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Report to Congressional Requesters

February 2011

OIL AND GAS BONDS

BLM Needs a Comprehensive Strategy to Better Manage Potential Oil and Gas Well Liability

GAO-11-292

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Highlights

Highlights of GAO-11-292, a report to congressional requesters

Why GAO Did This Study

The number of oil and gas wells on leased federal land has increased dramatically. To help manage the environmental impacts of these wells, the Department of the Interior's (Interior) Bureau of Land Management (BLM) requires oil and gas operators to reclaim disturbed land in a manner it prescribes. To help ensure operators reclaim leased land, BLM requires them to provide a bond before beginning drilling operations. BLM refers to oil and gas wells and leased land that will require reclamation as potential liabilities because BLM may have to pay for reclamation if the operators fail to do so. GAO was asked to determine (1) BLM's policies for managing potential federal oil and gas well liability, (2) the extent to which BLM has implemented these policies, and (3) the challenges, if any, BLM faces in managing potential oil and gas well liability. GAO analyzed agency data on bonding and wells and interviewed BLM officials. We surveyed all 48 BLM field offices with an oil and gas program, and received 33 responses covering these offices.

What GAO Recommends

GAO recommends that BLM develop a comprehensive strategy to, among other things, increase minimum bond amounts over time and improve its data system to better evaluate potential liability and agency performance. In commenting on a draft of this report BLM agreed with GAO's recommendations and noted that it has already taken steps to improve the completeness and accuracy of its oil and gas data.

View GAO-11-292 or key components.
For more information, contact Anu K. Mittal at (202) 512-3841 or mittala@gao.gov

What GAO Found

To manage potential liability on federal land, BLM has developed policies for reviewing bond adequacy and for managing idle wells (wells that have not produced for at least 7 years) and orphan wells (wells that generally have no responsible or liable parties). The bond adequacy policy is intended to ensure that bonds are regularly reviewed by BLM field offices when certain events occur, or periodically, and increased as necessary to ensure that they reflect the level of risk posed by the operator. BLM's idle and orphan well policy is intended to ensure that nonproducing wells are either plugged or returned to production; this policy directs BLM field offices to develop an inventory of such wells and rank and prioritize them for reclamation based on potential environmental harm, among other things.

BLM has not consistently implemented its policies for managing potential liabilities. Specifically, for fiscal years 2005 through 2009, GAO found that 13 of the 33 field office survey respondents reported that they either did not conduct any reviews or did not know the number of reviews conducted. Most field office officials told GAO that a lack of resources and higher priorities were the primary reasons for not conducting these reviews. In addition, BLM state offices also did not consistently interpret BLM policy on when to increase bond amounts. For example, officials in three state offices told GAO that they generally require evidence of operator noncompliance before raising a bond amount, while another state office increased bond amounts for most operators because it viewed them as a potential risk to the government. With regard to reviews of idle or orphan wells, 11 of the 33 field office survey respondents reported that they had not conducted any reviews in one or more fiscal years during the 5-year period GAO examined. The shortage of resources was identified by officials as the primary reason that these reviews were not conducted. In addition, 2 BLM state offices and 22 field offices have not created action plans for reviewing bond adequacy and idle and orphan wells, as BLM policies call for.

BLM faces two challenges in managing potential liability, according to field office officials. First, its bonding system impairs BLM's ability to manage potential liability. Specifically, the minimum bond amounts—not updated in more than 50 years—may not be sufficient to encourage all operators to comply with reclamation requirements. These officials also stated that criteria in the policy for deciding when to increase a bond is vague, creating ambiguity about whether a request for an increase should be submitted and whether it will be approved. Second, limitations with the data system BLM uses to track oil and gas information on public land restrict the agency's ability to evaluate potential liability and monitor agency performance. For example, the BLM field offices GAO surveyed reported a total of about 2,300 idle wells that had been inactive for 7 years or more as of fiscal year 2009. However, other Interior data indicate that the number of idle wells on federal land is nearly double the amount reported by the BLM field offices.

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Abbreviations

AFMSS	Automated Fluid Minerals Support System
APD	Application for a Permit to Drill
BLM	Bureau of Land Management
EPAct 2005	Energy Policy Act of 2005
IM	Instructional Memoranda
Interior	Department of the Interior
OGOR	Oil and Gas Operations Report
ONRR	Office of Natural Resource Revenue

GAO
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United States Government Accountability Office
Washington, DC 20548

February 25, 2011

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

The Honorable Jim Costa
The Honorable Nick J. Rahall, II
House of Representatives

The oil and natural gas resources located on federal land are important to the U.S. energy supply. In fiscal year 2010, wells on federal land produced 11 percent of the nation's gas supply and 5 percent of the nation's oil supply. Due in part to an interest in reducing our nation's reliance on foreign energy sources, the number of oil and gas wells on federal land has increased dramatically in recent years. Of the approximately 93,000 wells on federal land in fiscal year 2010, roughly 19,000 (about 20 percent) were drilled within the past 5 years.

The Department of the Interior's (Interior) Bureau of Land Management (BLM) is responsible for managing onshore federal oil and gas resources.[1] On BLM land, the agency is also responsible for implementing the Federal Land Policy and Management Act of 1976, as amended, which directs Interior to manage federal land for multiple uses, such as recreation and mineral extraction, while also taking any action required to prevent the "unnecessary or undue degradation" of federal land, including federal land that has been leased for oil and gas operations.

To carry out these responsibilities, BLM, among other things, issues leases to oil and gas operators that require the operators to reclaim the leased land once operations have ceased. Reclamation is intended to return land disturbed by oil and gas operations to as close to its original condition as is reasonably practical, including plugging wells, removing structures, and

[1]BLM is responsible for managing about 250 million acres of surface federal land, as well as approximately 700 million acres of subsurface land. Approximately 58 million acres of federal subsurface land are located beneath privately owned land—a situation commonly known as a split estate.

reshaping and revegetating the land around the wells.[2] BLM requires that operators provide a bond to the agency before beginning drilling operations to ensure that operators reclaim the land that they disturb, as well as to satisfy the lease's other terms and conditions.

All operators are required to complete reclamation, but they do not always do so. In these circumstances, BLM may use the bond to help defray some of the cost of completing reclamation. Wells become orphaned if an operator does not perform the required reclamation and if the bond is not sufficient to cover well plugging and surface reclamation and there are no other responsible or liable parties to do so. In these cases, BLM uses appropriated funds to complete the reclamation.

BLM is also concerned with the status of idle wells. These are wells that an operator has decided not to operate for a period of time because, for example, the operator is waiting for oil and gas prices to rise or for a pipeline to be constructed. Under certain conditions, BLM must approve a well's "idle" status. BLM may also review the adequacy of bond amounts and the status of idle wells that have not been in production for a period of time. BLM refers to oil and gas wells and leased land that require reclamation as potential liabilities because BLM may have to pay for reclamation if the operators fail to do so.[3] BLM uses its bond adequacy and idle well status reviews to guide its management of idle wells.

In this context, you asked us to address a range of issues concerning BLM's bonding requirements and efforts to ensure that operators reclaim federal land after oil and gas operations cease. We have previously reported on the number, value, and coverage of bonds BLM holds for oil and gas operations; the amount that BLM has paid to reclaim orphaned wells over the past 20 years ($3.8 million to reclaim 295 orphaned wells) and the number of orphaned wells BLM has identified but has not yet reclaimed (144 orphaned wells); and the bonding requirements of the 12 western states for oil and gas operations on state and private land and

[2]For the purposes of this report, "operator" refers to lessees, owners of operating rights, and operators of an oil or gas operation unless indicated otherwise and "reclamation" refers 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.

[3]In this report, we do not use "potential liability" in the legal or financial accounting sense. We also do not address how BLM recognizes and accounts for environmental liabilities in its financial statements.

other Interior agencies' bonding requirements for other resources.[4] This report provides the results of our work focused on BLM's policies and efforts to ensure that the federal government does not have to pay for oil and gas well reclamation. Specifically, our objectives were to (1) identify BLM's policies for managing potential federal oil and gas well liability, (2) determine the extent to which BLM has implemented these policies, and (3) identify the challenges, if any, BLM faces in managing potential oil and gas well liability.

To address these objectives, we reviewed federal laws and regulations regarding BLM's management of leases for onshore oil and gas production. To identify BLM's policies for managing potential federal oil and gas liabilities, we interviewed officials in BLM's Washington, D.C., headquarters office and reviewed and summarized relevant BLM policies. To determine the extent to which BLM has implemented these policies, we surveyed all 48 BLM field offices with an oil and gas program to gather data on their efforts to implement bond adequacy and idle well polices, including, among other things, the number of bond reviews and idle well reviews they had conducted. We received responses representing all of the 48 BLM field offices that we surveyed. However, because some field offices work together to implement these policies by sharing staff resources, 15 of the 48 field offices combined their responses with that of another field office, resulting in a total of 33 survey responses covering all 48 offices. In addition, as part of this survey, we asked BLM field offices to provide additional data on the increases in amounts to existing bonds and progress made in reducing their inventory of idle wells—that is, having the wells plugged or returned to production. To identify the number of idle wells in BLM's inventory, we obtained oil and gas well production and injection data, referred to as Oil and Gas Operations Report (OGOR) data, from Interior's Office of Natural Resource Revenue (ONRR)—formerly a component of the Minerals Management Service. We analyzed these data to determine which wells on federal land were idle and the length of time since they had last produced oil or gas. To assess the reliability of the OGOR data, we electronically tested all fields related to our analysis and met with agency officials who administer the systems, among other things. We found that these data were sufficiently reliable for the purpose of this report. We then compared these results with the information from BLM's

[4]GAO, *Oil and Gas Bonds: Bonding Requirements and BLM Expenditures to Reclaim Orphaned Wells*, GAO-10-245 (Washington, D.C.: Jan. 27, 2010). The 12 western states were Alaska, Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

Automated Fluid Minerals Support System (AFMSS)—a database that BLM uses to track oil and gas information on public land. AFMSS contains data on, among other things, lease ownership and on well identification, location, and production. To assess the reliability of these data, we conducted electronic testing and met with BLM officials who administer the AFMSS database. We also interviewed officials in 16 of the 33 BLM field offices that have an oil and gas program. These 16 field offices collectively manage more than 85 percent of the oil and gas wells on federal land. We also interviewed officials in the corresponding six BLM state offices that have jurisdiction over these 16 field offices. In these interviews, we discussed BLM policies, steps these officials had taken to implement the policies, whether they had fully implemented them, and if not, the reasons for not doing so. During these interviews, we also discussed the challenges, if any, BLM field office officials face in managing their potential reclamation liability. We present data from AFMSS regarding the number of wells managed by each of the 33 field offices. We conducted electronic testing of this data and met with BLM officials who administer the AFMSS database. We believe AFMSS data are sufficiently reliable for this purpose, although our audit work determined reliability issues for other AFMSS data used in other contexts. To better understand the perspectives of operators and their views of BLM bonding requirements, we interviewed industry officials with the Independent Petroleum Association of New Mexico and the Interstate Oil and Gas Compact Commission. Appendix I describes our scope and methodology in more detail.

We conducted this performance audit from January 2010 to February 2011 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.

Background

BLM is responsible for issuing leases for oil and gas resources on and underneath BLM land, underneath other federal agencies' land, and underneath private land where the federal government owns the mineral rights—amounting to roughly 700 million subsurface acres. Approximately 44.5 million of these acres are leased for oil and gas operations, of which about 11.7 million acres have active oil and gas production. In addition,

BLM manages about 250 million federal surface acres, of which 472,000 acres have surface disturbance related to oil and gas production.

BLM's Headquarters, State, and Field Office Structure

To manage its responsibilities, BLM administers its programs through its headquarters office in Washington, D.C.; 12 state offices; 38 district offices; and 127 field offices. BLM headquarters develops guidance and regulations for the agency, while 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 Springfield, Virginia, is responsible for managing land in 31 states, while 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 BLM State Offices

Sources: GAO analysis of BLM data; Map Resources (map).

