

GAO

Report to the Ranking Minority Member,  
Committee on Homeland Security and  
Governmental Affairs, U.S. Senate

June 2005

# OIL AND GAS DEVELOPMENT

## Increased Permitting Activity Has Lessened BLM's Ability to Meet Its Environmental Protection Responsibilities



G A O

Accountability \* Integrity \* Reliability



Highlights of [GAO-05-418](#), a report to the Ranking Minority Member, Committee on Homeland Security and Governmental Affairs, U.S. Senate

## Why GAO Did This Study

Rising U.S. energy consumption and concerns about dependency on foreign energy sources have prompted the administration to aggressively pursue domestic oil and gas production, including production on public lands, which in turn has generated concern that the impacts of this activity may compromise the use of public land for other purposes.

GAO determined (1) the extent to which the level of oil and gas development on public lands managed by the Bureau of Land Management (BLM) has changed in recent years, and how the change has affected BLM's ability to mitigate impacts; (2) what policy changes related to oil and gas development BLM recently made and how these policies affected BLM's environmental mitigation activities; and (3) what challenges BLM faces in managing its oil and gas program.

## What GAO Recommends

GAO recommends, among other things, that BLM should (1) ensure that its staffing needs are accurately reflected in its workforce plans and (2) finalize and implement a fee structure to recover the cost of processing oil and gas permits.

Interior agreed with all of GAO's recommendations and said the report generally does much to capture the many demands involved in managing BLM's oil and gas program.

[www.gao.gov/cgi-bin/getrpt?GAO-05-418](http://www.gao.gov/cgi-bin/getrpt?GAO-05-418).

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

# OIL AND GAS DEVELOPMENT

## Increased Permitting Activity Has Lessened BLM's Ability to Meet Its Environmental Protection Responsibilities

### What GAO Found

BLM's ability to meet its environmental mitigation responsibilities for oil and gas development has been lessened by a dramatic increase in oil and gas operations on federal lands over the past 6 years. Nationwide, the total number of drilling permits approved by BLM more than tripled, from 1,803 in fiscal year 1999 to 6,399 in fiscal year 2004. BLM officials in five out of eight field offices that GAO visited explained that as a result of the increases in drilling permit workloads, staff had to devote increased time to processing drilling permits, leaving less time for mitigation activities, such as environmental inspections and idle-well reviews.

BLM made policy revisions over the last 6 years that affected to varying degrees its ability to assess and mitigate the environmental impacts of oil and gas development. The combined effects of these policy changes—some of which were aimed at facilitating and managing increased development, while others were meant to enhance environmental mitigation—were mixed. For example, four of the eight field offices reported that the most significant impact of the policies to expedite and manage oil and gas development was the increased emphasis that some of these policies placed on processing permits, which in turn resulted in shifting staff responsibilities away from mitigation activities. On the other hand, policies to enhance mitigation generally had a positive impact, although increases in the permitting workload have limited their effect. For example, in six field offices, policies for revitalizing BLM's inspection and enforcement program resulted in more inspection staff being hired, although most offices remain understaffed.

BLM state and field office staff, and GAO, identified several challenges to managing the agency's oil and gas program, including (1) managing workloads while meeting all of its responsibilities, (2) using workforce planning to effectively identify and communicate its workforce needs, and (3) meeting its oil and gas program resource needs in light of budget constraints. Workload pressure, already high due to increased permitting activity, has been further exacerbated by increased appeals and litigation of BLM decisions and actions, according to BLM staff. In reviewing BLM's efforts to manage increasing workloads, GAO found that some data needed to quantify specific workload activities are either not tracked or not consistently tracked, and that BLM's current workforce planning process does not effectively identify and communicate BLM's staff needs to decision makers. As a result, the process does not provide consistent and readily available information that BLM can use to support budget justifications and make informed resource allocation decisions. BLM is also presented with the challenge of meeting its oil and gas program responsibilities in a period when staffing needs are growing faster than available resources. While BLM has the authority to assess and collect fees for processing oil and gas permits, it has not exercised this authority. BLM has recently taken steps to develop a fee structure for permits.

