



OFFICE OF  
**INSPECTOR GENERAL**  
U.S. DEPARTMENT OF THE INTERIOR

# **The U.S. Department of the Interior Does Not Analyze Effective Royalty Rates**

**This is a revised version of the report prepared for public release.**



OFFICE OF  
**INSPECTOR GENERAL**  
U.S. DEPARTMENT OF THE INTERIOR

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Memorandum

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Subject: Final Inspection Report – *The U.S. Department of the Interior Does Not Analyze Effective Royalty Rates*  
Report No. 2021–CR–042

This memorandum transmits our inspection report on the analyses and impact of allowances and relief on oil and gas royalty rates.

We will refer Recommendations 1 and 2 to the Office of Policy, Management and Budget for implementation tracking and to report to us on their status. In addition, we will notify Congress about our findings, and we will report semiannually, as required by law, on actions you have taken to implement the recommendations and on recommendations that have not been implemented. We will also post a public version of this report on our website.

If you have any questions about this report, please call me at 202–208–5745.

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# Results in Brief

## What We Inspected

The U.S. Department of the Interior (DOI) oversees oil and gas development on Federal lands and the Outer Continental Shelf. The DOI also supports Indian mineral owners<sup>1</sup> when oil and gas is developed on Indian lands. The Office of Natural Resources Revenue (ONRR) collects revenues associated with the use of these resources, such as royalties,<sup>2</sup> which are used to support Federal, State, and Indian initiatives. We initiated this inspection of royalty reporting data collected by ONRR to determine whether the DOI's bureaus perform analyses of effective royalty rates<sup>3</sup> for oil and gas developed offshore and on Federal lands; that is, we sought to review the actual amount of royalties paid taking into account various allowable deductions. However, because we learned that the bureaus do not perform their own analyses, we independently calculated the effective royalty rates by analyzing sales reporting data collected by ONRR.

## What We Found

We found that the DOI's bureaus do not perform any analysis of effective royalty rates for Federal oil and gas developed on Federal lands or offshore.<sup>4</sup>

After analyzing ONRR's sales reporting data, we found that application of royalty relief and statutorily authorized deductions can significantly decrease, and in some cases—for roughly 15 percent of offshore oil and gas leases—eliminate, the amount of royalties owed. For instance, in December 2020, a lessee received over \$5 million in proceeds from an oil sale but did not pay any royalties due to deepwater royalty relief.<sup>5</sup> Had the leaseholder paid royalties at the lease-stated rate of 12.5 percent, the company would have owed over \$721,000 in royalties.

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<sup>1</sup> “Indian mineral owner” is defined in 30 C.F.R. § 750.5 as “(1) any individual Indian or Alaska native who owns land or mineral interests in land the title to which is held in trust by the United States or is subject to a restriction against alienation imposed by the United States, or (2) any Indian tribe, band, native, pueblo, community, rancheria, colony, or other group which owns land or mineral interest in land the title to which is held in trust by the United States or is subject to a restriction against alienation imposed by the United States. This definition does not include owners of lands patented to a village or regional corporation pursuant to the Alaska Native Claims Settlement Act,” Pub. L. No. 92–203.

<sup>2</sup> Royalties are amounts specified in mineral leases and are usually calculated as a percentage of the sales value of the mineral extracted.

<sup>3</sup> In this report, we use “effective royalty rate” to mean the amount of royalties paid after royalty relief, deductions, and other adjustments expressed as a percentage of total sales value.

<sup>4</sup> We acknowledge that comments submitted by the Principal Deputy Assistant Secretary for Land and Minerals Management stated that the Bureau of Ocean Energy Management's (BOEM's) Economics Division analyzes historic royalty information to help determine revenue projections for the President's budget. We note, however, that such analysis differs from an effective royalty rate analysis; among other factors, it is forward looking and does not provide information regarding actual collections and effective rates for prior periods.

<sup>5</sup> Deepwater royalty relief is a reduction in the amount of royalties owed to promote increased exploration, development, and production on leases found in U.S. Outer Continental Shelf waters 200 meters or deeper.

We determined that offshore oil and gas leases had the more significant variances between the statutory rate and the effective rate. In particular, we found effective royalty rates that were as much as 3.2 percent and 4.87 percent below the minimum lease rate of 12.5 percent otherwise set by law. Based on offshore oil and gas sales data from 2016 through 2020, we estimate that each 1-percent decrease in the stated rate could result in an overall decrease of more than \$1.8 billion in offshore oil and gas royalty revenue over the 5-year period alone.

## Why This Matters

Federal oil and gas royalties are one of the most significant sources of nontax revenue for the Federal Government. In calendar year 2021 alone, ONRR collected \$9.6 billion in Federal oil and gas revenue. Among other activities, the collected revenue supports the Land and Water Conservation Fund, which is used to safeguard natural areas, water resources, and cultural heritage, and to provide recreation opportunities; the Historic Preservation Fund, which is used to provide grants to State and Tribal historic preservation offices to support the conservation of cultural and historic sites; and the Reclamation Fund, which is used to support irrigation and hydropower projects overseen by the Bureau of Reclamation.

As the U.S. Government Accountability Office's *Standards for Internal Control in the Federal Government* explains, entity management requires access to quality information to help the entity achieve its objectives. Analyzing the DOI's effective royalty rates would provide crucial information to decision makers and transparency to stakeholders, such as Congress and the DOI, regarding return on the use of Federal assets. It would also ensure that quality data is available to assist them in making lease-specific and programmatic decisions. The effective royalty rate is just one metric that could provide better quality information to decision makers and stakeholders. We concluded that this information would be particularly useful, as the DOI has stated that it plans to modernize the onshore and offshore oil and gas leasing programs "to better restore balance and transparency to public land and ocean management."<sup>6</sup> We acknowledge that there is no requirement to conduct such an analysis, and we do not express any opinion on what the most appropriate royalty rates may be. Regardless of the policy choices ultimately made, however, better and more detailed information will facilitate effective decision making and implementation of those choices.<sup>7</sup>

## What We Recommend

We make two recommendations to help ONRR provide quality information to decision makers and stakeholders regarding the financial return on Federal energy resources.

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<sup>6</sup> *Report on the Federal Oil and Gas Leasing Program*, DOI, November 2021.

See <https://www.doi.gov/sites/doi.gov/files/report-on-the-federal-oil-and-gas-leasing-program-doi-co-14008.pdf>.

<sup>7</sup> Our inspection considered information from January 1, 2016, through December 31, 2020. We acknowledge that the Inflation Reduction Act of 2022, Pub. L. No. 117-169, subsequently modified the applicable royalty rates that we discuss in this report. These and any other policy changes regarding the actual rates affect the specific numbers applicable at a given time, and thus the calculation of the effective royalty rate, but do not change our underlying conclusions—namely, that the DOI should consider calculating and disseminating information regarding effective royalty rates to provide better information to decision makers.

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# Introduction

## Objective

We initiated this project to determine whether the U.S. Department of the Interior's (DOI's) bureaus perform analyses of effective royalty rates for oil and gas developed offshore and on Federal lands, and if so, conduct our own review of the analyses.

We found that the DOI's bureaus do not perform any analysis of effective royalty rates for oil and gas developed offshore and on Federal lands. Accordingly, we calculated the effective oil rates based on the sales data reported to the Office of Natural Resources Revenue (ONRR).

Appendix 1 details our scope and methodology.

## Background

The DOI oversees oil and gas development offshore and on Federal lands. Four DOI bureaus are involved in setting Federal lease-specific royalty rates, providing royalty relief, and collecting royalties owed: the Bureau of Land Management (BLM), the Bureau of Ocean Energy Management (BOEM), the Bureau of Safety and Environmental Enforcement (BSEE), and ONRR. Each bureau has a unique set of responsibilities for protecting public interests.

### Federal Oil and Gas Leasing Process

Multiple statutory authorities grant the DOI bureaus the ability to issue leases for the exploration, production, and extraction of oil and gas on Federal land. The location of the leases (onshore or offshore) determines which bureau is responsible and which statutory requirements apply. More specifically, the Federal Land Policy and Management Act of 1976<sup>8</sup> and the Mineral Leasing Act of 1920<sup>9</sup> authorize the BLM to issue onshore leases. BSEE and BOEM share leasing responsibilities for offshore oil and gas, as provided by the Outer Continental Shelf Lands Act of 1953.<sup>10</sup>

Leases are issued to winning bidders of lease sales and auctions planned by the BLM for onshore leases and BOEM for offshore leases. The allowable period of exploration is lease-specific but typically ranges from 2 to 10 years. When the exploration is complete, the responsible bureau may grant leaseholders permission to begin processes related to the production and extraction of oil and gas. BSEE issues permits and monitors offshore oil and gas operations, while the BLM maintains responsibility for monitoring onshore operations.

Both production and sales (royalty) information must be reported to ONRR. ONRR is responsible for analyzing this information and collecting any monies owed to the Federal Government for oil and gas leases.

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<sup>8</sup> 43 U.S.C. § 1701 *et seq.*

<sup>9</sup> 30 U.S.C. §181 *et seq.*

<sup>10</sup> 43 U.S.C. § 1337.

### *Bureau of Land Management*

The BLM’s mission is to sustain the health, diversity, and productivity of public lands for the use and enjoyment of present and future generations. As part of that mission, the BLM manages the Federal Government’s onshore oil and gas program by leasing public land for mineral exploration. As of 2021, the BLM had more than 37,000 leases in effect spanning 26.6 million acres. In 2021, lessees paid more than \$5 billion in revenues associated with BLM-issued leases for oil and gas.

### *Bureau of Ocean Energy Management*

BOEM is responsible for managing development of the U.S. Outer Continental Shelf (OCS)<sup>11</sup> energy and mineral resources in an environmentally and economically responsible way. BOEM develops and grants all leases for the exploration, development, and production of oil and gas contained within the OCS. In 2021, lessees paid over \$4.5 billion in revenues to extract oil and gas in Federal waters under BOEM’s purview.

### *Bureau of Safety and Environmental Enforcement*

BSEE also has responsibilities related to offshore oil and gas development. It approves offshore oil and gas plans, facilities, and operations and plays a key role in royalty relief. Specifically, BSEE reviews royalty relief applications and determines eligibility, either approving or denying requests.

### *Office of Natural Resources Revenue*

Lessees who enter into lease agreements with the BLM or BOEM are required to pay revenues on minerals produced offshore and on Federal lands. ONRR oversees the collection and distribution of Federal energy and natural resource revenue, which is one of the largest sources of nontax revenue for the Federal Government. ONRR receives and analyzes production and revenue data related to Federal oil and gas leases and collects natural resource and energy revenues. ONRR stated that it distributes 100 percent of the collected revenue to States, Indian Tribes, Indian mineral owners, and the U.S. Treasury to support programs through specific funds, such as the Land and Water Conservation Fund, Historic Preservation Fund, and Reclamation Fund.

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<sup>11</sup> The OCS is the area between State jurisdiction to 200 nautical miles from shore. State jurisdiction over the seafloor extends from the shoreline out to 3 nautical miles, except for in Texas and the Florida Gulf Coast, where it extends to 9 nautical miles.

