



GAO

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United States Government Accountability Office  
Washington, DC 20548

September 26, 2008

Congressional Requesters

*Subject: Oil and Gas Royalties: MMS's Oversight of Its Royalty-in-Kind Program Can Be Improved through Additional Use of Production Verification Data and Enhanced Reporting of Financial Benefits and Costs*

In fiscal year 2007, the Department of the Interior's (Interior) Minerals Management Service (MMS) collected over \$9 billion in oil and natural gas (hereafter referred to as oil and gas) royalties and disbursed these funds to federal, state, and tribal accounts. The federal portion of these royalties, which totaled \$6.7 billion, represents one of the country's largest non-tax sources of revenue. In addition to this substantial financial value to the government, oil and gas production on federal lands and waters represents a critical component of the nation's energy portfolio, supplying roughly 35 percent of all the oil and 30 percent of all the gas produced in the United States in 2006.

Companies that develop and produce oil and gas resources from federal lands and waters do so under leases obtained from and administered by agencies of Interior—the Bureau of Land Management (BLM) for onshore leases and MMS's Offshore Energy and Minerals Management (OEMM) for offshore leases. Together, these agencies are responsible for overseeing oil and gas operations on more than 28,000 producing leases to help ensure that oil and gas companies comply with applicable laws, regulations, and agency policies. Companies, or lessees, compensate the government for producing oil and gas resources on federal lands either “in value” (royalty payments made in cash) or “in kind” (royalty payments made in oil or gas). In fiscal year 2006, about 58 percent of the \$9.74 billion in oil and gas royalty payments were made in value or in cash, while about 42 percent were made in kind.

When paying royalties in kind, a company owes to MMS a volume of oil or gas as determined by the following equation:

$$\text{Royalty volume} = \text{total production volume} \times \text{royalty rate}^1$$

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<sup>1</sup>In some cases, there may be deductions to the royalty oil and gas given MMS as a result of costs incurred by the company or payor to transport the oil or gas to the point at which MMS takes possession. In addition, there may also be credits or deductions that adjust for different qualities of oil transported on a pipeline.

To ensure that the government obtains the fair value of royalty-in-kind sales, MMS must make sure that it receives the volumes to which it is entitled. Because prices of these commodities fluctuate over time, it is also important that MMS receive the oil and gas at the time it is entitled to them. As part of its royalty-in-kind oversight effort, MMS identifies imbalances between the volume companies report they owe the federal government in royalties and the volume delivered and resolves these imbalances by adjusting future delivery requirements or cash payments.

MMS sells the oil and gas it receives through the royalty-in-kind program and disburses the revenues received from the sales to federal and state recipients. Revenues from oil and gas received in kind in 2006 were about \$4.12 billion. MMS may also transfer royalty oil or gas to federal agencies for them to use. For example, since 1999, MMS has transferred oil to the Department of Energy (DOE), which DOE has traded for other oil of specific quality to fill the nation's Strategic Petroleum Reserve (SPR). In fiscal year 2007, MMS transferred \$306 million worth of oil to DOE as part of its efforts to fill the SPR. In May 2008, DOE announced that it would suspend transfers of royalty oil to the SPR through the end of the year.<sup>2</sup> The SPR currently holds roughly 700 million barrels—equivalent to about 58 days of net oil imports—which can be released at the discretion of the President in the event of an oil supply disruption.

