



Testimony

Before the Committee on Natural  
Resources, United States House of  
Representatives

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**ROYALTIES COLLECTION**

**Ongoing Problems with  
Interior's Efforts to Ensure  
A Fair Return for  
Taxpayers Require  
Attention**

Statement of Mark Gaffigan, Acting Director  
Natural Resources & Environment



**G A O**

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Highlights of [GAO-07-682T](#), a testimony before the Committee on Natural Resources, United States House of Representatives

## Why GAO Did This Study

The Department of the Interior's Minerals Management Service (MMS) is charged with collecting and administering royalties paid by companies developing fossil and renewable energy resources on federal lands and within federal waters. To promote development of oil and natural gas, fossil resources vital to meeting the nation's energy needs, the federal government at times has provided "royalty relief," waiving or reducing the royalties that companies must pay. In these cases, relief is typically applicable only if prices remain below certain threshold levels. Oil and gas royalties can be taken at MMS's discretion either "in value" as cash or "in kind" as a share of the product itself. Additionally, MMS also collects royalties on the development of geothermal energy resources—a renewable source of heat and electricity—on federal lands.

This statement provides (1) an update of our work regarding the fiscal impacts of royalty relief for leases issued under the Deep Water Royalty Relief Act of 1995; (2) a description of our recent work on the administration of the royalties in kind program, as well as ongoing work on related issues; and (3) information on the challenges to collecting geothermal royalties identified in our recent work.

To address these issues we relied on recent GAO reports on oil, gas, and geothermal royalty collection systems. We are also reviewing key MMS estimates and data.

[www.gao.gov/cgi-bin/getrpt?GAO-07-682T](http://www.gao.gov/cgi-bin/getrpt?GAO-07-682T).

To view the full product, including the scope and methodology, click on the link above. For more information, contact Mark Gaffigan at 202-512-3841 or [gaffiganm@gao.gov](mailto:gaffiganm@gao.gov).

## ROYALTIES COLLECTION

### Ongoing Problems with Interior's Efforts to Ensure a Fair Return for Taxpayers Require Attention

#### What GAO Found

The absence of price thresholds in oil and gas leases issued by MMS in 1998 and 1999 has already cost the government about \$1 billion and the agency estimated in March 2007 that future foregone royalties would be \$6.4 billion to \$9.8 billion over the lives of the leases. Precise estimates of the actual foregone royalties, however, are not possible at this time because future projections are sensitive to price and production levels, both of which are subject to change. MMS is currently negotiating with oil and gas companies to apply price thresholds to future production from these leases, with mixed results—only 6 of the 45 companies involved have agreed to terms, while others have yet to agree to negotiate. Moreover, a pending legal challenge to Interior's authority to include price thresholds on any leases issued under the Deep Water Royalty Relief Act could, if successful, cost the government billions more in refunded and foregone revenue.

In our most recent review of the royalty in kind (RIK) program, conducted in 2004, we found that MMS was unable to determine whether the revenues received from its sales of oil taken in kind were equivalent to receiving royalties in value, largely because it had not developed systems to rapidly and efficiently collect this information. We made recommendations that the agency has implemented that have improved the administration of the program as it existed at the time of our report. However, the continued expansion of the program raises a new question about the adequacy of the agency's overall management practices and internal controls to meet the increasing demands placed on the RIK program. Accordingly, we are undertaking follow-on reviews assessing, among other things, the agency's ability to quantify and compare administrative costs and revenues of the RIK and royalties in value programs and the extent to which the revenues collected under the RIK program are equal to or greater than what would have been received had they been taken in value.

In a 2006 report on geothermal royalties, we found that missing and erroneous historical data, as well as insufficient data on electricity sales, meant that MMS was unable to accurately determine whether it was collecting royalties as directed by statute. The Energy Policy Act of 2005 included provisions that significantly changed how geothermal royalties are calculated but also directed Interior to maintain the same level of royalties over the next ten years that would have been collected prior to the Act's passage. We found that making this determination requires historical data on sales of electricity produced from geothermal resources as well as accurate royalty data. However, MMS did not have sufficient historical gross revenue data with which to establish a baseline for past royalties paid as a percentage of electricity revenues. Further, about 40 percent of MMS's royalty data was either missing or erroneous for the projects we reviewed. We recommended that MMS correct these deficiencies and the agency agreed. We are continuing to monitor the agency's efforts.