BLM has 48 field offices with an oil and gas program managed by 33 of its field offices that fall under the jurisdiction of 10 BLM state offices.[5] The Idaho and Oregon BLM state offices do not contain a field office with an oil and gas program. Table 1 shows the number of wells managed by the 33 field offices and their associated BLM state office, as of May 26, 2010.

Table 1: BLM State Offices and Field Offices with an Oil and Gas Program, and the Number of Wells They Manage

State office	Field office	Number of wells
Alaska State Office	Alaska field offices	176
Arizona State Office	Arizona Strip Field Office	n/a[a]
California State Office	Bakersfield Field Office	7,584
Colorado State Office	Colorado River Valley Field Office	1,868
	Grand Junction Field Office	568
	Little Snake Field Office	555
	Royal Gorge Field Office	445
	San Juan Public Lands Center	433
	White River Field Office	2,358
Eastern States State Office	Jackson Field Office	1,009
	Milwaukee Field Office	1,164
Montana State Office	Great Falls Field Office	1,451
	Miles City Field Office	1,480
	North Dakota Field Office	1,114
Nevada State Office	Nevada State Office	134
New Mexico State Office	Carlsbad Field Office	13,077
	Farmington Field Office	15,838
	Las Cruces Field Office	n/a[b]
	Oklahoma Field Office	1,307
	Roswell Field Office	1,603
Utah State Office	Moab Field Office	1,306
	Price Field Office	n/a[c]
	Richfield Field Office	18
	Vernal Field Office	6,478

[5]See appendix I for a list of the 48 field offices with an oil and gas program.

State office	Field office	Number of wells
Wyoming State Office	Buffalo Field Office	13,952
	Casper Field Office	3,504
	Kemmerer Field Office	830
	Lander Field Office	914
	Newcastle Field Office	1,545
	Pinedale Field Office	5,479
	Rawlins Field Office	2,338
	Rock Springs Field Office	1,500
	Worland Field Office	2,927
Total		**92,955**

Source: GAO analysis of AFMSS data, as of May 26, 2010.

[a]Wells managed by the Arizona Strip Field Office are included in the total with the Farmington Field Office (New Mexico).

[b]Wells managed by the Las Cruces Field Office are included in the total with the Roswell Field Office (New Mexico).

[c]Wells managed by the Price Field Office are included in the total with the Moab Field Office (Utah).

BLM's Process for Oil and Gas Development on Federal Land

The Federal Land Policy and Management Act of 1976 requires BLM to develop resource management plans, known as land use plans, which identify parcels of land that will be available for oil and gas development. BLM then offers for lease parcels of land nominated by industry and the public as well as some the agency identifies. The number of acres covered by a lease varies: the maximum number covered is 2,560 acres for leases in the lower 48 states and 5,760 acres for leases in Alaska. Similarly, the number of wells on a lease can also vary from 1 to more than 1,000, and well depths can range from a few hundred feet to more than 26,000 feet deep.

Operators who have obtained a lease must submit an application for a permit to drill (APD) to BLM before beginning to prepare land or drilling any new oil or gas wells.[6] The complete permit application package is a lengthy and detailed set of forms and documents, which, among other things, must include proof of bond coverage and a surface use plan. This surface use plan must include a reclamation plan that details the steps operators propose to take to reclaim the site, including redistribution of topsoil, configuring the reshaped topography, and seeding or other steps

[6]Land preparation involves, among other things, road construction, removal of topsoil, building a well drill pad, and digging pits to store waste drilling liquids.

to re-establish vegetation. However, operators generally do not have to submit cost estimates for completing the reclamation.

In reviewing the APD, BLM (1) evaluates the operator's proposal to ensure that the proposed drilling plan conforms to the land use plan and applicable laws and regulations and (2) inspects the proposed drilling site to determine if additional site-specific conditions must be addressed before the operator can begin drilling. After BLM approves a drilling permit, the operator can drill the well and begin production.[7]

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 to prepare land for drilling to ensure complete and timely reclamation. Accordingly, BLM regulations require the operator to submit a bond in order 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.[8] To ensure operators meet legal requirements, including reclamation, BLM regulations require them to have one of the following types of bond coverage:

- *individual lease bonds*, which cover all the wells an operator drills under one lease;[9]
- *statewide bonds*, which cover all of an operator's leases in one state;[10]
- *nationwide bonds*, which cover all of an operator's leases in the United States;[11] or

[7]In some circumstances, approval from state officials may also be required before operators can begin drilling and production.

[8]43 C.F.R. § 3104(a).

[9]With the consent of the surety provider, an 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. According to BLM officials, most leases have only one operator.

[10]A statewide bond posted by a lessee can cover all well operators with the consent of the surety provider.

[11]A nationwide bond posted by a lessee can cover all well operators with the consent of the surety provider.

- *other bonds*, which 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.[12] [13]

  BLM accepts 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 Treasury. The operator must 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, among other factors. If the operator fails to reclaim the land they disturb, the surety company either pays the amount of the bond to BLM 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:

- 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.

[12]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.

[13]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 reservewide bond (submitted separately or as a rider to an already existing nationwide bond).

If the operator fails to reclaim the land they disturb, BLM redeems the certificate of deposit, cashes the check, sells the security, or makes a demand on the letter of credit in order to pay the reclamation costs.

The regulations establish a minimum bond amount in order to ensure compliance with all legal requirements. As we reported in 2010, these minimum bond amounts were set in the 1950s and 1960s and have not been updated.[14] Specifically, the bond minimum of $10,000 for individual bonds was last set in 1960, and the bond minimums for statewide bonds ($25,000) and for nationwide bonds ($150,000) were last set in 1951.

BLM regulations require BLM to increase the bond amount when an operator applies for a new drilling permit who had previously failed to plug a well or reclaim land in a timely manner, resulting in BLM having to make a demand on a bond in the prior 5 years.[15] For such an operator, BLM must require a bond in an amount equal to its cost estimate for plugging the well and reclaiming the disturbed area if BLM's cost estimate is higher than the regulatory minimum amount.

BLM regulations state that BLM officials may require an increase in the amount of any bond when the operator poses a risk because of factors that include, but are not limited to, a history of previous violations,[16] a notice from ONRR of uncollected royalties due, or the total cost of plugging existing wells and reclaiming land exceeds the present bond amount according to BLM's estimates.[17]

When a BLM field office determines that an increase in the bond amount is warranted, it forwards its recommendation to the BLM state office, which decides whether and how much to increase the bond amount.

[14]GAO-10-245.

[15]The increased bond amount is only required if the operator, and not the lessees or owners of operating rights, has failed to plug a well or reclaim lands.

[16]Violations occur when an operator fails to comply with applicable laws, lease terms and conditions, the APD, or orders issued by BLM and violations may cause impacts on public health and safety, the environment, production accountability, or royalty income.

[17]The increase in bond amount is only authorized when the operator, and not lessees or owners of operating rights, poses a risk.

Idle and Orphan Wells

After production has ceased, the operator may delay performing reclamation and instead allow the well to remain idle for various reasons. For example, expected higher oil and gas prices may once again make the well economically viable to operate in the future, or the operator may decide to use the well for enhanced recovery operations. Enhanced recovery operations involve, for example, using the well to inject water into the oil reservoir and push any remaining oil to operating wells. Idle wells include:

- *Temporarily abandoned wells*. These are wells that are physically or mechanically incapable of producing oil or gas of sufficient value to exceed direct operating costs but may have value for a future use. Operators must receive BLM approval prior to placing a well in temporarily abandoned status for more than 30 days. This approval, which lasts for up to 12 months, can be renewed annually at BLM's discretion. All temporarily abandoned wells must have current approval after the initial 30 days.

- *Shut-in wells*. These wells are physically and mechanically capable of producing oil or gas in quantities that are economically viable but that have not produced for 30 days. According to BLM officials, operators do not have to obtain BLM approval to place wells in shut-in status.

Wells become orphaned if an operator does not perform the required reclamation and if the bond is not sufficient to cover well plugging and surface reclamation and there are no other responsible or liable parties to do so. This situation may occur, for example, when an operator has declared bankruptcy. For orphan wells, BLM uses the bond and appropriated funds as necessary to complete the reclamation. As we reported in 2010, according to BLM data, the agency spent a total of about $3.8 million to reclaim 295 orphan wells in 10 states from fiscal years 1988 through 2009.[18] BLM also estimated that there were an additional 144 orphan wells in seven states that needed to be reclaimed, with an estimated cost of approximately $1.7 million for 102 of these wells.

According to BLM officials, idle wells have the potential to create environmental, safety, and public health hazards if they fall into disrepair,

[18]GAO-10-245. The 10 states where orphaned wells were reclaimed include California, Colorado, Montana, New Mexico, North Dakota, Oklahoma, Ohio, Utah, West Virginia, and Wyoming.

and they are at greater risk than other wells for becoming orphan wells. Therefore, these officials told us that it is important to manage idle wells so that they do not become orphan wells. The Energy Policy Act of 2005 (EPAct 2005) directs the Secretary of the Interior, in cooperation with the Secretary of Agriculture, to establish a program to remediate, reclaim, and close idle or orphan oil and gas wells located on federal land.[19] For the purposes of this requirement, the act defines idle wells to be those wells that have been nonoperational for 7 years or longer and for which there is no anticipated beneficial use for the well. Specifically, the program must, among other things,

- include a means of ranking idle or orphan well sites for priority in remediation, reclamation, and closure, based on public health and safety, potential environmental harm, and other land use priorities, and
- provide for the identification of the costs of remediation, reclamation, and closure from those providing a bond or other financial assurance required under state or federal law for an oil or gas well that is idle or orphan and provide for the recovery of those costs from those operators or entities providing the bond or other financial assurance or their sureties or guarantors.[20]

[19]Pub. L. No. 109-58, § 349(b) (2005), *codified at* 42 U.S.C. § 15907. EPAct 2005 also requires the program to remediate, reclaim, and close abandoned wells. Because BLM defines abandoned wells as those which have been properly plugged and have had final reclamation completed but have not been approved by the surface managing agency or those properly plugged that have not completed final reclamation, the agency has not included those wells in the program, and we do not discuss abandoned wells in this report.

[20]EPAct of 2005 also requires BLM to conduct an orphaned well reclamation pilot program. Under this program, BLM is authorized, when issuing new oil and gas leases, to require lessees to remediate, reclaim, and close all orphaned wells on the leased land. BLM is also authorized to reimburse the lessee through a credit against the federal share of royalties or other means for the reasonable actual costs of remediation, reclamation, and well closure. In addition, BLM could provide such reimbursement for any lessee who reclaims an orphaned well on federal land for which the lessee is not legally responsible.

BLM Has Policies to Manage Potential Liabilities on Federal Land

BLM has developed two policies—one for bond adequacy and one for idle and orphan wells—to manage the potential liabilities on federal land. First, the bond adequacy policy directs BLM offices to review bonds and increase amounts as necessary to ensure, among other things, that the bond amount reflects the risk posed by the operator. Second, BLM's idle and orphan well policy, which implements EPAct 2005, directs field offices to review these wells and ensure they are either plugged and reclaimed or returned to production.

BLM's Bond Adequacy Policy Directs BLM Field and State Offices to Regularly Review Bonds and Increase Them as Necessary

BLM has established a bond adequacy policy that directs its field and state offices to periodically review bonds and increase the bond amounts as necessary. This policy is documented in three instruction memorandums (IM) sent to the BLM state offices administering an oil and gas program.[21] The first of these IMs—IM 2006-206, issued in August 2006—directs each BLM state office administering an oil and gas program to establish an action plan. The goal of these plans is to develop a process to ensure the review of operations on federal oil and gas leases, including steps to increase bond amounts when necessary. Two subsequent IMs—IM 2008-122, issued in May 2008, and IM 2010-161, issued in July 2010—continue and build on the bond adequacy policy established in IM 2006-206. Table 2 provides an overview of BLM's oil and gas bond adequacy policy based on these three IMs.

[21]IM 2006-206, *Oil and Gas Bond Adequacy Reviews*; IM 2008-122, *Oil and Gas Bond Adequacy Reviews*; and IM 2010-161, *Federal Oil and Gas Bonds*.