Prior to the mid-1990s, MMS's in kind efforts were generally limited to its Small Refiners Program—under which MMS sold oil that it took in kind to small refiners that did not have an adequate supply of their own. In 1995, MMS began to study whether there were additional circumstances under which taking oil and gas in kind were in the best interest of the federal government. In 1998, MMS began a series of pilot sales of royalty oil and gas and, based on the results of these pilot sales, expanded its royalty-in-kind program. In 2003, we recommended that MMS develop a more systematic approach to assess its royalty-in-kind program, and MMS has since made progress in developing metrics for measuring the performance of the program.<sup>3</sup> The Energy Policy Act of 2005<sup>4</sup> requires the Secretary of the Interior to submit an annual report to the Congress that describes the performance, benefits, and savings associated with MMS's royalty-in-kind program. Under the act, MMS is charged with ensuring that oil and gas taken in kind are not sold for less than market value and that revenues it receives are at least as great as the revenues it would have received had it taken the royalties in cash. According to MMS, it can often achieve greater revenues when it sells gas taken in kind because it is able to negotiate favorable transportation and processing arrangements. To meet the requirement that MMS receive at least as much revenue as it would have had it taken the royalties in value, MMS compares the estimated benefits of the in kind program with the estimated benefits MMS would

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<sup>2</sup>In May 2008, the Congress passed legislation suspending transfers of royalty oil to fill the SPR. See Strategic Petroleum Reserve Fill Suspension and Consumer Protection Act of 2008, Pub. L. No. 110-232.

<sup>3</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).

<sup>4</sup>Energy Policy Act of 2005, Pub. L. No. 109-58, § 342 (2005).

have received if the royalties had been taken in cash and includes this information in its annual reports to the Congress. MMS estimated that from fiscal years 2004 through 2006 the royalty-in-kind program generated about \$87 million more in net value to the government than MMS would have collected had it received royalties in cash. This \$87 million estimated net value amounts to about 1 percent of total royalty-in-kind revenues of \$8.15 billion for this period. Of this \$87 million, MMS estimated that (1) \$74 million came from selling royalty-in-kind oil and gas for more than MMS would have received in cash royalty payments, (2) \$5 million came from interest from receiving revenues from in kind sales earlier than cash payments are due, and (3) \$8 million came from savings accrued because the royalty-in-kind program costs less to administer than the in value program.

In March 2008, we provided congressional testimony on Interior's oversight of the collection of royalties paid both in value and in kind on the production of oil and gas from federal lands and waters.<sup>5</sup>

This report highlights oversight issues related to MMS's royalty-in-kind program raised in that testimony and assesses (1) the extent to which MMS has reasonable assurance that it is collecting the correct amounts of royalty-in-kind oil and gas and (2) the reliability of the information on the performance of the royalty-in-kind program contained in MMS's annual report to the Congress.

To assess the extent to which MMS has reasonable assurance that it is collecting the correct amounts of royalty-in-kind oil and gas, we interviewed officials at OEMM and MMS's royalty-in-kind program about MMS's production verification processes for oil and gas. In addition, we reviewed documentation on MMS policies and procedures for collecting royalties. To assess the reliability of the information on the performance of the royalty-in-kind program in MMS's annual report to the Congress, we interviewed officials in MMS's Economic Analysis Office who are responsible for preparing the annual report. We also collected and assessed information on the sales of royalty oil and gas and reviewed MMS procedures for preparing the administrative cost comparison between the benefits derived from the royalty-in-kind and royalty-in-value programs. Here, we assessed the reliability of the in kind sales and performance data by (1) reviewing the systems that MMS has in place to help ensure that the data are entered and calculated correctly and (2) comparing the data with aggregate performance results that MMS reported to the Congress for fiscal years 2004 through 2006. We determined that the data were sufficiently reliable for the purposes of this report. We conducted this performance audit from April 2007 to September 2008 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

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<sup>5</sup>GAO, *Mineral Revenues: Data Management Problems and Reliance on Self-Reported Data for Compliance Efforts Put MMS Royalty Collections at Risk*, [GAO-08-560T](#) (Washington, D.C.: Mar. 11, 2008).

## **Results in Brief**

Under the royalty-in-kind program, MMS's oversight of its natural gas production volumes is less robust than its oversight of oil production volumes. As a result, MMS does not have the same level of assurance that it is collecting the gas royalties it is owed. For instance, for oil, MMS compares companies' self-reported oil production data with third-party pipeline meter data from OEMM's liquid verification system, which records oil volumes flowing through pipeline metering points. Using these third-party pipeline statements to verify production volumes reported by companies provides a check against companies' self-reported statement of royalty payments owed to the federal government. While analogous data are available from OEMM's gas verification system, MMS does not use these third-party data to verify the company-reported production numbers. In December 2007, the Subcommittee on Royalty Management, a panel appointed by the Secretary of the Interior to examine MMS's royalty program, reported that OEMM was not adequately staffed to conduct sufficient review of data from the gas verification system.