Mr. Chairman and Members of the Committee:

We are pleased to be here today to discuss our recent work on the administration of revenues collected from the production of fossil and renewable energy resources on federal lands and within federal waters. Companies that develop these resources do so under leases which generally require the payment of royalties on the resources extracted and produced. These leases are administered by the Minerals Management Service (MMS), an agency within the Department of the Interior (Interior). These resources include geothermal, coal, and, most notably, oil and natural gas (hereafter oil and gas).

In particular, fossil energy resources from federal lands and waters are a critical component of the nation's energy portfolio, supplying more than a third of all the oil and nearly a quarter of all the natural gas produced in the United States in fiscal year 2005. Oil and gas companies received over \$77 billion from the sale of oil and gas produced from federal lands and waters in fiscal year 2006, and these companies paid the federal government about \$10 billion in royalties.

In order to promote oil and gas production, the federal government has at times and in specific cases provided "royalty relief"—the waiver or reduction of royalties that companies would otherwise be obligated to pay. When the government grants royalty relief, it typically specifies the amounts of oil and gas production that will be exempt from royalties and may also specify that royalty relief is applicable only if oil and gas prices remain below certain levels, known as "price thresholds." For example, the Outer Continental Shelf Deep Water Royalty Relief Act of 1995, also known as the Deep Water Royalty Relief Act (DWRRA), mandated royalty relief for oil and gas leases issued in the deep waters of the Gulf of Mexico from 1996 to 2000. These deep water regions are particularly costly to explore and develop. However, as production from these leases has grown, and as oil and gas prices have risen dramatically in recent years, serious questions have been raised about the extent to which royalty relief has been in the interest of taxpayers. These concerns were brought into stark relief when it was learned that MMS issued leases in 1998 and 1999 that failed to include the price thresholds above

which royalty relief would no longer be applicable, making large volumes of oil and natural gas exempt from royalties and significantly affecting the amount of royalty revenues collected by the federal government. Further royalty relief is currently available under other legislation and programs, raising the prospect that the federal government may be forgoing additional royalty revenues. Recently, congressional committees, Interior's Inspector General,<sup>1</sup> public interest groups, and the press have questioned whether our nation's oil and gas royalties are being properly managed and whether the oil and gas industry is paying a fair share of revenue to the public resource owners, especially in light of high oil and gas prices, record industry profits, and the daunting current and long-range fiscal challenges facing our nation. GAO has expressed similar concerns, and the U.S. Comptroller General has highlighted royalty relief as an area needing additional oversight by the 110th Congress.<sup>2</sup>

The MMS is authorized by Congress to collect royalties "in value," as a fraction of the revenues companies receive from sale of oil and gas produced on federal leases, or "in kind," as a fraction of the oil and gas that the MMS then sells to recover the government's share of oil and gas revenue. With regard to oil, while MMS has long received relatively small amounts of oil in kind for specific purposes, such as in a past program that provided royalty oil to small refiners at subsidized prices, the bulk of royalties have historically been collected in value. In recent years, however, MMS has taken a growing proportion of oil royalties in kind. Much of this oil was then exchanged for other oil that was put into the nation's Strategic Petroleum Reserve, over 700 million barrels of publicly held crude oil that is stored to ensure emergency supplies in the event of a significant disruption in the normal oil supply. Under the Energy Policy Act of 2005, MMS is charged with ensuring that the revenues it receives when it sells RIK oil are at least as great as the revenues it would have received had it taken the royalties in value.

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<sup>1</sup>*Minerals Management Service's Compliance Review Process*, Department of the Interior Office of the Inspector General, Report No. C-IN-MMS-0006-2006 (Washington, D.C.: Dec. 2006).

<sup>2</sup>GAO, *Suggested Areas for Oversight for the 110th Congress*, GAO-07-235R (Washington, D.C.: Nov. 17, 2006).

The recent expansion of the royalties-in-kind (RIK) program has raised the obvious question of whether or not this condition is being met.