Table 2: Overview of BLM Oil and Gas Bond Adequacy Policy

IM 2006-206: Oil and Gas Bond Adequacy Reviews (issued August 2006)	
Policy or action	Each state office administering an oil and gas program is to establish an action plan with a goal that operators on federal oil and gas leases are reviewed for risk assessment and bond adequacy.
Goal	To develop a process to ensure review of operations on federal oil and gas leases and include steps to increase bond amounts when it is determined necessary.

Bond adequacy and bond increase guidance	• Bond adequacy reviews should be performed when any of the following actions occur:
	  • A record title is assigned as workload permits.
	  • Operating rights are transferred as workload permits.
	  • A notification of change of operator occurs as workload permits.
	  • BLM field office staff perform an idle well liability review.
	  • BLM field office staff determine that the operator poses a risk (e.g., operator compliance history, current level of plugging and surface reclamation liabilities).
	  • An operator requests a bond to be released.
	  • When BLM field office staff periodically review operating leases.
	• If the review reveals that an increase in bonding is necessary because the operator poses a risk, the field office staff must determine the adequate level of coverage. The judgment and experience of field staff is paramount in determining whether the bond should be increased.
	• The bond may be increased to any level specified by BLM field office staff, although the bond amount should not be increased solely on the number of wells on the lease. However, the bond amount cannot exceed the total of the estimated cost of plugging and reclamation, the amount of uncollected royalties due, plus the amount of monies owed due to previous violations remaining outstanding.
	• BLM staff are to be mindful of the need to maintain an acceptable risk level, yet not to place an undue burden on industry.
	• BLM staff determine whether the field office's recommendation to increase the bond is tenable and whether the existing bond amount has been verified as inadequate. If an operator's bond coverage is determined inadequate, the bonded party will be contacted and requested to increase its bonding or negotiate a plan to reduce plugging obligations or conduct reclamation work.
	• The increase may be to an existing statewide or nationwide bond, as well as an individual lease bond, to cover a specific liability on one or several federal leases. This type of bond increase can be accomplished via a bond rider that is reserved solely for the liability specified, so that other demands on the statewide or nationwide bond could not draw on that increased amount of the bond.
	• It is important that idle wells be reviewed and that continuous reclamation monitoring be conducted to identify potential problems and liabilities and to assess adequacy of existing bond amounts.

IM 2008-122: Oil and Gas Bond Adequacy Reviews (issued May 2008)	
Policy or action	Each state office is to maintain and implement its action plan developed from IM 2006-206 so that operators on federal oil and gas leases are reviewed for risk assessment and bond adequacy.
Goal	To ensure regular review of operations on federal oil and gas leases and include steps to increase bond amounts when it is determined necessary.

Bond adequacy and bond increase guidance	• Maintains guidance as established in IM 2006-206, but modifies when the bond adequacy review should occur. Specifically, the bond adequacy review should occur when: • A record title is assigned. • Operating rights are transferred. • A notification of change of operator occurs. • BLM field office staff perform an idle well liability review. • BLM field office staff determine that the operator poses a risk (e.g., operator compliance history, current level of plugging and surface reclamation liabilities). • An operator requests a bond to be released. • When BLM field office staff periodically review operating leases. • A surety seeks to terminate a bond's period of liability. • Clarifies that BLM state office officials will determine whether the field office's recommendation to increase the bond is tenable and the existing bond amount has been verified as inadequate. • Reiterates that BLM is mindful of the need to maintain an acceptable risk level, yet not to place an undue burden on industry.
Semiannual reporting requirement	At mid-year and year-end, the BLM state directors must report on the bonds increased during the previous 6 months and the amount of any government expenditures to plug and reclaim wells.
IM 2010-161: Federal Oil and Gas Bonds (issued July 2010)	
Policy or action	Each BLM state office will continue to review operations on federal oil and gas leases for risk assessment and bond adequacy in accordance with IM 2006-206.
Goal	That the process established ensures review of operations on federal oil and gas leases and include steps to increase bond amounts when it is determined necessary.
Bond adequacy and bond increase guidance	• Maintains guidance as established in IM 2006-206 and IM 2008-122, but • Clarifies that the bond adequacy review should be performed when (1) record title is assigned, (2) operating rights are transferred, (3) a change of operator occurred, (4) the bondholder requests its release or decrease, (5) there is a periodic review of lease operations, and (6) when a surety seeks to terminate the bond's period of liability. • Further clarifies the BLM state office's role in the review process. • Specifies that increases to bonds to cover potential liabilities on a lease because of water impoundment structures, wells with significant actual or potential federal liabilities, surface production facilities, or other surface uses with significant reclamation liabilities will be accomplished by (1) increasing the face amount of a lease or unit bond or (2) a bond rider to a statewide or nationwide bond that specifies the designated liability so that other demands on the bond would not draw on that rider. • Additionally, calls for bond reviews to be documented in AFMSS and the lease file.

Source: GAO analysis of BLM IM 2006-206, IM 2008-122, and IM 2010-161.

In summary, according to BLM policy, when the specified activities occur—for example, when record title or operating rights are transferred or when operators change—BLM field office staff must perform a review to determine whether the existing bond amount is adequate. When determining bond adequacy, BLM field staff are to take into account a number of factors, including, but not limited, to the following:

- *Liabilities*. Liabilities may include ponds containing excess water and other materials produced from the well, wells with significant actual or

potential liabilities, surface production facilities, or other surface uses with significant reclamation liabilities. The policy states that it is important that idle wells be reviewed to identify potential problems and liabilities and to assess adequacy of existing bond amounts.

- *A history of previous violations*. Previous violations may include failing to comply with the lease terms and notices or orders issued by BLM, particularly with regard to the proper plugging and abandonment of wells or reclamation of the disturbed surface area.

- *Unique or unusual conditions*. Unique or unusual conditions may occur either in the planned drilling operations or in the surrounding environment that will make the operations potentially more hazardous or the potential for significant environmental damage resulting from an accident.

- *Unpaid royalties*. BLM receives a notice from ONRR that royalties are due.
- *Costs higher than bond amount*. As estimated by BLM field staff, the total cost of plugging existing wells and reclaiming land exceeds the bond amount.

Taking these conditions into account, the policy gives broad discretion to BLM field office staff to determine if a bond is adequate or should be increased. For example, if, while performing a bond adequacy review, BLM field staff determine that the operator poses a risk because the cost of well plugging and reclamation exceeds the bond amount, BLM can require an increase to the existing bond to cover the potential liabilities. The policy also allows BLM field staff to reduce the amount of the bond if the potential federal liability is reduced, but not to a level below the regulatory minimums.

When it has been determined that a bond amount is inadequate, BLM policy states that the bond may be increased to any amount specified by BLM staff. While the policy does not specify how the exact bond increase amount is determined, it stipulates that the bond amount should not be increased solely on the number of wells on the lease. Moreover, the bond amount is not to, in any circumstances, exceed the total of the estimated cost of plugging and reclamation, the amount of uncollected royalties due, and the amount of monies owed to the federal government due to outstanding violations. BLM policy stresses that the judgment and experience of its staff is paramount in deciding whether a bond needs to be increased or is adequate. When BLM field staff determine that a bond

increase is warranted, BLM state office officials review the proposed increase and process or deny it.

According to BLM's 2006 and 2008 bond adequacy policies, BLM is "mindful" of the need to maintain an acceptable risk level, yet to not place an undue financial burden on operators. Industry officials told us that increasing bond amounts for small operators can be burdensome in that surety companies may be unwilling to provide small operators a surety bond without a financial audit of their business, which in some circumstances can cost the operator between $25,000 and $30,000. As a result, these officials told us that small operators frequently rely on personal bonds to meet BLM's bonding requirements, which in some circumstances can further tie-up their already limited financial resources and impair their ability to perform the required reclamation. Further, BLM officials told us that in recognition of the potential burden on small operators, they may work directly with a small operator to develop and implement a plan for having the operator reduce their risk instead of requesting a bond increase.

BLM's Idle and Orphan Well Policy Directs Field Offices to Review These Wells and Ensure They Are Either Plugged or Returned to Production

By issuing IM 2007-192 in September 2007, BLM established a program to rank all idle and orphan oil and gas wells on federal land, as required by EPAct 2005. According to BLM officials the review process established by this policy is used to manage potential liabilities.[22] The policy directs the field offices to rank idle and orphan wells and makes the field offices responsible for using the priority rankings to take action to have the idle wells either plugged and reclaimed or returned to production or service and to have the orphan wells properly plugged and the surface reclaimed.

Specifically, under this policy the field offices are to develop an inventory of the idle and orphan wells under their jurisdiction and then rank them for priority in remediation, reclamation, and closure based on factors such as public health and safety, sensitive environmental resource, and other land use priorities. In order to aid the field offices with this work, IM 2007-192 provides guidance on procedures for determining priorities for plugging wells and reclaiming land. The policy contains factors for the field offices to use when determining the idle wells' priority ranking: (1)

[22]IM 2007-192, *Priority Ranking of Orphaned and Idled Wells; Section 349(b) of EPAct 2005.*

the percentage of idle to active wells;[23] (2) the number of years the well has remained idle; (3) environmental, safety, and public health concerns; and (4) sensitive environmental resource and other land use priorities, such as the intensity of recreational use of the land and whether the well is located in a significant wildlife area. These factors are each assigned a score and the total sum is used to determine whether a well has a high-, medium-, or low-priority ranking. BLM field office officials are then expected to work with well operators to either plug these wells or return them to production, or they may use this information to help support an increase in the bond amount.

For orphan wells, field offices are to evaluate 14 factors to determine the well's priority ranking. The following 13 individual factors have specific point scores associated with them; field office staff are to review each factor, assign a point score, and then total them.

- Well leaking at the surface.
- Well not leaking at surface—possible pressure.
- Well bore configuration.
- Age of the well.
- Presence of surface contamination.
- Presence of vessels containing fluid (e.g., storage tanks).
- Hydrogen sulfide (H_2S) concentration.
- Proximity to surface water.
- Proximity to water wells.
- Contaminated water wells.
- Proximity to residences or public buildings.

[23]The higher the percentage of idle to active wells, the greater the risk that the operator may not have the resources to reclaim the idle wells, according to BLM officials.

- Sensitive environmental resources and other land use priorities.
- Other environmental and safety concerns.

The 14th factor used to determine an orphan well's priority ranking is the cost for plugging and reclaiming the oil or gas well. The field office may provide an estimate of this cost or use the standard estimate of $5 per foot to determine the estimated cost. The policy then directs each field office to send to the BLM Washington Office its priority ranking of orphan wells. According to IM 2007-192, the Washington Office staff reviews the information, develops a nationwide priority listing for all orphan wells on federal land, and allocates available funds to properly plug and reclaim the surface of these wells.

BLM's idle and orphan well policy also directs each field office to develop an action plan for having these wells plugged or returned to production. The action plan is to include a timeline for when the field office expects to have its current inventory of idle wells properly plugged or returned to production. In addition, the action plan must discuss the field office's plan to manage wells that become idle in the future.

BLM Has Not Consistently or Completely Implemented Its Policies for Managing Potential Liability

BLM field and state offices have not consistently or completely implemented BLM's policies for managing the oil and gas wells on federal land to reduce the likelihood that BLM will need to pay for or perform reclamation. According to our analysis of 33 survey responses from 48 field offices,[24] these offices did not (1) consistently conduct bond adequacy reviews in accordance with BLM policy and their reliance on professional judgment has resulted in varying interpretations of the policy's criteria for increasing bond amounts, (2) consistently review all their idle and orphan wells or reduce their inventory of idle wells, and (3) develop consistent or complete plans for bond adequacy and idle and orphan well reviews.

[24]We surveyed all 48 BLM field offices with an oil and gas program. Because some field offices work together by sharing staff resources, 15 of the 48 field offices we surveyed combined their responses with that of another field office, resulting in a total of 33 survey responses covering all 48 offices.

