natural gas project in New Mexico. We also expect to learn more about the feasibility of RIK through the recently announced initiative to fill the Strategic Petroleum Reserve with royalty oil from the Gulf of Mexico.

We will take the recommendation under advisement and seek opportunities to maximize the information to be gained, perhaps through pilot expansion. The idea of including both oil and gas in the same project is especially well-taken.

However, as you are aware, we have finite resources which are spread over many responsibilities in managing the Nation’s mineral royalties. Thus, any expansion of the RIK pilots, if warranted would require additional resources to be appropriated for this purpose.

• **Pilot Operations:** We appreciate the report’s conclusions that the pilots are being well-managed and are operating smoothly. With regard to pilot operations, we note that the report asserts that, because the pilots are designed to increase revenues, the full spectrum of lease situations is not tested.

The pilots are designed to maintain or enhance revenues and, at the same time, test the RIK concept across all reasonable lease, transportation, and sales types. Although there is some natural tension between these two goals, they are both being concurrently fulfilled. As an example, in the Wyoming Pilot, a full range of lease and transportation types have been included in both bidding cycles conducted to date. Thus, we have received bids on leases that are both economically attractive and unattractive. Because we reject bids resulting in lower royalties than would be received in value, we maintain or increase revenues at the same time as receiving valuable data on all types of leases.

• **Industry Position:** You may wish to update this section to reflect industry’s changed view regarding the feasibility of a mandatory, comprehensive RIK program. Our understanding is that industry is no longer actively lobbying for passage of HR 3334 and its Senate counterpart.

• **Pilot Duration:** We appreciate the report’s recommendation to shorten the time frames for completing the RIK pilots. We would also like to complete the pilots and make decisions on their results as soon as possible. However, it is our view that a robust, defensible test of RIK concepts needs to be conducted over several business cycles to avoid the effects of short-term market distortions. With respect to the large offshore gas pilot, we have been told by a host of marketing
companies that a 4- to 5-year pilot is needed so that operations can mature considering the size of the royalty volumes involved.

We will keep your recommendation in mind as the pilots progress, as it is possible that the pilot results will be clear enough in a shorter time frame to base decisions on project termination or broader application.

Again, we believe the report will help us to further improve our RIK operations. We look forward to working with you in the future on this important project.

If you have any questions concerning our comments, please contact Bettine Montgomery at (202) 208-3976.
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SHOULD BE REPORTED TO
THE OFFICE OF INSPECTOR GENERAL

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Office of Inspector General
1849 C Street, N.W.
Mail Stop 5341
Washington, D.C. 20240

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