## Federal Royalty Revenues and Rates

Royalty revenues are based on the amount and value of production removed or sold from the lease. To determine the royalty value owed by a lessee, the following equation is used:

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$$\text{Royalty value} = (\text{Volume sold} \times \text{Sales price} \times \text{Royalty rate}) - \text{Deductions}$$


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Federal royalty rates are lease-specific and generally depend on the location of the oil or gas lease. The location of the lease also determines the applicable statutory requirements. Onshore oil and gas rates fall under the Mineral Leasing Act of 1920, which set the Federal onshore minimum royalty rate at 12.5 percent. The offshore oil and gas minimum royalty rate, which is also set at 12.5 percent, is provided within the Outer Continental Shelf Lands Act of 1953 (see Figure 1).

**Figure 1: Statutory Requirements During Inspection**

Lease Location	Requirements
Onshore*	Minimum royalty rate of 12.5 percent for leases on Federal land
Offshore†	Minimum royalty rate of 12.5 percent for offshore leases

\* Mineral Leasing Act of 1920, 30 U.S.C. § 226.

† Outer Continental Shelf Lands Act of 1953, 43 U.S.C. § 1337.

While the onshore oil and gas lease rates have, until recently, been consistent at 12.5 percent since 1920, the rates for offshore oil and gas have varied based on water depth and the date of the lease sale (see Figure 2).

**Figure 2: Federal Offshore Royalty Rates Over Time**

Water Depth (meters)	Royalty Rates (%)			
	Before 2007	2007	2008–March 2017	August 2017–2020
0 to 200	16.67	16.67	18.75	12.50
200 to 400	16.67	16.67	18.75	18.75
400+	12.50	16.67	18.75	18.75

Source: *Report on the Federal Oil and Gas Leasing Program*, DOI, November 2021.

There are various forms of statutorily allowable royalty relief and deductions that allow payors<sup>12</sup> to significantly reduce or eliminate the amount of royalties owed.

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<sup>12</sup> The “Glossary” in ONRR’s September 2022 *Minerals Revenue Reporter Handbook: Oil, Gas, and Geothermal Resources* defines a payor as, “An entity that reports and pays to ONRR.” The handbook is available at <https://www.onrr.gov/document/RRM-Printable.Minerals.Revenue.Handbook.pdf>.

## **Royalty Relief**

Royalty relief—the reduction or suspension of royalty rates—is available to leaseholders under differing criteria based on lease location. The BLM, BOEM, and BSEE have the authority to issue royalty relief to lessees under certain circumstances. The various types and terms of royalty relief are summarized below.

### *Federal Onshore Royalty Relief*

The BLM can issue royalty relief under the Mineral Leasing Act,<sup>13</sup> which authorizes the Secretary of the Interior to waive, suspend, or reduce the royalty to promote development or when, in the Secretary’s judgment, leases cannot be successfully operated under their terms. For example, the BLM temporarily reduced oil and gas royalty rates for some leases to less than 1 percent because of the COVID–19 pandemic. In addition to reducing royalty rates, the BLM can exempt a certain volume of production from royalties, such as allowing a designated initial volume produced from a lease to be royalty-free. The BLM has authority to issue royalty relief without statutory or regulatory limits around the amount of royalties that can be reduced; within those limits, the BLM generally has the discretion to issue relief as it determines appropriate.

### *Federal Offshore Royalty Relief*

The Outer Continental Shelf Lands Act<sup>14</sup> provides both BOEM and BSEE the ability to issue royalty relief for Federal offshore leases. The Outer Continental Shelf Deep Water Royalty Relief Act<sup>15</sup> allows BOEM to issue deepwater or deep gas royalty relief, reducing or eliminating any royalty for an OCS lease to promote increased production, for example, by suspending royalties for the first 87.5 million barrels of oil equivalent produced from new leases in oil fields in water depths of more than 800 meters. Automatic deepwater royalty relief was provided to eligible leases sold between 1996 and 2000 in water depths of 200 meters or deeper on specified volumes of production.

BSEE can exercise its discretion to reduce, modify, or eliminate any royalty to promote development, increase production, or encourage production of marginal resources on certain leases or categories of leases. BSEE also grants end-of-life royalty relief for leases with earnings that cannot sustain production and may provide special case royalty relief when a lease or project is not eligible for other formal programs.

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<sup>13</sup> 30 U.S.C. § 209.

<sup>14</sup> 43 U.S.C. § 1337(a)(3).

<sup>15</sup> Pub. L. No. 104–58.

## Deductions

Deductions are regulatory allowances given to lessees for the transportation and processing costs of production; application of these allowances decreases the royalty payment owed. Federal regulations allow for “reasonable, actual costs”<sup>16</sup> to be deducted. Transportation allowances let operators reduce the royalty value by up to 50 percent to offset the costs to transport Federal oil and gas from the lease. Processing allowances let operators reduce the value by up to 66.67 percent of the royalty value less the transportation allowance for reasonable costs to process Federal gas. If both transportation and processing allowances were maximized, the full royalty that would otherwise be owed to the Federal Government could theoretically be reduced to 16⅔ percent of the *royalty value* of the gas plant products.<sup>17</sup> This would result in an effective royalty rate of 2.08 percent if the commodity had a 12.5 percent royalty rate stated in the lease. For example, if a lease produces \$100,000 of gas plant products with a royalty value of \$12,500 (12.5 percent) and the entity used the maximum 50 percent transportation allowance (\$6,250 of the royalty value) and maximum 66.67 percent processing allowance (\$4,167 of the royalty value less transportation allowance), the result would be a royalty value of \$2,083 for \$100,000 of gas plant products sold.)

### *Bankruptcy Adjustments*

If an entity that owes rents, royalties, or other payments files for bankruptcy, adjustments may be applied that can partially or totally relieve that entity of any amount owed to the Federal Government, including outstanding royalty payments. ONRR works with the Office of the Solicitor, the U.S. Department of Justice, BOEM, BSEE, the BLM, the BIA, and other Federal entities to coordinate resolution of the bankruptcies. Once resolved, any elimination or reduction identified by ONRR due to bankruptcy is reported within the sales data, ultimately reducing the effective royalty rate.

### *Gravity Bank Adjustments*

“Gravity bank adjustments” can also reduce or increase lessees’ royalty liabilities owed to the Federal Government. Gravity bank adjustments<sup>18</sup> reflect the difference in oil quality between the oil measured at the approved point of royalty settlement and the oil delivered to the refiner at the delivery point.

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<sup>16</sup> 2 C.F.R. § 200.404 states, “A cost is reasonable if, in its nature and amount, it does not exceed that which would be incurred by a prudent person under the circumstances prevailing at the time the decision was made to incur the cost.” “Actual costs” are defined as well. 30 C.F.R. §§ 1206.152, 1206.159.

<sup>17</sup> Gas plant products are separate, marketable products that result from gas processing. ONRR has system controls that should prevent payors from exceeding the limit or eliminating all royalty values by flagging the transaction for review by ONRR personnel. ONRR administers the system payors use to file the data as well as the system controls.

<sup>18</sup> Gravity bank adjustments are a way to account for differing qualities of oil in a transportation system used by multiple producers. The quality of the oil is measured by its specific gravity; oils of differing quality or value have a different specific gravity.

## The Difference Between Implied Royalty Rate and Effective Royalty Rate

The *implied royalty rate* is derived by dividing the royalty value by the sales value without considering deductions. For example, if a well produces \$200,000 worth of oil with a reported royalty value of \$20,000, the implied royalty rate is 10 percent—that is, the value is derived simply by dividing the \$20,000 by \$200,000. As part of the reporting process to ONRR, an implied royalty rate is calculated by the system used by payors to report their sales data.

In contrast, the *effective royalty rate*<sup>19</sup> accounts for royalty relief, deductions, and other adjustments *before* the royalty value is divided by the sales value. Using the same example of a well, if the entity claimed \$5,000 of transportation allowance, it is subtracted from the \$20,000 royalty value, resulting in a royalty value of \$15,000. That is, the effective royalty rate is 7.5 percent—\$15,000 divided by \$200,000. This means that, once allowances are accounted for, the lessee pays 2.5 percent less than the stated rate for the lease. For this example, the difference equates to \$5,000 less in royalty payments.

The implied royalty rate reflects the lease-stated rate or rate reflective of relief. ONRR uses the implied rate as part of its system controls to ensure payors are reporting their appropriate rate. The implied rate does not, however, take into account allowances that are applied. In contrast, the effective royalty rate—the rate after royalty relief, deductions, and other adjustments—considers the deductions when calculating the return on the assets.

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<sup>19</sup> The OIG developed the formula used to calculate the effective royalty rate, and it is included in Appendix 1 of this report. We specifically developed the effective royalty rate formula to demonstrate the impact that allowances, other deductions, and royalty relief have on the royalties paid to the Federal Government when contrasted to the royalty rates stated in the leases.

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## Results of Inspection

We found that the DOI's bureaus<sup>20</sup> do not perform any analysis of effective royalty rates for oil and gas developed offshore and on Federal lands. There is no statutory or regulatory requirement to conduct this type of analysis, but the absence of this information means that decision makers lack crucial data regarding the return on the use of Federal assets.

Specifically, our own analysis of the effective royalty rates for oil and gas demonstrated significant differences between the minimum lease-stated royalty rates and the effective royalty rates. In particular, we identified that the differences were higher for offshore oil and gas, at least 1.9 percent for offshore oil and 2.9 percent for offshore gas. We reviewed a selection of offshore oil and gas transactions and noted that allowances, royalty relief, and other deductions, such as gravity bank adjustments, were the key drivers reducing the effective royalty rates.

The U.S. Government Accountability Office's (GAO's) *Standards for Internal Control in the Federal Government* (the "Green Book") explains that entity management needs access to quality information to help the entity achieve its objectives.<sup>21</sup> The Green Book also states that management needs comparative sets of data to consider relationships and appropriate actions to take. The DOI's own conclusions in its recent *Report on the Federal Oil and Gas Leasing Program*<sup>22</sup> bear out the importance of obtaining this information. For example, the report compared State-imposed rates and Federal royalty rates and emphasized that State-imposed rates

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Based on offshore oil and gas sales data from 2016 through 2020, we estimate that each 1-percent decrease in the effective royalty rate from the lease-stated rate could result in a decrease of more than \$1.8 billion in offshore oil and gas royalty revenue over that 5-year period.

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were often higher. The report does not, however, discuss the effect of certain deductions on royalties or assess the extent to which varying effective royalty rates affect the overall return on Federal oil and gas leases. Making effective royalty rate information available to stakeholders would increase transparency and allow the DOI and other decision makers to make informed choices regarding the effects of changes in royalty rates and deductions on Federal oil and gas.

### Bureaus Do Not Analyze Effective Royalty Rates

We found that the DOI's bureaus do not analyze effective royalty rates for oil and gas. Without this information, stakeholders cannot fully assess the overall effect of allowances and relief on royalty revenue. Moreover, decision makers cannot assess the interactions of deductions and other relief, nor can they compare approaches across bureaus and the DOI. We believe that this information would be valuable. For example, based on offshore oil and gas sales data from 2016

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<sup>20</sup> Our inspection reviewed the actions of the BIA, BLM, BOEM, BSEE, and ONRR in relation to the review of effective royalty rates.

<sup>21</sup> The Green Book defines quality information as information that is appropriate, current, complete, accurate, accessible, and timely.

