



May 2018

OIL AND GAS WELLS

Bureau of Land Management Needs to Improve Its Data and Oversight of Its Potential Liabilities

Accessible Version

GAO Highlights

Highlights of [GAO-18-250](#), a report to congressional requesters

Why GAO Did This Study

In fiscal year 2016, private entities operated about 94,000 oil and gas wells on federal lands overseen by BLM. Once wells cease production, they can become inactive and potentially orphaned if an operator does not perform required reclamation and if an operator's bond is insufficient to cover the expenses. BLM considers oil and gas wells on federal and Indian lands and the associated leased lands as potential liabilities for the federal government because BLM may have to cover the costs of reclaiming well sites. To better manage its potential liabilities, BLM issued well and bond adequacy review policies in 2012 and 2013, respectively.

GAO was asked to review how BLM manages its potential oil and gas well liabilities. This report examines, among other things: (1) how BLM's actual costs and potential oil and gas well liabilities have changed for fiscal years 2010 through 2017 and (2) the extent to which BLM has implemented its well and bond review policies. GAO analyzed BLM's policies and data and interviewed BLM officials and representatives from stakeholder organizations.

What GAO Recommends

GAO is making seven recommendations, including that BLM systematically track the agency's actual reclamation costs and potential liabilities and strengthen its approach to monitoring field offices' implementation of the well review and bond adequacy review policies. BLM agreed with GAO's recommendations.

View [GAO-18-250](#). For more information, contact Frank Rusco at (202) 512-3841 or ruscof@gao.gov

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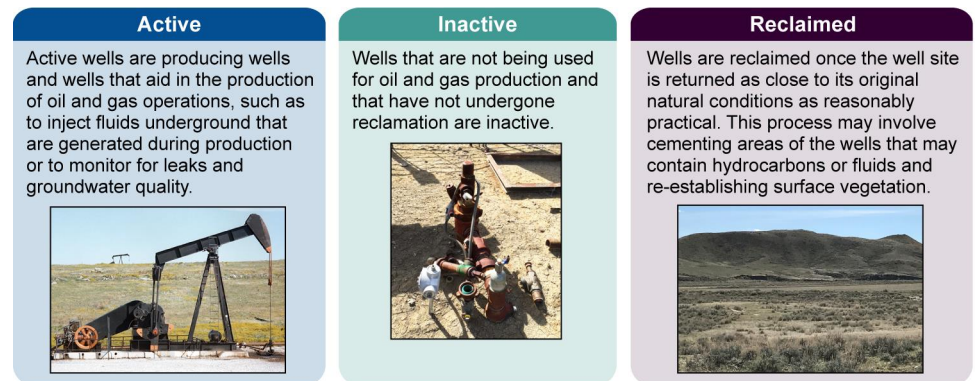
OIL AND GAS WELLS

Bureau of Land Management Needs to Improve Its Data and Oversight of Its Potential Liabilities

What GAO Found

GAO's analysis indicates that the Bureau of Land Management's (BLM) actual costs incurred and potential liabilities for reclaiming oil and gas wells have likely increased for fiscal years 2010 through 2017. However, the full extent of the increase is not known because BLM does not systematically track needed data. Based on GAO's analysis of data obtained from 13 of BLM's 33 field offices that manage oil and gas programs, the average annual reclamation cost was \$267,600, an increase compared to the \$171,500 annual average across all BLM offices that GAO reported in 2010. Similarly, GAO's analysis of BLM data found that the number of known orphaned wells, those that generally have no responsible or liable parties, for all field offices has increased from 144 in 2010 to 219 as of 2017. However, BLM's database that contains information on oil and gas wells on federal and Indian lands does not collect information on costs incurred or on potential liabilities that might result from an increase in the number of orphaned wells. Under federal internal control standards, management should use quality information to achieve the entity's objectives. Without systematically tracking such information, BLM does not have assurance that it has sufficient bonds or financial assurances to cover the costs of reclaiming orphaned wells.

Lifecycle of Oil and Gas Wells Overseen by the Bureau of Land Management (BLM)



Sources: GAO analysis of BLM information; Department of Energy (left photo); GAO (center and right photos). | GAO-18-250

GAO was unable to fully assess the extent to which BLM field and state offices have implemented the agency's policies on reviewing wells and bond adequacy in part because of deficiencies in BLM's monitoring approach. For example, reports BLM headquarters used to monitor field offices' implementation of the policies have limitations. GAO identified discrepancies between the well and bond adequacy review reports that BLM state offices submitted to headquarters and the national summary consolidating states' information. Out of 10 state offices, 3 reported a different number of reviews completed in fiscal year 2016 than what BLM reported in its fiscal year 2016 national summary. Leading practices for monitoring the implementation of agency policies call for taking steps such as collecting and analyzing data on performance indicators. Without strengthening BLM's approach to monitoring, its ability to assess field offices' reviews of all inactive wells and determine the adequacy of all bonds is limited.

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Abbreviations

AFMSS	Automated Fluid Minerals Support System
BLM	Bureau of Land Management
EPAct 2005	Energy Policy Act of 2005
OGOR	Oil and Gas Operations Report
OIG	Office of Inspector General
ONRR	Office of Natural Resources Revenue

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May 16, 2018

The Honorable Raúl M. Grijalva
Ranking Member
Committee on Natural Resources
House of Representatives

The Honorable Alan S. Lowenthal
Ranking Member
Subcommittee on Energy and Mineral Resources
Committee on Natural Resources
House of Representatives

The Honorable Jared Polis
House of Representatives

Oil and natural gas resources on federal and Indian lands are an important source of our nation's energy supply. According to the Department of the Interior's Bureau of Land Management (BLM), in fiscal year 2015, the most recent year for which data are available, wells on federal and Indian lands were responsible for providing 11 percent of the natural gas and 7 percent of the oil used in the United States. In fiscal year 2016, private entities operated about 94,000 oil and gas wells on federal lands overseen by BLM.¹ Once these wells cease production, they can become inactive. Inactive wells, which are non-producing wells, have the potential to create physical and environmental hazards if operators fail to reclaim the well sites, which may involve plugging the well, removing structures, and reshaping and revegetating the land around the wells (i.e., returning well sites as close to their original natural conditions as reasonably practical).² For example, inactive wells that are not plugged or not properly plugged can leak methane or contaminate surface water and

¹Data available from BLM on the total number of wells were limited to federal lands and excluded data on Indian lands.

²For the purposes of this report, "operator" refers to lessees, owners of operating rights, and operators of an oil or gas operation unless indicated otherwise. We use the term "reclamation" to refer to all of the actions and costs to reclaim a well site, including well plugging and surface reclamation, and to restore any lands or surface waters adversely affected by oil and gas operations. BLM differentiates between plugged wells and plugged wells in which the surface has been reclaimed in its data system.

groundwater. BLM considers both oil and gas wells on federal and Indian lands as well as the associated leased land as potential liabilities because BLM may have to pay for reclamation if the well operator fails to do so.³

BLM regulations and federal laws contain requirements aimed at managing BLM's potential oil and gas well liabilities. For example, to help ensure that operators reclaim well sites, BLM requires operators to provide a bond before drilling operations begin. Operators are required to reclaim well sites before their bonds are released. These bonds may be surety bonds, which are third-party guarantees that operators purchase from private insurance companies, or personal bonds accompanied by a financial instrument, such as a cashier's check. Inactive wells become orphaned if an operator does not perform required reclamation and if the bond is insufficient to cover reclamation expenses and there are no other responsible or liable parties to do so. In these cases, BLM is responsible for completing the reclamation of the well site and uses appropriated funds to perform reclamation.⁴ The Energy Policy Act of 2005 (EPA 2005) directs the Secretary of the Interior to establish a program to reclaim orphaned, abandoned, or idled oil and gas wells on federal lands.⁵ The act requires that the program identify persons providing a bond or other financial assurance and establish a means of recovering the costs of reclaiming wells.

³In this report, we refer to actual costs BLM incurred to reclaim orphaned wells. We refer to BLM's "potential liabilities" as the costs the agency may incur to reclaim wells that operators fail to reclaim. We do not use "potential liabilities" in the legal or financial accounting sense. We also do not address how BLM recognizes and accounts for environmental liabilities in its financial statements.

⁴BLM regulations do not assign lessee liability for reclamation or decommissioning as "joint and several" as do regulations governing offshore oil and gas operations—that is, each lessee of offshore oil and gas is liable for all decommissioning obligations that accrue on the lease during its ownership, including those that accrued prior to its ownership but had not been performed. The focus of this report is on onshore oil and gas wells. For information on the Department of the Interior's management of offshore oil and gas wells, see GAO, *Offshore Oil and Gas Resources: Actions Needed to Better Protect Against Billions of Dollars in Federal Exposure to Decommissioning Liabilities*, [GAO-16-40](#) (Washington, D.C.: Dec. 18, 2015).

⁵Specifically, the act directs the Secretary of the Interior to establish a program to remediate, reclaim, and close such wells. Pub. L. No. 109-58, § 349 *codified as amended at* 42 U.S.C. § 15907. In this report we use the term reclamation to include remediation and closing. BLM defines abandoned wells as wells that have been properly plugged and have had final reclamation completed, but have not been approved by the surface managing agency or wells that have been properly plugged but have not completed final reclamation. An idle well is a well that has been inactive for at least 7 years and has no anticipated beneficial use during the well's lease term.

We have previously reported on the actual costs BLM has incurred to reclaim orphaned wells and reported on and made recommendations related to BLM's potential oil and gas well liabilities and the agency's efforts to manage these liabilities. For example, in January 2010, we documented the amount that BLM paid to reclaim orphaned wells from 1988 through 2009 (\$3.8 million to reclaim 295 orphaned wells), and identified the number of orphaned wells that BLM had not yet reclaimed (144 orphaned wells).⁶ In addition, in February 2011, we found incomplete bond information in BLM's data system, as well as incomplete data on the number of well and bond adequacy reviews.⁷ We recommended that BLM develop a comprehensive strategy to better manage potential oil and gas well liabilities. BLM agreed and, partly in response to our recommendations, issued a well review policy in 2012 and a bond adequacy review policy in 2013.⁸

You asked us to review how BLM manages its potential oil and gas well liabilities. This report examines (1) how BLM's actual costs incurred to reclaim orphaned wells and potential oil and gas well liabilities have changed, if at all, for fiscal years 2010 through 2017 (since we last reported on these issues); (2) the extent to which BLM has implemented its 2012 well review and 2013 bond adequacy review policies; and (3) BLM officials' and stakeholders' views on what challenges, if any, BLM faces in managing its potential oil and gas well liabilities.

To examine how BLM's actual reclamation costs incurred and potential oil and gas well liabilities have changed, we analyzed data from BLM's Automated Fluid Minerals Support System (AFMSS) on oil and gas wells on federal and Indian lands, including inactive and orphaned wells—which represent potential liabilities.⁹ AFMSS provides a snapshot of the

⁶GAO, *Oil and Gas Bonds: Bonding Requirements and BLM Expenditures to Reclaim Orphaned Wells*, [GAO-10-245](#) (Washington, D.C.: Jan. 27, 2010).

⁷GAO, *Oil and Gas Bonds: BLM Needs a Comprehensive Strategy to Better Manage Potential Oil and Gas Well Liability*, [GAO-11-292](#) (Washington, D.C.: Feb. 25, 2011).

⁸On September 5, 2012, BLM issued Instruction Memorandum 2012-181, which we refer to in this report as BLM's well review policy. On July 3, 2013, BLM issued Instruction Memorandum 2013-151, which we refer to in this report as BLM's bond adequacy review policy.

⁹AFMSS is the central database that BLM uses to maintain information on oil and gas activities on federal and Indian lands. Not all data we analyzed covered the entirety of fiscal years 2010 through 2017, due to data limitations and other issues that we describe later in this report.

time that the data are queried, and so AFMSS does not include historical data over time. As such, to examine the number of inactive wells on federal and Indian lands and how long these have been inactive, we combined AFMSS data with data from the Department of the Interior's Office of Natural Resources Revenue (ONRR) Oil and Gas Operations Report's (OGOR) data system. The Department of the Interior requires monthly OGORs from operators. These OGORs document and record the volume of oil and gas produced from wells on federal and Indian lands.¹⁰ To assess the reliability of AFMSS and OGOR data, we reviewed agency documents, met with relevant agency officials, and performed electronic testing. We found the data on the number of inactive wells and how long they have been inactive and the data for the number of wells BLM has identified as orphaned to be sufficiently reliable for our purposes.