MMS's annual reports to the Congress do not fully describe the performance of the royalty-in-kind program and, in some instances, may overstate the benefits of the program. For example, MMS's calculation that from fiscal years 2004 to 2006 MMS sold royalty oil and gas for \$74 million more than it would have received in cash was based on assumptions, not actual sales data, about the prices at which royalty payors would have sold their oil or gas had they sold it on the open market. MMS did not report to the Congress that even small changes in these assumptions could result in very different estimates. Also, MMS's calculation that the royalty-in-kind program cost about \$8 million less to administer than the royalty-in-value program over the same period did not include certain costs, such as information technology costs shared with the royalty-in-value program, that would likely have changed the results of MMS's administrative cost analysis. In addition, these annual reports lack important information on the financial results of individual oil sales that the Congress could use to more broadly assess the performance of the royalty-in-kind program.

From the examples cited above, we believe opportunities exist to enhance the oversight of MMS's royalty-in-kind program. We are recommending that MMS improve its verification of gas volumes owed to the government and, therefore, gas royalties owed, by using third-party production information, such as data from OEMM's gas verification system. We are also recommending that MMS take several actions to improve its calculations of the benefits and costs of the royalty-in-kind program and the information it presents annually to the Congress on the program. We provided the Department of the Interior with a draft of this report for comment.

### **MMS's Royalty-in-Kind Production Verification Is Not as Robust for Gas as It Is for Oil**

MMS's royalty-in-kind program does not extend the same production verification processes used by its oil program to its gas program, and, as a result, MMS does not have the same level of assurance that it is collecting the gas royalties it is owed. For

instance, for gas, MMS relies on information contained in two gas operator-provided documents—monthly production reports and “imbalance statements”<sup>6</sup>—to determine the federal government’s correct share of gas from federal off-shore gas leases. Production reports contain a large number of data elements, including production volumes for each gas well. Imbalance statements include the operator’s total gas production for the month, the share of that production that the government is entitled to, and any differences between what the operator delivered and the government’s royalty share.

For oil, on the other hand, MMS collects monthly production reports and imbalance statements from oil companies but also uses additional third-party pipeline meter data from OEMM’s liquid verification system, which records oil volumes flowing through numerous pipeline metering points in the Gulf of Mexico region. MMS calculates its royalty share of oil by multiplying the total production volumes provided in these pipeline statements by the royalty rates for a given lease. MMS compares this calculation with the volume of royalty oil that the operators delivered. Using pipeline statements to verify production volumes provides an additional check against companies’ self-reporting of royalties due the federal government because companies have an incentive not to underreport their share of oil going into the pipeline as that is the same amount they will have to sell at the other end of the pipeline.

Importantly, since 2004, OEMM has collected data from gas pipeline companies through its gas verification system, which is similar to its liquid verification system in that it records information from pipeline company-provided source documents. Our review of data from this program shows that these data could be a useful tool in verifying offshore gas production volumes at some pipeline meters. Our analysis of these pipeline data showed that for the months of January 2004, May 2005, July 2005, and June 2006, 25 percent of the pipeline metering points had an outstanding discrepancy between self-reported and pipeline data. These discrepancies are both positive and negative—that is, production volumes submitted to MMS by operators are at times either under- or over-reported. MMS has recognized that it needs to improve the data in the gas verification system. In December 2007, the Subcommittee on Royalty Management, a panel appointed by the Secretary of the Interior to examine MMS’s royalty program, reported that OEMM was not adequately staffed to conduct sufficient review of data from the gas verification system.<sup>7</sup> Interior is

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<sup>6</sup>Production reports refer to form MMS-4054, also referred to as the Oil and Gas Operations Report (OGOR). The OGOR is an operator-submitted form that identifies all oil and gas lease production and dispositions. The form is used for all production reporting for offshore Outer Continental Shelf and onshore federal and Indian lands. Operator imbalance statements are required by entities that transfer gas to MMS in lieu of cash and are required, if requested, for oil. The imbalance statement must specify total production, MMS’s entitled share, volumes delivered, the monthly imbalance, and the cumulative imbalance.