While fossil energy resources are significant, the federal government also manages royalties from renewable sources such as geothermal energy. Geothermal energy is a unique renewable energy resource in that it can provide a consistent and uninterrupted supply of heat and electricity. Companies drill wells to bring the geothermal fluids and steam to the surface, separate the steam from the fluids as their pressure drops, and use the steam to spin the blades of a turbine that generates electricity. The electricity is then sold to utilities in a manner similar to sales of electricity generated by hydroelectric, coal-fired, and gas-fired power plants, and the companies pay royalties based on the electricity sold.

Due, in part, to increasing demand for electricity, interest is increasing in developing geothermal energy resources as an alternative form of generation. Because many areas that have the potential to produce additional geothermal energy are located on federal lands, the federal government will continue to be a major participant in the future development of geothermal energy. MMS collects the federal geothermal royalties and disburses to the state and local governments its share of these royalties. In 2005, the most recent year for which data are available, MMS collected \$12.3 million in geothermal royalties, almost all of which was derived from the production of electricity.

You asked us to provide information from our recent work on the administration of federal royalty revenues at MMS. My testimony today (1) updates our work regarding the fiscal impacts of royalty relief for leases issued under the Deep Water Royalty Relief Act of 1995; (2) describes our recent work regarding the administration of the royalties in kind program, as well as ongoing work on this and related issues we have undertaken for this committee and other congressional requesters; and (3) provides information on the challenges to collecting and managing geothermal royalties that we identified in recent work.

To address these issues, we relied on recent GAO reports related to MMS's royalty collection systems for oil, gas, and geothermal resources. As part of our ongoing work, we also reviewed the methodology and assumptions used by MMS to produce their March 2007 estimate of foregone oil and gas royalties. Our work follows the issuance of our report last year explaining why oil and gas royalties have not risen at the same pace as rising oil and gas prices.<sup>3</sup> Our work was conducted in accordance with generally accepted government auditing standards.

**In summary we found:**

- The absence of price thresholds in leases issued in 1998 and 1999 has already cost the government about \$1 billion and MMS's most recent estimate in March 2007 indicates a range of future foregone royalties of between \$6.4 billion and \$9.8 billion over the lifetime of the leases. However, because there is considerable uncertainty about future oil and natural gas prices and production levels, actual foregone royalties could end up being higher or lower than MMS's estimates. MMS is currently negotiating with oil and gas companies to apply price thresholds to future production from the 1998 and 1999 leases. To date, the results of these negotiations have been mixed—6 of the 45 companies involved have agreed to terms, others have agreed to negotiate but have not come to terms, while others have yet to agree to negotiate. Moreover, a pending legal challenge to Interior's authority to include price thresholds on any leases issued under the DWRRA could, if successful, cost the government billions more in refunded and foregone revenue.
- In our most recent audit of the RIK program, conducted in 2004, we found that MMS had not collected the necessary information to determine whether or not the revenues received from its sales of royalty oil were equivalent to receiving royalties in value, largely because it had not developed information systems to rapidly and efficiently collect this information. We made recommendations to the Secretary of

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<sup>3</sup>GAO, *Royalty Revenues: Total Revenues Have Not Increased at the Same Pace as Rising Natural Gas Prices due to Decreasing Production Sold*, GAO-06-786BR (Washington, D.C.: June 21, 2006).

the Interior that the agency has implemented and that have improved the administration of the program as it existed at the time. However, the continued expansion of the program raises additional questions about the adequacy of the agency's overall management practices and internal controls to meet the increasing demands of the program. Accordingly, at the request of Congress, we are undertaking a follow-on review assessing, among other things, the agency's ability to quantify and compare administrative costs and revenues of the RIK and royalties-in-value programs and the extent to which the revenues collected under the RIK program are equal to or greater than what would have been received had they been taken in value.

- In a 2006 report on geothermal royalties, we found that MMS had erroneous and missing historical geothermal royalty data and did not collect sufficient data from royalty payors to accurately assess whether MMS was collecting the amount of royalties required by statute. The Energy Policy Act of 2005 included provisions that significantly changed how geothermal royalties are calculated but also instructed the Secretary of the Interior to seek to maintain the same aggregate level of royalties over the next ten years that would have been collected prior to the Act's passage. We found that in order to compare royalties collected under the provisions of the Act with what would have been collected under the old system would require historical data on gross revenues from geothermal electricity sales as well as accurate royalty data. However, we found that MMS did not have sufficient historical gross revenue data with which to establish a baseline for past royalties paid as a percentage of electricity revenues. Further, about 40 percent of MMS's royalty data was either missing or erroneous for the projects we reviewed. In our report we recommended that the Secretary of the Interior direct MMS to correct these deficiencies and the agency agreed with our findings and recommendations. We are continuing to monitor the agency's efforts to address these shortcomings.