<sup>22</sup> The November 2021 report was developed in response to Executive Order No. 14008, *Tackling the Climate Crisis at Home and Abroad*, and its requirement for the DOI to conduct a review of Federal oil and gas leasing and permitting practices.

through 2020, we estimate that each 1-percent decrease in the effective royalty rate from the lease-stated rate could result in a decrease of more than \$1.8 billion in offshore oil and gas royalty revenue over that 5-year period.<sup>23</sup>

In addition, in an April 2023 High-Risk Series report,<sup>24</sup> the GAO concluded that the DOI continues to face challenges with revenue determination and collection related to Federal oil and gas resources. The report also expressed concern that the DOI “may not be collecting its fair share of revenue from oil and gas production on Federal lands and waters.” We also note that royalty rates are a matter of current policy interest, and, in April 2022, the DOI announced that new lease sales for Federal onshore oil and gas would be subject to a higher minimum royalty rate of 18.75 percent. In August 2022, the Inflation Reduction Act was passed into law and increased the minimum onshore royalty rate to 16⅔ percent for onshore oil and gas.<sup>25</sup> Federal oil and gas rates remain the subject of continued legislative attention, as the U.S. House of Representatives recently considered and passed H.R. 1, the Lower Energy Costs Act, which proposes lowering minimum royalty rates.<sup>26</sup> Therefore, an understanding of the effective royalty rate would be useful, and the information would provide an important data point for future decision makers regardless of the ultimate policy choices.

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While effective royalty rates are not currently calculated by bureaus, ONRR already has the information necessary to calculate effective royalty rates.

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While effective royalty rates are not currently calculated by bureaus, ONRR already has the information necessary to calculate effective royalty rates. Specifically, ONRR manages and ensures full payment of revenues owed for the development of the Nation’s energy and natural resources on the OCS and Federal lands. ONRR’s royalty reporting system, eCommerce, is the entry point for payors to report royalty revenues on Federal oil and gas, including adjustments. Payors report royalty revenues using the electronic Report of Sales and Royalty and Remittance Form (ONRR–2014).

## Effective Royalty Rate Analysis Yields Significant Offshore Variances

Because the bureaus do not perform their own analyses, we calculated the effective royalty rates by analyzing sales reporting data collected by ONRR. We found that the effective royalty rates for Federal offshore oil and gas sold from 2016 through 2020 were significantly lower than the lease-stated royalty rates. Specifically, we concluded that the effective royalty rates for Federal offshore oil and gas were as much as 3.2 percent and 4.87 percent below the lowest potentially applicable statutory minimum lease rate of 12.5 percent. Minimum offshore oil and gas lease-stated rates, however, vary considerably, ranging from 12.5 to 18.75 percent, meaning that

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<sup>23</sup> ONRR data for offshore oil and gas sold from 2016 through 2020 identified total sales values of \$166.8 billion for oil and \$17.5 billion for gas, a total of \$184.3 billion; 1 percent of that value is \$1.8 billion.

<sup>24</sup> *High-Risk Series: Efforts Made to Achieve Progress Need to Be Maintained and Expanded to Fully Address All Areas* (GAO–23–106203).

<sup>25</sup> Pub. L. No. 117–169 § 50262.

<sup>26</sup> H.R.1, 118th Cong. (2023), <https://www.congress.gov/bill/118th-congress/house-bill/1>.

the variance between the effective rate and lease-stated rate could be much larger for deepwater offshore leases where the minimum lease rate of 18.75 percent applies. For comparison, Federal onshore effective royalty rates were only 0.49 percent lower than the minimum lease rates for oil and 2.58 percent lower than the minimum lease rates for gas. While the minimum lease rate was 12.5 percent, oil and gas leases offshore had an average effective royalty rate of as little as 9.3 percent for oil and 7.63 percent for gas (see Figure 3). As previously noted, we estimate that each 1-percent decrease in the effective royalty rate from the lease-stated rate could result in an overall decrease of more than \$1.8 billion in offshore oil and gas royalty revenue over that 5-year period; as such, a 3.2-percent difference between the minimum lease-stated rate and the effective royalty rate equates to \$5.9 billion in relief, deductions, and adjustments over the 5-year period.

**Figure 3: Minimum Lease-Stated Rates and Average Effective Royalty Rates for Federal Oil and Gas for Calendar Years (CYs) 2016 Through 2020**

Lease Type	Minimum Lease-Stated Rates (%)	Average Effective Royalty Rates (%) by CY				
		2016	2017	2018	2019	2020
Federal Offshore Oil	12.5 to 18.75	9.30	9.84	10.18	10.62	9.33
Federal Onshore Oil	12.5	12.17	12.01	12.04	12.44	12.23
Federal Offshore Gas	12.5 to 18.75	7.63	8.33	9.56	9.37	8.88
Federal Onshore Gas	12.5	10.06	10.29	10.22	10.20	9.92

Source: DOI Office of Inspector General

Based on the lower effective rates for Federal offshore oil and gas, we conducted additional analyses to identify the cause or causes of the rate variances (see Figure 4). We reviewed 20 instances where leases had either significantly lower effective royalty rates or high variances between the implied and effective royalty rates reported in their monthly data. One selection had an implied rate of 16.67 percent, but the effective rate was 0.18 percent. Other selections had negative effective royalty rates (one reaching -2,055 percent).

**Figure 4: Causes of Royalty Rate Variances Cited by ONRR  
for Federal Offshore Oil and Gas Selections**

<b>Cause of Variance</b>	<b>No. of Records*</b>
Transportation and processing allowances	10
Adjustments made to leases without entities' initial reporting	9
Gravity bank adjustments	6
Deepwater royalty relief	3
Other	2

\* The sum of the records is greater than the number of selections made because some had multiple causes cited.

We found that high transportation and processing allowances, deepwater royalty relief, and gravity bank adjustments were the most frequent reasons cited by ONRR for effective rate variances. For example, during May 2016, a lessee sold \$85,615 worth of gas from a well in the Pacific; however, after transportation and processing allowances, the entity paid only \$152 in royalties. This was an effective royalty rate of 0.18 percent. This leaseholder was granted permission by ONRR to exceed the 50-percent transportation allowance of \$7,135 and instead deduct \$14,117—the entirety of transportation costs identified—from the royalties owed. The royalty value before allowances at the assigned lease rate of 16.67 percent would have been \$14,269. As of December 31, 2016, ONRR eliminated the provision that allowed lessees to request to exceed established limits or to take extraordinary allowances, but the limits can nonetheless still be exceeded if ONRR permits lessees to claim pre-plant transportation allowances.<sup>27</sup>

As another example, in July 2019, a lessee sold \$76,082 of gas and received deepwater royalty relief, which would have resulted in \$0 in royalties based on application of the ordinarily applicable royalty

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ONRR stated that a credit such as this negative royalty transaction could be used against other royalty payments.

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reduction. However, the company also claimed transportation allowances that resulted in a negative \$3,954 royalty transaction—essentially, a credit. The amount of royalties due before allowances would have been \$9,510 without royalty relief, given the

12.5-percent lease rate. Based on discussions regarding a similar example, ONRR stated that it is possible a credit such as this negative royalty transaction could be used against other royalty payments.

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<sup>27</sup> As defined in the *Oil and Gas Payor Handbook, Volume III – Product Valuation*, “Pre-plant transportation allowances” are for the “actual transportation costs of estimated recovered [nongas liquids] and the plant fuel and flare from the lease to the plant.”

In a third example, in December 2020, a lessee sold \$5,774,074 in oil from the Gulf of Mexico and did not pay any royalties due to deepwater royalty relief. Had the leaseholder paid royalties at the lease-stated rate of 12.5 percent, the company would have owed over \$721,000 in royalties for December 2020.<sup>28</sup>

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<sup>28</sup> We also note that, during our analyses, we identified nine selections that were missing records in the entities' initial monthly reporting (the "original lines of reporting") that are used to calculate adjustments such as allowances. We found, however, that the missing data were reported under related corporate entities—entities that have substantial direct or indirect common control. For example, a single company may have several subsidiaries that operate different wells but substantially have the same management. If one subsidiary reports the original data and a second subsidiary reports an adjustment increasing allowances, the effective royalty rate would appear low and potentially negative. This issue relates directly to the findings in our January 2022 report, *Better Internal Controls Could Ensure Accuracy of the Office of Natural Resources Revenue's Royalty Reporting and Adjustments* (Report No. 2020–CR–009), where we identified a variety of issues associated with ONRR's reporting and specifically found that, because of the structure of the reporting system and the data requested, ONRR could not differentiate between original reporting information and adjustments. We made recommendations directed to this issue, and ONRR concurred with those recommendations. As of the date of this report, however, those recommendations remain unimplemented. In addition to addressing the issues set forth in our January 2022 report, implementing these recommendations may also enable ONRR to more clearly and accurately report on effective royalty rates.

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# Conclusion and Recommendations

## Conclusion

We found that the DOI's bureaus do not conduct any analyses of effective royalty rates, although ONRR has the data readily available to do so. As a result, stakeholders and decision makers, both internal and external, may be unaware of the effects that allowances and royalty relief have on the return on Federal assets. In conducting our own analysis, we found, for example, that offshore oil and gas had significant differences between the lease-stated rates and effective royalty rates.

We believe that calculating and providing this information would be beneficial to the agency and to its stakeholders alike. We acknowledge that there is no requirement to conduct such an analysis, and we do not express any opinion on what the most appropriate royalty rates may be. Regardless of the policy choices made in this area, better information would promote a more comprehensive understanding of the implications of different approaches.

We make two recommendations to help ONRR provide decision makers with quality information to meet their objectives.

## Recommendations

We provided a draft of this report to ONRR for review. ONRR partially concurred with Recommendation 1 and concurred with Recommendation 2. We consider Recommendation 1 and Recommendation 2 resolved. ONRR's response also provided technical comments and proposed modifying certain language in the draft report. We clarified some passages to address these comments, but we did not modify our overall findings and recommendations. Below we summarize ONRR's response to our recommendations, as well as our comments on its responses. See Appendix 2 for the full text of ONRR's response and a response from the Principal Deputy Assistant Secretary for Land and Minerals Management; Appendix 3 provides our response to ONRR's technical comments; and Appendix 5 lists the status of each recommendation.

We recommend that the Office of Natural Resources Revenue:

1. Develop, document, and implement a plan to calculate and analyze the effective royalty rates for oil and gas sales reported to the Office of Natural Resources Revenue.

**ONRR's Response:** ONRR partially concurred with our recommendation, stating that it would "publish year data to the Natural Resources Revenue Data (NRRD) website, which will include the effective royalty rate calculation for each sales year" and that "by providing the additional royalty data and rate calculations, policymakers will have access to the information needed to analyze the data according to their needs." ONRR further stated that it would "develop a calculation of effective royalty rates for federal oil and gas sales stratified by state (onshore) and offshore region (offshore)" and "include appropriate contextual

language, so the user understands the data.” It plans to implement these changes by March 31, 2024.

**OIG Comment:** We consider Recommendation 1 resolved based on ONRR’s partial concurrence and described actions. However, information provided in ONRR’s technical comments indicate that the impact of deductions and adjustments such as transportation and processing allowances, as well as quality bank adjustments, will not be considered or disclosed when calculating the effective royalty rate. Without complete information on these allowances and adjustments, the intent of the recommendation is not met.