<sup>7</sup>Subcommittee on Royalty Management, Royalty Policy Committee, *Report to the Royalty Policy Committee: Mineral Revenue Collection from Federal and Indian Lands and the Outer Continental Shelf* (2007).

currently implementing a recommendation action plan to address this concern and other recommendations made by the Subcommittee.

### **MMS's Annual Reports to the Congress on the Royalty-in-Kind Program May Overstate Its Benefits**

The methods and underlying assumptions MMS uses to compare the revenues it collects in kind with what it would have collected in cash do not sufficiently deal with uncertainties and do not account for all costs, making the financial benefits of the royalty-in-kind program unclear. For example, MMS's calculation that early royalty-in-kind payments yielded \$5 million in additional interest from fiscal years 2004 to 2006 was based on assumptions about payment dates and interest rates that could misstate the estimated interest benefit. In addition, these annual reports lack important information on the financial results of individual oil sales that the Congress could use to more broadly assess the performance of the royalty-in-kind program.

#### Reported Revenues from Royalty-in-Kind Sales Do Not Account for Uncertainties

MMS sold the oil and gas it collected as royalties during fiscal years 2004 through 2006 for \$8.15 billion and estimated that this amount exceeded what it would have received in cash royalties by about \$74 million—a net benefit of approximately 0.9 percent. However, according to MMS's Economic Analysis Office, these estimates are subject to uncertainty because MMS makes assumptions about how much royalty payors would have sold their oil or gas for had they paid royalties in cash. Office of Management and Budget *Circular A-94*, which describes how agencies should determine the costs and benefits of federal programs, instructs agencies to identify key assumptions behind net benefit calculations and determine how sensitive the calculations are to changes in those assumptions. MMS has not conducted such a sensitivity analysis.<sup>8</sup> As a result, MMS has not calculated, or reported to the Congress, the uncertainties surrounding the benefits of taking royalties in kind, which can be significant. For example, a 1 percent error in the estimate of cash payments can lead to a change in the \$74 million estimated benefit of the royalty-in-kind program to anywhere from a loss of \$6 million to a benefit of \$155 million. MMS has recognized that its estimates of what it would have received in cash payments are subject to some degree of uncertainty but has not evaluated or reported how sensitive the net benefit calculations are to this uncertainty.

#### Reported Interest Rate Savings Do Not Account for Range of Possible Outcomes

In addition, MMS calculated that the government earned about \$5 million in interest from fiscal years 2004 through 2006 from the royalty-in-kind program. This interest benefit may have accrued because revenues from the sale of in kind oil are due

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<sup>8</sup>In commenting on a draft of this report, Interior noted that the Royalty Policy Committee has recommended that MMS report to the Congress the ranges that MMS currently calculates internally.

10 days earlier than cash payments, and revenues from the sale of in kind gas are due 5 days earlier.<sup>9</sup> However, we found two weaknesses in the way MMS calculated this interest benefit. First, the payment dates used to calculate the interest revenue have the potential to over- or underestimate its value. That is, MMS calculated the interest on the basis of the time between the actual date that the Department of the Treasury (Treasury) received a royalty-in-kind payment and the theoretical latest date that Treasury would have received a cash payment under the royalty-in-value program. However, MMS officials told us that cash payments can, and sometimes do, arrive before their due date. As a result, MMS might be overstating the value of the early royalty-in-kind payments. Second, the interest rate used to calculate the interest revenue may either over- or understate its value because the rate is not linked to any market rate. From fiscal year 2004 through 2007, MMS used a 3 percent interest rate to calculate the time value of these early payments. However, during this time, actual market interest rates at which the federal government borrowed fluctuated. For example, 4-week Treasury bill rates ranged from a low of 0.72 percent to a high of 5.18 percent during this period. Therefore, during some fiscal years, MMS is likely to have over- or understated the value of these early payments.