However, because AFMSS does not contain information on actual costs incurred to reclaim orphaned wells, we obtained documentation of the actual reclamation costs that 13 selected BLM field offices incurred for fiscal years 2010 through July 2017. To analyze these costs, we reviewed purchase orders and invoices. We also obtained documentation, including spreadsheets with estimated potential reclamation costs that these 13 offices faced as of July 2017.¹¹ We compared estimated costs provided by the 13 field offices to historical actual costs and determined that overall estimated reclamation costs were sufficiently reasonable for providing a sense of the general magnitude of potential costs, though we did not assess the underlying inputs or assumptions used. We selected the 13 BLM field offices because they are responsible for about 80 percent of all oil and gas wells managed by BLM.¹² We also interviewed officials from the 13 selected BLM field offices and the 6 BLM state offices associated with these field offices.¹³ Findings from the selected offices cannot be

¹⁰ONRR is responsible for managing and collecting revenues from companies that produce or extract resources on federal leases.

¹¹In some cases, officials from the selected field offices continued to provide us with updates on reclamation costs over the course of our review.

¹²The 13 selected BLM field offices are as follows: Bakersfield, Buffalo, Casper, Carlsbad, Colorado River Valley, Farmington, Division of Oil and Gas—Great Falls, North Dakota, Oklahoma, Pinedale, Rawlins, Vernal, and Worland. There are 127 BLM field offices, of which 33 manage oil and gas programs. The Division of Oil and Gas—Great Falls changed from a field office to a division in October 2016. For purposes of reporting, we refer to all 13 selected offices as field offices.

¹³The six selected BLM state offices are as follows: California, Colorado, Montana-Dakotas, New Mexico, Wyoming, and Utah.

generalized to BLM offices we did not include in our review. We also reviewed documentation provided by BLM and compared BLM's policies and procedures on recording information on actual costs incurred to reclaim orphaned wells and potential liabilities against the information and communication standard outlined in *Standards for Internal Control in the Federal Government*.¹⁴

To examine the extent to which BLM has implemented its 2012 and 2013 policies for conducting well and bond adequacy reviews, we analyzed BLM's well review and bond adequacy review reports for fiscal year 2016. We also reviewed AFMSS data on wells and bonds as of October 2017. We were unable to fully assess BLM's performance against the directives in the agency's 2012 well review and 2013 bond adequacy review policies due to limited agency data and documentation. We identified data accuracy and consistency concerns with some of the data elements in the agency's well review and bond adequacy review reports as well as some AFMSS data on wells and bonds, which we discuss later in this report. In addition, we reviewed documentation from a random, non-generalizable sample of 62 well reviews and 58 bond adequacy reviews, as reported by the 13 selected BLM field offices. Information from our documentation reviews is not generalizable to all BLM field offices but provides illustrative examples of the information contained in BLM's well and bond adequacy reviews. We compared BLM's procedures detailing how offices are to count or report a well review and procedures for maintaining data quality against the control activities standard outlined in *Standards for Internal Control in the Federal Government*.¹⁵ We also compared BLM's procedures for monitoring implementation of policy directives against leading practices for monitoring agency policies.¹⁶

To examine any challenges that BLM faces in managing its potential oil and gas well liabilities, we interviewed officials from 20 BLM offices and interviewed or obtained written responses from representatives from 8 stakeholder organizations knowledgeable about BLM's oil and gas well

¹⁴GAO, *Standards for Internal Control in the Federal Government*, [GAO-14-704G](#) (Washington, D.C.: Sept. 10, 2014).

¹⁵[GAO-14-704G](#).

¹⁶We reviewed leading practices for monitoring government programs and projects based primarily on *Standards for Internal Control in the Federal Government*, the GPRA Modernization Act of 2010, Pub. L. No. 111-352, 124 Stat. 3866 (2011); and U.S. Office of Management and Budget, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards*, 2 C.F.R. part 200.

management, including academic, environmental, industry, and state organizations.¹⁷ In addition, we spoke with knowledgeable officials from ONRR and the Department of the Interior's Office of Indian Energy and Economic Development, Division of Energy and Mineral Development. To identify knowledgeable stakeholders, we conducted a literature search, reviewed previous GAO reports, and obtained recommendations from BLM officials. We then used a technique in which the initial group of BLM officials and stakeholders we interviewed identified additional contacts to interview. From this list, we selected stakeholders who could provide a range of viewpoints. The views of the BLM officials, stakeholders, and other agency personnel we interviewed are not generalizable to BLM officials, similar stakeholders, and other agency personnel we did not interview. Lastly, we compared how BLM identified and managed certain inactive wells, as well as how BLM managed nationwide and statewide bonds, against the control activities standard outlined in *Standards for Internal Control in the Federal Government*,¹⁸ and BLM's resource management practices against certain requirements in EPA Act 2005 and leading practices by the Project Management Institute's *The Standard for Program Management*.¹⁹ (App. I lists the BLM offices and knowledgeable stakeholders we interviewed and provides additional information on our scope and methodology).

We conducted this performance audit from November 2016 to May 2018, in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

¹⁷We interviewed officials from the 13 selected BLM field offices, the 6 state offices associated with these 13 field offices, and BLM headquarters, for a total of 20 BLM offices.

¹⁸[GAO-14-704G](#).

¹⁹Project Management Institute, Inc., *The Standard for Program Management*, Fourth Edition (Newtown Square, PA: 2017). PMI® is a registered mark of the Project Management Institute, Inc.

Background

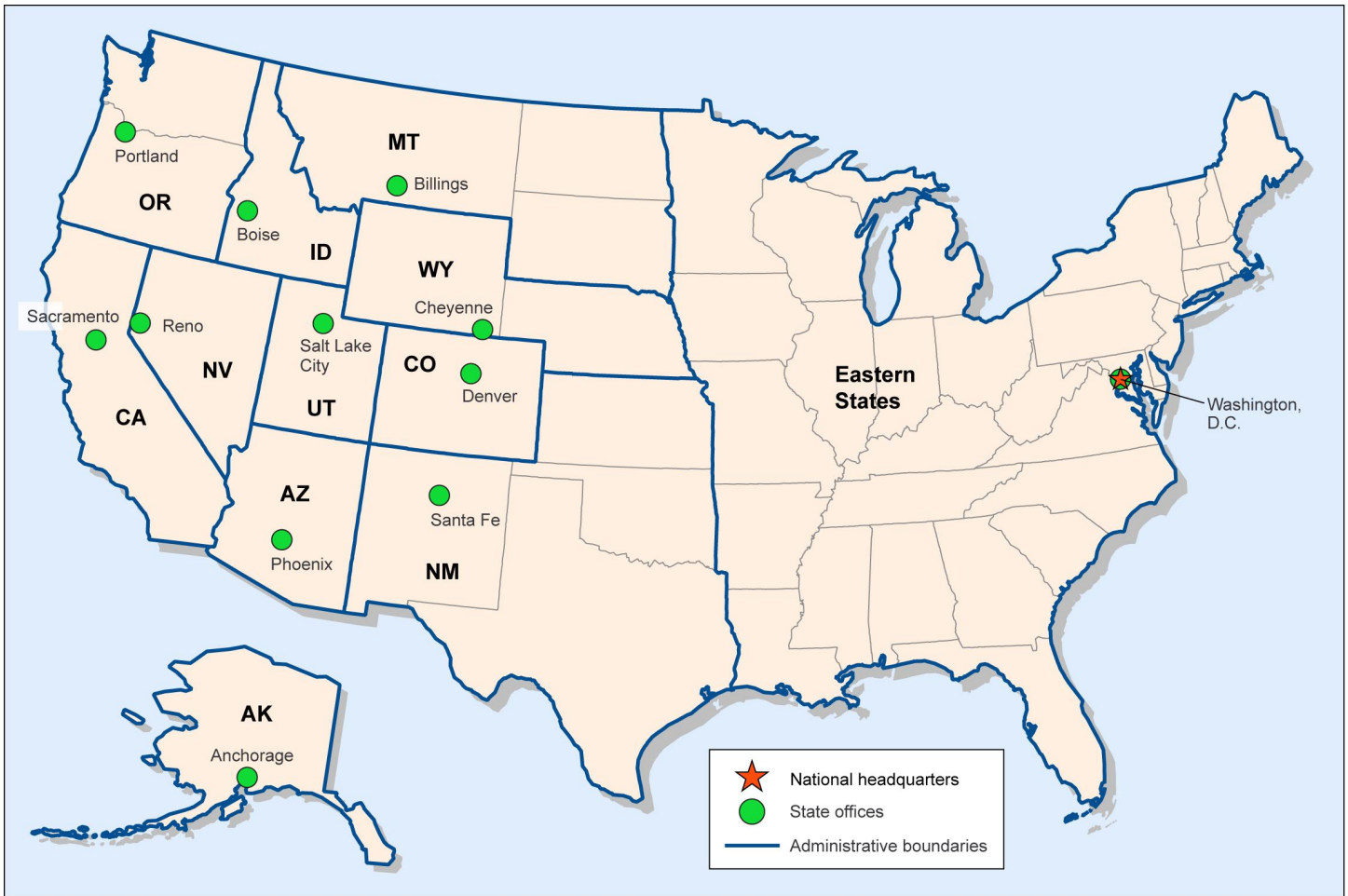
This section provides information on (1) BLM headquarters, state, and field offices; (2) the lifecycle of oil and gas wells; (3) BLM's bonding regulations; and (4) BLM's 2012 well review and 2013 bond adequacy review policies.

BLM Headquarters, State, and Field Offices

BLM is responsible for issuing leases for private entities to develop oil and gas resources on and under roughly 700-million acres of (1) BLM land, (2) other federal agencies' land, and (3) private land where the federal government owns the mineral rights. According to BLM, approximately 32-million acres were leased for oil and gas operations at the end of fiscal year 2015. BLM also oversees oil and gas operations on 56-million acres of Indian lands.

BLM administers its programs through its headquarters office in Washington, D.C.; 12 state offices; 38 district offices; and 127 field offices. Of these, 10 state offices and 33 field offices manage oil and gas programs, and these are located primarily in the Mountain West, the center of much of BLM's oil and gas development. BLM headquarters develops guidance and regulations for the agency, and the state, district, and field offices manage and implement the agency's programs. Because BLM has few acres of land in the eastern half of the United States, the Eastern States State Office, in Washington, D.C., is responsible for managing land in 31 states, and the remaining state offices generally conform to the boundaries of one or more states. Figure 1 shows the boundaries of the 12 BLM state offices.