This recommendation will be closed when ONRR provides documentation demonstrating that it has developed, documented, and implemented a plan to calculate and analyze the effective royalty rates, including allowances, deductions, and adjustments.

2. Develop and implement a means of communicating the oil and gas effective royalty rates to stakeholders and decision makers on an ongoing basis.

**ONRR’s Response:** ONRR concurred with our recommendation, stating that it will “communicate the federal oil and gas effective royalty rate calculation results and sales year accounting data by publishing it to the NRRD [Natural Resources Revenue Data] website every year before March 31.”

**OIG Comment:** We consider Recommendation 2 resolved based on ONRR’s concurrence and planned actions. This recommendation will be closed when we receive documentation demonstrating that it has developed and implemented a means of communicating the oil and gas effective royalty rates to stakeholders and decision makers on an ongoing basis.

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# Appendix 1: Scope and Methodology

## Scope

The scope of our inspection included a review of the U.S. Department of the Interior’s (DOI’s) bureaus’ actions to analyze the royalty rates after royalty relief and deductions, commonly referred to in this report as effective royalty rates, for oil and gas developed offshore and on Federal lands.<sup>29</sup> However, when we found that the bureaus do not perform their own analyses, we calculated the effective royalty rates by analyzing sales reporting data collected by the Office of Natural Resources Revenue (ONRR) for January 1, 2016, through December 31, 2020.

## Methodology

We conducted our inspection in accordance with the *Quality Standards for Inspection and Evaluation* as put forth by the Council of the Inspectors General on Integrity and Efficiency. We believe that the work performed provides a reasonable basis for our conclusions and recommendations. To accomplish our objective, we:

- Gathered and reviewed general, administrative, and background information to provide a working knowledge of bureau responsibilities regarding onshore and offshore oil and gas leasing, Tribal coordination, and royalty revenue collection.
- Obtained and reviewed relevant reports as well as applicable laws and regulations.
- Interviewed personnel from the Bureau of Land Management (BLM), Bureau of Ocean Energy Management (BOEM), Bureau of Safety and Environmental Enforcement (BSEE), Bureau of Indian Affairs (BIA), and ONRR on relevant oil and gas oversight and coordination responsibilities, statutory allowances, royalty relief, and royalty reporting.
- Developed a standardized questionnaire and analyzed responses provided by the BIA, the BLM, BOEM, and BSEE regarding available allowances, royalty relief, and deductions, as well as the analysis of effective royalty rates.
- Developed a methodology to calculate the effective royalty rate, given that the bureaus had not previously performed this type of analysis. Specifically, the following equation was used:

$$\text{Effective Royalty Rate} = \frac{\text{Total Royalty Value} - \text{Deductions} \pm \text{Gravity Bank Adjustments}}{\text{Total Sales Value}}$$

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<sup>29</sup> Our initial objective was to determine whether the DOI’s bureaus perform analyses of effective royalty rates for oil and gas developed offshore and on both Federal and Indian lands. In the course of our work, we identified significant differences between the nature of Federal and Indian oil and gas leases and updated our objective to focus solely on Federal oil and gas leases, causing us to remove oil and gas developed on Indian lands from the scope of our inspection.

- Calculated the effective royalty rates from a universe of 21.7 million records of oil and gas royalty reporting data,<sup>30</sup> with a net sales value of \$305.1 billion and net royalties of \$33.3 billion, from sales reported for January 1, 2016, through December 31, 2020.
- Judgmentally selected 20 sales reporting months associated with 18 offshore oil and gas leases to perform additional analyses. The analyses included calculating the effective and implied royalty rates, corroborating implied rates with lease-stated rates, and reviewing documentation to support royalty relief and extraordinary allowance authorizations.

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<sup>30</sup> The universe included Federal offshore and onshore and Indian oil and gas sales data reported to ONRR.

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## **Appendix 2: Responses to Draft Report**

The Office of Natural Resources Revenue's response to our draft report follows on page 19. In addition, a response from the Principal Deputy Assistant Secretary for Land and Minerals Management is included on page 30.



# United States Department of the Interior

## OFFICE OF NATURAL RESOURCES REVENUE

P.O. Box 25165  
Denver, Colorado 80225-0165

Feb 27, 2023

### Memorandum

To: Kathleen Sedney  
Assistant Inspector General for Audits, Inspections, and Evaluations  
Office of Inspector General (OIG), U.S. Department of the Interior

From: Howard M. Cantor    HOWARD    Digitally signed by HOWARD  
Acting Director        CANTOR        CANTOR  
Date: 2023 02 27 10:30:30 -0700

Subject: Response to the OIG's Draft Inspection Report – *The U.S. Department of the Interior Does Not Analyze Effective Royalty Rates* (Report No. 2021-CR-042)

Thank you for the opportunity to review and comment on the OIG's inspection report titled *The U.S. Department of the Interior (the Department) Does Not Analyze Effective Royalty Rates* (draft report). The OIG concluded that the Department's bureaus do not conduct any analyses of effective royalty rates, and that calculating and providing this information would be beneficial to the agency and to its stakeholders. The OIG did not express any opinion on what the most appropriate royalty rates are, only that better information would improve the understanding of policymakers. The OIG made two (2) recommendations for the Office of Natural Resources Revenue (ONRR) to address.

ONRR generally agrees with OIG's recommendations. We appreciate OIG's efforts to improve the Department's information outputs. We attached a summary of the actions ONRR plans to take, target dates, and the responsible official for each of the two recommendations in OIG's draft report (Attachment 1). ONRR is committed to continuous improvement and welcomes external reviews to review and improve our operations.

We appreciate the insight OIG's draft report provides. However, ONRR identified several factual errors and misleading statements that, if corrected, would improve the report. We met with OIG on February 15, 2023, to discuss these issues, and we have attached to this memo our comments and supporting documentation, for OIG's consideration (Attachments 2 and 3).

ONRR also reviewed and agreed with the Principal Deputy Assistant Secretary of Land and Minerals Management's (ASLM) comments, particularly related to the Bureau of Ocean Energy Management's (BOEM) analysis of aggregate effective royalty rates, and that OIG's draft report may imply the Department is required to calculate effective royalty rates. We believe additional language early in the report and modification of statements regarding these topics would improve the report.

If you have any questions about this response, please contact Stephen Rovira, ONRR's Audit Liaison Officer, at [REDACTED] or Catherine Vojslavek, Auditor at [REDACTED]

Attachments

**Agency Response to the Office of Inspector General’s Draft Report, *The U.S. Department of the Interior (DOI) Does Not Analyze Effective Royalty Rates*, Report No. 2021-CR-042**

**Recommendation 1:** *Develop, document, and implement a plan to calculate and analyze the effective royalty rates for oil and gas sales reported to the Office of Natural Resources Revenue.*

**ONRR Response: Partially Concur**

ONRR agrees to develop, document, and implement a plan to calculate the effective royalty rates for federal oil and gas sales reported to ONRR. To implement the plan, ONRR will publish sales year data to the Natural Resources Revenue Data (NRRD) website, which will include the effective royalty rate calculation for each sales year. By providing the additional royalty data and rate calculations, policymakers will have access to the information needed to analyze the data according to their needs.

ONRR will develop a calculation of effective royalty rates for federal oil and gas sales stratified by state (onshore) and offshore region (offshore). ONRR will include appropriate contextual language, so the user understands the data. ONRR will provide documentation and show implementation by providing the written procedure or documentation of the automated process.

**Target Date: March 31, 2024**

**Responsible Official:** Howard M. Cantor, Acting Director, Office of Natural Resources Revenue

**Recommendation 2:** *Develop and implement a means of communicating the oil and gas effective royalty rates to stakeholders and decision makers on an ongoing basis.*

**ONRR Response: Concur**

ONRR will communicate the federal oil and gas effective royalty rate calculation results and sales year accounting data by publishing it to the NRRD website every year before March 31, along with contextual language. ONRR will provide the finalized process and screenshots of the first publication to demonstrate implementation of the recommendation. ONRR strives to be as transparent with the public as possible and will dutifully publish this data on its external portal.

**Target Date: March 31, 2024**

**Responsible Official:** Howard M. Cantor, Acting Director, Office of Natural Resources Revenue

## Technical Comments

**Page 2, Why This Matters.** OIG states that calculation and dissemination of an effective royalty rate would provide better information to decision makers. ONRR agrees that information on the cost of Congressionally mandated royalty relief, agency-granted royalty relief, and underbonding/bad debt may inform decision makers. However, these 3 reasons for lower royalty collections are fundamentally different in nature, and if they are to be calculated, should be calculated separately to allow for solutions targeting any specific source of lower royalty collection found to be of concern. Transportation deductions, processing deductions, and gravity adjustments do not contribute to an effective royalty rate different than the lease royalty rate; rather, they are part of the formula used to ensure collection of the full lease royalty rate. (See Attachment 3. Additional supporting documentation sent directly to OIG auditors.)

**Page 4, Office of Natural Resources Revenue, Last 2 sentences in the last paragraph and the pop out text.** The draft report incorrectly describes ONRR distributions. The correct description is, “ONRR distributes 100% of the collected revenue to States, Indian Tribes, Indian mineral owners as well as to the U.S. Treasury and required specific funds such as the Land and Water Conservation Fund, Historic Preservation Fund, and the Reclamation Fund.”

**Pages 5 and 14, Federal Royalty Revenues and Rates, Royalty and Effective Royalty Rate equations.** The draft report at pages 5 and 14 contains two royalty formulas:

Royalty payment = (volume sold × sales price × royalty rate) – deductions

Effective royalty rate = (total royalty value - deductions +/- gravity adjustments)/total sales value

Both formulas are incorrect, though ONRR may share some of the responsibility for the incorrect formulas. As a result of the incorrect formulas, OIG has concluded that transportation deductions, processing deductions, and gravity adjustments all reduce royalty value when, in fact, they are subtracted from commodity value at destination to get to royalty value.

A better articulation of the royalty formula is:

Royalty value = commodity value at destination - transportation deductions - processing deductions + gravity bank adjustments where not already reflected in commodity value

This formula would then logically lead to the following formulas:

Royalty payment = Royalty value<sup>1</sup> x volume x royalty rate

Effective royalty rate = (Royalty value<sup>1</sup> x volume x royalty rate) – Congressionally mandated royalty relief - agency-granted royalty relief - under-bonded or uncollectable debt

OIG worked with incorrect formulas in part because of the flawed column headings and verbiage used in ONRR’s oil and gas royalty report (Form ONRR-2014), which was developed many years ago and has remained unchanged. The form headings and verbiage have led to inconsistent terminology at times, including possibly in documents reviewed by OIG when preparing its draft report.

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<sup>1</sup> On a per-unit basis

ONRR regulations make clear that transportation and processing deductions are subtracted from commodity value in calculating royalty value; they are not deducted from royalty value. While ONRR regulations require that commodity value at destination be measured in different ways under different circumstances (e.g. index price, sales price, major portion value, or the higher of multiple measures of value), the same regulations consistently allow for the deduction of transportation and processing costs in calculating royalty value. For example, both “transportation allowance” and “processing allowance” are defined in 30 CFR 1206.20, which states in part: “Transportation allowance means a deduction in determining royalty value ....” and “Processing allowance means a deduction in determining royalty value ....” See also examples at 30 CFR 1206.11(d)(1) and (3) for the subtraction of a transportation deduction and quality differential (including a gravity adjustment) from an index price at destination to arrive at royalty value.