#### Reported Administrative Cost Savings Exclude Certain Fixed Costs

MMS calculated that the royalty-in-kind program cost about \$8 million less to administer than the royalty-in-value program during fiscal years 2004 through 2006. However, MMS's calculation of the administrative cost savings did not include some fixed costs that were not incurred on a regular or predictable basis. If these costs had been included, they could have changed MMS's administrative cost analysis. For example, in fiscal year 2006, royalty-in-kind information technology costs of \$3.4 million were excluded from the administrative cost analysis. Moreover, additional information technology costs of approximately \$29.4 million—some of which may have been incurred under either the in kind or in value program—were also excluded. Including and assigning these information technology costs to the programs they supported would have provided a more complete accounting of the respective costs of the in kind and in value programs.

#### Important Information about Individual Oil Sales Is Excluded

Interior's annual reports to the Congress on its royalty-in-kind program do not include important information that could be useful to the Congress in its evaluation of the program. In particular, the annual reports do not provide information on individual oil sales. Such information would show that relatively few sales have accounted for most of the estimated benefits of the program. For example, during fiscal years 2004 through 2006, the top 15 percent of oil sales accounted for almost 80

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<sup>9</sup>While MMS calls this value "interest," it is not interest *per se* because the money does not go into an interest-bearing account. Rather, MMS argues that the government uses the early payments to cover expenses that it would otherwise need to borrow money to pay for. The interest, then, is the cost that the government avoids by deferring the need to borrow.

percent of the benefits of taking royalty oil in kind.<sup>10</sup> Information displayed by subgroupings of individual sales would also show that MMS has sold some of its oil assets for less than it estimates it would have received in cash payments. In fiscal years 2004 and 2005, MMS sold 1.2 percent and 12.4 percent, respectively, of oil collected in kind for less than it estimated it would have collected in cash. In fiscal year 2006, MMS sold 28 million barrels, or 64 percent of all oil it collected in kind, for less than it estimated it would have received in cash. MMS officials told us that the oil in kind program's performance in 2006 was an anomaly caused by hurricane activity in the Gulf late in fiscal year 2005. However, because MMS presents oil sales performance in aggregate it is difficult to monitor the program's performance between years. In contrast to its reporting for oil sales, MMS has presented individual sales data for its natural gas sales in its annual report to the Congress.

## **Conclusions**

Interior's royalty management programs have faced increased scrutiny in the last few years, and the agency is in the process of implementing many recommendations made by GAO, its own Inspector General, and its Subcommittee on Royalty Management. While the outcome of Interior's implementation of these recommendations will not be known for some time, we believe additional opportunities exist to enhance the oversight of MMS's royalty-in-kind program. Our findings show that MMS risks not collecting accurate volumes of gas and, therefore, accurate gas royalties, because the agency relies on operator-reported data. Data from the gas verification system could be useful in validating production volumes and reducing discrepancies in some instances. In addition, our review of MMS's annual reports to the Congress on the performance of its royalty-in-kind program shows that these reports may overstate the program's benefit and do not provide the Congress with all the information it could use to assess the performance of the program.

## **Recommendations for Executive Action**

We recommend that the Director of MMS improve verification of natural gas volumes owed to the government by using third-party production information, such as data from OEMM's gas verification system, to verify reported production and royalties owed.

We also recommend that the Director of MMS improve calculations of the benefits and costs of the royalty-in-kind program and the information presented to the Congress by (1) calculating and presenting a range of the possible performances of the royalty-in-kind sales in accordance with Office of Management and Budget guidelines; (2) reevaluating the process by which it calculates the early payment savings; (3) disclosing the costs to acquire, develop, operate, and maintain royalty-in-kind-specific information technology systems; and (4) disaggregating the oil sales data to show the variation in the performances of individual sales.