Figure 1: Boundaries of the 12 Bureau of Land Management State Offices



Sources: GAO analysis of Bureau of Land Management data; Map Resources (map). | GAO-18-250

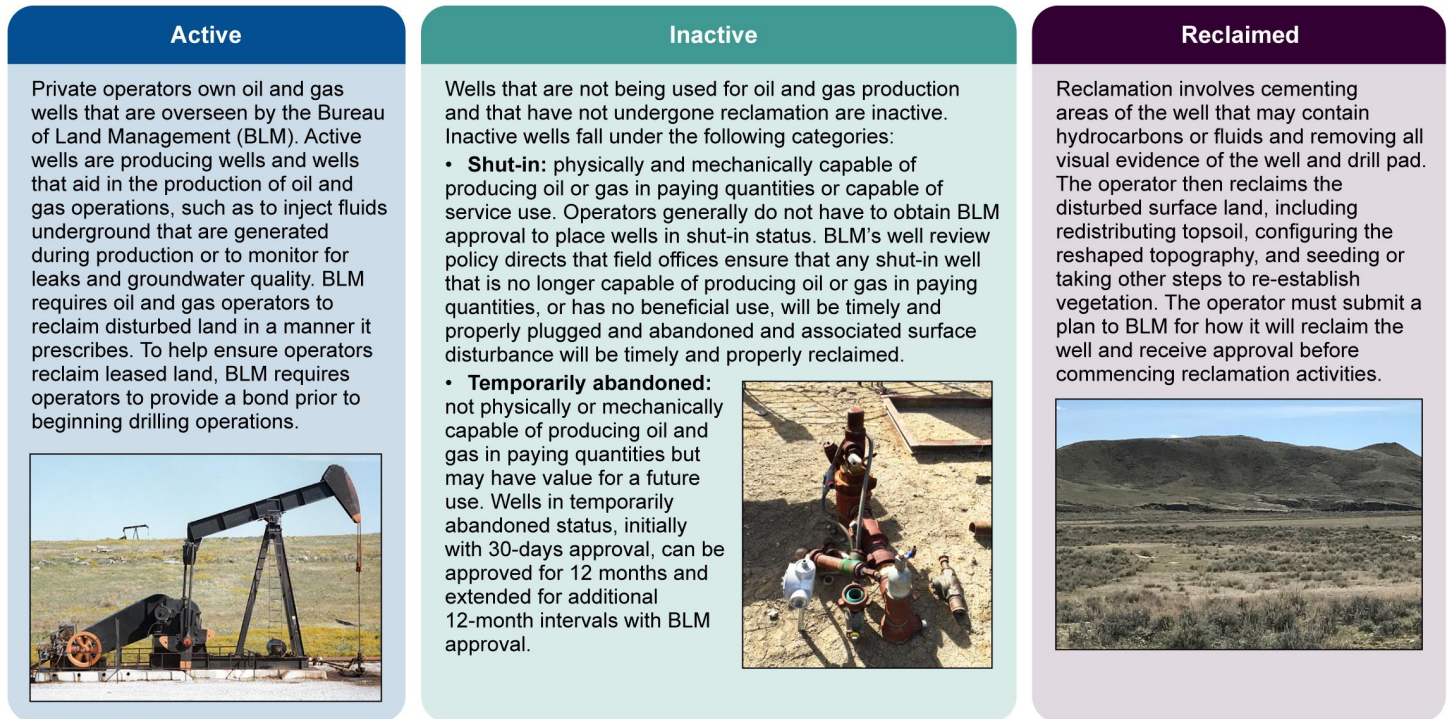
Lifecycle of Oil and Gas Wells

Once operators obtain federal oil and gas leases and drill wells, those wells can be actively producing, inactive, or reclaimed. An orphaned well is a well that BLM determined has no responsible or liable party and for

which there is insufficient bond coverage for reclamation.²⁰ This situation may occur, for example, when an operator has declared bankruptcy. Shut-in and temporarily abandoned wells are examples of types of inactive wells that can become orphaned. Shut-in wells are physically and mechanically capable of producing oil or gas in paying quantities or capable of service use. For example, an operator may put a well in shut-in status if it has not been connected to a sales line or the line is too far away and it is not economical to connect to at this time. Temporarily abandoned wells are another type of inactive well that is not physically or mechanically capable of producing oil or gas in paying quantities but that may have value for a future use. Figure 2 depicts the lifecycle of oil and gas wells overseen by BLM.

²⁰According to BLM, field offices typically go through several steps to determine that a well has no responsible or liable party and to designate a well as orphaned, including issuing *Incidents of Noncompliance* to the operator, notifying the operator of proposed civil penalties, and terminating the lease. If the operator fails to respond, the field office is to issue the same notifications to the current record title owners and require them to either comply or reclaim the well sites. The field office is to also determine whether the lease is capable of producing hydrocarbons in paying quantities. The 2012 well review policy defines production in paying quantities as covering the costs to operate the well and market the products. The phrase “market the products” is further defined as the well’s processing, measurement, and transportation costs that a prudent operator would be expected to incur in order to sell the products. The process to designate a well as orphaned can take up to several years.

Figure 2: Lifecycle of Oil and Gas Wells Overseen by the Bureau of Land Management (BLM)



Sources: GAO analysis of BLM information; Department of Energy (left photo); GAO (center and right photos). | GAO-18-250

BLM's Bonding Regulations

The Mineral Leasing Act of 1920, as amended, requires that federal regulations ensure that an adequate bond is established before operators begin preparing land for drilling to ensure complete and timely reclamation of the land. Accordingly, BLM regulations require operators to submit a bond to ensure compliance with all of the terms and conditions of the lease, including, but not limited to paying royalties, plugging wells,

and reclaiming disturbed land.²¹ BLM regulations generally require operators to have one of the following types of bond coverage:²²

- individual lease bonds, which cover all of an operator's wells under one lease, and the minimum amount is set at \$10,000;²³
- statewide bonds, which cover all of an operator's leases in one state, and the minimum amount is set at \$25,000;²⁴ or
- nationwide bonds, which cover all of an operator's leases in the United States, and the minimum amount is set at \$150,000.²⁵

BLM can accept two types of bonds: surety bonds and personal bonds. A surety bond is a third-party guarantee that an operator purchases from a private insurance company approved by the Department of the Treasury. The operator is required to pay a premium to the surety company to maintain the bond. These premiums can vary depending on various factors, including the amount of the bond and the assets and financial resources of the operator. If operators fail to reclaim the land they disturb, the surety company can either pay BLM the amount of the bond to help offset reclamation costs, or in some circumstances, BLM may allow the surety company to perform the required reclamation. A personal bond must be accompanied by one of the following financial instruments:

²¹43 C.F.R. § 3104.1(a).

²²Other bonds include both unit operator bonds that cover all operations conducted on leases within a specific unit agreement, and bonds for leases in the National Petroleum Reserve in Alaska. Unit agreements refer to multiple lessees who unite to adopt and operate under a single plan for the development of any oil or gas pool, field, or like area. The amount of a unit operator bond is determined on a case-by-case basis by BLM officials, and the minimum amount of a National Petroleum Reserve in Alaska bond is set in regulation—not less than \$100,000 for a single lease or not less than \$300,000 for a reserve-wide bond (submitted separately or as a rider to an already existing nationwide bond).

²³An individual lease bond posted by a lessee may cover all operators on a lease. Otherwise, each operator on a lease must provide a separate bond covering just the wells operated by that operator. As we previously reported, according to BLM officials, most leases have only one operator. See [GAO-11-292](#).

²⁴A statewide bond posted by a lessee can cover all well operators with the consent of the company providing the bond.

²⁵A nationwide bond posted by a lessee can cover all well operators with the consent of the company providing the bond.

- certificates of deposit issued by a financial institution whose deposits are federally insured, granting the Secretary of the Interior authority to redeem it in case of default in the performance of the terms and conditions of the lease;
- cashier's checks;
- certified checks;
- negotiable Treasury securities, including U.S. Treasury notes or bonds, with conveyance to the Secretary of the Interior to sell the security in case of default in the performance of the lease's terms and conditions; or
- irrevocable letters of credit that are issued for a specific term by a financial institution whose deposits are federally insured and meet certain conditions.

If operators fail to reclaim the land they disturb, BLM will redeem the certificate of deposit, cash the check, sell the security, or make a demand on the letter of credit to pay the reclamation costs.

BLM's 2012 Well Review and 2013 Bond Adequacy Review Policies

In response to our previous recommendations that BLM develop a comprehensive strategy to improve monitoring agency performance in conducting well reviews and bond adequacy reviews, BLM issued a 2012 well review policy and a 2013 bond adequacy review policy. These policies contain directives for conducting reviews when wells and bonds meet certain criteria. The well review policy directs:

- that field office officials evaluate every shut-in well at least once every 5 years;
- that field office officials review all wells that have been inactive for 25 years or longer and that have no anticipated beneficial use by March 29, 2013;
- that if field office officials determine that there are wells that are not capable of producing oil or gas in paying quantities or have no beneficial use, officials are to send the operator a written order directing the operator to demonstrate that these wells are capable of producing oil or gas in paying quantities or have a future beneficial use, or the operator is to submit plans to reclaim the wells;

- that each state office submit to BLM headquarters a consolidated annual report recording well reviews; and
- that the annual report identify the leases that were reviewed and the wells that were reviewed on each lease, and describe what follow-up action the field office official conducting the review performed.

The bond adequacy review policy directs:

- that field offices perform bond adequacy reviews on all bonds at least once every 5 years or whenever a bond review is warranted;
- that field offices verify and tie all federal wells to their appropriate bond number and enter bond information and bond adequacy review data into AFMSS;
- that field offices perform adequacy reviews on all bonds using specific instructions and a worksheet that assigns points for three risk factors: (1) status of wells covered by the bond (share of inactive wells, deep wells, and wells with marginal production); (2) operator-specific compliance history; and (3) reclamation stewardship diligence;
- that if the field office official performing the review determines that the bond amount is insufficient, the official is to take the necessary steps to determine the appropriate bond amount and increase the bond;
- that if the bond being reviewed is a statewide or nationwide bond, field offices are to review the wells within their field office jurisdiction; and
- that each BLM state office with an oil and gas program submit a semi-annual bond adequacy review report to BLM headquarters.

BLM's Actual Reclamation Costs and Potential Oil and Gas Well Liabilities Have Likely Increased, but the Agency Does Not Systematically Track These

BLM's actual costs incurred to reclaim orphaned wells and potential liabilities have likely increased for fiscal years 2010 through 2017 based on our analysis of available information. Precisely how the agency's actual reclamation costs and potential liabilities have changed is unclear because BLM does not systematically track them at an agency-wide level. BLM headquarters officials we interviewed told us that they did not have any information on actual costs incurred to reclaim orphaned wells and

stated that BLM's data systems were not designed to track incurred reclamation costs. In addition, AFMSS provides a snapshot of orphaned wells as identified at the time that the data are queried and does not provide data for prior time periods.

Because BLM headquarters does not record actual reclamation costs incurred at an agency-wide level, we requested documentation for the reclamation costs incurred by 13 selected BLM field offices for fiscal years 2010 through July 2017.²⁶ This documentation identified about \$2.1 million in reclamation costs incurred over this period, or an average of about \$267,600 per year by these 13 field offices. We estimate that total actual reclamation costs for all field offices are likely to be higher than this amount as other field offices may have also reclaimed orphaned wells during this period. In January 2010, we found that, for all field offices across the agency, BLM spent about \$3.8 million from fiscal years 1988 through 2009, or an average of about \$171,500 per year.²⁷ Comparing the average costs incurred by the 13 selected field offices to the data we previously reported demonstrates that actual total reclamation costs incurred have likely increased since 2010.

In addition to actual costs increasing, potential liabilities are also likely to have increased, though BLM does not systematically track information on potential liabilities that might result from an increase in the number of orphaned wells. Potential liabilities include costs that the agency may incur to reclaim wells that operators fail to reclaim. We believe these costs have also increased because the number of known orphaned wells on federal and Indian lands managed by BLM has increased. We identified changes in the number of known orphaned wells since we last reported on this matter in January 2010. In January 2010, we found that BLM had identified and was managing 144 orphaned wells.²⁸ Over half of those 144 wells (75) were still identified in AFMSS as orphaned as of July 2017, and the total number of identified orphaned wells on federal lands

²⁶Officials from selected field offices provided documentation on actual reclamation costs, including purchase orders and invoices. In some cases, officials from the selected field offices continued to provide us with updates on reclamation costs over the course of our review.

²⁷[GAO-10-245](#).

²⁸[GAO-10-245](#). In that report, we found that BLM's reclamation cost estimates were not available for all of the wells it had yet to reclaim, but BLM field office officials completed reclamation cost estimates of approximately \$1.7 million for 102 of the 144 orphaned wells.

had increased from 144 to 219.²⁹ Also, BLM officials from the 13 selected field offices identified about \$46.2 million in estimated potential reclamation costs associated with orphaned wells and inactive wells that officials deemed to be at risk of becoming orphaned.³⁰

Also concerning potential liabilities, our analysis of AFMSS data and OGOR production data through September 2016 found that BLM managed about 15,600 inactive wells, of which over 1,000 were inactive for 25 years or more. In contrast, a document provided to us by BLM headquarters indicates 325 wells had been inactive for 25 years or more as of around 2017. This document summarizes data from AFMSS queries conducted by BLM field and state offices at various times from 2013 through 2014 and queries conducted at various times from 2016 through 2017. BLM officials told us that this difference could be because AFMSS reports sometimes return conflicting data since the reports draw from current and historical statuses of wells from both AFMSS and OGOR. We combined AFMSS and OGOR data to identify the number of inactive wells because although BLM records the total number of wells on federal lands over time—a rough indicator of how potential reclamation costs may change—the agency does not systematically record more specific types of wells that may be at higher risk of becoming orphaned, such as inactive wells or wells that have been inactive for 25 years or more.