## Background

Interior oversees and manages the nation's publicly owned natural resources, including parks, wildlife habitat, and crude oil and natural gas resources on over 500 million acres onshore and in the waters of the Outer Continental Shelf (OCS). In this capacity, Interior is authorized to lease federal fossil and renewable energy resources and to collect the royalties associated with their production. These substantial revenues are disbursed to 38 States, 41 Indian Tribes, the Department's Office of Trust Funds Management on behalf of some 30,000 individual Indian royalty owners, and to U.S. Treasury accounts.

Royalties paid for fossil and renewable resources extracted from leased lands represent the principal source of the \$12.6 billion in revenues managed by MMS—\$10.7 billion, more than 85 percent of revenues received in fiscal year 2006.<sup>4</sup> Of these, oil and natural gas leases are the most significant component of royalties, composing on average nearly 90 percent of the royalties received over the past five years. For oil and gas, production royalties are paid either in value or in kind. The OCS Lands Act of 1953, as amended, and the Mineral Leasing Act of 1920, as amended, authorize the collection of production royalties either in value or in kind for federal lands leased for development onshore and on the OCS. Furthermore, according to MMS, the terms of virtually all federal oil and gas leases provide for royalties to be paid in value or in kind at the discretion of the lessor. The Energy Policy Act of 2005 provides additional statutory requirements to support the operation and funding of a program for managing federal oil and gas royalties in kind.

Additionally, MMS also collects revenue generated by exploration and development of geothermal energy resources commonly used to generate electricity.<sup>5</sup> Until recently, the Geothermal Steam Act of 1970, as amended, directed MMS to disburse royalties collected from geothermal energy development such that 50 percent of geothermal royalties be

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<sup>4</sup>The remaining \$1.9 billion consist of other revenues received from rent payments and bonuses paid by companies for successful bids on leases.

<sup>5</sup>Geothermal energy is literally the heat of the earth. This heat is abnormally high where hot and molten rocks exist at shallow depths below the earth's surface. Water, brines, and steam circulating within these hot rocks are collectively referred to as geothermal resources.

retained by the federal government and the other 50 percent be disbursed to the states in which the federal leases are located.<sup>6</sup> A provision of the Energy Policy Act of 2005 changed the distribution of the royalties collected from geothermal resources. While 50 percent of federal geothermal royalties must still be disbursed to the states in which the federal leases are located, an additional 25 percent must be disbursed to the counties in which the leases are located, leaving only 25 percent to the federal government.

### **Billions of Dollars of Royalty Revenue Will be Foregone Because of Problems Associated with Royalty Relief**

As Assistant Secretary Allred of Interior recently testified before the Congress, the absence of price thresholds in leases issued in 1998 and 1999 has already cost the government almost \$1 billion and in March 2007, MMS estimated a range of potential future foregone revenue for these leases of between \$6.4 billion and \$9.8 billion. MMS calculated these estimates under a range of assumptions about oil and natural gas prices and future production levels. We reviewed MMS's assumptions and methodology for estimating the potential foregone revenue from 1998 and 1999 leases and found them to be reasonable. However, because there is considerable uncertainty about future oil and natural gas prices and production levels, actual foregone royalties could end up being higher or lower than MMS's estimates.

MMS is currently negotiating with oil and gas companies to apply price thresholds to future production from the 1998 and 1999 leases. If successful, this approach would partially undo the omission of price thresholds for future production, thereby implementing the royalty relief as though price thresholds had been included in the leases. However, the results of the negotiation have been mixed so far—as of late February 2007, only 6 of 45 companies have agreed to terms, while many companies have not agreed to negotiate, and the current legal challenge to Interior's authority to set price thresholds on any DWRRA leases may further deter or complicate a negotiated settlement.

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<sup>6</sup>30 U.S.C. § 191(a). The State of Alaska is an exception to this provision, receiving 90 percent.