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<sup>10</sup>The top 15 percent of oil sales by volume were determined by ranking sales volumes by the percentage by which they exceeded the royalty-in-kind program's calculation for cash payments.



## Agency Comments

We provided a draft of this report to Interior for review and comment. Interior provided written comments, which are presented in enclosure I. In general, Interior concurred with our findings and recommendations. While generally agreeing with our recommendations, Interior raised concerns about specific methods to implement two of our recommendations related to the calculation of benefits and costs of the royalty-in-kind program. In particular;

- Regarding our recommendation for MMS to calculate and present a range of the possible performances of the royalty-in-kind program in accordance with Office of Management and Budget guidelines, MMS agreed with the need to provide better information to the Congress, but expressed concern about how to do so. In its comments, MMS misinterpreted an illustrative example in our draft report of how uncertainty can be explained—that a 1 percent error in the estimate of cash payments can lead to a significant change in the estimated benefit of the program was simply to illustrate how sensitive the reported program benefits were to even small changes in assumptions—to be a definitive methodology of how to implement our recommendation. We believe that there are a variety of ways to convey the inherent uncertainty in the estimates MMS provides to the Congress. We support Interior’s efforts to develop language and/or graphics that will better explain that the Revenue Performance Metrics are estimates.
- Regarding our recommendation for MMS to disaggregate oil sales data to show the variation in the performance of individual sales, MMS expressed concerns regarding disclosing confidential information. We believe this information could be presented without disclosing the revenue performance by individual oil properties. Rather, as we pointed out in the report, RIK sales data could be disaggregated to show the number of oil properties that were sold for less than what MMS estimated it would have received in cash payments or to show that relatively few oil properties accounted for most of the estimated benefits of the program. We believe that such information could be useful to the Congress in its evaluation of the royalty-in-kind program.

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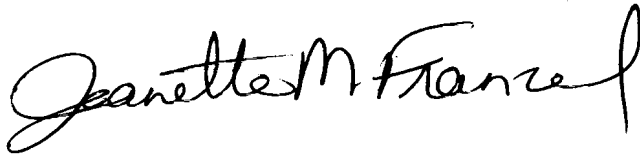
As agreed with your offices, unless you publicly announce the contents of this report earlier, we plan no further distribution until 30 days from the report date. At that time, we will send copies of this report to appropriate congressional committees, the Secretary of the Interior, the Director of MMS, and other interested parties. We will also make copies available to others upon request. In addition, the report will be available at no charge on GAO’s Web site at <http://www.gao.gov>.

If you or your staffs have any questions or comments about this report, please contact Frank Rusco at (202) 512-3841 or [ruscof@gao.gov](mailto:ruscof@gao.gov), or Jeanette Franzel at (202) 512-9406 or [franzelj@gao.gov](mailto:franzelj@gao.gov). Contact points for our Offices of Congressional

Relations and Public Affairs may be found on the last page of this report. GAO staff who made contributions to this report include Assistant Director Paul Kinney, Assistant Director Jon Ludwigson, Ron Belak, Ben Bolitzer, Lisa Brownson, Melinda Corderro, Nancy Crothers, Glenn C. Fischer, Cindy Gilbert, Tom Hackney, Heather Hill, Chase Huntley, Jennifer Leone, Tim Minelli, Michelle Munn, G. Greg Peterson, and Barbara Timmerman.