Moreover, we identified inconsistencies between the data and the document provided to us by BLM headquarters summarizing the data. For example, BLM's summary document did not include one state office, even though the data include that state office as having two wells that were inactive for 25 years or more in 2014. BLM's summary document states

²⁹As of July 2017, there were 23 wells identified as orphaned on Indian lands, in addition to the 219 orphaned wells on federal lands, for a total of 242 orphaned wells. In January 2010, the number of orphaned wells we reported on did not include wells on Indian lands. According to an official we interviewed for this report from the Department of the Interior's Division of Energy and Mineral Development, orphaned wells on Indian lands could, in certain instances, represent a potential liability to the federal government.

³⁰Officials from one field office told us that they estimated potential reclamation costs based on various factors, such as depth of the well, location, and seeding requirements. To assess the reasonableness of estimated reclamation costs, we reviewed estimates provided by officials from the selected field offices and compared those to historical actual costs that we previously reported in January 2010. We determined the overall estimated reclamation costs were sufficiently reasonable for providing a sense of the general magnitude of potential costs, though we did not assess the underlying inputs or assumptions used. Total potential reclamation costs for all field offices are likely to be higher than the costs for these 13 field offices.

that there had been a reduction in the number of wells that were inactive for 25 years or more between the times of the two data queries. However, because BLM does not systematically track the number of inactive wells, in particular those wells that are at high risk of becoming orphaned, the agency does not know how its potential liabilities may be changing. These liabilities include wells inactive for 25 years or more.

Although we were unable to determine the full extent of the increase in BLM's potential liabilities because BLM does not have the data needed for such an analysis, other factors also suggest such an increase. For example, there has been an increase in oil and gas development on federal lands, and therefore, there is the potential for an increase in the total number of wells on federal lands at risk of becoming orphaned and needing to be reclaimed in the future. BLM's portfolio of oil and gas wells on federal lands has changed over the years, based on overall trends in the oil and gas industry.³¹ According to AFMSS data provided by BLM, the total number of wells on federal lands that are capable of production increased along with rising oil and gas prices, from about 89,600 wells in fiscal year 2010 to peaking to about 94,800 wells in fiscal year 2014. As oil and gas prices declined starting in 2014, the total number of wells capable of production also declined to about 94,100 wells in fiscal year 2016.

In addition, declining oil and gas prices (by nearly half from 2010 through 2017) have placed financial stress on oil and gas operators, thereby increasing bankruptcies and the risk of wells becoming orphaned. For example, coalbed methane—natural gas extracted from coal beds—was economical to produce when natural gas prices were higher and thousands of coalbed methane wells were drilled on federal lands.³² However, coalbed methane production has declined because the spread of shale gas production has driven down natural gas prices. Officials we interviewed in one BLM field office told us that the drop in natural gas prices contributed to an increasing number of bankruptcies for operators

³¹AFMSS data provided by BLM on oil and gas development and the total number of wells were limited to federal lands and excluded data on wells on Indian lands.

³²In coalbed methane formations, gas is extracted through a process to reduce pressure called dewatering. As water is pumped out of the coal seams, reservoir pressure decreases, allowing the natural gas to release (desorb) from the surface of the coal and flow through natural fracture networks into the well. The separation of the gas from the water as well as the disposal of the water may be costly, making this process relatively expensive compared to natural gas production from formations containing less water.

of coalbed methane wells. Our analysis of AFMSS data suggests that there were thousands of inactive coalbed methane wells as of October 2017. To the extent that market conditions remain unfavorable for coalbed methane production, BLM's potential future reclamation costs may increase if any operators of these wells go bankrupt or are otherwise unwilling or unable to pay the full costs of reclamation, leaving these wells orphaned.

According to federal internal control standards, management should use quality information, which should be complete, to achieve the entity's objectives.³³ However, BLM does not systematically or comprehensively track the agency's actual costs incurred to reclaim orphaned wells and the information necessary to determine potential liabilities, including indicators of potential future reclamation costs, such as the number of inactive wells, orphaned wells, and estimates of reclamation costs for orphaned wells. BLM headquarters officials said that they sometimes check AFMSS to see how many orphaned wells there are, but without doing so systematically and recording the results of these checks, it is not possible to determine how the agency has been making progress in managing the number of orphaned wells. EPOA 2005 requires that the costs of reclaiming orphaned wells be recovered from persons or entities providing a bond or other financial assurance. Without systematically and comprehensively tracking actual reclamation costs incurred and the information necessary to determine potential liabilities including the numbers of orphaned wells and inactive wells over time, BLM cannot ensure that it has sufficient bond coverage or other financial assurances to minimize the need for taxpayers to pay for the costs of reclaiming orphaned wells.

The Extent to which BLM Implemented Its Well Review Policy and Bond Adequacy Review Policy Directives Is Unclear

The extent to which BLM has implemented its well review policy and bond adequacy review policy is unclear. Specifically, we were unable to fully assess the extent to which BLM's field and state offices have implemented directives included in these policies because of inconsistent

³³[GAO-14-704G](#).

well review information, inaccurate well and bond data in AFMSS, and inadequate monitoring of well and bond policies' implementation.

Inconsistent well review information. We were unable to fully assess the extent to which BLM implemented some directives in the well review policy because the well review information reported by field offices differed across the agency. For example, officials we interviewed at the 13 selected BLM field offices had different understandings of what specific actions constitute a well review, and therefore differed in their understanding of which wells were to be included in the annual reports for documenting well reviews. Specifically, officials from 11 out of 13 selected field offices told us that a well review consisted of actions—such as reviewing a well's status, conducting a physical inspection, and providing additional notices or letters to the well operator when a well is inactive. Officials in 2 other field offices told us that while they conduct similar actions, they consider the sole action of correcting data on a well's status to constitute a well review.³⁴ For example, a BLM official told us that one reported well review was conducted on a well that had been reclaimed in 1986 but that was not noted in AFMSS. The official told us that following this well review, they corrected the well status in AFMSS and noted that this well should not have been on the list of wells to review. While correcting well data helps improve the accuracy of AFMSS, when some offices count such corrections as well reviews and others do not, this variance results in inconsistent information in BLM's annual well review reports.

Such inconsistencies in what counts as a well review may be the result of a lack of clarity in BLM's well review policy that does not specify what constitutes a well review. Unlike the bond adequacy review policy, which provides instructions to field offices on how to conduct a bond adequacy review and directs field offices to use a specific worksheet to calculate bond adequacy, the well review policy does not contain specific

³⁴In addition, we found that the way state offices reported well reviews varied between reporting at the well completion level and reporting at the larger well level, resulting in inconsistent reporting. BLM officials explained that a well with multiple completions is equipped to produce oil or gas separately from more than one zone. A well may be shut-in or plugged in one zone but re-entered or worked over to open up production from another zone. The two zones could be totally independent of each other. Thus some wells that are producing from multiple completions are erroneously reported as shut-in if one zone is inactive. BLM officials told us that a well review is conducted at the well level, not at the completion level. BLM officials also told us that any well with a producing zone should be considered as a producing well.

instructions on what actions field offices are to take to conduct a well review, such as how to count reviews or report them. A January 2018 report by the Department of the Interior's Office of Inspector General (OIG) similarly found that BLM's well review policy does not specifically outline how to conduct and document reviews of shut-in wells (shut-in wells, as noted earlier, are inactive wells that are physically and mechanically capable of producing oil or gas in paying quantities or capable of service use).³⁵ Under federal standards for internal control, management should design control activities to achieve objectives and respond to risks; such activities include appropriate documentation of internal control in management directives, administrative policies, or operating manuals. Without developing and communicating specific instructions outlining what actions constitute a well review for annual-reporting purposes, BLM cannot have reasonable assurance that its field offices are conducting and reporting on well reviews in a consistent manner.

Inaccurate well and bond data in AFMSS. Our ability to assess the extent to which BLM implemented its well review and bond adequacy review policies was impeded by inaccuracies in certain AFMSS data. BLM officials told us that some of the data in AFMSS on wells and bonds were not reliable. For example, BLM officials told us that there may be discrepancies between the bonds listed in AFMSS and the bonds listed in the Bond and Surety System, which is BLM's official database for all oil and gas bonds. Officials told us that bonds may be missing from AFMSS because BLM field offices are responsible for manually entering the bond number from the Bond and Surety System into AFMSS.³⁶

³⁵Department of the Interior, Office of Inspector General, *Bureau of Land Management's Idle Well Program*, Report No. 2016-EAU-061 (Washington, D.C.: Jan. 17, 2018). The OIG found that BLM management could not ensure its field offices were conducting reviews appropriately for managing their idle well inventories or taking some of the steps necessary to help reduce those inventories. The OIG recommended that BLM develop and implement guidance or update its policy regarding how to conduct and document reviews of shut-in wells. BLM concurred with the recommendation. In addition, the OIG found that unlike BLM's Inspection and Enforcement strategy, which details how to prioritize wells for inspection, BLM has no clear strategy for prioritizing and conducting well reviews, resulting in inconsistencies in how field offices prioritize well reviews. The OIG recommended that BLM develop and implement a well review strategy for inactive wells consistent with BLM's Inspection and Enforcement strategy. BLM also concurred with this recommendation.

³⁶According to our analysis of AFMSS data provided by BLM officials in December 2017, about 10 percent of wells did not have an associated bond.

In addition, AFMSS data we reviewed contained other inaccuracies. Specifically, the data we reviewed contained future dates for when wells were completed, or capable of production, when some wells last changed statuses, and when some well reviews were reportedly conducted. BLM officials told us that AFMSS allows users to enter future dates, which can result in inaccurate data. Having inaccurate dates for wells' statuses and wells' reviews is problematic because it means it is not possible to assess whether reviews are being conducted as directed by BLM policy. For example, BLM's well review policy directs field offices to review each shut-in well every 5 years. BLM's performance against this directive cannot be assessed without reliable information on when wells become shut-in and when well reviews are conducted.

In written responses to our request for information, BLM officials stated that AFMSS has some edit checks, but the accuracy of the data entered into AFMSS is dependent on field office officials responsible for data entry. BLM officials stated that AFMSS has some electronic safeguards, such as certain number fields only accepting numbers. In addition, AFMSS has dropdown menus and checkboxes to narrow the parameters of certain data being entered. However, there are no edit checks to prevent field offices from inputting future status dates. In addition, BLM's data administration and management handbook establishes that data stewards are to, among other things, establish target quality levels, data quality plans (including audits and other quality assurance steps), and certify the quality of the data. BLM officials stated that they have national level AFMSS data stewards and information-technology data stewards. However, BLM officials stated that the agency has not defined AFMSS target quality levels and did not provide any data quality plans. Officials stated that BLM headquarters conducts annual data reviews and will periodically review sample well files to detect data inconsistencies and errors. In addition, BLM officials stated that field offices are responsible for certifying the accuracy of the data they enter into AFMSS, and BLM headquarters is responsible for providing oversight. However, BLM headquarters officials did not provide documentation of any data certifications or data reviews, raising concerns over the extent of this oversight.

Under federal standards for internal control, management should design control activities, including control activities used in information processing, to achieve objectives and respond to risks. Examples of such control activities include:

- conducting edit checks of data entered,

-
- accounting for transactions in numerical sequences, and
 - comparing file totals with control accounts.

Without taking steps to improve AFMSS data quality, such as by conducting more edit checks and having data stewards certify the quality of the data, BLM cannot have reasonable assurance that management has the accurate information it needs to track whether field offices are conducting well and bond adequacy reviews as intended.

In its January 2018 report, the OIG found similar issues related to the accuracy of AFMSS data.³⁷ Specifically, the OIG found that AFMSS data were unreliable due to inaccurate well status information. The OIG also found that BLM officials update AFMSS manually during a well review or as needed, as opposed to automating the data, meaning that information about the status of individual wells in AFMSS and data used for BLM's annual well report are not timely. The OIG recommended that BLM develop and implement a quality control process to identify inaccurate or incomplete data in AFMSS. BLM concurred with this recommendation.