In addition to forgone royalty revenues from leases issued in 1998 and 1999, royalty revenues on leases issued under DWRRA in 1996, 1997, and 2000, are also threatened, pending the outcome of a legal challenge regarding price thresholds. Specifically, Kerr-McGee filed suit against the Department of the Interior in early 2006, challenging its authority to place price thresholds on any of the leases issued under the DWRRA. In effect, this suit seeks to remove price thresholds from the leases in question. In June 2006, Kerr-McGee agreed to enter into mediation with Interior in an attempt to resolve the issue; however, the mediation was unsuccessful and litigation has resumed. As of March 2007, the leases in question have generated approximately \$1 billion in royalties. If the government loses this legal challenge, it may be required to refund these royalties—perhaps with interest penalties—and to forego any future royalties on these leases, and perhaps any lease issued during 1996, 1997, and 2000. As a result, the government could stand to lose billions of additional dollars.

### **The RIK Program Has Been Unable to Demonstrate Its Effectiveness Due to Data Limitations**

We reviewed the RIK pilot program for this committee in two separate reports in 2003 and 2004 and found that MMS did not collect the necessary information to effectively monitor and evaluate the program.<sup>7</sup> This information includes the administrative costs of the RIK program and the revenue impacts of all sales. We found that MMS lacked this information largely because it had not developed information systems to rapidly and efficiently collect this information.

We made several recommendations in our 2003 and 2004 reports to address the shortcomings we identified. Specifically, to further the development of management

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<sup>7</sup> GAO, *Mineral Revenues: A More Systematic Evaluation of the Royalty-in-Kind Pilots is Needed*, GAO-03-296 (Washington, D.C.: Jan. 9, 2003) and GAO, *Mineral Revenues: Cost and Revenue Information Needed to Compare Different Approaches for Collecting Federal Oil and Gas Royalties*, GAO-04-448 (Washington, D.C.: Apr. 16, 2004).

controls for MMS's RIK program, we recommended that the Secretary of the Interior instruct the appropriate managers within MMS to identify and acquire key information needed to monitor and evaluate performance prior to expanding the RIK program. We specified that such information should include the revenue impacts of all RIK sales, administrative costs of the RIK program, and expected savings in auditing revenues. We also recommended that MMS clarify the RIK program's strategic objectives to explicitly state that the goals of RIK include obtaining fair market value and collecting at least as much revenue as MMS would have collected in cash royalty payments. MMS agreed with both recommendations and has taken several steps to address these shortcomings.

We acknowledge the agency's efforts and, within the context of the program's scope at the time of our report, consider our recommendations implemented by the agency. However, the expansion of use of RIK since our last review raises an additional concern. The RIK program has actively expanded the scope of its operations as MMS has increasingly opted to take royalties in kind rather than in cash. As MMS reported in its September 2006 *Report to Congress*, today's RIK operation manages a significant portfolio of the nation's oil and gas royalty assets collected primarily from federal leases in the Gulf of Mexico. This portfolio has expanded more than three-fold from 1999 to present—some 82 million barrels of oil equivalent were exchanged in kind in fiscal year 2005—and is expected to continue to grow for the foreseeable future. The Energy Policy Act of 2005 permanently established an RIK operation with administrative and business costs to be paid from royalty revenues generated by RIK sales, effectively transitioning the program from pilot status to a steady-state business operation and potentially enabling a further expansion of the RIK program. The Act restricts the use of RIK to those situations where the benefit is determined to equal or exceed the benefit from royalties in value prior to the sale. However, the larger scale of the RIK program at present makes it unclear that MMS can effectively and accurately make this determination going forward.

Noting this issue, we are undertaking work for the Congress. Specifically, we have several ongoing reviews assessing, among other things, MMS's ability to quantify and

compare administrative costs and revenues of the RIK and royalties in value programs; the effectiveness of the systems used to collect, account for, and disburse royalties; and the accuracy of royalty revenue collection, including evaluating whether the value of RIK payments equal or exceed the value of royalties that would have been received in value for oil and gas as required by statute.