**Pages 5 and 14, Federal Royalty Revenues and Rates, Royalty and Effective Royalty Rate equations.** Because of the incorrect formulation of the royalty formulas in the draft report, that draft incorrectly concludes that these deductions and adjustments reduce the "effective royalty rate" when, in fact, they are necessary to get to the correct royalty rate specified in the lease, and without them the effective royalty rate would exceed the lease royalty rate because the commodity values at destination are higher than royalty value, which is intended to reflect the value of actual production in marketable condition at or near the lease, and not a higher value for theoretical or processed production at a market center many miles downstream of the lease.

**Page 6, Federal Offshore Royalty Relief, first paragraph.** This section oversimplifies royalty relief and is misleading. It gives an example of suspending royalties for the first 87.5 million barrels of oil produced from new leases in oil fields in water depths of more than 800 meters. That is the maximum volume that can be suspended if a lease qualifies for relief. Also, it states "barrels of oil produced" but should be updated to say "million barrels of oil equivalent (MMBOE)." The amount of volumes suspended is based on the water depth (deepwater) and drilling successful wells and sidetracks (deepgas). For deepwater, the suspended volumes are 17.5 MMBOE in water depths of 200-399 meters, 52.5 MMBOE in water depths of 400-800 meters, and 87.5 MMBOE in water depths of greater than 800 meters.

Although a lease can qualify for the volume threshold mentioned, the relief volumes are also subject to a price threshold. The annual threshold price must exceed the average NYMEX price to qualify for relief each year (except for "Eligible" leases where price thresholds don't apply due to a Kerr-McGee court decision).

**Page 6, Federal Offshore Royalty Relief, first paragraph.** Stating that royalty relief is "automatic" can also be misleading. The "automatic" relief does not apply to all royalty relief categories. Not all leases in deepwater qualify for royalty relief. Leases must be in 200 meters of water or greater, in the Western and Central planning areas and a portion of the eastern planning area encompassing whole lease blocks lying west of 87 degrees. There are multiple royalty relief categories - deepwater and shallow water deep gas. For deepwater pre-act leases (leases issued prior to 11/28/95), the lessee must demonstrate an economic need for relief and relief must be granted on an application basis. For eligible leases (leases issued in 1996-2000) the relief was automatic and no application was required. The other deepwater royalty relief category is royalty suspension (leases issued 2001 and later). For shallow water deep gas (SWDG), there are 2 relief categories. A royalty suspension supplement where both oil and gas receive relief on all wells. The royalty suspension volume where only the gas receives relief for a specific well. For SWDG, the relief is based on whether a successful well was drilled and the depth of that well.

**Page 7, Deductions, first paragraph and first full sentence.** "Transportation allowances let... oil and gas from the wellsite." Suggest changing "wellsite" to "point of royalty settlement." Additionally, it may

be worth mentioning that only allowed costs and the royalty value share of transportation and processing costs may be claimed as allowances

**Page 7, Deductions, first paragraph.** The report reads "If both transportation and processing allowances were maximized, the full royalty that would otherwise be owed to the Federal Government could theoretically be eliminated and potentially result in a credit that could be used toward other royalty payments." A footnote acknowledges that ONRR's systems prevent this from happening. First, this issue would only apply to gas plant products, which are the only products to which a processing allowance applies. Moreover, it is worth noting that for Indian oil and gas there is specific regulatory language preventing a lessee from reducing their royalty value to zero at 30 CFR 1206.56(b)(2) and 1206.177(c)(2). For federal coal and geothermal resources, there is regulatory language at 1206.258 and 1206.261 for coal and 1206.352 for geothermal as well. The language in those regulations state, with appropriate variations for commodity "Under no circumstances may the value, for royalty purposes, under any sales type code, be reduced to zero." There was similar language prior to 2017 for federal oil and gas, and in addition to system edits preventing a lessee from reducing the royalty to zero, there is ubiquitous lease language requiring a lessee to market the production for the mutual benefit of the lessor and lessee, which would prevent ONRR from allowing a value less than zero for any commodity.

Regarding the same section noted above, it is misleading to suggest that ONRR would functionally pay a lessee for extracting Federal or Indian resources. ONRR has numerous protections (both in regulation and system design) in place to prevent this from happening. We suggest ending this paragraph after the sentence about processing allowances and the 66 2/3 % limit. If additional detail is needed, we suggest replacing the latter portion of this paragraph with this sentence, "In rare instances where a lessee incurs very high transportation and processing costs, it may take allowances on gas plant products that nearly reduce the royalty value to zero."

**Page 7, Deductions, Bankruptcy Adjustments.** The draft report discusses bankruptcies without mentioning other related reasons for an effective royalty rate lower than the lease royalty rate. But bankruptcies are just one reason DOI may not collect the full royalty obligation. First, Congress does not require and DOI does not set or increase individual or general bonding requirement to dollar amounts sufficient to consistently protect the United States against bad debt; if they did, then bankruptcies would be immaterial because any unpaid royalty obligation could be paid out of a bond. The failure to set or increase bond amounts is outside ONRR's control.

Second, at times bad debt is uncollectible and written off, even in the absence of bankruptcy. Again, bad debt would not be an issue if Congress or others required bonding sufficient to consistently cover unmet royalty obligations.

**Page 7, Deductions, Gravity Bank Adjustments.** According to ONRR's regulations, royalties are due on the quantity and quality of production measured at the BSEE or BLM royalty measurement point. *See e.g.* 30 CFR 1206.119. Gravity banks, as the report states, account for the difference between what was measured at the royalty settlement point and what arrives at a market center after different qualities of oil are mixed together. Any change to gravity bank adjustments would mean that a lessee would be paying royalties on a quality of oil different than what was produced from their lease.

Quality bank adjustments are the mechanism by which a lessee correctly pays royalties on the quality of production removed from the lease. Said another way, if a lessee did not incorporate its quality bank adjustments, then it would be paying on the wrong royalty value. Suggest removing the discussion of quality banks altogether.

**Page 8, First paragraph, Second to last sentence.** OIG states, "This means that once royalty relief is accounted for, the lessee pays 2.5 percent less than the stated rate for the lease." This statement is confusing because if a lease qualifies for royalty relief (volume and price thresholds aren't exceeded), the royalty rate reported for the deepwater leases and shallow water deep gas royalty suspension supplement leases would be 0%. For shallow water deep gas, royalty suspension volume leases, the reported royalty rate may appear to be less than the stated royalty rate because the relief is at the well level.

**Page 12, first paragraph.** Suggest rewording "As of December 31, 2016, ONRR eliminated the provision that allowed lessees to request an extraordinary allowance exceeding established limits, but the limits can nonetheless still be exceeded if ONRR permits lessees to claim pre-plant transportation allowances." to "As of December 31, 2016, ONRR eliminated the provision that allowed lessees to request to exceed established limits or to take extraordinary allowances." We suggest this edit because "extraordinary allowances" are separate and different from "request to exceed limits."

**Page 12, first paragraph.** OIG stated, "the limits can nonetheless still be exceeded if ONRR permits lessees to claim pre-plant transportation allowances." Per the footnote, these appear to explain transporting non-royalty bearing products, for which a lessee should not claim allowances on transporting non-royalty bearing products. It appears misleading to suggest that "ONRR permits" this reporting.

**Page 12, second paragraph.** The first two examples describe a lease that receives royalty relief to report a zero sales value and subsequently claims a transportation allowance resulting in a credit. A lessee cannot claim allowances on production that is deemed royalty free to receive a credit. For special case royalty relief (value based), a lessee may be eligible to claim allowances, but it would be helpful to distinguish between the type of royalty relief at issue in this example. For deep water and shallow water royalty relief, which is volume based, a lessee shouldn't claim allowances for transporting royalty free volumes.

**Page 12, second paragraph and call out.** The call out for "ONRR stated that it is possible a credit such as this negative royalty transaction could be used against other royalty payments" is misleading and inaccurate as it applies to this section. The comment was made to reflect that if a total royalty report submitted, due to adjustments made for prior overreporting, is in total negative, then a "credit" or contra receivable would be generated which then can be applied to current or future obligations. Credit receivables cannot be used across Federal or Indian activities or be applied outside of a specific Indian distribution code.

**Page 12, negative royalty examples.** It appears when we were working with the OIG on the data, the data sets were limited by payor, payor code and sales month, commodity type and reporting period. In discussions with the OIG, we adhered to this strict scope.

If the intent of this investigation was to "ensure that quality data is available to assist them [decision makers and stakeholders] in making lease-specific and programmatic decisions," OIG should have analyzed the effective royalty rate from a lease perspective, expanding the scope to include payor consideration. This would have drastically changed the discrepancies between the implied royalty rate and the effective royalty rate.

Using lease [REDACTED] as an example, there were two original lines submitted by separate payors. One payor was an affiliate with the other payor, who then submitted the adjustments. Because 2 different payors reported on the same lease, the analysis ONRR provided showed an incomplete representation because of the parameters of the data requested by OIG. Therefore, OIG had data that did not show or present the accurate representation of facts in the draft report to BOEM and BSEE.

For the lease depicted in 18 Off Oil Selection 2 tab, lease [REDACTED] this drastically changes the outcome of the effective royalty rate from -2054.92% to 10.98%.

Lastly, ONRR has remedied negative lease reporting via SCR 3170, the "Original Line Monitoring edit". This edit triggers on a lease basis, therefore mitigating the reporting of adjustments taken against different payor codes for the same lease. ONRR put this edit into production on October 7, 2022. This system and process change eliminates any potential of negative lease reporting as described in the draft report. (Supporting spreadsheets and comment above sent directly to OIG auditors.)

**Page 12, footnote 25.** The report reads "...the ESTIMATED transportation costs of recovered nongas liquids and the plant fuel and flare from the lease to the plant." It should say the ALLOCATED costs. A lessee may only deduct their reasonable, ACTUAL, costs.

**Page 13, Conclusion.** The conclusion states that stakeholders and decision makers may be unaware of the effects allowances and royalty relief have on the return on Federal leases. ONRR's 2014 report contains information that is reported by industry that shows royalty value prior to allowances, transportation allowances, processing allowances, and royalty value after allowances. For royalty relief, there are specific transaction codes that industry uses to report to ONRR to identify the royalty volumes and values for royalty relief. The impact of royalty relief and allowances have on royalties can be easily retrieved by information ONRR already collects and maintains in its systems. There have been numerous Congressional requests sent to ONRR for the impacts royalty relief has on Federal royalties and ONRR has been able to use information already maintained in its system to respond timely to those requests.

# Establishing Royalty Value at the Lease

## Introduction

The Department of the Interior, through its Office of Natural Resources Revenue (ONRR), has long recognized the deduction of transportation and processing allowances as part of arriving at the royalty value, as demonstrated further below.

The draft report inaccurately concludes that transportation and processing deductions, as well as quality bank adjustments, reduce the "effective royalty rate" when, in fact, they are necessary to get to the correct royalty rate specified in the lease. These mistakes may be premised on the fact that ONRR forms and other materials use terms such as "royalty value less allowances," and because royalty formulas are sometimes inarticulately expressed. However, without deductions for transportation and processing, the effective royalty rate would exceed the lease royalty rate, because the commodity values at destination are higher than royalty value, which is intended to reflect the value of actual production in marketable condition at or near the lease, and not a higher value for theoretical or processed production at a market center many miles downstream of the lease. Similarly, without quality bank adjustments, the effective royalty rate could exceed the lease royalty rate, because it would be based on the quality of the blended stream of production transported in a pipeline, rather than the quality of the actual, royalty-bearing production from the lease.