BLM Field Offices Have Not Always Conducted Bond Adequacy Reviews and Have Not Consistently Interpreted Criteria for Increasing Bonds

According to our analysis of the number of bond reviews reported by 33 survey respondents, the field offices do not always regularly review bonds and increase bond amounts as necessary. BLM policy calls for field offices to conduct a bond adequacy review when certain events occur. For example, 13 of the 33 survey respondents reported that they either did not conduct any reviews or did not know the number of reviews they conducted for fiscal years 2005 through 2009. For example, the Vernal Field Office did not conduct any bond adequacy reviews during this period. According to officials we interviewed in the Vernal Field Office, they did not have sufficient staff resources to conduct any bond adequacy reviews, in part because of a backlog in processing APDs. Table 3 shows the number of bond adequacy reviews conducted by BLM field offices from fiscal years 2005 through 2009.

Table 3: Number of Bond Adequacy Reviews, Fiscal Years 2005 through 2009, by Field Office

	Bond adequacy reviews by fiscal year					
Field office (state office)	**2005**	**2006**	**2007**	**2008**	**2009**	**Total reported**
Alaska field offices (AK)[a]	0	0	0	0	0	**0**
Arizona Strip (AZ)	0	0	0	1	0	**1**
Bakersfield (CA)	39	104	127	128	69	**467**
Buffalo (WY)	35	31	49	38	74	**227**
Carlsbad (NM)	0	0	0	1	0	**1**
Casper (WY)	3	6	7	46	19	**81**
Colorado River Valley (CO)	3	5	4	1	1	**14**
Farmington (NM)[b]	14	12	15	123	20	**184**
Grand Junction (CO)	n/a[c]	0	0	0	0	**0**
Great Falls (MT)	4	0	0	71	4	**79**
Jackson (Eastern States)	0	0	0	91	12	**103**
Kemmerer (WY)	0	0	0	0	n/a[c]	**0**
Lander (WY)	0	0	0	0	0	**0**
Las Cruces (NM)	0	0	0	0	0	**0**
Little Snake (CO)[d]	1	11	6	3	7	**28**
Miles City (MT)	0	0	55	133	126	**314**
Milwaukee (Eastern States)	0	0	0	0	0	**0**
Moab (UT)[e]	n/a[c]	n/a[c]	n/a[c]	n/a[c]	n/a[c]	**0**
Nevada State Office (NV)[f]	1	2	6	2	5	**16**
Newcastle (WY)	n/a[c]	n/a[c]	n/a[c]	n/a[c]	6	**6**

Field office (state office)	Bond adequacy reviews by fiscal year					Total reported
	2005	2006	2007	2008	2009	
North Dakota (MT)	7	10	14	4	4	**39**
Oklahoma (NM)	0	3	2	0	1	**6**
Pinedale (WY)	2	4	15	5	24	**50**
Price (UT)	n/a[c]	n/a[c]	n/a[c]	n/a[c]	0	**0**
Rawlins (WY)	n/a[c]	n/a[c]	8	8	8	**24**
Richfield (UT)	n/a[c]	n/a[c]	n/a[c]	n/a[c]	n/a[c]	**0**
Rock Springs (WY)	n/a[c]	n/a[c]	n/a[c]	20	15	**35**
Roswell (NM)	n/a[c]	n/a[c]	n/a[c]	n/a[c]	n/a[c]	**0**
Royal Gorge (CO)	0	0	0	0	0	**0**
San Juan Public Lands Center (CO)[g]	0	7	18	11	14	**50**
Vernal (UT)	0	0	0	0	0	**0**
White River (CO)	0	0	0	0	0	**0**
Worland (WY)[h]	5	0	9	7	14	**35**
Total	**114**	**195**	**335**	**693**	**423**	**1,760**

Source: GAO analysis of BLM data.

[a]This survey response includes BLM's Anchorage and Arctic field offices.

[b]This survey response includes BLM's Rio Puerco Field Office.

[c]Information not available.

[d]This survey response includes BLM's Kremmling Field Office.

[e]This survey response includes BLM's Monticello Field Office.

[f]This survey response includes BLM's Egan, Humboldt River, Mount Lewis, Schell, Stillwater, Tonopah, and Tuscarora field offices.

[g]This survey response includes BLM's Dolores, Pagosa, and Uncompahgre field offices.

[h]This survey response includes BLM's Cody Field Office.

In addition, the total number of bond adequacy reviews conducted by the field offices varied substantially each year, from a low of 114 in fiscal year 2005 to a high of 693 in fiscal year 2008. BLM officials said that the fluctuation in the number of reviews is typically the result of a higher priority placed on other BLM activities such as completing APDs. As table 3 also shows, the bulk of the bond adequacy reviews was conducted by just a few field offices. In particular, Bakersfield and Miles City conducted 781, or nearly 45 percent, of the total reported 1,760 bond adequacy reviews conducted by the field offices included in our survey from fiscal years 2005 through 2009.

Lack of resources was a recurring theme at many of the 16 field offices where we interviewed field office staff. For example, officials at 14 field offices reported that they face resource limitations for conducting bond adequacy reviews. Officials in seven field offices told us that their offices had not reviewed bonds in all instances called for in the policy, in part because of a lack of staff resources.[25] Similarly, at 13 field offices, officials told us that they found it difficult to conduct bond adequacy reviews because BLM headquarters and state offices give priority to other work activities through annual work plans.

We found that while many field offices use similar methodologies for evaluating bond adequacy and deciding whether to increase bonds, some apply other approaches. Some field office officials told us that they generally rely on their professional judgment to evaluate bond adequacy, as allowed by BLM policy. These officials said that they typically gather and evaluate a variety of information, such as the location and depth of the wells, the ratio of idle wells to active wells, and whether any money is owed by the operator for previous violations, as well as any other pertinent or unusual facts regarding the operator or the wells. They then use their professional judgment to decide (1) whether to keep the current amount of the bond; (2) work with the operator to reduce the risk the operator poses, for example, by developing a plan and a schedule to plug wells or bring wells back into production; or (3) increase the bond. Officials in two field offices stated that their offices took the following additional steps when making bond adequacy determinations:

- The Carlsbad Field Office evaluated the remaining oil and gas reserves available and the estimated remaining lifespan of the well—known as the production decline curve—to determine when the well might become idle.

- The Farmington Field Office developed an electronic spreadsheet for evaluating potential liability and automating the process of analyzing of data. The spreadsheet uses formulas to uniformly assess the number, depth, and production of wells; the bonding amount; the inflation rate; and operator compliance history. It then identifies whether there is a need to increase the bond and the amount of the bond increase. Officials in the Farmington Field Office told us that the goal is to use this spreadsheet to ensure that all operators are reviewed for bond adequacy at least once every 2 years.

[25]See table 2 for a list of events that should trigger a bond adequacy review.

According to our analysis, BLM state offices, like the field offices, have varied in how they interpret BLM's policy for deciding whether to approve an increase to a bond amount requested by a field office. As mentioned earlier, BLM's 2006 and 2008 bond adequacy policies stated that "BLM is mindful of the need to maintain an acceptable risk level, yet not to place an undue burden on industry." However, the current policy does not include this statement and none of the policies define the term "acceptable risk" or offer guidance on when to increase a bond. Instead, the policy instructs BLM to rely on the judgment of BLM state office officials in deciding when to increase a bond, and we found that these officials have varied in their approaches to increasing bond amounts. For example, BLM state office officials in Colorado, Montana, Utah, and Wyoming told us that they generally interpreted BLM policy as only allowing bond increases when the operator is not in compliance, among other things. In contrast, officials in BLM's California State Office told us that in 2002 they broadly interpreted BLM regulations and policy as allowing them to increase bond amounts for all wells identified as a potential risk to the government. In coordination with the Bakersfield Field Office, they therefore raised the bond amounts on all but 40 of their more than 300 leases from regulatory minimum bond amounts to $20,000 for an individual bond and $75,000 for a statewide bond. In addition, in situations where an operator only has a nationwide bond, they require the operator to post a rider to the bond to cover their wells in California. This is because they were concerned that nationwide bonds could cover other wells and that other BLM state and field offices could draw upon them to reclaim orphan wells, leaving the wells in California without adequate bond coverage. BLM officials in the California state office were the only state level officials we interviewed who interpreted the policy in this manner. According to BLM headquarters officials responsible for overseeing the oil and gas program, the policy was intended to allow states some flexibility in making these decisions, and they have not done a comprehensive review of the implementation of the policy.

BLM's Field Offices Have Not Reviewed All Their Idle and Orphan Wells and Vary in Their Ability to Reduce the Idle Well Inventory

According to our survey of BLM field offices, not all field offices have conducted reviews to identify wells that were idle or orphan on an annual basis as specified in BLM policy. In particular, 11 of the 33 survey responses indicate that many field offices had not conducted reviews for at least one of the years from fiscal year 2005 through fiscal year 2009, and 16 responses indicate that several did not know how many wells they had reviewed for at least one of the years during this period. Furthermore, three field offices—Bakersfield, Farmington, and Worland—had reviewed 76 percent of the 15,660 wells reviewed by the field offices included in our survey.[26] Table 4 shows the number of wells each field office reviewed from fiscal years 2005 through 2009.

Table 4: Number of Wells Reviewed under BLM's Idle and Orphan Well Policy by Field Office, Fiscal Years 2005 through 2009

	Wells reviewed by fiscal year					
Field office (state office)	**2005**	**2006**	**2007**	**2008**	**2009**	**Total reported**
Alaska field offices (AK)[a]	n/a[b]	n/a[b]	31	36	31	**98**
Arizona Strip (AZ)	0	0	0	0	0	**0**
Bakersfield (CA)	585	1,059	1,092	807	975	**4,518**
Buffalo (WY)	84	99	85	153	109	**530**
Carlsbad (NM)	n/a[b]	n/a[b]	n/a[b]	n/a[b]	95	**95**
Casper (WY)	2	0	4	45	49	**100**
Colorado River Valley (CO)	9	13	22	26	16	**86**
Farmington (NM)[c]	1,000	1,000	1,000	1,000	1,000	**5,000**
Grand Junction (CO)	n/a[b]	n/a[b]	n/a[b]	7	7	**14**
Great Falls (MT)	59	8	31	113	132	**343**
Jackson (Eastern States)	8	5	2	1	5	**21**
Kemmerer (WY)	n/a[b]	n/a[b]	n/a[b]	n/a[b]	12	**12**
Lander (WY)	n/a[b]	n/a[b]	n/a[b]	n/a[b]	n/a[b]	**n/a[b]**
Las Cruces (NM)	0	0	0	0	0	**0**
Little Snake (CO)[d]	1	5	9	4	12	**31**
Miles City (MT)	n/a[b]	n/a[b]	55	133	126	**314**
Milwaukee (Eastern States)	0	0	0	0	0	**0**
Moab (UT)[e]	20	20	20	30	50	**140**

[26]Together, the Bakersfield, Farmington, and Worland field offices manage 26,349 wells, or about 28 percent of BLM's 92,955 wells.

Field office (state office)	Wells reviewed by fiscal year					Total reported
	2005	2006	2007	2008	2009	
Nevada State Office (NV)[f]	n/a[b]	30	52	110	10	**202**
Newcastle (WY)	n/a[b]	34	n/a[b]	n/a[b]	n/a[b]	**34**
North Dakota (MT)	27	4	42	49	33	**155**
Oklahoma (NM)	19	4	10	n/a[b]	19	**52**
Pinedale (WY)	60	60	60	60	60	**300**
Price (UT)	n/a[b]	n/a[b]	n/a[b]	n/a[b]	0	**0**
Rawlins (WY)	n/a[b]	n/a[b]	200	200	200	**600**
Richfield (UT)	0	0	0	0	0	**0**
Rock Springs (WY)	n/a[b]	n/a[b]	n/a[b]	8	70	**78**
Roswell (NM)	0	n/a[b]	154	n/a[b]	n/a[b]	**154**
Royal Gorge (CO)	n/a[b]	n/a[b]	n/a[b]	n/a[b]	n/a[b]	**n/a[b]**
San Juan Public Lands Center (CO)[g]	0	2	2	2	1	**7**
Vernal (UT)	0	0	290	116	22	**428**
White River (CO)	n/a[b]	n/a[b]	n/a[b]	n/a[b]	n/a[b]	**n/a[b]**
Worland (WY)[h]	n/a[b]	n/a[b]	n/a[b]	0	2,348	**2,348**
Total	**1,874**	**2,343**	**3,161**	**2,900**	**5,382**	**15,660**

Source: GAO analysis of BLM data.