### **MMS Does Not Collect the Data Necessary to Assess Whether Geothermal Royalties Remain Constant as Required by Law**

In a 2006 report on geothermal royalties, we found that MMS had erroneous and missing historical geothermal electricity revenue data and did not collect sufficient data from royalty payors to accurately assess whether MMS was collecting the amount of royalties required by statute.<sup>8</sup> Specifically, about 40 percent of the royalty revenue data for royalty payors was either missing or erroneous in the projects we reviewed. In addition, MMS did not have sufficient historical gross revenue data for geothermal electricity sales.

MMS is charged with collecting and distributing royalties collected from the development of geothermal resources used to generate electricity. The Energy Policy Act of 2005 included provisions that significantly changed how geothermal royalties are calculated but also instructed the Secretary of the Interior to seek to maintain the same level of royalties over the next ten years that would have been collected prior to the Act's passage. We found that to meet the statutory requirements, MMS will need to calculate the percentage of gross sales revenues that lessees will pay in future royalties from electricity sales and compare this to what lessees would have paid prior to the Act. In order to compare royalties collected under the provisions of the Act with what would have been collected under the old system would require historical data on gross revenues from geothermal electricity sales as well as accurate royalty data on those sales.

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<sup>8</sup> GAO, *Renewable Energy: Increased Geothermal Development Will Depend on Overcoming Many Challenges*, GAO-06-629 (Washington, D.C.: May 24, 2006), 34-38.

As a result of the insufficient gross revenue data and missing or erroneous royalty revenue data, MMS was unable to determine if it was collecting the amount of royalties on geothermal electricity production as required in statute. In our report we recommended that the Secretary of the Interior direct MMS to correct these deficiencies and the agency agreed with our findings and recommendations. We will continue to monitor the agency's efforts to address these shortcomings.

## **Conclusions**

As seen by all the attention royalties management has received in the Congress and the media, Interior's performance in managing this effort is a cause for concern. Billions of dollars have been lost already and potentially billions more are at risk. In a time of dire long-term national fiscal challenges it is urgent that this problem be fixed and the confidence of the American public that the sale of its national resources is generating a fair return be restored. Our work on this issue is continuing on multiple levels, including comparing the value of royalties taken in kind to the value of royalties taken as cash, reviewing the diligence of resource development, and evaluating the accuracy of the agency's cost, revenue, and production data.

We look forward to this continued work, and to helping this committee and the Congress as a whole exercise oversight of this important issue. Mr. Chairman, this concludes my prepared statement. I would be pleased to respond to any questions that you or other members of the Committee may have at this time.

## **GAO Contact and Staff Acknowledgments**

For further information about this testimony, please contact me, Mark Gaffigan, at 202-512-3841 or [gaffiganm@gao.gov](mailto:gaffiganm@gao.gov). Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this statement. Contributors to this testimony include Frank Rusco, Assistant Director; Robert Baney;

Ron Belak; Glenn Fischer; Philip Farah; Dan Haas; Chase Huntley; Dawn Shorey; Barbara Timmerman; Maria Vargas; and Jacqueline Wade.

## Enclosure

### Related GAO Products

*Oil and Gas Royalties: Royalty Relief Will Likely Cost the Government Billions, but the Final Costs Have Yet to Be Determined*, GAO-07-369T (Washington, D.C.: Jan. 18, 2007).

*Suggested Areas for Oversight for the 110th Congress*, GAO-07-235R (Washington, D.C.: Nov. 17, 2006).

*Department of Interior: Royalty-in-Kind Oil and Gas Preferences*, B-307767 (Washington, D.C.: Nov. 13, 2006).

*Royalty Revenues: Total Revenues Have Not Increased at the Same Pace as Rising Natural Gas Prices due to Decreasing Production Sold*, GAO-06-786BR (Washington, D.C.: June 21, 2006).

*Renewable Energy: Increased Geothermal Development Will Depend on Overcoming Many Challenges*, GAO-06-629 (Washington, D.C.: May 24, 2006).

*Mineral Revenues: Cost and Revenue Information Needed to Compare Different Approaches for Collecting Federal Oil and Gas Royalties*, GAO-04-448 (Washington, D.C.: Apr. 16, 2004).

*Mineral Revenues: A More Systematic Evaluation of the Royalty-in-Kind Pilots is Needed*, GAO-03-296 (Washington, D.C.: Jan. 9, 2003).

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