Frank Rusco  
Acting Director, Natural Resources  
and Environment



Jeanette Franzel  
Director, Financial Management  
and Assurance

Enclosure

*List of Congressional Requesters*

The Honorable Jeff Bingaman  
Chairman  
Committee on Energy and Natural Resources  
United States Senate

The Honorable Ron Wyden  
Chairman  
Subcommittee on Public Lands and Forests  
Committee on Energy and Natural Resources  
United States Senate

The Honorable Nick J. Rahall II  
Chairman  
Committee on Natural Resources  
House of Representatives

The Honorable Darrell E. Issa  
Ranking Member  
Subcommittee on Domestic Policy  
Committee on Oversight and Government Reform  
House of Representatives

**Comments from the Department of the Interior**



United States Department of the Interior

OFFICE OF THE SECRETARY  
Washington, DC 20240



SEP 18 2008

Mr. Frank Rusco  
Acting Director, Natural Resources and Environment  
Government Accountability Office  
441 G Street, NW  
Washington, DC 20548

Dear Mr. Rusco:

Thank you for the opportunity to review and comment on the Government Accountability Office (GAO) draft report entitled, "Oil and Gas Royalties: MMS's Oversight of its Royalty-in-Kind (RIK) Program Can Be Improved Through Additional Use of Production Verification Data and Enhanced Reporting of Financial Benefits and Costs" (GAO-08-942R).

The GAO's usual protocol of providing a complete draft report, following an in-person exit conference to discuss the statement of facts, facilitates a full and comprehensive review by the agency being evaluated. Please note that, in this case, GAO restricted access to the draft report, which required the Minerals Management Service (MMS) staff to visit GAO offices in Denver, CO, and Washington, D.C., to review the statement of facts, conclusions, and recommendations. The MMS made every effort to work with GAO given the constraints created by restricted document access and appreciates your staff's providing meeting space for MMS staff to review the draft document. We believe our response addresses GAO's conclusion and recommendations as discussed below.

We concur with the GAO's findings and recommendations. Comments on the recommendations are provided below:

*Recommendation 1. We recommend MMS improve its verification of natural gas volumes owed to the Government by using third-party production information, such as data from the OEMM [Offshore Energy and Minerals Management] gas verification system (GVS) to verify reported production and royalties owed.*

We concur with Recommendation 1. The MMS believes that with adequate functionality, the GVS data could be a useful tool in verifying offshore gas production taken in kind. The MMS has been using similar data from the liquids verification system to verify crude oil production taken in kind. As GAO acknowledged in its draft report, MMS has recognized the need to improve the data in the GVS and is evaluating and implementing recommendations to that end.

*Recommendation 2. We recommend MMS improve its calculations of the benefits and costs of the RIK Program and the information presented to Congress by:*

- a. *Calculating and presenting a range of possible performances of the RIK sales in accordance with OMB guidelines.*
- b. *Reevaluating the process by which it calculates the early payment savings.*
- c. *Disclosing the cost to acquire, develop, operate, and maintain RIK-specific IT [Information Technology] systems.*
- d. *Disaggregating the oil sales data to show the variation in the performance of individual sales.*

We concur with the concepts in Recommendation 2. However, we disagree with GAO's suggested methods to implement the Recommendation in 2a and 2d. We address the four parts of Recommendation 2 below:

2. a.: Footnote 7 of the GAO draft report states, "MMS has calculated ranges for its estimates of cash payment, but these ranges are based on variation in their estimates over time, not on the inherent uncertainties of underlying assumptions. Therefore, the methods used to calculate these ranges do not meet OMB's [Office of Management and Budget] guidelines. The Royalty Policy Committee (RPC) has recommended that MMS report to the Congress the ranges that MMS currently calculates internally. However, we believe that adopting this recommendation would not contribute to accurately portraying the uncertainty of the benefits of the royalty-in-kind program."

The MMS disagrees with the GAO. The GAO suggested that the MMS present uncertainty about a statistical estimate as a band of plus or minus one percent. The OMB guidance recommends that uncertainty be characterized to the extent possible by probability distributions. The OMB guidance is to use sensitivity analysis for assumptions. Fair Market Value (FMV) is not an assumption, it is an estimate. The MMS believes the RPC recommendation more closely follows OMB guidance than the GAO recommendation, but we also have doubts it would contribute to portraying the uncertainty of the benefits to the nontechnical reader.