[a]This survey response includes BLM's Anchorage and Arctic field offices.

[b]Information not available.

[c]This survey response includes BLM's Rio Puerco Field Office.

[d]This survey response includes BLM's Kremmling Field Office.

[e]This survey response includes BLM's Monticello Field Office.

[f]This survey response includes BLM's Egan, Humboldt River, Mount Lewis, Schell, Stillwater, Tonopah, and Tuscarora field offices.

[g]This survey response includes BLM's Dolores, Pagosa, and Uncompahgre field offices.

[h]This survey response includes BLM's Cody Field Office.

BLM field office officials cited a number of reasons why field offices have not conducted reviews under the idle and orphan well policy. In addition to the shortage of resources and other higher priority work mentioned earlier, some officials told us that they do not have access to complete and accurate well data, which we believe can impact their ability to conduct well reviews. For example, officials in the Rock Springs Field Office in Wyoming told us that they rely on BLM's AFMSS data to determine which wells are idle. However, BLM officials have told us that well status data in AFMSS are not routinely updated on the basis of production data, which makes it difficult to identify idle wells from these data. In contrast, field

offices that rely on well data that are compiled and updated by the state in which they are located are more easily able to identify idle well status. For example, the Farmington and Carlsbad field offices in New Mexico have access to data compiled by the New Mexico Oil Conservation District, a New Mexico state agency that regulates oil and gas wells. According to officials we interviewed, these state data are more complete, accurate, and user-friendly than BLM well data.

Finally, field offices we surveyed reported mixed results in getting wells plugged or returned to production. For example, while three field offices—Buffalo, Carlsbad, and Casper—had plugged or returned to production more than 100 wells since fiscal year 2007, several offices we surveyed had not reduced their number of idle or orphan wells. In addition, officials in the Newcastle Field Office reported that due to staffing issues they did not know how many wells had been plugged or returned to production since fiscal year 2007. Table 5 shows the actions taken by the field offices we surveyed to either plug or return wells to production since fiscal year 2007.

Table 5: Number of Wells Plugged and Wells Returned to Production by Field Office, September 1, 2007 to November 9, 2010

Field office (state office)	Wells plugged	Wells returned to production
Alaska field offices (AK)[a]	2	1
Arizona Strip (AZ)	2	0
Bakersfield (CA)	4	8
Buffalo (WY)	347	0
Carlsbad (NM)	126	69
Casper (WY)	55	53
Colorado River Valley (CO)	5	1
Farmington (NM)[b]	10	0
Grand Junction (CO)	22	0
Great Falls (MT)	26	24
Jackson (Eastern States)	0	0
Kemmerer (WY)	11	2
Lander (WY)	0	7
Las Cruces (NM)	2	0
Little Snake (CO)[c]	16	0
Miles City (MT)	11	5
Milwaukee (Eastern States)	n/a[d]	n/a[d]

Field office (state office)	Wells plugged	Wells returned to production
Moab (UT)[e]	30	4
Nevada State Office (NV)[f]	0	0
Newcastle (WY)	n/a[d]	n/a[d]
North Dakota (MT)	0	0
Oklahoma (NM)	0	0
Pinedale (WY)	33	n/a[d]
Price (UT)	7	0
Rawlins (WY)	12	5
Richfield (UT)	0	0
Rock Springs (WY)	10	0
Roswell (NM)	11	0
Royal Gorge (CO)	4	1
San Juan Public Lands Center (CO)[g]	13	2
Vernal (UT)	n/a[d]	n/a[d]
White River (CO)	25	11
Worland (WY)[h]	1	12
Total	**785**	**205**

Source: GAO analysis of BLM data.

[a]This survey response includes BLM's Anchorage and Arctic field offices.

[b]This survey response includes BLM's Rio Puerco Field Office.

[c]This survey response includes BLM's Kremmling Field Office.

[d]Information not available.

[e]This survey response includes BLM's Monticello Field Office.

[f]This survey response includes BLM's Egan, Humboldt River, Mount Lewis, Schell, Stillwater, Tonopah, and Tuscarora field offices.

[g]This survey response includes BLM's Dolores, Pagosa, and Uncompahgre field offices.

[h]This survey response includes BLM's Cody Field Office.

Some of the field offices that had taken steps to have wells plugged or returned to production were assisted by state programs that create funds for plugging and reclaiming idle and orphan wells. For example, New Mexico has created an oil and gas well reclamation fund that is paid for by production taxes on oil and gas operations. Using this fund, the BLM Carlsbad Field Office has plugged 26 orphan wells from August 1995 to December 2008.

A Few BLM State Offices and Many Field Offices Have Not Created Action Plans for Bond Adequacy and Idle Wells, and the Plans Varied in the Elements They Contain

Two of BLM's 10 state offices (Alaska and Arizona) have not developed an action plan to help ensure that bonds are regularly reviewed for adequacy, as directed by BLM's policy in IM 2008-122. In addition, two of the other eight state offices' action plans—California and Wyoming—do not contain an element specified in the IM (i.e., indicates the steps to take when a bond increase is considered necessary). Some of the eight plans also vary in the elements they contain that would be useful to field offices in meeting the IM's goals, according to our analysis and comments provided by officials at BLM field offices. For example, none of the state bond adequacy action plans we reviewed contained guidance for field offices on how to determine the amount a bond should be increased by, an element that some field office officials we interviewed said would be helpful. Table 6 shows the elements that we identified as contained in or missing from the BLM state office's bond adequacy action plans.

Table 6: Bond Adequacy Action Plans and the Elements They Contain for Eight State Offices

State office	Indicates when to conduct a bond adequacy review	Indicates how to determine if a bond increase is necessary	Indicates the steps to take when a bond increase is deemed necessary[a]	Indicates how to decide how much the bond increase should be	Lists specific potential liabilities or risk factors that can lead to an increased bond	Indicates how the state office and field offices coordinate work on bond adequacy reviews
California	Yes	No	No	No	No	No
Colorado	No	No	Yes	No	No	Yes
Eastern States	Yes	No	Yes	No	Yes	Yes
Montana	Yes	No	Yes	No	Yes	Yes
Nevada	Yes	Yes	Yes	No	No	n/a[b]
New Mexico	Yes	Yes	Yes	No	Yes	Yes
Utah	Yes	Yes	Yes	No	Yes	Yes
Wyoming	Yes	No	No	No	No	Yes

Sources: GAO analysis of BLM state office bond adequacy review action plans and BLM IM 2008-122.

[a]BLM policy calls for this element to be included in state office action plans.

[b]According to BLM Nevada's action plan, all bond adequacy determinations are performed at the state office level.

At the field office level, 22 of the 33 survey respondents reported that they did not have an idle well action plan as directed by BLM's IM 2007-192. While 11 field offices reported that they had developed idle well action plans, our review of these plans indicated that the plans lacked elements that the IM states should be included, such as the timeline for having its current inventory of idle wells properly plugged or returned to production.

Table 7 shows the elements contained in or missing from the BLM field office's idle well action plans for the 11 field offices that had developed such a plan.

Table 7: Idle Well Action Plans at 11 Field Offices and the Elements They Contain, by Field Office

Field office (state office)	Establishes a timeline to have the current inventory of idle wells plugged or returned to production[a]	Indicates steps to be taken to have the current inventory of idle wells plugged or returned to production	Sets priorities for addressing the current inventory of idle wells	Discusses plan to manage wells which become idle in the future[a]
Bakersfield (CA)	No	Yes	Yes	No
Grand Junction (CO)	Yes	Yes	No	No
Royal Gorge (CO)	Yes	Yes	Yes	Yes
White River (CO)	No	Yes	No	No
Great Falls (MT)	No	No	Yes	No
Miles City (MT)	n/a[b]	n/a[b]	n/a[b]	Yes
Nevada State Office (NV)[c]	No	No	No	No
Farmington (NM)	No	No	No	No
North Dakota (MT)	No	Yes	No	Yes
Casper (WY)	Yes	Yes	No	Yes
Rock Springs (WY)	No	No	No	No

Sources: GAO analysis of BLM field office idle well review action plans and BLM IM 2007-192.

[a]BLM policy call for these elements to be included in field office action plans.

[b]According to the Miles City Field Office's plan, the office does not have any idled or orphaned wells as defined in IM 2007-192.

[c]This covers BLM's Egan, Humboldt River, Mount Lewis, Schell, Stillwater, Tonopah, and Tuscarora field offices.

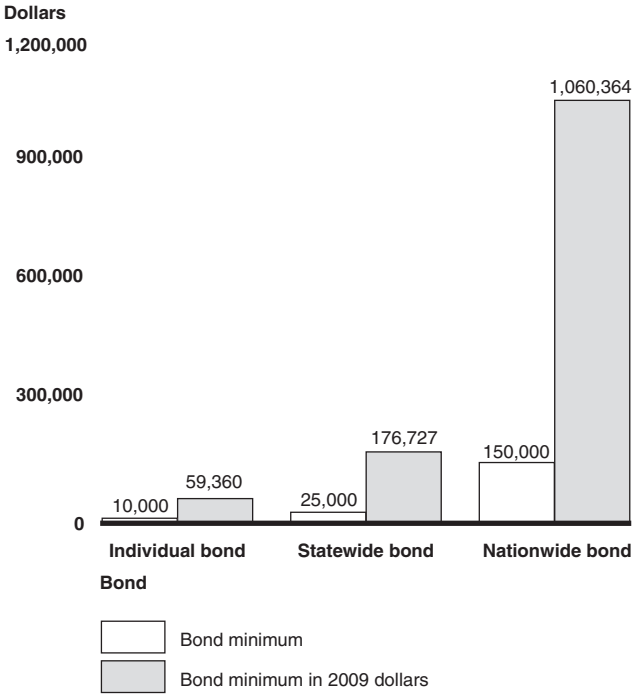
BLM Faces Challenges in Managing the Potential Liability on Federal Land

According to most field office officials we interviewed, they face challenges in two interrelated areas for managing potential liability on federal land. First, BLM's bonding system—including the minimum bond amounts and inconsistent interpretation of policy for increasing bond amounts—impairs BLM's ability to manage potential liability. Second, limitations with BLM data restrict the agency's ability to evaluate potential liability and measure agency performance in managing potential liabilities on federal land.

BLM's Bonding System Impairs the Agency's Ability to Manage BLM's Potential Liability

At 15 of the 16 field offices, BLM officials we interviewed noted challenges associated with the agency's outdated minimum bonding amounts. Specifically, the bond minimum of $10,000 for individual bonds was last set in 1960, and the bond minimums for statewide bonds and for nationwide bonds—$25,000 and $150,000 respectively—were last set in 1951. As we reported in 2010, if adjusted to 2009 dollars, these minimum amounts would be $59,360 for an individual bond, $176,727 for a statewide bond, and $1,060,364 for a nationwide bond.[27] Figure 2 shows the current amounts set in 1951 and 1960 and these amounts adjusted to 2009 dollars.

Figure 2: Current Individual, Statewide, and Nationwide Bond Minimums Adjusted to 2009 Dollars



Source: GAO analysis of BLM data.

According to BLM officials we interviewed at 12 of the 16 field offices, these minimum bond amounts are inadequate for managing potential liability. This is because these minimum amounts may not be sufficient to serve as an incentive to encourage operators to comply with plugging and

[27] GAO-10-245.

reclamation requirements and the cost to plug and reclaim a well site may far outweigh the value of the bond. For example, these officials told us that the cost to plug a well ranges from approximately $2.50 to $20 per foot depth of well and that wells can range from being just a few hundred feet deep to more than 26,000 feet deep. In addition, the reclamation costs can range from $200 to $15,000 per acre. In other situations, these officials noted, the cost to plug and reclaim a single well may cost more than $100,000, and it can cost more than $10,000 simply to get a work crew to the well site. Consequently, in most circumstances, a $10,000 individual lease bond is insufficient to cover the plugging and reclamation costs for one well, according to the officials we interviewed.