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# Contents

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## Letter

|  |    |
|--|----|
| Results in Brief   | 1  |
| Background   | 5  |
| Dramatic Increases in Oil and Gas Permitting Activity Have Lessened BLM's Ability to Ensure That Environmental Impacts Are Mitigated | 7  |
| Recent BLM Policy Changes Have Had Mixed Impacts on Environmental Mitigation Activities for Oil and Gas Development                  | 17 |
| BLM Faces Several Major Challenges in Implementing Its Oil and Gas Program   | 27 |
| Conclusions  | 35 |
| Recommendations for Executive Action   | 45 |
| Agency Comments and Our Evaluation   | 46 |
|  | 47 |

---

## Appendixes

|   |    |
|---|----|
| <b>Appendix I: Objectives, Scope, and Methodology</b>             | 49 |
| <b>Appendix II: Resource Monitoring</b>                           | 55 |
| <b>Appendix III: Comments from the Department of the Interior</b> | 61 |
| GAO Comments  | 64 |
| <b>Appendix IV: GAO Contact and Staff Acknowledgments</b>         | 65 |

---

## Tables

|  |    |
|--|----|
| Table 1: Increases in Oil and Gas Drilling Permits Approved by Eight BLM Field Offices in Fiscal Years 1999 and 2004                         | 21 |
| Table 2: Number of Abandoned Wells That Still Needed Approved Final Abandonment Notices for Eight BLM Field Offices, as of February 17, 2005 | 26 |
| Table 3: Status of the Energy-Related Expedited Resource Management Plans for Eight BLM Field Offices as of March 2005                       | 30 |
| Table 4: Policy Changes to Improve and Streamline the Processing of Drilling Permits   | 31 |
| Table 5: Nature of Resource Monitoring Plans That Address Impacts from Oil and Gas Development across Broad Geographic Areas                 | 57 |

---

## Figures

|  |    |
|--|----|
| Figure 1: Oil Drilling Site with Access Road | 10 |
|--|----|

|   |    |
|---|----|
| Figure 2: Fragmentation of Wildlife Habitat by Multiple Oil and Gas Sites   | 11 |
| Figure 3: Typical Oil and Gas Site Subject to an Environmental Inspection   | 14 |
| Figure 4: BLM State and Field Offices Visited   | 19 |
| Figure 5: Number of Oil and Gas Drilling Permits Approved by BLM for Fiscal Years 1999 through 2004   | 20 |
| Figure 6: Cumulative Percentage Change in Drilling Permits Approved, BLM's Oil and Gas Program Budget, and Staff Resources for the Oil and Gas Program for Fiscal Years 1999 through 2005 | 43 |

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### Abbreviations

|       |   |
|-------|---|
| AFMSS | Automated Fluids Mineral Support System |
| AIRS  | Automated Inspection Record System      |
| BLM   | Bureau of Land Management               |
| EA    | environmental assessment                |
| EIS   | environmental impact statement          |
| EPA   | Environmental Protection Agency         |
| EPCA  | Energy Policy and Conservation Act      |
| FLPMA | Federal Land Policy and Management Act  |
| FTE   | full-time equivalent                    |
| IOAA  | Independent Offices Appropriations Act  |
| NEPA  | National Environmental Policy Act       |
| TA    | temporarily abandoned                   |

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United States Government Accountability Office  
Washington, D.C. 20548

June 17, 2005

The Honorable Joseph I. Lieberman  
Ranking Minority Member  
Committee on Homeland Security and Governmental Affairs  
United States Senate

Dear Senator Lieberman:

American families, communities, and businesses all depend on reliable and affordable energy for their health, safety, and livelihood. Energy is necessary for a myriad of things that affect peoples' daily lives, including transportation, communication, food production, medical services, air-conditioning, and heating. As our nation's energy consumption continues to rise and concerns about dependency on foreign energy sources heighten, the administration has aggressively pursued options for increasing domestic oil and gas production, including production on public lands. This, in turn, has generated concern among some state and local government officials, sportsmen, conservationists, and others that this activity may compromise the use of public land for other purposes.