Inadequate monitoring of well and bond policies' implementation.

BLM headquarters has taken some actions to monitor the implementation of its well and bond adequacy review policies across the agency, but its efforts have been limited, and the agency cannot ensure that its policy directives have been fully implemented. For example, BLM headquarters officials told us that headquarters relies on national well review and bond adequacy review reports to monitor the extent to which field offices are conducting well and bond adequacy reviews. These well and bond adequacy review reports provide some information on how BLM field offices conducted their reviews during a given year, but the reports as previously mentioned above have data limitations and do not consistently record a field office's progress in meeting the policies overall. For example, annual well review reports list the wells field offices reviewed in a given year, but do not compare this statistic to a list of the wells that each field office should have reviewed. Similarly, field offices' bond adequacy review reports list the bonds that the field offices reviewed in a given year. However, the reports do not compare the bonds reviewed to a list of bonds each field office should have reviewed.

³⁷Department of the Interior, Office of Inspector General, *Bureau of Land Management's Idle Well Program*, Report No. 2016-EAU-061 (Washington, D.C.: Jan. 17, 2018).

In addition, our analysis of 58 selected bonds reported as reviewed across the 13 selected field offices found that 4 bonds—about 7 percent—were not reviewed, even though field offices had reported that they had conducted the reviews.³⁸ The bond adequacy review policy directs field offices to review all bonds once every 5 years or whenever a bond review is warranted. Therefore, the bond adequacy review reports on their own provide insufficient information for BLM headquarters to monitor progress about whether field offices are fully implementing the directive.

We also identified discrepancies between the annual well review and semi-annual bond adequacy review reports that state offices submitted to BLM headquarters and the information in headquarters' national summary, which consolidates the state office information. These discrepancies limit the usefulness of the national summary for monitoring the extent to which field offices are conducting well and bond adequacy reviews as directed by the policies. For example, 3 out of 10 state offices reported a different number of bond adequacy reviews completed in their fiscal year 2016 state reports than what was reported in BLM's fiscal year 2016 national report.³⁹ Similarly, 6 out of 9 state offices reported a different number of completed well reviews in their fiscal year 2016 state report than what was reported in BLM's fiscal year 2016 national report.⁴⁰

Similarly, the OIG's January 2018 report found that BLM can only report its progress in reviewing wells that have been inactive for 25 years or more by using field office spreadsheets, coupled with AFMSS data.⁴¹ The report stated that using spreadsheets and AFMSS data have made it difficult, however, for BLM to demonstrate proper oversight. BLM's headquarters officials had to ask state office officials how many wells had

³⁸For one of the four bonds, field office officials told us that they verified that all required wells and liabilities were associated with the new bond, and that this review was not conducted in accordance with the bond adequacy review policy. We therefore did not consider it reviewed as part of our analysis.

³⁹In addition, BLM headquarters officials did not provide semi-annual bond adequacy review reports covering the first and second quarters as directed by the policy for any of the six selected state offices. Six out of the six selected state offices provided end-of-year bond adequacy review reports that, according to headquarters officials, include data for the entire year selected.

⁴⁰BLM officials did not provide a state report for Idaho.

⁴¹Department of the Interior, Office of Inspector General, *Bureau of Land Management's Idle Well Program*, Report No. 2016-EAU-061 (Washington, D.C.: Jan. 17, 2018).

been reviewed and then had to summarize those results in a spreadsheet. The OIG recommended that BLM monitor and track reviews of shut-in wells in a management system. BLM concurred and stated that AFMSS and an update to AFMSS that is under development were the appropriate databases for monitoring and tracking well reviews.

Overall, we found that BLM's current approach to monitoring the agency's progress in implementing its well and bond adequacy review policies has been limited. We reviewed leading practices for monitoring the implementation of agency policies.⁴² These practices call for, among other things: (1) periodically collecting and analyzing data on performance indicators, (2) establishing procedures for ensuring the quality of data on performance indicators, (3) documenting that monitoring plans were executed, and (4) considering performance information in making management decisions. Without taking actions to strengthen its approach to monitoring, such as collecting and analyzing data on performance indicators and ensuring the quality of those data, BLM's ability to assess the extent to which field offices are reviewing all inactive wells and determining the adequacy of all bonds is limited.

Agency Officials and Stakeholders Identified Several Challenges BLM Faces in Managing Its Potential Oil and Gas Well Liabilities

According to BLM officials and stakeholders we interviewed, BLM faces several challenges in managing its potential liabilities.⁴³ In particular, BLM officials and stakeholders told us that one challenge in managing BLM's

⁴²We reviewed leading practices for monitoring government programs and projects based primarily on *Standards for Internal Control in the Federal Government*; the GPRA Modernization Act of 2010, Pub. L. No. 111-352, 124 Stat. 3866 (2011); and U.S. Office of Management and Budget, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards*, 2 C.F.R. part 200.

⁴³We interviewed officials from 13 selected BLM field offices that manage the largest number of oil and gas wells, representing about 80 percent of all oil and gas wells managed by BLM. We also interviewed BLM officials from the 6 state offices associated with these 13 field offices, and BLM headquarters, for a total of 20 BLM offices. We also interviewed or received written responses from representatives of 8 stakeholders who were knowledgeable about BLM's oil and gas well management, including academic, environmental, industry, and state organizations. In addition, we spoke with officials from 2 agencies within the Department of the Interior. For purposes of this report, we refer to these 10 stakeholders and Department of the Interior officials collectively as stakeholders.

potential liabilities was identifying and managing shut-in wells and preventing them from becoming orphaned. Another challenge identified was limited resources and competing priorities in reclaiming orphaned wells. Other challenges to managing BLM's potential liabilities include difficulties in reviewing nationwide bonds, minimum bond amounts, and operators' unresponsiveness.

BLM Faces Challenges Identifying and Managing Shut-in Wells and Preventing Them from Becoming Orphaned

BLM officials from 6 of the 20 BLM offices—including headquarters and selected state and field offices—and 2 of the 10 stakeholders told us that one of the challenges that BLM faces in managing its potential liabilities is identifying and managing shut-in wells. As previously mentioned, shut-in wells are inactive wells that are physically and mechanically capable of producing oil or gas in paying quantities or capable of service use. Since shut-in wells may become orphaned and therefore involve BLM resources to reclaim, identifying and managing them is a way for BLM to manage its potential liabilities. BLM's 2012 well review policy directs field offices to review all shut-in wells on federal and Indian lands every 5 years and to ensure that shut-in wells no longer capable of production are reclaimed. However, operators are generally not required to notify BLM when they place a well in shut-in status. As a result, officials noted that it is difficult for field offices to identify all shut-in wells in order to review them. Officials from one field office told us that identifying when a well becomes shut-in is challenging unless inspectors are able to physically find the well.

Even when wells have been identified to BLM as shut-in, some BLM officials at selected field offices said that they have few policy tools to manage shut-in wells. In reviewing the well review policy, we found that it contains certain directives for wells that are temporarily abandoned, including that an operator is to conduct well integrity testing prior to placing a well in temporarily abandoned status and a 30-day limit for how long operators can place wells in temporarily abandoned status without receiving BLM approval. However, the policy contains no similar directives related to testing or limited time frames for placing wells in shut-in status. As a result, BLM may be unable to identify and reduce its inventory of shut-in wells, including wells that have been in shut-in status for an extended period of time.

In its January 2018 report, the OIG similarly found that the well review policy does not provide field offices the leverage to make an operator

conduct integrity testing since the policy does not have instructions on the method, frequency, and way to proceed with a notice or order.⁴⁴ Without having these test results available to them, the report found that BLM staff cannot be certain that an inactive well is environmentally sound and capable of production. The report recommended that BLM develop and implement guidance or update the well review policy to require integrity testing on inactive wells at specific periods.

Strengthening the identification and management of shut-in wells could be particularly helpful in managing BLM's potential liabilities because such wells have represented a large portion of orphaned wells. According to our analysis of AFMSS data, 138 of the 242 orphaned wells BLM manages were in shut-in status prior to becoming orphaned. Moreover, one of these wells had been in shut-in status since 1926. BLM's Colorado and New Mexico state offices have taken steps to address the challenges associated with shut-in wells becoming orphaned. For example, in September 2016, BLM's New Mexico state office issued a policy that directed operators to obtain BLM's approval in order to place a well in shut-in status for more than 90 days and directed the operator to conduct periodic testing to verify that wells that have been inactive for more than 12 consecutive months remain capable of production.⁴⁵ Under federal standards for internal control, management should design control activities—such as by clearly documenting internal control in management directives, administrative policies, or operating manuals—to achieve objectives and respond to risks.⁴⁶ Without providing greater specificity in current policy or new supplemental guidance to all BLM field offices on how to identify and manage shut-in wells, the agency is at an increased risk of having unidentified shut-in wells, and wells that remain in shut-in status for extended periods of time, leading to increased potential liabilities if such wells become orphaned.

⁴⁴Department of the Interior, Office of Inspector General, *Bureau of Land Management's Idle Well Program*, Report No. 2016-EAU-061 (Washington, D.C.: Jan. 17, 2018).

⁴⁵BLM New Mexico State Office, *New Mexico Bureau of Land Management (BLM) Policy for Temporarily Abandoned (TA) wells and Shut-in Wells (SI)*, IM NM-2016-017 (Sept. 7, 2016). Under the BLM New Mexico state office's policy, with BLM approval, an operator can maintain the well in shut-in status for up to 2 years, after which time the operator can apply for the well to be placed in temporarily abandoned status for up to 3 years. The policy allows BLM to approve wells in shut-in status for longer than 2 years on a case-by-case basis and directs the operator to conduct production testing every 5 years.

⁴⁶[GAO-14-704G](#).

BLM Faces Challenges Related to Limited Resources and Competing Priorities

BLM officials and stakeholders told us that one of the challenges BLM faces in managing its potential liabilities is limited resources, including staff and funding, and competing priorities. Specifically, officials from 14 of the 20 BLM offices and 3 of the 10 stakeholders told us that BLM field offices have limited staff and therefore prioritize other work, such as processing drilling permits, over conducting well and bond adequacy reviews, which are used to manage potential liabilities. BLM prioritizes processing drilling permits over well and bond adequacy reviews in part because the agency is required by statute to process drilling permits within 30 days of receiving a complete application. BLM headquarters officials told us that processing permits is the agency's highest priority activity and that they ask field offices for monthly progress reports with projected goals for processing permits within the next 90 days, and compare the offices' accomplishments to agency targets. BLM headquarters officials told us that prioritizing processing permits increases the workload at the national, state-office, and field-office levels.

Officials from one BLM state office told us that other challenges to managing its potential liabilities are staffing limitations and the time it takes to conduct bond adequacy reviews. These state office officials told us that bond reviews can take a long time to complete because some bonds are associated with several hundred wells. Similarly, officials from one field office stated that conducting bond adequacy reviews was time consuming and that they had only one staff member dedicated to conducting the reviews. In 2011, we found that a lack of resources and higher agency priorities were the primary reasons for why many BLM field office officials we interviewed had not conducted well and bond adequacy reviews or did not know the number of reviews they had conducted.⁴⁷

In addition, officials from 6 of the 20 BLM offices and 1 stakeholder told us that another challenge BLM faces in managing its potential liabilities is prioritizing funding to reclaim orphaned wells. For example, an official from one state office told us that securing funding to reclaim orphaned wells is a challenge because BLM does not set aside funding to pay for reclamation costs. BLM officials in one field office told us that they had not received funding from BLM headquarters specifically for reclamation

⁴⁷ [GAO-11-292](#).

in over 10 years, despite managing a growing number of orphaned wells. An official from this field office told us that without dedicated funds from BLM headquarters for this purpose, the field office was unable to reclaim the orphaned wells. In addition, officials from another field office told us that time frames for competing and awarding contracts to perform reclamation work do not coincide with securing funding from BLM headquarters, and that funding has to be obligated by the end of the fiscal year. These officials explained that in one instance, by the time they obtained funding for well reclamation, it was too late to issue a contract for the work.