The performance metric that MMS uses to evaluate the performance of the RIK Program begins with a FMV benchmark based on the major liquid market pricing point(s) located close to RIK properties. The MMS then determines other benchmarks based on where the oil or gas could be sold and from this sample, calculates a normalized mean and a variance. This calculation gives MMS some parameters from which a range of prices can be calculated for the FMV benchmark. The MMS compares this range to what was actually received for the product taken in kind. This range concept has statistical validity in presenting uncertainty and is not based on variation in MMS's estimates over time. The range is based on estimates of what market participants did sell or could have sold oil or gas at markets located close to RIK properties.

In the draft report, the GAO suggests calculating a sensitivity analysis around the aggregate FMV benchmark. The value of the benchmark, however, is not an assumption; it is a calculated value of what market participants could sell oil or gas at markets located close to RIK properties.

in the \$74 million estimated benefit of the royalty-in-kind program to anywhere from a loss of \$6 million to a benefit of \$155 million.” This statement does not inform a nontechnical reader about the uncertainty of the estimated benefit and has no statistical validity. The MMS is currently evaluating reporting RIK revenue performance as a range for Fiscal Year (FY) 2008. We will develop language and/or graphics that will better explain that the Revenue Performance Metrics are estimates.

2. b.: The MMS is in the process of reevaluating the process by which we calculate the time value of money benefit or early payment savings, including the interest rates used and the methodology for comparison to in-value payments. We anticipate completion of the review of this process and resulting changes to be reported in the FY 2008 Annual Report to Congress as required by Section 342 of the Energy Policy Act of 2005 (EPAAct).

2. c.: The MMS will disclose the costs associated with RIK-specific IT systems beginning with the FY 2008 Annual Report to Congress as required by Section 342 of the EPAAct. The IT operations and support (O&S) costs for RIK are aggregated with other MMS O&S costs and included in the Exhibit 300. We cannot add the RIK-specific IT costs to the administrative cost calculation due to the complexities of allocating MMS’s overall systems costs between the RIK program and the Royalty-in-Value program. Allocating the costs of various system upgrades that occur every few years would render the administrative cost comparison data meaningless. Development costs for RIK projects are not included in the Exhibit 300.

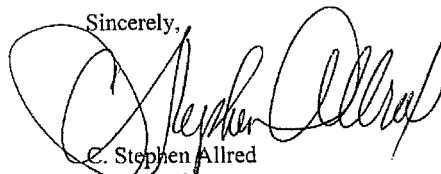
2. d.: While MMS calculates revenue performance metrics by individual property for oil and by pipeline for gas, the results are rolled up into reporting categories in order to protect proprietary information regarding RIK sales, particularly contractual arrangements with service providers. The MMS believes reporting revenue performance by individual oil property or gas pipeline has the potential to compromise the actual bid prices that MMS receives for the sale of oil or gas and could affect the competitive nature of the sales.

Proprietary information includes pricing and sales data. The RIK sales contracts include confidentiality clauses that neither party will disclose prices received under the contract. Many RIK service agreements for transportation and/or processing also have confidentiality clauses that neither party will disclose the rates charged or the terms of the agreement. Maintaining the confidentiality of proprietary data is essential to continue to contract for royalty-in-kind. Because the MMS uses a portfolio approach in its RIK sales, losses may occur in individual sales packages due to diversification in purchasers, pricing, and other contract terms as a means to mitigate risk. The FY 2007 Annual Report to Congress does not show revenue performance metrics by gas pipeline, as did prior reports, in order to protect the proprietary nature of the information. However, the FY 2007 Report does include a footnote stating that this information can be made available upon request by Congress.

We appreciate the opportunity to comment on the draft report and look forward to working with

the GAO and implementing the GAO's recommendations. Please contact Andrea Nygren, MMS Audit Liaison Officer, at (202) 208-4343, if you have any questions regarding this response.

Sincerely,



C. Stephen Allred  
Assistant Secretary  
Land and Minerals Management

(360824)

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