Given these factors, a few field office officials we surveyed noted that some operators, particularly small, independent operators with wells producing only small amounts of oil and gas, may be inclined to declare bankruptcy and default on the bond rather than pay to properly plug and reclaim the well site. These officials also told us that raising bond amounts for these small operators may in some situations make matters worse because the operators may not be able to provide the higher bond amount, and BLM's effort to seek a bond increase may only hasten their decision to declare bankruptcy. To avoid this situation, BLM officials told us that they must devote significant time and resources to supervising these small operators and persuading them to properly plug and reclaim their wells, which places a drain on staff resources. Officials at 12 of the 16 field offices reported that they had too few resources to effectively manage potential liability.

Officials in 15 of the 16 field offices we interviewed said that they face challenges conducting bond adequacy reviews. They noted the following examples:

- BLM staff have a limited amount of time available for conducting bond adequacy reviews because a significant amount of staff resources are needed to complete the process—potentially months of work—and BLM places a higher priority on other activities, such as processing APDs.

- The criteria for increases outlined in IM 2008-122 are vague, creating ambiguity about whether a request for an increase should be submitted and whether it will be approved.

- The BLM state office process for reviewing requests for a bond increase can, in some circumstances, be time consuming—sometimes taking a year

or longer before a decision is made, by which time the conditions supporting the request may have changed or worsened.

The Bakersfield Field Office in California was the only field office that did not report facing challenges conducting bond adequacy reviews. This is because this office is the only field office that raised bond amounts above the regulatory minimums for the majority of its bonds.

Our analysis of data reported by the officials we surveyed indicates that about one-third of the field offices requested bond increases and many of the increases requested by field offices have not been approved by state offices. According to our survey of field offices, 13 of the 33 survey respondents reported that they did not request any bond increases, and 3 survey respondents reported that they did not know the number of bond increases they had requested. The 17 survey respondents that did request bond increases from May 2008 through November 2010 sought 93 bond increases worth about $19 million, and BLM state offices approved 59 (63 percent) of these increases, worth about $7 million, or 38 percent of the total value of increases sought, as shown in table 8.

Table 8: Bond Increases Requested and Approved from May 2008 through November 2010, by State Office

State office	Number of bond increases requested by field offices	Number of bond increases approved by state office	Percent approved	Amount of bond increase requested by field offices	Amount of bond increase approved by state office	Percent approved
Alaska	0	0	n/a	$0	$0	n/a
Arizona	0	0	n/a	0	0	n/a
California	15	15	100%	340,000	340,000	100%
Colorado	7	2	29	4,364,814	139,000	3
Eastern States	0	0	n/a	0	0	n/a
Montana	1	1	100	25,000	25,000	100
Nevada	0	0	n/a	0	0	n/a
New Mexico	48	29	60	4,495,500	2,433,500	54
Utah	3	1	33	775,000	125,000	16
Wyoming	19	11	58	9,130,230	4,225,920	46
Total	**93**	**59**	**63%**	**$19,130,544**	**$7,288,420**	**38%**

Source: GAO analysis of BLM data.

BLM Data Limitations Restrict the Agency's Ability to Evaluate Potential Liability and Measure Performance

We identified three limitations in BLM's data systems that restrict the ability of BLM field and state offices to evaluate potential liability and measure performance of BLM field offices' implementation of the agency's policies: (1) incomplete bond information in AFMSS, (2) unreliable field office counts of the number of idle wells, and (3) incomplete AFMSS data on the number of reviews for bond adequacy and idle wells.[28]

Incomplete Bond Information in AFMSS

According to our analysis of AFMSS data, of the approximately 93,000 individual wells recorded in the database, more than 22,500 (about 24 percent) lack an associated bond number. Consequently, BLM field office officials told us it is difficult to accurately determine the oil and gas wells covered by a particular bond. To address this problem, BLM has developed a process to link well data from AFMSS to bond data in the LR2000 Bond & Surety System—which contains data on the amount and value of bonds held by BLM—to provide field office officials conducting bond adequacy reviews with the number of wells covered by a particular bond. For this system to work, however, BLM field office staff must manually enter bond data into AFMSS, yet they are not required to do so. As a result, the data necessary to make this process useful for evaluating potential liability across field offices are incomplete. The link between AFMSS and the LR2000 Bond & Surety System could address this problem for future bond entries if BLM required field office staff to enter and maintain bond number data into AFMSS.[29]

In addition, BLM field office officials told us that it is difficult to evaluate which bonds are associated with which potential liabilities when the wells are covered by a statewide or nationwide bond because BLM field offices generally cannot access AFMSS data for wells in areas managed by other field offices. Therefore, the data available to them have been insufficient to fully evaluate all of the potential liabilities that are covered by a particular statewide or nationwide bond. The link between AFMSS and the LR2000 Bond & Surety System will not fully address this problem since the link only shows the number of wells associated with a bond, and does not

[28]AFMSS is the database that BLM uses to track oil and gas information on public land. It contains data on, among other things, lease ownership and well identification, location, and production.

[29]The BLM Wyoming State Office has developed a system involving e-mailing other state and field offices to identify potential liabilities associated with a statewide or nationwide bond. However, this process is not automated and is not used consistently throughout BLM.

show further details about the wells, such as their production status, age, or condition.

Unreliable Counts of the Number of Idle Wells

The 33 BLM field offices that responded to our survey reported a total of about 2,300 idle wells that had been inactive for 7 years or more as of fiscal year 2009. However, according to our analysis of ONRR's Oil and Gas Operations Report (OGOR) data system, into which operators input monthly oil and gas production quantities, the number of idle wells on federal land under the jurisdiction of these offices is nearly double what was reported to us by BLM field offices—about 4,600 wells.[30] Table 9 shows the number of wells we identified as inactive for 7 years or more using OGOR data and the number of idle wells reported by the 33 BLM field offices.

Table 9: Idle Wells Reported by BLM Field Offices and Calculated Using OGOR Data for Fiscal Year 2009, by Field Office

Field office (state office)	Idle wells reported to GAO	Total idle wells as indicated by OGOR data	Difference between idle wells indicated by OGOR and the number reported by BLM field offices
Alaska field offices (AK)[a]	6	37	31
Arizona Strip (AZ)	0	0	0
Bakersfield (CA)	153	1,398	1,245
Buffalo (WY)	475	1,008	533
Carlsbad (NM)	389	274	-115
Casper (WY)	121	259	138
Colorado River Valley (CO)	7	12	5
Farmington (NM)[b]	11	55	44
Grand Junction (CO)	114	101	-13
Great Falls (MT)	6	41	35
Jackson (Eastern States)	n/a[c]	43	n/a[c]
Kemmerer (WY)	3	10	7

[30]EPAct 2005 defines an idle well as one which has been nonoperational for 7 years or more and for which there is no anticipated beneficial use for the well. For our analysis, we were unable to assess future economic benefit, and therefore relied on whether the well was inactive for 7 years or more to determine if it was idle.

Field office (state office)	Idle wells reported to GAO	Total idle wells as indicated by OGOR data	Difference between idle wells indicated by OGOR and the number reported by BLM field offices
Lander (WY)	n/a[c]	174	n/a[c]
Las Cruces (NM)	0	0	0
Little Snake (CO)[d]	n/a[c]	27	n/a[c]
Miles City (MT)	0	145	145
Milwaukee (Eastern States)	n/a[c]	2	n/a[c]
Moab (UT)[e]	78	103	25
Nevada State Office (NV)[f]	14	11	-3
Newcastle (WY)	183	258	75
North Dakota (MT)	2	45	43
Oklahoma (NM)	72	36	-36
Pinedale (WY)	n/a[c]	53	n/a[c]
Price (UT)	4	17	13
Rawlins (WY)	36	66	30
Richfield (UT)	0	0	0
Rock Springs (WY)	69	84	15
Roswell (NM)	153	125	-28
Royal Gorge (CO)	1	6	5
San Juan Public Lands Center (CO)[g]	27	29	2
Vernal (UT)	205	169	-36
White River (CO)	54	150	96
Worland (WY)[h]	141	183	42
Total	**2,324**	**4,622**	**2,298**

Source: GAO analysis of BLM data.

[a]This survey response includes BLM's Anchorage and Arctic field offices.

[b]This survey response includes BLM's Rio Puerco Field Office.

[c]Information not available.

[d]This survey response includes BLM's Kremmling Field Office.

[e]This survey response includes BLM's Monticello Field Office.

[f]This survey response includes BLM's Egan, Humboldt River, Mount Lewis, Schell, Stillwater, Tonopah, and Tuscarora field offices.

[g]This survey response includes BLM's Dolores, Pagosa, and Uncompahgre field offices.

[h]This survey response includes BLM's Cody Field Office.

BLM field offices did not question the accuracy of the OGOR data, but they noted three challenges associated with identifying idle wells that are likely the cause of the discrepancy. First, information on idle well status may be incomplete because BLM policy allows operators to keep wells in a shut-in status without alerting the field office that the well is not producing. According to our analysis of AFMSS data, about 1,600, or 32 percent, of the idle wells we identified from OGOR data are in shut-in status. However, this number may actually be higher because operators do not have to notify BLM when they place their well in shut-in status. As a result, BLM officials cannot solely rely on AFMSS data to accurately identify all wells that have been idle for 7 years or more, as directed by EPAct 2005 and BLM policy.

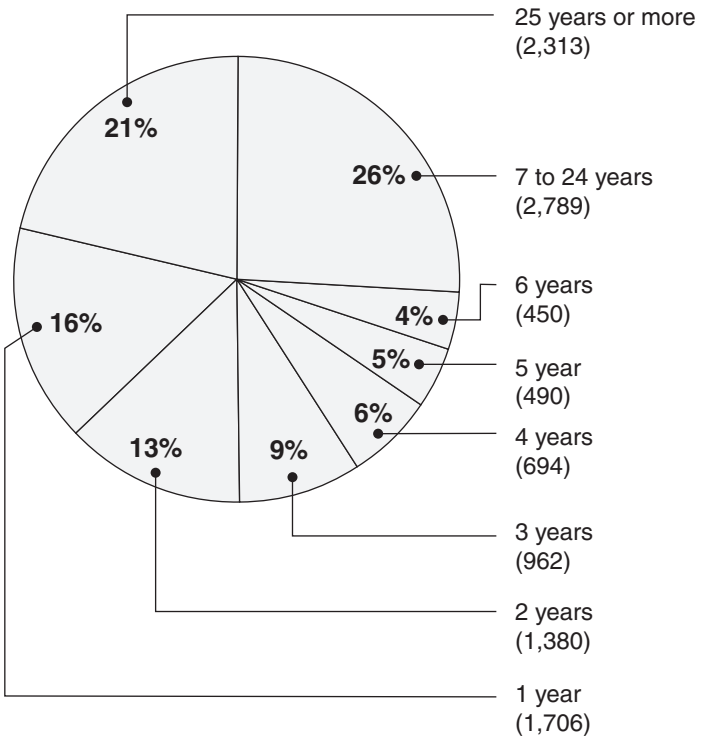
Second, until October 1, 2010, a process BLM had developed in 2007 to link BLM's well data in AFMSS with oil and gas production data from ONRR's OGOR reports had not worked properly, according to BLM officials. OGOR data are based on information directly entered into an ONRR database by oil and gas operators. ONRR staff conduct data reliability checks and make corrections as appropriate. BLM officials told us that the problems with the linkage were addressed on October 1, 2010. However, even with this link between OGOR and AFMSS, it is still difficult to reconcile the data from the two systems. Reconciliation requires staff to manually compare well status data in AFMSS with production data from OGOR. Officials in BLM field offices told us that this process can be time consuming, depending on the total number of wells that must be reviewed, and can involve months of work looking through significant quantities of data.

Third, according to some BLM field office officials, while some field offices have access to other more reliable sources of production data gathered by state conservation commissions and the global energy information provider IHS,[31] these data sources also have limitations. For example, they generally do not distinguish between wells on federal, state, and private land. To use these data, field offices typically have to reconcile the wells from the state and IHS data with federal well numbers contained in AFMSS to identify those wells overseen by BLM.

[31]IHS is an information services company based in Englewood, Colorado that, among other things, compiles and sells data on oil and gas well production.