EPAct 2005 requires the establishment of a program to reclaim orphaned, abandoned, or idled oil and gas wells on federal lands. As part of this program, BLM conducts well reviews and bond adequacy reviews. As discussed above, about half of the orphaned wells BLM identified in 2009 were not reclaimed and remained orphaned in 2017, and BLM officials cited funding as the issue. The Project Management Institute, Inc. has established a standard on program management.⁴⁸ Under the standard, program resource management planning ensures that all required resources are made available for managers to enable the delivery of benefits for a program. Resource management planning involves identifying existing resources and the need for additional resources. The program manager analyzes the availability of each resource, in terms of both capacity and capability, and determines how these resources will be allocated to avoid over-commitment or inadequate support. Such planning, through a resource management plan, forecasts the expected resources across a program to allow the program manager to identify potential resource shortfalls or conflicts over the use of scarce or constrained resources. The plan is also to describe guidelines for making program resource prioritization decisions and resolving resource conflicts.

Based on our discussions with BLM headquarters and field office officials, BLM does not have a resource management plan. For example, when we discussed resources for reclaiming orphaned wells with BLM headquarters officials, they told us that some BLM offices obtain funding

⁴⁸See Project Management Institute, Inc., *The Standard for Program Management*, Fourth Edition (Newtown Square, PA: 2017). PMI® is a registered mark of the Project Management Institute, Inc. PMI is a not-for-profit association that provides global standards for, among other things, project and program management. These standards are utilized worldwide and provide guidance on how to manage various aspects of projects, programs, and portfolios.

from state funds established for reclaiming orphaned wells, but not all offices have been able to access such funds. If unable to secure funding from the states, offices may request funding from BLM headquarters for reclamation, and as mentioned previously, occasionally try to use unexpended funds left at the end of a fiscal year. In its comments on the draft report, Interior noted that BLM engages in annual work planning processes designed to facilitate agency resource allocation decisions. However, BLM overall does not have information on the federal resources needed to reclaim known orphaned wells. Without developing a resource management plan addressing resources needed for conducting well and bond adequacy reviews and reclaiming orphaned wells, BLM cannot have reasonable assurance that it is achieving the program's objectives.

Agency Officials and Stakeholders Identified Several Additional Challenges BLM Faces in Managing Its Potential Liabilities

Agency officials and stakeholders cited additional challenges including BLM's ability to review nationwide bonds, minimum bond amounts, and operator unresponsiveness.

Reviewing nationwide bonds. Officials from 10 of the 20 BLM offices told us that they encountered challenges reviewing nationwide bonds because of a lack of coordination between BLM offices. The purpose section of the bond adequacy review policy states that field offices are to review bonds to determine whether the bond amount appropriately reflects the level of potential risk posed by the operator. However, the bond adequacy review policy also states in a directive that if the bond being reviewed is a nationwide or statewide bond, field offices are only to review the wells within their field office. Officials from one field office told us that without insights into an operator's activities in the jurisdictions of other field offices, bond adequacy reviews do not cover when an operator has been cited with an *Incident of Noncompliance* or the number of inactive wells the operator may have in other jurisdictions. These field office officials said that it is important to communicate and coordinate with other field offices when there is a need to require an operator to secure a larger bond. For example, to require a well operator to increase the amount of its bond, BLM must show that the operator meets the point system's threshold in the bond adequacy review's calculation

worksheet.⁴⁹ Officials in one state office told us that under a nationwide or statewide bond, an operator might not reach the agency's threshold for requiring a bond increase based on an operator's activities in the jurisdiction of one field office but may meet the threshold if BLM's bond adequacy review assessed all of the operator's operations within a state or across the nation.

Under federal standards for internal control, management should design control activities to achieve objectives and respond to risks, such as by clearly documenting internal controls, and having the documentation appear in management directives, administrative policies, or operating manuals.⁵⁰ While BLM has documented its policy, the purpose of the policy to ensure that the bond amount appropriately reflects the level of potential risk posed by the operator conflicts with a directive of the policy that offices are only to review wells within their own jurisdiction. Officials told us that BLM is currently revising the bond adequacy review policy. As the agency revises its bond adequacy review policy, BLM has the opportunity to ensure that bond adequacy reviews reflect the overall risk presented by operators. By having the policy ensure that the reviews of nationwide and statewide bonds account for overall operator risk, BLM can have better assurance that it will reduce the likelihood of using taxpayer funds to pay to reclaim orphaned wells.

Minimum bond amounts. Officials from 9 of the 20 BLM offices and 1 stakeholder told us that BLM faces challenges related to federal minimum bond amounts that in their opinion are too low. For example, officials from one BLM state office expressed concerns about operators with multiple wells covered by the minimum bond amounts, which the officials believed to be inadequate to cover total potential reclamation costs. Minimum bond amounts were set in the 1950s and 1960s and have not been updated to keep up with inflation. Specifically, the \$10,000 minimum for individual bonds was established in 1960, and the bond minimums for statewide bonds (\$25,000) and nationwide bonds (\$150,000) were established in 1951. If adjusted to 2016 dollars, these amounts would be \$63,613 for an individual bond, \$189,825 for a statewide bond, and \$1,138,952 for a nationwide bond. According to BLM headquarters officials, the agency

⁴⁹According to the bond adequacy review policy, field office officials use the point system worksheet to determine how much to adjust the bond, if necessary. For example, field office officials assign points if an operator has a history of *Incidents of Noncompliance* in the last 3 years.

⁵⁰[GAO-14-704G](#).

does not require that operators provide full liability bonds. These officials told us that they believed that most operators would not be able to remain in business if bond amounts were based on estimated total reclamation costs.

Operators' unresponsiveness. Officials from 8 of the 20 BLM offices and 2 stakeholders told us that BLM faces challenges dealing with unresponsive operators when requiring operators to increase bond amounts or issuing *Incidents of Noncompliance*. For example, officials from one BLM state office told us that operators do not always respond to letters informing them of a requirement to secure an increase in their bond. Officials from another BLM state office told us that the agency can place operators on a noncompliance list prohibiting them from holding leases or conducting operations on federal lands. However, these officials also said that they have seen operators ask relatives to obtain leases in order to circumvent such prohibitions. Officials from one field office told us of one particular instance in which BLM had spent over 7 years attempting to enforce the requirements for reclamation activities. BLM had issued an *Incident of Noncompliance*, but the operator did not respond and instead reorganized as a separate corporate entity. Subsequently, the operator went bankrupt, requiring BLM to restart the communications process from the beginning with the newly formed entity. BLM officials told us that the agency has very little leverage when companies change their name or reorganize in an attempt to evade performing required reclamation activities. BLM headquarters officials told us that working with operators was a delicate balance, especially when oil and gas prices are down, and BLM field offices would benefit from conducting periodic operator outreach to have an open dialogue with the operators.

Conclusions

BLM is responsible for overseeing oil and gas development on federal lands and for balancing the sometimes competing priorities of encouraging oil and gas development, while ensuring that when wells run dry, operators return well sites to their original natural conditions. Federal laws, regulations, and BLM's own policies call for the agency to take various actions to manage its potential oil and gas well liabilities and reclaim orphaned wells. However, BLM does not systematically or comprehensively track how much the agency has spent to reclaim orphaned wells or information, such as the number of orphaned wells and inactive wells over time, necessary to determine the agency's potential

liabilities. Without systematically or comprehensively tracking information on BLM's well reclamation costs and indicators of potential future costs, its ability to monitor its progress and plan for its potential liabilities associated with orphaned wells is limited.

In addition, implementation of BLM's well and bond adequacy review policies by the field offices is hampered by officials having different understandings of what constitutes a well review. This variance is because BLM's well review policy does not outline specific instructions on what actions field offices should take when conducting a well review. This situation results in inconsistent ways of conducting well reviews and annually reporting on them. Without developing and communicating specific instructions outlining what actions constitute a well review for annual-reporting purposes, BLM cannot have reasonable assurance that its field offices are conducting and reporting on well reviews in a consistent manner. Further, inaccuracies in certain AFMSS data, such as the dates that wells last changed statuses, raise questions about the quality of data BLM headquarters uses to determine the extent to which its offices are implementing the well review and bond adequacy review policies. BLM has not taken steps to improve AFMSS' data quality such as through the use of additional edit checks to prevent field offices from inputting erroneous data or having data stewards certify the quality of the data. Without taking such steps, BLM cannot have reasonable assurance that management has accurate information it needs to track whether field offices are conducting well and bond adequacy reviews as intended. In addition, BLM's approach to monitoring the implementation of its well and bond adequacy review policies is limited because the reports the agency uses to monitor implementation provide insufficient and at times conflicting information. Without taking actions to strengthen its approach to monitoring, such as collecting and analyzing data on performance indicators and ensuring the quality of those data, BLM's ability to assess the extent to which field offices are reviewing all inactive wells and determining the adequacy of all bonds will continue to be limited.

BLM officials and stakeholders identified several challenges that BLM faces in managing its potential oil and gas well liabilities, including identifying and managing certain inactive wells—specifically wells that are in shut-in status and that have the potential to become orphaned. This problem is because operators are generally not required to notify BLM when they place a well in shut-in status. Without providing greater specificity in current policy or supplemental guidance to all field offices, the federal government may face increased potential liabilities if shut-in wells become orphaned. In addition, BLM faces challenges related to

limited resources and competing priorities, such as not setting aside funding to pay for reclaiming orphaned wells. Without developing a resource management plan addressing resources needed for conducting well and bond adequacy reviews and reclaiming orphaned wells, BLM cannot have reasonable assurance that it is achieving the program's objectives. BLM also faces challenges related to conducting nationwide and statewide bond adequacy reviews because the bond adequacy review policy overall contains conflicting information on how field offices are to review bonds' adequacy. BLM is currently revising the bond adequacy review policy and has an opportunity to ensure that the reviews of nationwide and statewide bonds reflect operators' overall risks.

Recommendations for Executive Action

We are making the following seven recommendations to BLM:

The Director of BLM should systematically and comprehensively track the actual costs BLM incurs when reclaiming orphaned wells and the information, including the number of orphaned wells and inactive wells over time, necessary to determine the agency's potential liabilities. (Recommendation 1)

The Director of BLM should develop and communicate specific instructions on what actions constitute a well review for annual-reporting purposes. (Recommendation 2)

The Director of BLM should take steps to improve AFMSS data quality, for example, by conducting more edit checks and by having data stewards certify the quality of the data. (Recommendation 3)

The Director of BLM should strengthen its approach to monitoring field offices' implementation of the well review and bond adequacy review policies, such as by collecting and analyzing data on performance indicators and ensuring the quality of those data. (Recommendation 4)

The Director of BLM should provide greater specificity in current policy or supplemental guidance to all BLM field offices on how to identify and manage all shut-in wells. (Recommendation 5)

The Director of BLM should develop a resource management plan addressing resources needed for conducting well and bond adequacy reviews and reclaiming orphaned wells. (Recommendation 6)

The Director of BLM should, in revising the bond adequacy review policy, ensure that the reviews of nationwide and statewide bonds reflect the overall risk presented by operators. (Recommendation 7)

Agency Comments and Our Evaluation

We provided a draft of this report to the Department of the Interior for review and comment. In its comments, reproduced in appendix II, Interior generally concurred with our recommendations. Interior stated that, following GAO's 2011 report on potential oil and gas well liabilities, BLM implemented comprehensive policies to better manage and minimize the risks of idle and orphaned wells on federal and Indian lands. Interior agreed that there are areas where BLM can improve the accuracy of its data and further reduce the risks associated with idle and orphaned wells. Interior indicated that it will update and improve its existing policies and guidance consistent with the findings and recommendations in our report.

In response to our sixth recommendation—that BLM develop a resource management plan addressing resources needed for conducting well and bond adequacy reviews and reclaiming orphaned wells—Interior stated that BLM conducts annual work planning processes which facilitate decisions regarding the allocation of agency resources and requested additional information clarifying how our recommendation fits into or differs from these. We expanded our description of resource management planning and added language regarding BLM's annual work planning processes to the report. However, we were not able to review the scope or adequacy of BLM's annual work planning processes as they relate to resource planning for well and bond reviews and reclaiming orphaned wells for this report.

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

If you or your staff have any questions about this report, please contact me at (202) 512-3841 or ruscof@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in appendix III.

A handwritten signature in black ink that reads "Frank Rusco". The signature is written in a cursive style with a long, sweeping horizontal line extending to the right from the end of the name.