The following information reinforces the concept that the correct royalty value is the value at the lease.

## Case Law:

The following cases, including ones that predate the Federal Oil & Gas Royalty Management Act of 1982 (FOGRMA), evidence a long-standing intent to value oil and gas production for royalty purposes at or near the lease. When oil and gas are sold downstream of the lease, valuation at or near the lease often requires use of a downstream sales price, reduced by the costs of transportation to the downstream location, and, for gas, further reduced by downstream processing, which creates products of higher quality and value than at the lease.

### *Kerr-McGee Corp.*, 22 IBLA 124 (1975)

This Department has never ruled, however, that transportation costs are not recoverable on a pro rata basis when there is no market in the field. On the contrary, the Department, in *Shell Oil Co.*, 70 I.D. 393 (1963), specifically noted that "[o]il and gas leases executed pursuant to the Mineral Leasing Act have been construed to allow for the deduction of transportation costs in the computation of market values and royalty interests." *Id.* at 395, fn. 6.

### *Independent Petroleum Ass'n of Amer. v. Armstrong*, 91 F. Supp. 2d 117 (D.D.C. 2000)

"Consistent with this practice of selling gas at the lease, royalties on federal gas leases were typically "calculated at values at the wells, not at the pipeline destination. . . ." *Continental Oil Co. v. United States*, 184 F.2d 802, 820 (9th Cir. 1950)."

The longstanding interpretation of "value of production," one recognized by Interior (at least until the present matter) and affirmed by the courts, is that it refers to the value of oil or gas at the wells. See *United States v. General Petroleum*, 73 F. Supp. 225, 235 (S.D.Cal. 1946), *af 'd sub nom Continental Oil Co. v. United States*, 184 F.2d 802, 820 (9th Cir. 1950). Thus, it is well-recognized that the government's royalty interest is limited to the value of production at the lease or wellhead, not in value enhancements resulting from downstream activities. *Marathon Oil Co. v. United States*, 604 F. Supp. 1375 (Alaska 1985). Accordingly, the government's royalty interest on the value of production may not include proceeds received by lessees that are attributable to matters other than gas production. *Diamond Shamrock Exploration Co. v. Hodel*, 853 F.2d 1159, 1165 (5th Cir. 1988). Cf. *Independent Petroleum*, 92 F.3d at 1252.

## Rulemaking (Preamble Language)

### Revision of Gas Royalty Valuation and Related Topics; Final Rule (53 FR 1230, January 15, 1988)

(53 FR 1257) MMS Response: Based on Interior Board of Land Appeals decisions, Solicitor opinions, and judicial decisions, it has been DOI policy since 1961 to grant transportation allowances when production is moved to a sales point off the lease in order to calculate the value of the product at the lease. Furthermore, the IBLA has specifically ruled that transportation allowances must be granted for Indian leases. *Kerr-McGee Corp.*, 22 IBLA 124 (1975). Therefore, the transportation allowance regulations being adopted are consistent with past practice and consistent with the Secretary's responsibility to the Indians. The MMS believes generally that royalty should be free of cost. However, values may need to be adjusted for transportation and/or processing to determine value at the lease. The MMS believes that the policy of granting transportation allowances to properly value lease production is appropriate and should continue.

(53 FR 1258) "The MMS believes that the consideration of transportation costs is necessary to determine the value of lease production at the lease."

### Revision of Oil Product Valuation Regulations and Related Topics; Final Rule (53 FR 1184, January 15, 1988)

(53 FR 1205) The purpose of § 206.102(h) is to make it clear that no matter what valuation method is used, the value for royalty purposes cannot be less than the lessee's gross proceeds less applicable allowances. Therefore, if a benchmark-derived value less applicable allowances is less than gross proceeds less applicable allowances, gross proceeds less applicable allowances is to be used as the value for royalty purposes. In either event the lessee may be entitled to deduct transportation allowances to determine value, for royalty purposes, at the lease (unless the benchmark-derived value already is a value at the lease – in that event no further transportation allowance would be authorized).

### Establishing Oil Value for Royalty Due on Federal Leases (65 FR 14022, March 15, 2000)

(65 FR 14044) “We believe that the location and quality adjustments together with the transportation allowances specified in the final rule effectively result in market value at the lease.”

### Federal Oil Valuation Final Rule (69 FR 24959, May 5, 2004)

In proposing these amendments, the Department of the Interior reaffirmed that the value for royalty purposes of crude oil produced from Federal leases is the value at or near the lease. However, in determining value at the lease of production not sold under an arm's-length contract, MMS is not restricted to a comparison to arm's-length sales of other production occurring in the field or area. MMS may begin with a "downstream" price or value, and determine value at the lease by deducting the costs of transporting oil to downstream sales points or markets, or by making appropriate adjustments for location and quality. Federal lessees are not obligated to sell crude oil downstream of the lease. Lessees are at liberty to sell production at or near the lease, even if selling downstream might have resulted in a higher royalty value for the production than selling it at the lease. If lessees do choose to sell downstream, the choice to sell downstream does not make otherwise non-deductible costs deductible (for example, marketing costs). See *Independent Petroleum Association of America, et al. v. DeWitt*, 279 F.3d 1036 (DC Cir. 2002), cert. denied sub nom., *Independent Petroleum Association of America, et al. v. Watson*, 537 U.S. 1105 (2003). In addition, MMS may choose to use downstream values when a lessee sells to an affiliate at or near the lease.

### Regulation Language

ONRR regulations state that transportation and processing deductions are subtracted from commodity value in calculating royalty value; they are not deducted from royalty value. While ONRR regulations require that commodity value at destination be measured in different ways under different circumstances (e.g., index price, sales price, major portion value, or the higher of multiple measures of value), the same regulations allow for the deduction of transportation and processing costs in calculating royalty value. For example, both “transportation allowance” and “processing allowance” are defined in 30 CFR 1206.20, which states in part: “Transportation allowance means a deduction in determining royalty value ....” and “Processing allowance means a deduction in determining royalty value ....” See also examples at 30 CFR 1206.11(d)(1) and (3) for the subtraction of a transportation deduction and quality differential (including a gravity adjustment) from an index price at destination to arrive at royalty value.

### Full definitions of allowances at 30 CFR 1206.20

*Transportation allowance* means a deduction in determining royalty value for the reasonable, actual costs that the lessee incurs for moving:

- (1) Oil to a point of sale or delivery off of the lease, unit area, or communitized area. The transportation allowance does not include gathering costs.
- (2) Unprocessed gas, residue gas, or gas plant products to a point of sale or delivery off of the lease, unit area, or communitized area, or away from a processing plant. The transportation allowance does not include gathering costs.
- (3) Coal to a point of sale remote from both the lease and mine or wash plant.

*Processing allowance* means a deduction in determining royalty value for the reasonable, actual costs the lessee incurs for processing gas.

*Washing allowance* means a deduction in determining royalty value for the reasonable, actual costs the lessee incurs for coal washing.

30 CFR 1206.113(d) – paragraphs 1 and 3 of this section show that the royalty value for oil includes transportation allowances and adjustments for location and quality of the oil.

## Other Sources:

(2017). Seeking Innovative Solutions for the Future of Hardrock Mining: Oversight Hearing Before the Subcommittee on Energy and Mineral Resources of the Committee on Natural Resources U.S. House of Representatives One Hundred Fifteenth Congress First Session.

The royalty on oil produced under Federal leases is not based upon the value of these refined products, however, it is measured by the value of the crude oil at the lease or wellhead, prior to such processing and refining. Unlike most hardrock minerals, there is a market for oil in its crude, unrefined state and therefore a ready value for royalty purposes before the value added by refining and processing. Most oil is sold at the wellhead into this crude oil market and that wellhead sales price establishes the value of the oil for Federal royalty purposes. Thus, it is somewhat misleading to call the Federal royalty on crude oil a "gross" royalty, because the royalty is "net" of refining costs, equivalent to a net or mine mouth royalty on the value of raw ore in a hardrock operation.

Similarly, Federal royalty on gas is also based upon the value of the gas at the lease. After gas is extracted, often the only thing required for consumption by the ultimate end-user is transportation (the cost of which, if paid by the producer, is deducted before royalties are calculated). Sometimes further processing is required to remove sulfur and separate gasoline, butane and other constituents from the gas.

The royalty, however, remains payable on the value of the gas at the lease or wellhead and the processing costs incurred by the producer downstream of the lease are deducted under the Federal rules before calculating royalty, to arrive at essentially a "net" value at the lease.

Congressional Budget Office Reforming the Federal Royalty Program for Oil and Gas [vii] (November 2000)

<https://www.cbo.gov/publication/12927>

Multiple references to value at the lease resulting from transportation and processing allowances.



# United States Department of the Interior

OFFICE OF THE SECRETARY  
Washington, DC 20240

## Memorandum

To: Kathleen Sedney  
Assistant Inspector General for Audits, Inspections, and Evaluations  
Office of Inspector General (OIG), U.S. Department of the Interior

From: Laura Daniel-Davis  
Principal Deputy Assistant Secretary – Land and Minerals Management

Laura Daniel-Davis  
Davis

Digitally signed by Laura Daniel-Davis  
Date: 2023.02.15 10:17:19 -05'00'

Re: Comments on Draft Inspection Report – *The U.S. Department of the Interior Does Not Analyze Effective Royalty Rates* (Report No. 2021–CR–042)

Thank you for the opportunity to review and provide feedback on the OIG’s report on effective royalty rates (draft report). This memo transmits the combined comments from the Bureau of Land Management (BLM), the Bureau of Ocean Energy Management (BOEM), and the Bureau of Safety and Environmental Enforcement (BSEE).

I greatly appreciate the OIG’s work to ensure that the Department of the Interior (DOI) and its bureaus are fully utilizing their authority to ensure that the American taxpayers receive a fair return for the extraction of publicly-owned mineral resources by private companies. Analysis of the effective royalty rate that companies are paying for oil and gas on public lands will be extremely useful as we continue to look at potential reforms to improve the onshore and offshore oil and gas programs.

During our review of the draft report, we identified some factual errors and potential phrasing revisions that we believe can improve the report, and those are attached for your review. Also attached is a memo from the BOEM Economics Division providing additional background on their work analyzing royalty issues. I would like to highlight a few key points from these materials.

### **BOEM Does Conduct Analyses of Effective Royalty Rates**

The draft report states in a number of places that the bureaus do not perform their own analyses of effective royalty rates. While this is true on an individual lease or company basis, the BOEM Economics Division does analyze the aggregate effective royalty rate, which it uses to help determine the revenue projections for the President’s budget.