The Bureau of Land Management (BLM), an agency of the Department of the Interior, is responsible for managing 261 million surface acres of public land, which is roughly one-eighth of the United States. BLM is also responsible for issuing leases for oil and gas resources that are on or under federal lands as well as private lands for which the federal government retains mineral rights—amounting to roughly 700 million acres.<sup>1</sup> In fiscal year 2004, oil and gas valued at roughly \$14.5 billion was produced from these leases and the government collected approximately \$1.6 billion in royalty payments, which are based on a percentage of the value of the oil and gas produced.

The guiding legislation for BLM's management of public lands and mineral estates is the Federal Land Policy and Management Act of 1976, as

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<sup>1</sup>The Mineral Leasing Act of 1920 (Pub. L. No. 66-146 (1920)), as amended, and the Mineral Leasing Act for Acquired Lands (Pub. L. No. 80-382 (1947)), as amended, provide the legislative authority for federal oil and gas leasing. BLM's oil and gas leasing regulations are located at 43 C.F.R. pt. 3100. BLM cannot issue leases for National Forest System lands over the objection of the Forest Service. 43 C.F.R. § 3101.7-1(c). Generally, for lands administered by other agencies, BLM must either obtain the consent of (for acquired lands), or consult with (for public domain lands), the agency responsible. 43 C.F.R. § 3101.7-1 (a), (b).

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amended (FLPMA).<sup>2</sup> Congress declared in FLPMA that it was U.S. policy to manage public lands for multiple use and sustained yield.<sup>3</sup> “Multiple use” is defined, in part, as “the management of the public lands and their various resource values so that they are utilized in the combination that will best meet the present and future needs of the American people.”<sup>4</sup> “Sustained yield” is defined as the “achievement and maintenance in perpetuity of a high-level annual or regular periodic output of the various renewable resources of the public lands consistent with multiple use.”<sup>5</sup> BLM carries out these requirements by continuously balancing a variety of competing land uses, including cattle grazing, habitat protection for threatened and endangered species, wilderness preservation, recreational use, and oil and gas development.

BLM is also responsible for protecting the environment by mitigating the impacts of oil and gas development occurring on lands managed by the agency.<sup>6</sup> This requires BLM to undertake a number of activities to ensure that adverse impacts on the land as well as other resources—such as air, water, vegetation, and wildlife—are properly avoided or mitigated. The Federal Oil and Gas Royalty Management Act of 1982,<sup>7</sup> as amended, establishes the authority for BLM’s program for inspecting oil and gas sites to make sure operators are in compliance with all restrictions and requirements outlined in their leases and drilling permits—including those designed to protect the environment. The act requires the Secretary of the Interior to develop guidelines setting forth the coverage and the frequency of such inspections. Relatedly, various BLM regulations and policies form the basis for monitoring the long-term impacts of oil and gas production; tracking nonproducing wells, also referred to as “idle” wells, to make sure that, among other things, they do not fall into disrepair and become a liability to the federal government; and ensuring that lands affected by oil and gas production are being properly reclaimed. The protection of other

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<sup>2</sup>Pub. L. No. 94-579 (1976), 90 Stat. 2743, *codified at* 43 U.S.C. § 1701 *et seq.*

<sup>3</sup>43 U.S.C. § 1701(a)(7).

<sup>4</sup>43 U.S.C. § 1702(c).

<sup>5</sup>43 U.S.C. § 1702(h).

<sup>6</sup>When we refer to BLM’s environmental protection responsibilities, we are including BLM’s responsibilities to protect the land as well as other resources, such as air, water, vegetation, fish, and wildlife.