Frank Rusco
Director, Natural Resources and Environment

Appendix I: Objectives, Scope, and Methodology

This report examines (1) how BLM’s actual costs incurred to reclaim orphaned wells and potential oil and gas well liabilities have changed, if at all, for fiscal years 2010 through 2017; (2) the extent to which BLM has implemented its 2012 well review and 2013 bond adequacy review policies; and (3) BLM officials’ and stakeholders’ views on what challenges, if any, BLM faces in managing its potential liabilities.

To examine how BLM’s actual reclamation costs incurred and potential oil and gas well liabilities have changed, we analyzed data in BLM’s Automated Fluid Minerals Support System (AFMSS) on oil and gas wells on federal and Indian lands, including inactive wells—which represent potential liabilities.¹ We reviewed documentation provided by BLM and compared BLM’s policies and procedures on recording information on actual costs incurred to reclaim orphaned wells and potential liabilities against the information and communication standard outlined in *Standards for Internal Control in the Federal Government*.² We selected and interviewed officials from 13 BLM field offices because, according to fiscal year 2016 data from the Department of the Interior’s Office of Natural Resources Revenue (ONRR) Oil and Gas Operations Report (OGOR) data system we analyzed, these offices were responsible for about 80 percent of all oil and gas wells managed by BLM.³ In addition, we interviewed officials from the 6 BLM state offices associated with the 13 selected field offices (see table 1). Findings from selected offices cannot be generalized to those we did not include in our review.

¹AFMSS is the central database that BLM uses to maintain information on oil and gas activities on federal and Indian lands. Not all data we analyzed covered the entirety of the fiscal years 2010 through 2017, due to data limitations and other issues that we describe in this report.

²[GAO-14-704G](#).

³There are 127 BLM field offices, of which 33 manage oil and gas programs.

Table 1: Selected Bureau of Land Management (BLM) State Offices and Field Offices

BLM Office
California State Office
Bakersfield Field Office
Colorado State Office
Colorado River Valley Field Office
Montana-Dakotas State Office
North Dakota Field Office
Division of Oil and Gas—Great Falls ^a
New Mexico State Office
Carlsbad Field Office ^b
Farmington Field Office
Oklahoma Field Office
Wyoming State Office
Buffalo Field Office
Casper Field Office
Pinedale Field Office
Rawlins Field Office
Worland Field Office
Utah State Office
Vernal Field Office

Source: GAO. | GAO-18-250

^aFormerly Great Falls Field Office.

^bCarlsbad includes the Hobbs field office because Carlsbad manages the Hobbs field office's wells in addition to its own.

However, because AFMSS does not contain information on actual costs incurred to reclaim orphaned wells, we obtained documentation of the actual reclamation costs that 13 selected BLM field offices incurred for fiscal years 2010 through July 2017. To analyze these costs, we reviewed purchase orders, invoices, and other documentation for actual reclamation work performed. We also obtained documentation, including spreadsheets with estimated potential reclamation costs that these 13 selected field offices faced as of July 2017.⁴ To assess the reasonableness of estimated reclamation costs, we reviewed estimates provided by officials from the selected field offices and compared those to

⁴In some cases, officials from the selected field offices continued to provide us with updates on reclamation costs over the course of our review.

historical actual costs that we previously reported in January 2010. We determined the overall estimated reclamation costs were sufficiently reasonable for providing a sense of the general magnitude of potential costs, though we did not assess the underlying inputs or assumptions used. The information we received is not generalizable to reclamation costs for other BLM offices that we did not review.

We also analyzed AFMSS data on the number of wells capable of production on federal lands from fiscal years 2010 to 2016. The AFMSS database provides a snapshot of the time that the data are queried, and so does not include historical data over time. As such, to examine the number of inactive wells on federal and Indian lands and how long these have been inactive, we combined AFMSS data with data from the OGOR data system through September 2016. The Department of the Interior requires monthly OGORs from operators, which document and record the volume of oil and gas produced from wells on federal and Indian lands. From AFMSS, we identified the appropriate population of wells by selecting wells only located on federal and Indian lands, and excluded wells that were on state or private lands. Because we did not find data in AFMSS on how long a well had been in its last recorded status to be reliable, we analyzed production records from the OGOR data system. We also excluded data on wells that were in statuses in which there was no associated potential liability, such as wells pending an application for permit to drill.

For each reporting date through September 2016, we aggregated data from multiple well completions to the 10-digit unique well identifier level. We then matched the unique well identifiers in AFMSS to those listed in the OGOR data system to enumerate inactive wells by duration of inactivity. For each reporting date, we designated wells with at least one completion showing non-zero production volumes⁵ or in drilling or monitoring status in the OGOR data system as active. We also designated a well as active at a certain date if AFMSS data indicated any of its completions were completed on that date. Otherwise we deemed wells where all completions had zero production reporting on a date as inactive for the corresponding period. In some cases, (i) no OGOR records existed with non-zero production volumes or drilling or monitoring well status and (ii) no AFMSS well completion date was provided, and so we calculated inactivity by using the earliest record date for that well in

⁵We considered gas, oil, water, and injection volumes.

the OGOR data set. We discussed our methodology for calculating the number of wells with BLM officials. We compared the number of inactive wells from our analysis to those reported in BLM national and state reports to identify data inconsistencies. In addition, we analyzed AFMSS reports, as of July 2017, to analyze data on the number of orphaned wells. To assess the reliability of OGOR and AFMSS data, we reviewed agency documents, met with relevant agency officials, and performed electronic testing by verifying, for example, missing or out-of-range data values. We found the data for the number of inactive wells and how long they have been inactive as well as the data for the number of wells BLM has identified as orphaned to be sufficiently reliable for our purposes.

To determine the extent to which BLM has implemented its 2012 and 2013 policies for conducting well reviews and bond adequacy reviews, we reviewed applicable laws and analyzed the well review and bond adequacy review policies.⁶ We reviewed information contained in BLM's well review and bond adequacy review reports for fiscal year 2016 as well as data generated through AFMSS on bonds and wells as of October 2017. We were unable to fully assess BLM's performance against the directives in the agency's 2012 well review and 2013 bond adequacy review policies due to limited agency data and documentation as discussed in the report. Specifically, we identified data accuracy and consistency concerns with some of the data elements in the agency's well review and bond adequacy review reports as well as some AFMSS data on wells and bonds, which we discuss in this report. We performed electronic testing by verifying out-of-range values, such as dates of well reviews conducted that were listed as being in the future. We also interviewed officials from BLM headquarters, the 13 selected field offices, and the 6 associated BLM state offices, to obtain information on the extent to which the selected offices implemented the 2012 and 2013 policy directives. We compared BLM's procedures detailing how field offices are to count or report a well review as well as procedures for maintaining data quality against the control activities standard outlined in *Standards for Internal Control in the Federal Government*.⁷ We also

⁶We examined BLM's well review policy, Instruction Memorandum 2012-181, issued on September 5, 2012; we also examined BLM's bond adequacy review policy, Instruction Memorandum No. 2013-151, issued on July 3, 2013.

⁷[GAO-14-704G](#).

compared BLM's procedures for monitoring implementation of policy directives against leading practices for monitoring agency policies.⁸

We also reviewed documentation for a random, non-generalizable sample of 62 well reviews and 58 bond adequacy reviews, as reported by the 13 selected BLM field offices, for a total of 120 reviews. A GAO statistician selected a random sample of five well reviews for unique well numbers and five bond reviews of unique bond numbers that the 13 selected field offices had reviewed from the fiscal year 2016 well report and bond adequacy report.⁹ Due to variations in field offices' reporting, some well and bond reviews from prior fiscal years were also included in the random selection. The Farmington field office also did not conduct any bond adequacy reviews in fiscal year 2016, and so we included bond reviews that the field office conducted in fiscal year 2015 in the random selection. In addition, the Pinedale and Rawlins field offices had not conducted any bond adequacy reviews in fiscal year 2016. As a result, we randomly selected additional reviews from fiscal year 2015 for those field offices. The Pinedale, Rawlins, and Colorado River Valley field offices conducted less than 5 bond reviews in each office in that fiscal year, so we selected and reviewed documentation in support of only those reviews they had conducted. We assessed the documentation to determine whether or not field offices conducted reviews and complied with selected directives of the well review and bond adequacy review policies. Information from our documentation reviews is not generalizable to all BLM field offices but provides illustrative examples of the information contained in BLM well and bond adequacy reviews.

To examine BLM officials' and stakeholders' views on what challenges, if any, BLM faces in managing its potential oil and gas well liabilities, we conducted semi-structured interviews with officials from BLM

⁸We reviewed leading practices for monitoring government programs and projects based primarily on *Standards for Internal Control in the Federal Government*, the GPRA Modernization Act of 2010, Pub. L. No. 111-352, 124 Stat. 3866 (2011); and U.S. Office of Management and Budget, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards*, 2 C.F.R. part 200.

⁹We originally developed a data collection instrument to use when reviewing physical files, but following initial testing at two field offices in Wyoming, determined that the physical files for the selected well reviews did not have significant documentation. The team instead selected the random, non-generalizable sample of five well reviews and five bond reviews conducted by each field office in fiscal year 2016, and requested electronic supporting documentation on those reviews based on the unique well number and unique bond number attached to those reviews.

headquarters, the 13 selected BLM field offices, and the 6 BLM state offices associated with these 13 field offices. In addition, we interviewed or obtained written responses from a standard set of questions from 8 representatives of stakeholder organizations. These representatives were knowledgeable about BLM's oil and gas well management, and included academic, environmental, industry, and state organizations (see table 2). In addition, we spoke with knowledgeable officials from the Department of the Interior's Office of Natural Resources Revenue (ONRR) and the Department of the Interior's Office of Indian Energy and Economic Development, Division of Energy and Mineral Development.¹⁰ To identify knowledgeable stakeholders, we conducted a literature search, reviewed previous GAO reports, and obtained recommendations from BLM officials and stakeholders using a snowball technique in which an initial group of BLM officials and stakeholders we interviewed identified additional contacts to interview. From this list, we selected stakeholders who could provide a range of viewpoints. We generally asked the same questions during each interview but also discussed individual stakeholders' perspectives, as appropriate. In our interviews, we asked officials and stakeholders what challenges, if any, BLM offices face in managing their potential oil and gas well liability. We also asked what challenges, if any, BLM offices face in conducting well reviews and bond adequacy reviews. To identify the challenges identified most often in the interviews, two analysts developed categories of challenges identified by BLM offices and stakeholders, and each analyst independently determined whether each BLM office and stakeholder had identified challenges that fit into these categories. The two analysts discussed and resolved any differences in their coding. The views of the BLM officials, stakeholders, and other agency personnel we interviewed are not generalizable to BLM officials, similar stakeholders, and other agency personnel who we did not interview. Lastly, we compared how BLM identified and managed certain inactive wells, as well as how it managed nationwide and statewide bonds, against the control activities standard outlined in *Standards for Internal Control in the Federal Government*¹¹ and BLM's resource management practices against certain requirements in the Energy Policy

¹⁰For purposes of this report, we refer to these 10 stakeholders and Department of the Interior officials collectively as stakeholders.

¹¹[GAO-14-704G](#).

Act of 2005 (EPAAct 2005) and leading practices by the Project Management Institute in *The Standard for Program Management*.¹²

Table 2: Stakeholders and Other Agencies GAO Interviewed

Stakeholders and other agencies within the Department of the Interior	Category
Colorado Oil and Gas Conservation Commission	State
Department of the Interior, Office of Indian Energy and Economic Development, Division of Energy and Mineral Development	Other
Department of the Interior, Office of Natural Resources Revenue	Other
Environmental Defense Fund	Environmental
Interstate Oil and Gas Compact Commission	State
Petroleum Association of Wyoming ^a	Industry
Professor Lucas Davis, University of California-Berkeley	Academia
Resources for the Future	Environmental
Western Organization of Resource Councils	Environmental
Wyoming Oil and Gas Conservation Commission	State

Source: GAO. | GAO-18-250

^aRepresentatives from the Petroleum Association of Wyoming declined to meet because they were not knowledgeable about all our questions. They instead provided written comments to selected questions they felt they could answer. We also contacted the Independent Petroleum Association of America and Western Energy Alliance, but did not interview representatives from either organization because representatives told us that they were not knowledgeable about BLM's management of orphaned and inactive wells.