### **Some Royalty Rate Reductions are Mandated by Law**

As the BOEM Economics Division also points out, a significant number of leases issued between 1996 and 2000 were provided with mandatory royalty-suspension volumes under the Outer Continental Shelf (OCS) Deepwater Royalty Relief Act (DWRRA) without regard to oil price. These royalty-free leases are now responsible for 20 percent of the oil production on the OCS, and any effective royalty rate analysis that combines these legislated royalty-free leases with leases where DOI has exercised discretion in

granting reduced royalties provides a misleading perspective of the impacts of previous policy decisions and the ability of regulatory or policy changes to have an impact on the effective royalty rate. While the draft report does acknowledge the existence of the mandatory nature of the royalty relief provided to DWRRA leases in one sentence, the phrase “deepwater royalty relief” is used multiple times without that context, including in the Results in Brief section.

### **The Report May Leave the Impression that DOI Bureaus are Required to Calculate Effective Royalty Rates**

I am concerned that the tenor of the report gives the impression that DOI bureaus are supposed to be calculating effective royalty rates but are failing in that responsibility, particularly through the title of the report and its introductory material. As you are aware, the bureaus are not required to perform such calculations, and neither BOEM nor BLM possess the necessary data to do so on their own. BOEM is only able to perform its effective royalty rate calculation by requesting data from the Office of Natural Resources Revenue (ONRR). I agree that effective royalty rates should be calculated and can provide valuable insight to policymakers, and I am pleased to see the recommendations to ONRR that it begin calculating and reporting such rates. However, I believe some additional language early in the report regarding agency responsibilities could provide useful context.

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## Appendix 3: OIG Analysis of Technical Comments

In the Office of Natural Resources Revenue (ONRR) response to our draft report, it stated that our draft report “identified several factual errors and misleading statements that, if corrected would improve the report” and included 18 technical comments (see Appendix 2). As a result of the technical comments, we clarified some passages in the background section to address ONRR’s comments. However, as we discuss in more detail below, we disagree that any aspect of our report was “misleading,” and we did not modify our overall findings and recommendations. We summarize ONRR’s technical comments and address each below.

**ONRR Technical Comment 1:** ONRR provided commentary on our overarching finding, stating, “OIG states that calculation and dissemination of an effective royalty rate would provide better information to decision makers. ONRR agrees that information on the cost of Congressionally mandated royalty relief, agency-granted royalty relief, and underbonding/bad debt may inform decision makers. However, these 3 reasons for lower royalty collections are fundamentally different in nature, and if they are to be calculated, should be calculated separately to allow for solutions targeting any specific source of lower royalty collection found to be of concern. Transportation deductions, processing deductions, and gravity adjustments do not contribute to an effective royalty rate different than the lease royalty rate; rather, they are part of the formula used to ensure collection of the full lease royalty rate.”

**OIG Response:** We partially agree with ONRR’s position in the technical comment. We agree that transportation and processing allowances are in accordance with statutes and regulations and can be used to recognize the value of the commodities at the wellhead. We differ, however, in our opinion as to whether allowances should affect the effective royalty rate and so have declined to modify the formula that we used in this report.

More specifically, ONRR stated in its response that our report “inaccurately concluded that transportation and processing deductions, as well as quality bank adjustments, reduce the ‘effective royalty rate’ when, in fact, they are necessary to get to the correct royalty rate specified in the lease.” This statement does not, however, seem to be consistent with ONRR’s own documentation and policies. In particular, ONRR develops and distributes materials that provide guidance to lessees and the public and that were provided to us as part of this inspection. For example, ONRR’s *Minerals Revenue Reporter Handbook* explicitly states that the royalty value is calculated by multiplying the sales volume by the price and then by the royalty rate. This value is defined in the handbook as the “Royalty Value Prior to Allowances.” The Handbook also states that the transportation and processing allowances are deductions from royalty due, resulting in “Royalty Value Less Allowances.” Numerous examples exist throughout the handbook that demonstrate the calculation in this manner. That is, ONRR’s own materials support the approach we have used.

In addition, the handbook explains that the quality adjustments can affect the amount of royalty received, both positively and negatively. Given that transportation and processing

allowances, as well as gravity adjustments, do affect the amount of royalty collected, or the “Royalty Value Less Allowances,” we do not agree with ONRR’s position that the adjustments “do not contribute to an effective royalty rate different than the lease royalty rate.” To the contrary, these adjustments are significant factors in the difference between the implied royalty rate and the effective royalty rate. Accordingly, no changes were made to the report based on Technical Comment 1. We note, however, that to the extent that ONRR believes terminology or other information could be improved, it may wish to modify or update its own materials.

**ONRR Technical Comment 2:** ONRR provided suggested edits to a sentence in the background section of our report, stating, “The draft report incorrectly describes ONRR distributions. . . . ONRR distributes 100% of the collected revenue to States, Indian Tribes, Indian mineral owners as well as to the U.S. Treasury and required specific funds.”

**OIG Response:** We agree with ONRR’s position in the technical comment and adjusted the language in our report accordingly.

**ONRR Technical Comment 3:** ONRR stated that the royalty formulas in our draft report were incorrect, though it acknowledged that it “may share some of the responsibility for the incorrect formulas. As a result of the incorrect formulas, OIG has concluded that transportation deductions, processing deductions, and gravity adjustments all reduce royalty value when, in fact, they are subtracted from commodity value at destination to get to royalty value.” ONRR further provided what it described as a “better” formula and stated that “OIG worked with incorrect formulas in part because of the flawed column headings and verbiage used in ONRR’s oil and gas royalty report (Form ONRR-2014), which was developed many years ago and has remained unchanged. The form headings and verbiage have led to inconsistent terminology at times, including possibly in documents reviewed by OIG when preparing its draft report.”

ONRR also stated that “regulations make clear that transportation and processing deductions are subtracted from commodity value in calculating royalty value; they are not deducted from royalty value. While ONRR regulations require that commodity value at destination be measured in different ways under different circumstances (e.g. index price, sales price, major portion value, or the higher of multiple measures of value), the same regulations consistently allow for the deduction of transportation and processing costs in calculating royalty value.”

**OIG Response:** We partially agree with ONRR’s position in the technical comment. While ONRR’s description of the value of oil or gas at the production site is accurate based on 30 C.F.R. § 1206.52, the value is derived from the gross proceeds [sales value] less applicable allowances. However, the royalty due to the Federal Government is calculated based on the formula used in the “Federal Royalty Revenues and Rates” section of this report. The calculation as described in the aforementioned section, and discussed in Technical Comment 1, is repeatedly demonstrated throughout materials developed and distributed by ONRR. We provide two clear examples of ONRR’s calculation of the royalties due (see Appendix 4). The first example is ONRR’s Valuation & Pricing webpage and the second is one of many ONRR Form–2014 Fact Sheets contained within the *Minerals Revenue Reporter*

*Handbook*, which was last updated on September 1, 2022. Both examples demonstrate that ONRR calculates the royalties due to the Federal Government as a derivative of the gross sales value. As such, the royalty value as presented in our report is correct.

Given that the royalty value is a derivative of the gross sales value, deductions such as transportation and processing allowances, gravity adjustments, royalty relief, and bankruptcies all affect the royalties collected. Therefore, we believe that effects associated with these deductions should be reported as a component of the effective royalty rate.

In short, we do not agree with ONRR’s assessments of the royalty value and effective royalty rate formulas or that the calculations we have included are incorrect. Accordingly, no changes were made to the report or our analysis based on Technical Comment 3. We did, however, add language to the footnote as we developed the effective royalty rate formula to demonstrate the effect that allowances, other deductions, and royalty relief have on the royalties paid to the Federal Government in contrast to the royalty rates stated in the leases.

**ONRR Technical Comment 4:** ONRR provided additional commentary on the royalty rate formulas, stating, “Because of the incorrect formulation of the royalty formulas in the draft report, that draft incorrectly concludes that these deductions and adjustments reduce the ‘effective royalty rate’ when, in fact, they are necessary to get to the correct royalty rate specified in the lease, and without them the effective royalty rate would exceed the lease royalty rate because the commodity values at destination are higher than royalty value, which is intended to reflect the value of actual production in marketable condition at or near the lease, and not a higher value for theoretical or processed production at a market center many miles downstream of the lease.”

**OIG Response:** See our previous responses to ONRR Technical Comments 1 and 3.

**ONRR Technical Comment 5:** ONRR stated that the background section “oversimplifies royalty relief and is misleading” and provided additional technical details related to an example in that section. Regarding that example, ONRR stated, “Although a lease can qualify for the volume threshold mentioned, the relief volumes are also subject to a price threshold. The annual threshold price must exceed the average NYMEX<sup>31</sup> price to qualify for relief each year.”

In addition, ONRR proposed a correction to “million barrels of oil produced” to “million barrels of oil equivalent.”

**OIG Response:** We partially agree with ONRR’s position in the technical comment. We agree with adjusting the wording to reflect “million barrels of oil equivalent.” However, no further adjustments were made because the example is accurate and was intended to be a simplified illustration of the concepts set forth in the report.

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<sup>31</sup> “NYMEX” refers to the New York Mercantile Exchange, which is the official source of pricing for oil and gas as it relates to the relief threshold.

**ONRR Technical Comment 6:** ONRR noted, “Stating that royalty relief is ‘automatic’ can also be misleading. The ‘automatic’ relief does not apply to all royalty relief categories” and provided examples.

**OIG Response:** We partially agree with ONRR’s position in the technical comment. While automatic relief does not apply to all categories, the statement in the draft is accurate, as the language is specific to the leases that the automatic relief applies to. To clarify, however, we adjusted language within the report to note that automatic relief applies to “eligible leases.”

**ONRR Technical Comment 7:** ONRR provided suggested edits to a sentence describing transportation deductions in the background section and stated that “it may be worth mentioning that only allowed costs and the royalty value share of transportation and processing costs may be claimed as allowances.”

**OIG Response:** We partially agree with ONRR’s position in the technical comment. Although we agree that clarification on this point is beneficial, we did not agree with the wording ONRR proposed. Accordingly, we adjusted the text in the report to track more closely the definitions from 30 C.F.R. § 1206.20.

**ONRR Technical Comment 8:** ONRR provided comments and suggested edits on a sentence in the background section describing the elimination of royalty due to transportation and processing allowances. Specifically, ONRR stated that “this issue would only apply to gas plant products, which are the only products to which a processing allowance applies. Moreover, it is worth noting that for Indian oil and gas there is specific regulatory language preventing a lessee from reducing their royalty value to zero at 30 CFR 1206.56(b)(2) and 1206.177(c)(2). For federal coal and geothermal resources, there is regulatory language at 1206.258 and 1206.261 for coal and 1206.352 for geothermal as well. The language in those regulations state, with appropriate variations for commodity ‘Under no circumstances may the value, for royalty purposes, under any sales type code, be reduced to zero.’”

ONRR also stated that “it is misleading to suggest that ONRR would functionally pay a lessee for extracting Federal or Indian resources. ONRR has numerous protections (both in regulation and system design) in place to prevent this from happening.”

**OIG Response:** We agree with ONRR’s positions in the technical comment and have adjusted the language in the report accordingly.

**ONRR Technical Comment 9:** ONRR provided perspective on bankruptcy adjustments, stating “bankruptcies are just one reason DOI may not collect the full royalty obligation. First, Congress does not require and DOI does not set or increase individual or general bonding requirement to dollar amounts sufficient to consistently protect the United States against bad debt; if they did, then bankruptcies would be immaterial because any unpaid royalty obligation could be paid out of a bond. The failure to set or increase bond amounts is outside ONRR’s control.” ONRR further stated that “at times bad debt is uncollectible and written off, even in the absence of bankruptcy. Again, bad debt would not be an issue if Congress or others required bonding sufficient to consistently cover unmet royalty obligations.”