In addition, OGOR data show that BLM has a significant number of long term idle wells—which BLM officials told us pose the greatest risk for causing environmental degradation. Our analysis of OGOR data as of July 7, 2010, shows that of the approximately 5,100 wells idle for 7 years or longer, roughly 45 percent, or about 2,300 wells, have not produced oil or gas for more than 25 years. Figure 3 shows the total number of idle wells calculated using OGOR data, by the number of years they have been idle.

Figure 3: Idle Wells on Federal Land, by Number of Years Idle, as of July 7, 2010



Source: GAO analysis of OGOR data.

Note: We have aggregated the number of wells that have been idle for 25 year or more because the ONRR data system does not contain annual well production data prior to 1983.

Incomplete AFMSS Data on the Number of Reviews for Bond Adequacy and Idle Wells

Field offices vary in how they use AFMSS to record bond adequacy reviews; as a result, AFMSS data on the number of reviews for bond adequacy are inconsistently entered and therefore incomplete. This makes it difficult for BLM officials to track the efforts of BLM field offices in managing potential liability. Although BLM field office staff manually enter bond review data into AFMSS, the bond adequacy review policy did not instruct staff to do so until July 2010. In addition, as mentioned earlier,

some field offices did not know the number of bond adequacy reviews they conducted in some fiscal years from 2005 through 2009. Consequently, the data that have been entered into AFMSS do not reflect the actual number of reviews that a field office may have conducted. For example, 8 of the 33 field offices survey respondents reported to us that they had conducted more bond adequacy reviews from fiscal years 2005 through 2009 than the total number recorded in AFMSS covering the period from May 1, 1990 through March 17, 2010. Table 10 shows the number of bond adequacy reviews reported to us by the BLM field offices we surveyed and the number of bond adequacy reviews recorded in AFMSS.

Table 10: Bond Adequacy Reviews Reported by Field Offices From Fiscal Years 2005 through 2009 and the Total Number of Bond Adequacy Reviews In AFMSS from May 1, 1990 through March 17, 2010

Field office (state office)	Total number of bond adequacy reviews reported to GAO	Total number of bond adequacy reviews in AFMSS	Incomplete bond adequacy review data in AFMSS
Alaska field offices (AK)[a]	0	13	
Arizona Strip (AZ)	1	n/a[b]	
Bakersfield (CA)	467	101	•
Buffalo (WY)	226	271	
Carlsbad (NM)	1	n/a[b]	
Casper (WY)	81	84	
Colorado River Valley (CO)	13	12	•
Farmington (NM)[c]	184	31	•
Grand Junction (CO)	0	6	
Great Falls (MT)	79	81	
Jackson (Eastern States)	103	98	•
Kemmerer (WY)	0	16	
Lander (WY)	0	35	
Las Cruces (NM)	0	n/a[b]	
Little Snake (CO)[d]	28	41	
Miles City (MT)	314	26	•
Milwaukee (Eastern States)	0	3	
Moab (UT)[e]	n/a[b]	n/a[b]	
Nevada State Office (NV)[f]	16	21	
Newcastle (WY)	6	156	

Field office (state office)	Total number of bond adequacy reviews reported to GAO	Total number of bond adequacy reviews in AFMSS	Incomplete bond adequacy review data in AFMSS
North Dakota (MT)	39	62	
Oklahoma (NM)	6	3	●
Pinedale (WY)	50	48	●
Price (UT)	0	n/a[b]	
Rawlins (WY)	24	2	●
Richfield (UT)	n/a[b]	n/a[b]	
Rock Springs (WY)	35	59	
Roswell (NM)	n/a[b]	n/a[b]	
Royal Gorge (CO)	0	26	
San Juan Public Lands Center (CO)[g]	50	n/a[b]	
Vernal (UT)	0	n/a[b]	
White River (CO)	0	4	
Worland (WY)[h]	35	59	

Source: GAO analysis of BLM data.

Note: In this table, zero bond adequacy reviews means either that the field offices reported that they did not conduct any bond adequacy reviews or did not conduct reviews for some years and reported information not available for others.

[a]This survey response includes BLM's Anchorage and Arctic field offices.

[b]Information not available.

[c]This survey response includes BLM's Rio Puerco Field Office.

[d]This survey response includes BLM's Kremmling Field Office.

[e]This survey response includes BLM's Monticello Field Office.

[f]This survey response includes BLM's Egan, Humboldt River, Mount Lewis, Schell, Stillwater, Tonopah, and Tuscarora field offices.

[g]This survey response includes BLM's Dolores, Pagosa, and Uncompahgre field offices.

[h]This survey response includes BLM's Cody Field Office.

A similar discrepancy occurs with data for idle and orphan well reviews in part because BLM's policy does not direct field office staff to record idle and orphan well reviews in AFMSS. Consequently, the data that have been entered into AFMSS do not reflect the actual number of idle and orphan well reviews that a field office may have conducted. For example, 11 of the 33 field office survey respondents reported to us that they had conducted more idle and orphan well reviews from fiscal years 2005 through 2009 than the total number recorded in AFMSS covering the period from April 25, 2002 through March 12, 2010. In addition, of the almost 10,000 idle and orphan well reviews in AFMSS for all field offices, more than 68 percent of

the records have blank date fields, making it impossible for BLM staff to know when an idle and orphan well review occurred by looking at data in AFMSS. Table 11 shows the number of idle and orphan well reviews reported to us by the BLM field offices we surveyed and the total number of idle and orphan well reviews recorded in AFMSS.

Table 11: Idle and Orphan Well Reviews Reported from Fiscal Year 2005 through Fiscal Year 2009, and Total Idle and Orphan Well Reviews In AFMSS from April 25, 2002 through March 12, 2010

Field office (state office)	Total Idle and orphan well reviews reported to GAO	Total idle and orphan well reviews in AFMSS	Incomplete idle and orphan well review data in AFMSS
Alaska field offices (AK)[a]	98	154	
Arizona Strip (AZ)	0	n/a[b]	
Bakersfield (CA)	4,515	2,091	●
Buffalo (WY)	530	2,444	
Carlsbad (NM)	95	333	
Casper (WY)	97	670	
Colorado River Valley (CO)	86	72	●
Farmington (NM)[c]	5,000	428	●
Grand Junction (CO)	14	178	
Great Falls (MT)	343	211	●
Jackson (Eastern States)	21	126	
Kemmerer (WY)	12	35	
Lander (WY)	n/a[b]	302	
Las Cruces (NM)	0	n/a[b]	
Little Snake (CO)[d]	31	56	
Miles City (MT)	314	302	●
Milwaukee (Eastern States)	0	37	
Moab (UT)[e]	140	142	
Nevada State Office (NV)[f]	202	12	●
Newcastle (WY)	34	242	
North Dakota (MT)	155	65	●
Oklahoma (NM)	52	580	
Pinedale (WY)	300	88	●
Price (UT)[g]	0	n/a[b]	
Rawlins (WY)	600	104	●
Richfield (UT)	0	n/a[b]	

Field office (state office)	Total Idle and orphan well reviews reported to GAO	Total idle and orphan well reviews in AFMSS	Incomplete idle and orphan well review data in AFMSS
Rock Springs (WY)	78	108	
Roswell (NM)	154	362	
Royal Gorge (CO)	n/a[b]	13	
San Juan Public Lands Center (CO)[h]	7	138	
Vernal (UT)	428	235	●
White River (CO)	n/a[b]	247	
Worland (WY)[i]	2,348	108	●

Source: GAO analysis of BLM data.

[a]This survey response includes BLM's Anchorage and Arctic field offices.

[b]Information not available.

[c]This survey response includes BLM's Rio Puerco Field Office.

[d]This survey response includes BLM's Kremmling Field Office.

[e]This survey response includes BLM's Monticello Field Office.

[f]This survey response includes BLM's Egan, Humboldt River, Mount Lewis, Schell, Stillwater, Tonopah, and Tuscarora field offices.

[g]Until fiscal year 2009, all idle well reviews for the Price Field Office were conducted and recorded in the Moab Field Office.

[h]This survey response includes BLM's Dolores, Pagosa, and Uncompahgre field offices.

[i]This survey response includes BLM's Cody Field Office.

Conclusions

To ensure that federal taxpayers do not have to cover the costs of reclamation for each of the approximately 93,000 oil and gas wells in BLM's inventory, BLM has established a number of policies. However, most BLM offices have not fully implemented these policies because they have not always conducted bond adequacy reviews, consistently interpreted the policy for increasing bonds, identified all idle or orphan wells on federal land, or made progress in reducing their inventory of these wells. These deficiencies have the potential to increase the federal government's exposure to paying for reclamation costs for idle and orphan wells on federal land.

BLM's ability to effectively manage potential liabilities is further impaired by a number of interrelated challenges. Because minimum bond amounts have not been updated or adjusted for inflation in more than 50 years, they may not be sufficient to serve as an incentive to encourage operators to comply with plugging and reclamation requirements and the cost to plug and reclaim a well site may far outweigh the value of the bond. As a result,

BLM officials must devote additional time and resources to manage the potential liability, which is difficult given their limited resources and other agency priorities. This situation is further exacerbated by BLM's vague policy for increasing bond amounts, which field offices have interpreted differently, and have not led to consistent and regular bond increases. BLM staff are also challenged by a lack of complete, consistent, and reliable data that can help them readily evaluate potential liabilities, make informed decisions about them, and evaluate agency performance for conducting bond adequacy and idle and orphan well reviews. We believe that the challenges BLM faces in managing potential liabilities are interdependent and cannot be solved in a piecemeal fashion. Instead we believe that BLM needs a comprehensive approach to address these challenges in a holistic fashion that will ensure that the agency has (1) a complete understanding of the extent of the potential liability, (2) adequate bond amounts to ensure that operators and not taxpayers pay for reclamation, and (3) appropriate processes to ensure that the agency is able to effectively manage and reduce this liability.

Recommendations for Executive Action

To better manage potential liability on federal land, we recommend that the Secretary of the Interior direct the Director of BLM to develop a comprehensive strategy to include four actions:

- increasing regulatory minimum bonding amounts over time to strengthen bonding as a tool for ensuring operators' compliance,
- revising the bond adequacy review policy to more clearly define terms and the conditions that warrant a bond increase,
- implementing an approach for ensuring complete and consistent well records in AFMSS so that BLM field and state offices can better evaluate potential liability and improve decisionmaking, and
- implementing an approach for better monitoring agency performance in conducting reviews for bond adequacy and idle wells.

Agency Comments and Our Evaluation

GAO provided Interior with a draft of this report for its review and comment. Interior concurred with all four of our recommendations and noted that, among other things, it has already started to take steps to improve the data in AFMSS to ensure the completeness and accuracy of these data. Interior's written comments are presented in appendix II of this report.

We are sending copies of this report to the appropriate congressional committees, the Secretary of the Interior, the Director of BLM, and other interested parties. The report also is available at no charge on the GAO Web site at http://www.gao.gov.

If you or your staff have any questions about this report, please contact me at (202) 512-3841 or mittala@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 major contributions to this report are listed in appendix III.

Anu K. Mittal
Director, Natural Resources
and Environment

Appendix I: Scope and Methodology

This appendix details the methods we used to examine the Department of the Interior's (Interior) Bureau of Land Management's (BLM) policies and efforts to ensure that the bonds for oil and gas wells are adequate to cover the cost of reclaiming land disturbed by oil and gas operations. Specifically, we were asked to (1) identify BLM's policies for managing potential federal oil and gas liabilities, (2) determine the extent to which BLM has implemented these policies, and (3) describe the challenges, if any, BLM faces in managing potential oil and gas well liability.

To identify BLM's policies for managing potential liabilities, we first interviewed officials in BLM's Washington, D.C., headquarters office to identify the BLM policies intended to manage these potential liabilities. These officials identified policies in two areas: bond adequacy and idle and orphan wells. The bond adequacy policy, which implements the increased bond amount regulation, included instructional memorandums (IM) IM 2006-206, Oil and Gas Bond Adequacy Reviews; IM 2008-122, Oil and Gas Bond Adequacy Reviews; and IM 2010-161 Federal Oil and Gas Bonds. The idle and orphan well policy included IM 2007-192, Priority Ranking of Orphaned and Idled Wells; Section 349(b) of the Energy Policy Act of 2005, which implements Section 349 of EPAct of 2005. We analyzed these policies to summarize the actions they outlined for BLM state and field offices.