We conducted this performance audit from November 2016 to May 2018, in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

¹²Project Management Institute, Inc., *The Standard for Program Management*, Fourth Edition (Newtown Square, PA: 2017). PMI® is a registered mark of the Project Management Institute, Inc.

Appendix II: Comments from the Department of the Interior



United States Department of the Interior

OFFICE OF THE SECRETARY
Washington, DC 20240

APR 30 2018

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

Dear Mr. Rusco:

Thank you for giving the Department of the Interior (Department) the opportunity to review and comment on the draft Government Accountability Office (GAO) report entitled, *Federal Oil and Gas Wells: Bureau of Land Management Needs Better Data and Oversight of Its Potential Liabilities* (GAO-18-250).

The Department is committed to sustainably developing oil and gas resources on Federal and Indian lands in a manner that recognizes the need for domestic sources of minerals resources, while minimizing potential liabilities to the United States Government. Following the 2011 GAO Report *Oil and Gas Bonds: BLM needs a Comprehensive Strategy to Better Manage Potential Oil and Gas Liability*, the Bureau of Land Management (BLM) implemented comprehensive policies to better manage and minimize the risks of idle and orphan wells on Federal and Indian lands. While these policies have provided an appropriate framework for managing potential liabilities from oil and gas wells, we agree that there are areas where the BLM can improve the accuracy of its data on non-operational wells and further reduce the risks associated with idle and orphan oil and gas wells on Federal and Indian lands. The BLM will update and improve its existing policies and guidance, while pursuing technological enhancements consistent with the audit findings and recommendations in this draft report.

The GAO issued seven recommendations in response to its overall findings. The Department generally agrees with the findings and concurs with the recommendations. However, we request clarification on Recommendation 6 as it relates to the term "resource management plan."

Below is a summary of the BLM's response to the recommendations and the actions planned to implement the recommendations.

Recommendation 1: The Director of BLM should systematically and comprehensively track the actual costs BLM incurs when reclaiming orphaned wells and information

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necessary to determine the agency's potential liabilities, including the number of orphaned wells and inactive wells over time.

Response: The BLM concurs with this recommendation. The BLM will expand existing reporting capabilities to provide the ability to track orphaned and inactive well records over time. The BLM will also develop a new funding code to track the costs incurred when reclaiming orphaned wells. The BLM will issue written guidance to state and field offices in order to implement the bureau-wide use of the code(s) to track the costs incurred reclaiming orphaned wells.

Recommendation 2: The Director of BLM should develop and communicate specific instructions on what actions constitute a well review for annual reporting purposes.

Response: The BLM concurs with this recommendation. The BLM will provide additional guidance by updating IM 2012-181 *Idle Well Review and Data Entry into the Automated Fluid Minerals Support System (AFMSS)*, to further bolster and communicate appropriate actions for well reviews. While the BLM believes that its existing policies provide considerable guidance to state and field offices on how to conduct and report non-operational well reviews, the BLM also believes that it would be beneficial to develop and issue written policy updating and replacing IM 2012-181. This new and updated guidance will provide state and field offices additional clarification as to what actions constitute a well review. The BLM is also currently pursuing system enhancements in the updated AFMSS 2 database that will improve the quality and reporting capabilities of its non-operational well data, which will also be incorporated into the written policy that updates and replaces IM 2012-181.

Recommendation 3: The Director of BLM should take steps to improve AFMSS data quality by, for example, conducting more edit checks, and having data stewards certify the quality of the data.

Response: The BLM concurs with this recommendation. The BLM currently performs AFMSS 1 and AFMSS 2 data quality checks on an ad hoc basis. The BLM will take additional steps to further improve AFMSS 1 and AFMSS 2 data quality by developing guidance on the frequency and standard procedures for data validation review and certification which will also be part of the IM-2012-181 update.

Recommendation 4: The Director of BLM should strengthen its approach to monitoring field offices' implementation of the well review and bond adequacy review policies, such as by collecting and analyzing performance indicators and ensuring the quality of those data.

Response: The BLM concurs with this recommendation. The BLM will update its current data review processes by developing guidance on the frequency and standard procedures for data validation reviews and provide more detailed instructions on documenting idle well and bond adequacy reviews. Those actions, combined with AFMSS 2 system enhancements that will improve the data quality and reporting capabilities, will strengthen the BLM's monitoring of the implementation of its well review and bond adequacy review policies.

Recommendation 5: The Director of BLM should provide greater specificity in current policy or supplemental guidance to all BLM field offices on how to identify and manage all shut-in wells.

Response: The BLM concurs with this recommendation. As previously stated in response to Recommendation 2, IM 2012-181 already provides BLM state and field offices with guidance on reviewing and reporting reviews of wells, including those in shut-in (SI) status. However, the BLM will issue new guidance on conducting, tracking, and reporting SI well reviews. As part of the ongoing AFMSS 2 database enhancements, the BLM will improve the quality and reporting capabilities of its SI well data, which will also be incorporated in the new guidance replacing IM 2012-181.

Recommendation 6: The Director of BLM should develop a resource management plan addressing resources needed for conducting well and bond adequacy reviews and reclaiming orphaned wells.

Response: The BLM conducts annual work planning processes which facilitates the decisions regarding the allocation of agency resources. The BLM is requesting additional information regarding the “resource management plan” envisioned and recommended by the GAO to clarify how the suggested plan fits into or differs from the established Bureau and Department planning processes.

Recommendation 7: The Director of BLM should, in revising the bond adequacy review policy, ensure that the reviews of nationwide and statewide bonds reflect the overall risk presented by operators.

Response: The BLM concurs with this recommendation. The BLM will issue new guidance replacing the expired IM 2013-151 entitled, “Oil and Gas Bond Adequacy Reviews.” This new guidance will ensure that the reviews account for the overall operator risk by clarifying the circumstances which warrant the adjustment of bond amounts.

If you have any questions about this response, please contact Timothy Spisak, Acting Assistant Director – Energy, Minerals and Realty Management at (202) 208-4201.

Sincerely,



Joseph R. Balash
Assistant Secretary
Land and Minerals Management

Appendix III: GAO Contact and Staff Acknowledgments

GAO Contact

Frank Rusco, (202) 512-3841 or ruscof@gao.gov

Staff Acknowledgments

In addition to the contact named above, Quindi Franco (Assistant Director), Marie Bancroft (Analyst-in-Charge), Richard Burkard, John Delicath, Cindy Gilbert, Shylene Mata, Celia Mendive, Dan Royer, Barbara Timmerman, Carolyn Voltz, Jack Wang, and Jina Yu made key contributions to this report.

Appendix IV: Accessible Data

Agency Comment Letter

Accessible Text for Appendix II Comments from the
Department of the Interior

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United States Department of the Interior

OFFICE OF THE SECRETARY

Washington, DC 20240

APR 30 2018

Mr. Frank Rusco

Director

Natural Resources and Environment

U.S. Government Accountability Office

441 G Street NW

Washington, DC 20548

Dear Mr. Rusco:

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potential liabilities to the United States Government. Following the 2011 GAO Report *Oil and Gas Bonds: BLM needs a Comprehensive Strategy to Better Manage Potential Oil and Gas Liability*, the Bureau of Land Management (BLM) implemented comprehensive policies to better manage and minimize the risks of idle and orphan wells on Federal and Indian lands. While these policies have provided an appropriate framework for managing potential liabilities from oil and gas wells, we agree that there are areas where the BLM can improve the accuracy of its data on non-operational wells and further reduce the risks associated with idle and orphan oil and gas wells on Federal and Indian lands. The BLM will update and improve its existing policies and guidance, while pursuing technological enhancements consistent with the audit findings and recommendations in this draft report.

The GAO issued seven recommendations in response to its overall findings. The Department generally agrees with the findings and concurs with the recommendations. However, we request clarification on Recommendation 6 as it relates to the term “resource management plan.”

Below is a summary of the BLM's response to the recommendations and the actions planned to implement the recommendations.

Recommendation 1: The Director of BLM should systematically and comprehensively track the actual costs BLM incurs when reclaiming orphaned wells and information

Page 2

necessary to determine the agency's potential liabilities, including the number of orphaned wells and inactive wells over time.

Response: The BLM concurs with this recommendation. The BLM will expand existing reporting capabilities to provide the ability to track orphaned and inactive well records over time. The BLM will also develop a new funding code to track the costs incurred when reclaiming orphaned wells. The BLM will issue written guidance to state and field offices in order to implement the bureau-wide use of the code(s) to track the costs incurred reclaiming orphaned wells.

Recommendation 2: The Director of BLM should develop and communicate specific instructions on what actions constitute a well review for annual reporting purposes.

Response: The BLM concurs with this recommendation. The BLM will provide additional guidance by updating IM 2012-181 *Idle Well Review and Data Entry into the Automated Fluid Minerals Support System (AFMSS)*, to further bolster and communicate appropriate actions for well reviews. While the BLM believes that its existing policies provide considerable guidance to state and field offices on how to conduct and report non-operational well reviews, the BLM also believes that it would be beneficial to develop and issue written policy updating and replacing IM 2012-181. This new and updated guidance will provide state and field offices additional clarification as to what actions constitute a well review. The BLM is also currently pursuing system enhancements in the updated AFMSS 2 database that will improve the quality and reporting capabilities of its non-operational well data, which will also be incorporated into the written policy that updates and replaces IM 2012-181.

Recommendation 3: The Director of BLM should take steps to improve AFMSS data quality by, for example, conducting more edit checks, and having data stewards certify the quality of the data.

Response: The BLM concurs with this recommendation. The BLM currently performs AFMSS 1 and AFMSS 2 data quality checks on an ad hoc basis. The BLM will take additional steps to further improve AFMSS 1 and AFMSS 2 data quality by developing guidance on the frequency and standard procedures for data validation review and certification which will also be part of the IM-2012-181 update.

Recommendation 4: The Director of BLM should strengthen its approach to monitoring field offices' implementation of the well review and bond adequacy review policies, such as by collecting and analyzing performance indicators and ensuring the quality of those data.

Response: The BLM concurs with this recommendation. The BLM will update its current data review processes by developing guidance on the frequency and standard procedures for data validation reviews and provide more detailed instructions on documenting idle well and bond adequacy reviews. Those actions, combined with AFMSS 2 system enhancements that will improve the data quality and reporting capabilities, will strengthen the BLM's monitoring of the implementation of its well review and bond adequacy review policies.

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Recommendation 5: The Director of BLM should provide greater specificity in current policy or supplemental guidance to all BLM field offices on how to identify and manage all shut-in wells.

Response: The BLM concurs with this recommendation. As previously stated in response to Recommendation 2, IM 2012-181 already provides BLM state and field offices with guidance on reviewing and reporting reviews of wells, including those in shut-in (SI) status. However, the BLM will issue new guidance on conducting, tracking, and reporting SI well reviews. As part of the ongoing AFMSS 2 database enhancements, the BLM will improve the quality and reporting capabilities of its SI well data, which will also be incorporated in the new guidance replacing IM 2012-181.

Recommendation 6: The Director of BLM should develop a resource management plan addressing resources needed for conducting well and bond adequacy reviews and reclaiming orphaned wells.

Response: The BLM conducts annual work planning processes which facilitates the decisions regarding the allocation of agency resources. The BLM is requesting additional information regarding the "resource management plan" envisioned and recommended by the GAO to clarify how the suggested plan fits into or differs from the established Bureau and Department planning processes.

Recommendation 7: The Director of BLM should, in revising the bond adequacy review policy, ensure that the reviews of nationwide and statewide bonds reflect the overall risk presented by operators.

Response: The BLM concurs with this recommendation. The BLM will issue new guidance replacing the expired IM 2013-151 entitled, "Oil and Gas Bond Adequacy Reviews." This new guidance will ensure that the reviews account for the overall operator risk by clarifying the circumstances which warrant the adjustment of bond amounts.

If you have any questions about this response, please contact Timothy Spisak, Acting Assistant Director - Energy, Minerals and Realty Management at (202) 208-4201.

Sincerely

Joseph R. Balash,
Assistant Secretary
Land and Minerals Management

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