**OIG Response:** We acknowledge ONRR’s perspective on the bonding requirements and, to the extent ONRR believes it would be appropriate, it may wish to work with policymakers to address this issue. No changes were made to the report based on Technical Comment 9.

**ONRR Technical Comment 10:** ONRR provided technical commentary and suggested removing the discussion of gravity bank adjustments in the background section, stating, “Any change to gravity bank adjustments would mean that a lessee would be paying royalties on a quality of oil different than what was produced from their lease. Quality [Gravity] bank adjustments are the mechanism by which a lessee correctly pays royalties on the quality of production removed from the lease. Said another way, if a lessee did not incorporate its quality bank adjustments, then it would be paying on the wrong royalty value.”

**OIG Response:** We acknowledge that gravity bank adjustments are the mechanism for a lessee to correctly pay royalties on the quality of production removed from the lease. However, the adjustments affect the amount of royalties collected and the effective royalty rate. Accordingly, no changes were made to the report based on Technical Comment 10.

**ONRR Technical Comment 11:** ONRR provided feedback on a statement made regarding royalty relief in the background section, stating “if a lease qualifies for royalty relief (volume and price thresholds aren’t exceeded), the royalty rate reported for the deepwater leases and shallow water deep gas royalty suspension supplement leases would be 0%. For shallow water deep gas, royalty suspension volume leases, the reported royalty rate may appear to be less than the stated royalty rate because the relief is at the well level.”

**OIG Response:** We agree with ONRR’s positions in the technical comment, and we adjusted the language in the report accordingly.

**ONRR Technical Comment 12:** ONRR suggested minor edits regarding “extraordinary allowances” as described in the body of our draft report.

**OIG Response:** We agree with ONRR’s positions in the technical comment, and we adjusted the language in the report accordingly.

**ONRR Technical Comment 13:** ONRR stated that language used in the body of our report related to ONRR practices that had the effect of permitting transportation allowance limits to be exceeded was “misleading.”

**OIG Response:** We do not agree with ONRR’s position in the technical comment. The language in our report was obtained from ONRR’s *Oil and Gas Payor Handbook, Volume III – Product Valuation* (February 15, 2001). Accordingly, no changes were made to the report based on Technical Comment 13.

**ONRR Technical Comment 14:** Regarding information in the body of the report, ONRR stated that the “first two examples describe a lease that receives royalty relief to report a zero sales value and subsequently claims a transportation allowance resulting in a credit. A lessee

cannot claim allowances on production that is deemed royalty free to receive a credit. For special case royalty relief (value based), a lessee may be eligible to claim allowances, but it would be helpful to distinguish between the type of royalty relief at issue in this example. For deep water and shallow water royalty relief, which is volume based, a lessee shouldn't claim allowances for transporting royalty free volumes."

**OIG Response:** We do not agree with ONRR's position in the technical comment. The example demonstrates an issue in reporting of sales data causing a negative effective royalty rate. Accordingly, no changes were made to the report based on Technical Comment 14.

**ONRR Technical Comment 15:** ONRR stated that a callout box in the body of our report was "misleading and inaccurate as it applies to this section." ONRR stated that the "comment was made to reflect that if a total royalty report submitted, due to adjustments made for prior overreporting, is in total negative, then a 'credit' or contra receivable would be generated which then can be applied to current or future obligations. Credit receivables cannot be used across Federal or Indian activities or be applied outside of a specific Indian distribution code."

**OIG Response:** We do not agree with ONRR's position in the technical comment. During the course of our inspection, we met with ONRR personnel to explicitly discuss the example in question. In response to our questions, ONRR personnel explicitly stated that a credit could be used against other royalty payments. While the technical comment states that this example is different because it is a credit receivable, the *Minerals Revenue Reporter Handbook* provides that, "for Federal sales periods after August 1996, you can recoup net negative adjustments provided the adjustment is reported within six years from the obligation due date." Accordingly, a credit related to a net negative reporting period may not be identified by ONRR. Accordingly, no changes were made to the report based on Technical Comment 15.

**ONRR Technical Comment 16:** Regarding negative royalty rates, ONRR stated "OIG should have analyzed the effective royalty rate from a lease perspective, expanding the scope to exclude payor consideration. This would have drastically changed the discrepancies between the implied royalty rate and the effective royalty rate." ONRR provided examples, and further stated that, as of October 2022, it "has remedied negative lease reporting via SCR 3170, the 'Original Line Monitoring edit'. This edit triggers on a lease basis, therefore mitigating the reporting of adjustments taken against different payor codes for the same lease. ONRR put this edit into production on October 7, 2022. This system and process change eliminates any potential of negative lease reporting as described in the draft report."

**OIG Response:** We partially agree with ONRR's position in the technical comment. We recognize the potential that erroneous reporting could cause negative royalties for some payors if an affiliate payor reports data intended for the other payor. This error would cause an underreported liability for one and an overreported liability for the other. While the combining of different payors for the lease demonstrated an effective rate of 10.98 percent, the example cited identified that the individual payor underreported resulting in an effective royalty rate of -2054.92 percent. We recognize that ONRR has stated that it has applied mitigating controls to help prevent this issue, but that reported change was made after our field work was completed. Accordingly, we did not modify the report based on Technical Comment 16.

**ONRR Technical Comment 17:** ONRR provided suggested edits to footnote 25 of the draft report (footnote 27 in this report).

**OIG Response:** We partially agree with ONRR’s position in the technical comment. We do not agree with ONRR’s proposed language, however, and so modified the text to match language in ONRR’s *Oil and Gas Payor Handbook, Volume III – Product Valuation* (February 15, 2001).

**ONRR Technical Comment 18:** ONRR provided perspective on the conclusion of our report, stating that “ONRR’s 2014 report contains information that is reported by industry that shows royalty value prior to allowances, transportation allowances, processing allowances, and royalty value after allowances. For royalty relief, there are specific transaction codes that industry uses to report to ONRR to identify the royalty volumes and values for royalty relief. The impact of royalty relief and allowances have on royalties can be easily retrieved by information ONRR already collects and maintains in its systems. There have been numerous Congressional requests sent to ONRR for the impacts royalty relief has on Federal royalties and ONRR has been able to use information already maintained in its system to respond timely to those requests.”

**OIG Response:** We partially agree with ONRR’s position in the technical comment. We agree that ONRR collects and maintains the information necessary to determine the impact that royalty relief and allowances have on royalties, which is why the recommendations were addressed to ONRR. We note, however, that this information is not readily available unless it is specifically requested. In addition, ONRR stated that it provided information about the “impacts royalty relief has on Federal royalties.” Similar to the November 2021 *Report on the Federal Oil and Gas Leasing Program*, ONRR does not address the impacts that allowances and other deductions have on Federal royalties.

As summarized in the report, if our recommendations are implemented, stakeholders will have the ability to access quality information readily and easily. Therefore, no changes were made to the report based on Technical Comment 18.

# Appendix 4: ONRR Valuation Examples

The Office of Natural Resource Revenue’s (ONRR) reference material demonstrates that ONRR calculates royalties using the method in the report section Federal Royalty Revenues and Rates. Example 1 is a screen capture of the ONRR Valuation & Pricing web page ([Valuation & Pricing | Office of Natural Resources Revenue \(onrr.gov\)](#)), which provides the valuation method ONRR states is incorrect in Technical Comment 3. Example 2 is a 2014 Fact Sheet from the *Minerals Revenue Reporter Handbook: Oil, Gas, and Geothermal Resources* (September 1, 2022), which shows how royalties are calculated, again, at odds with the information provided in the technical comment.

## Example 1: ONRR Valuation & Pricing Web Page



- References Home
- Statutes
- Rulemakings
- Federal Register Notices
- Information Collection Requests
- Forms
- Reference Lists & Codes
- Handbooks
- Valuation & Pricing**
- Reporter Letters
- Reporter Training

Home | References | Valuation & Pricing

## Valuation & Pricing

How Valuation Works
Pricing
Unbundling
Valuation Regulations
Valuation Examp... >

### How Valuation Works

Volume

×

Unit Value

×

Royalty Rate

=

Royalty Value  
Prior to Allowances (RVPA)

**Volume** is the quantity and quality of production as measured at the approved royalty measurement point. The Bureau of Land Management (BLM) or Bureau of Safety and Environmental Enforcement (BSEE) approve measuring points.

**The unit value** is the price at which you sold each unit of production or another price required by regulations. See [valuation regulations](#) for pricing non-arm’s-length transactions. Pricing on Indian lands depends on the lease terms and location of the land. [Learn how to price oil and gas on Indian lands.](#)

**The royalty rate** is the rate specified in your lease.

Royalty Value  
Prior to Allowances (RVPA)

-

Allowances  
(Transportation & Processing)

×

Royalty Rate

=

Royalty Value  
Less Allowances (RVLA)

**Allowances** are deductions in determining royalty value for reasonable, actual costs the lessee incurs.

Completed Forms ONRR-2014 for royalty payments and the associated payments are due by the end of the month following the production month ([30 CFR 1210.53\(a\)](#)).



**Example 2: 2014 Fact Sheet From the  
Minerals Revenue Reporter Handbook: Oil, Gas, and Geothermal Resources\***

**Form ONRR-2014 Fact Sheet**

Line Number	Detail Line			
	1	2	3	4
API Well Number				
ONRR Lease Number	0540088880	0540088880	0540088880	0540088880
ONRR Agreement Number				
Product Code	01	03	07	05
Sales Type Code	ARMS	ARMS	POOL	ARMS
Sales MO/YR	102019	102019	102019	102019
Transaction Code	01	01	01	01
Adjustment Reason Code				
Sales Volume	9621.00	275206.50	458677.50	3142.00
Gas MMBtu		288966.82		
Sales Value	211662.00	866900.46	321074.25	69124.00
Royalty Value Prior to Allowances	26457.75	108362.55	40134.28	8640.50
Transportation Allowance Deduction		-19952.47	-4013.43	
Processing Allowance Deduction			-9173.55	
Royalty Value Less Allowances	26457.75	88410.08	26947.30	8640.50
Payment Method Code	03	03	03	03

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ONRR Release 4.1 ♦ 09/01/2022

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\*The image provided is of a fact sheet in the September 2022 version of the *Minerals Revenue Reporter Handbook: Oil, Gas, and Geothermal Resources*. The handbook was updated in May 2023, and the version provided as a hyperlink here was also updated. No changes were made to the information in this table in the updated version of the handbook.

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## Appendix 5: Status of Recommendations

Recommendation	Status	Action Required
<b>2021-CR-042-01</b> We recommend that the Office of Natural Resources Revenue develop, document, and implement a plan to calculate and analyze the effective royalty rates for oil and gas sales reported to the Office of Natural Resources Revenue.	Resolved	We will refer this recommendation to the Office of Policy, Management and Budget to track implementation.
<b>2021-CR-042-02</b> We recommend that the Office of Natural Resources Revenue develop and implement a means of communicating the oil and gas effective royalty rates to stakeholders and decision makers on an ongoing basis.	Resolved	We will refer this recommendation to the Office of Policy, Management and Budget to track implementation.

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# REPORT FRAUD, WASTE, ABUSE, AND MISMANAGEMENT

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