To determine the extent to which BLM has implemented its policies for managing potential liabilities, we reviewed laws and federal regulations related to onshore oil and gas bonding and idle wells on federal land and interviewed officials at BLM's Washington D.C., headquarters office. We developed a Web-based survey, which we sent to all 48 BLM field offices with an oil and gas program and received responses from all these offices. Because some field offices work together to implement these policies by sharing staff resources, 15 of the 48 field offices we surveyed combined their responses, resulting in a total of 33 survey responses. We also interviewed officials in the 16 BLM field offices that collectively manage more than 85 percent of the oil and gas wells on federal land, as well as officials in the corresponding 6 state offices in which the 16 field offices are located. We also visited 12 BLM field and state offices. Table 12 shows the 10 BLM state offices and 48 field offices and notes which field offices combined their responses.

Table 12: BLM State and Field Office Officials Surveyed, Interviewed, and Visited

State and field offices	Surveyed	Interviewed	Visited
Alaska State Office			
Anchorage Field Office[a]	●		
Arctic Field Office[a]	●		
Arizona State Office			
Arizona Strip Field Office	●		
California State Office		●	●
Bakersfield Field Office	●	●	●
Colorado State Office		●	●
Colorado River Valley Field Office	●	●	●
Columbine Field Office	●		
Dolores Field Office[b]	●		
Grand Junction Field Office	●		
Kremmling Field Office[c]	●		
Little Snake Field Office	●		
Pagosa Field Office[b]	●		
Royal Gorge Field Office	●		
San Juan Public Lands Center[b]	●		
Uncompahgre Field Office[b]	●		
White River Field Office	●	●	
Eastern States Office			
Jackson Field Office	●		
Milwaukee Field Office	●		
Montana State Office		●	●
Great Falls Field Office	●	●	●
Miles City Field Office	●	●	●
North Dakota Field Office	●		
Nevada State Office			
Egan Field Office[d]	●		
Humboldt River Field Office[d]	●		
Mount Lewis Field Office[d]	●		
Schell Field Office[d]	●		
Stillwater Field Office[d]	●		
Tonopah Field Office[d]	●		
Tuscarora Field Office[d]	●		
New Mexico State Office		●	●

State and field offices	Surveyed	Interviewed	Visited
Carlsbad Field Office	●	●	●
Farmington Field Office	●	●	●
Las Cruces Field Office	●		
Oklahoma Field Office	●		
Rio Puerco Field Office[e]	●		
Roswell Field Office	●		
Utah State Office		●	
Moab Field Office	●	●	
Monticello Field Office[f]	●		
Price Field Office	●		
Richfield Field Office	●		
Vernal Field Office	●	●	
Wyoming State Office		●	●
Buffalo Field Office	●	●	●
Casper Field Office	●	●	
Cody Field Office[g]	●		
Kemmerer Field Office	●		
Lander Field Office	●		
Newcastle Field Office	●	●	
Pinedale Field Office	●	●	
Rawlins Field Office	●	●	
Rock Springs Field Office	●	●	
Worland Field Office	●	●	
Total	**48**	**22**	**12**

Source: GAO.

[a]These offices combined their survey responses and are referred to as Alaska field offices throughout the report.

[b]These offices combined their survey responses with Colorado's San Juan Public Lands Center Field Office.

[c]This office combined its survey response with Colorado's Little Snake Field Office.

[d]These offices combined their survey responses and are referred to as Nevada State Office throughout the report.

[e]This office combined its survey response with the New Mexico's Farmington Field Office.

[f]This office combined its survey response with the Utah's Moab Field Office.

[g]This office combined its survey response with the Wyoming's Worland Field Office.

Among other things, we asked officials in the 48 BLM field offices we surveyed to provide information on the number of bond adequacy and idle well reviews conducted each fiscal year from 2005 to 2009. We also asked these officials whether their field office had created an idle well action

plan and completed the ranking procedures outlined in the idle and orphan well instruction memorandum.

We also asked the field office officials to provide information on the most current inventory of idle wells their office manages. To evaluate the accuracy and completeness of these data, we compared the information the field offices provided with the oil and gas well production data, referred to as Oil and Gas Operation Report (OGOR) data, from Interior's Office of Natural Resource Revenue (ONRR)—formerly a component of the Minerals Management Service—on all wells that had been idle for 1 year or longer. The OGOR data was extracted by ONNR on July 7, 2010. We present this data of idle wells on federal land, broken out by the number of years idle, in figure 3. To compare the OGOR data to the data provided by BLM field offices, we limited our set of OGOR data to cover a period through fiscal year 2009—the most current year with complete BLM data. This comparison is presented in table 9. To assess the reliability of the OGOR data provided by ONRR, among other things, we electronically tested all elements related to our analysis and met with agency officials who administer the systems. We found that these data were sufficiently reliable for the purpose of this report. We analyzed the production data to determine which wells on federal land are idle and the length of time since they last produced oil or gas.

In our Web-based survey, we also requested the BLM field offices to submit detailed information on requests for increases in bond amounts from May 1, 2008 to December 16, 2010. We asked the field offices for information on the amount of the requested increases and the disposition of the requests. We used this information to determine the total number of bond increases requested, the value of the requested bond increases, the percentage of requests that were approved, and the total value of approved bond increases. We also asked the field offices to provide information on the wells they have plugged or returned to production since September 1, 2007. We used this information to determine the progress BLM field offices have made in reducing their inventory of idle wells. We also analyzed the information officials in the 16 BLM field offices provided during our interviews on BLM policies and steps these officials had taken to implement these policies. If the officials had not fully implemented the policies, we asked them why they had not done so.

The practical difficulties of developing and administering a survey may introduce errors—from how a particular question is interpreted, for example, or from differences in the sources of information available to respondents when answering a question. Therefore, we included steps in

developing and administering the survey to minimize such errors. We obtained comments on a draft of the survey from officials in BLM's Washington, D.C., headquarters office. We also pretested the survey in person at three BLM field offices—Bakersfield, California, and Carlsbad and Farmington, New Mexico. We conducted these pretests to check that (1) the questions were clear and unambiguous, (2) terminology was used correctly, (3) the information could feasibly be obtained, and (4) the survey was comprehensive and unbiased. We made changes to the content and format of the Web-based survey after these pretests, based on the feedback we received.

To identify the challenges BLM faces in managing potential liabilities, we analyzed the information officials in the 16 BLM field offices and the corresponding six state offices provided during our interviews on what challenges they face, if any, in implementing BLM policies for managing the potential liability on federal land; whether they had sufficient tools and resources to implement the policies; and what their views were on BLM's bonding system and minimum bonding amounts.

To assess challenges related to the electronic data available to BLM officials when evaluating and managing potential oil and gas liabilities, we requested electronic data, including OGORs from ONRR and data on bond adequacy reviews and idle well reviews from BLM's Automated Fluid Minerals Support System (AFMSS). The OGOR data was extracted by ONNR on July 7, 2010. The AFMSS data was extracted by BLM on March 17, 2010; May 26, 2010; and October 1, 2010. First, we analyzed the OGOR and AFMSS data to count the number of idle wells (i.e., wells that have not produced for 7 years more) as of fiscal year 2009 for each field office, and we compared these data with idle well data provided by the 33 field offices we surveyed. We also grouped the idle wells we identified by the number of years they have remained idle. Second, we counted the number of bond adequacy reviews and idle well reviews in AFMSS and compared them with the number of reviews reported by the BLM field offices in our Web-based survey. Third, to determine the number of well records without bond numbers, we selected current well records in AFMSS without any information on their associated bond numbers and counted them by their unique 10-digit American Petroleum Institute number to identify individual wells that could not be easily associated with a bond.

We present data from AFMSS regarding the number of wells managed by each of the 33 field offices. We believe AFMSS data are sufficiently reliable for this purpose although our audit work determined reliability issues for other AFMSS data used in other contexts.

To better understand the perspectives of operators regarding BLM bonding requirements, we interviewed industry officials with the Independent Petroleum Association of New Mexico and the Interstate Oil and Gas Compact Commission.

We conducted this performance audit from January 2010 to February 2011 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.

Appendix II: Comments from the Department of Interior

United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

FEB 15 2011

TAKE PRIDE IN AMERICA

Ms. Anu K. Mittal
Director, Natural Resources and Environment
Government Accountability Office
441 G Street, N.W.
Washington, D.C. 20548

Dear Ms. Mittal:

Thank you for the opportunity to review and comment on the Government Accountability Office (GAO) draft report entitled, *OIL AND GAS BONDS: BLM Needs a Comprehensive Strategy to Better Manage Potential Oil and Gas Well Liability*, (GAO-11-292).

The Department of the Interior (DOI) concurs with all four recommendations. The Bureau of Land Management (BLM) has the primary responsibility for managing Federal onshore oil and gas and accounting for fluid mineral production, and thus is the responsible bureau.

The BLM acknowledges GAO's concern in Recommendation 1 that the minimum bond amounts for oil and gas operations have not been updated in over 50 years. Although existing regulations provide BLM with the authority to set bond amounts higher than the regulatory minimum, the BLM will complete an evaluation of the appropriate minimum bonding amounts and increase minimum amounts through a rulemaking process.

In addition to the actual bond amounts, it is important to note the other incentives that BLM's bonding system provides to ensure operator compliance and deter default on an operator's reclamation obligations. The BLM's oil and gas program uses a "performance" bonding system. By regulation, operators seeking approval of an Application for Permit to Drill, who within the previous 5 years have caused BLM to demand a bond or financial guarantee upon the operator's failure to plug and reclaim, are required to post a bond equal to the full cost of reclaiming the site. Further, bond holders who default and fail to reimburse the Bureau for the full cost of site reclamation may subject all of their leases under the bond to cancellation. Hence, apart from the bond amount, these regulations expose operators -- particularly those with extensive operations on Federal lands -- to potentially severe consequences for defaulting on their reclamation obligations under the lease. An increase in the minimum bond amounts would enhance the protections currently in place.

In response to Recommendation 2, the bond adequacy review policy will be updated to provide additional clarity to assist field offices in determining when to increase a bond. The BLM will explore options to standardize the process and factors to be considered when setting bond amounts.

Recommendation 3 addresses the need for complete and consistent well records. Specifically, the GAO report references the need to document bond information such as the bond number. BLM's well records are maintained in the Automated Fluid Minerals Support System (AFMSS). As noted in the report, BLM has taken steps to improve bond information and documentation of bond adequacy review data by issuing Instruction Memorandum (IM) No. 2010-161, "Federal Oil and Gas Bonds," in July 2010. This IM requires bond reviews to be documented in AFMSS and the lease file.

In addition, improvements to documentation of well records in the AFMSS database should result from the issuance in August 2009 of the "Inspection and Enforcement Documentation and Strategy Development Handbook." The Handbook requires documentation of inspection and enforcement actions and well records necessary for bond review, such as the status of each well, production history, and noncompliance history. The BLM will continue to address the need for complete and consistent well records, including by more closely monitoring existing policy implementation related to data entry to ensure the completeness and accuracy of the data in AFMSS.

In response to Recommendation 4, the above improvements will be used to develop an approach to better monitor agency performance in conducting reviews both for bond adequacy and idle well determinations.

We appreciate your recommendations for improving the regulatory oversight of Federal oil and gas operations. If you have any questions about this response, please contact Mike Nedd, Assistant Director, Minerals and Realty Management at (202) 208-4201.

Sincerely,

Wilma A. Lewis
Assistant Secretary
Land and Minerals Management

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Appendix III: GAO Contact and Staff Acknowledgments

GAO Contact

Anu K. Mittal, (202) 512-3841 or mittala@gao.gov

Acknowledgments

In addition to the contact named above, Andrea Wamstad Brown (Assistant Director), Jeffrey B. Barron, Casey L. Brown, Ying Long, Kevin Remondini, Jerome Sandau, JulieMarie Shepherd, Carol Herrnstadt Shulman, Jeanette Soares, and Walter Vance made key contributions to this report.

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