<sup>7</sup>Pub. L. No. 97-451(1983), 96 Stat. 2447, *codified at* 30 U.S.C. § 1701 *et seq.*

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resources that may be affected by oil and gas activity is governed by resource-specific laws, such as the Clean Air Act, the Clean Water Act, and the Endangered Species Act.

In January 2001, the President established the National Energy Policy Development Group for the purpose of developing a national energy policy. In May 2001, this group issued the National Energy Policy Report, which included recommendations for facilitating the production of oil and gas resources on public lands. While Congress is still considering comprehensive energy policy legislation in response to the National Energy Policy Development Group, BLM has been administratively implementing some of its recommendations. Specifically, BLM has focused its efforts on streamlining its administration and management of the various stages of oil and gas production through a number of policy and procedural changes that seek to minimize delays in approving drilling permits and increase production while also protecting the environment.

In this context, you asked us to determine (1) the extent to which the level of oil and gas development on public lands managed by BLM has changed over the past 6 years and how these changes have affected, if at all, BLM's ability to assess and mitigate environmental impacts; (2) what policy changes BLM has made in the past 6 years related to facilitating and managing oil and gas development and how these changes have affected, if at all, BLM's ability to assess and mitigate environmental impacts; and (3) what challenges BLM faces in managing its oil and gas program.

To respond to these objectives, we obtained data from BLM on the number of oil and gas drilling permits approved in the past 6 years and the number of environmental inspections performed. We met with officials from BLM's Fluid Minerals Group to discuss the agency's responsibilities for managing its oil and gas program. We also met with the Director and Deputy Director of BLM's National Energy Office to discuss the agency's efforts to implement recommendations in the National Energy Policy specifically affecting BLM's oil and gas program. In addition, we visited a nonprobability sample of BLM field offices and used a structured interview guide to assist in collecting information about how each field office manages its oil and gas program, including staffing and workload issues.<sup>8</sup>

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<sup>8</sup>Results from nonprobability samples cannot be used to make inferences about a population, because in a nonprobability sample, some elements of the population being studied have no chance or an unknown chance of being selected as part of the sample.

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We selected field offices that experienced some of the greatest increases in oil and gas permitting activity for fiscal years 1999 through 2003 (at the time of site selection, fiscal year 2004 data were not available). Additional criteria for selection included offices that vary in their ability to meet BLM's goals for inspecting oil and gas wells and offices that either are or are not expediting the update of resource management plans because the plans involve energy development issues. We focused on these offices because of concern that the expedited time frames for updating these plans could compromise the environmental analyses associated with the plans. Using these criteria, we selected eight field offices to visit: in Glenwood Springs, Colorado;<sup>9</sup> Miles City, Montana; Carlsbad and Farmington, New Mexico;<sup>10</sup> Vernal, Utah; and Buffalo, Rawlins, and Pinedale, Wyoming. Using a structured interview guide, we also interviewed officials from each of the five BLM state offices—in Colorado, Montana, New Mexico, Utah, and Wyoming—that have oversight authority for these field offices.<sup>11</sup> The officials we interviewed at these offices, including state and field office managers, were responsible for the day-to-day administration of BLM's oil and gas program. We also met with officials from industry groups, environmental and citizen-based groups, and state governments. We collected and analyzed documents related to BLM's management of its oil and gas program, including instructional memoranda, resource management plans, BLM's National Energy Policy Implementation Plan, and relevant laws and regulations. A more detailed description of our scope and methodology can be found in appendix I. We conducted our work from February 2004 through April 2005 in accordance with generally accepted government auditing standards.

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<sup>9</sup>The Glenwood Springs, Colorado, field office shares oil and gas program staff with the Grand Junction, Colorado, field office. The information we collected represents the contributions of staff from both offices to managing oil and gas activities that occur within the jurisdiction of the Glenwood Springs, Colorado, field office.

<sup>10</sup>The Carlsbad, New Mexico, field office shares oil and gas program staff with the Roswell, New Mexico, field office and the Hobbs, New Mexico, field station. The information we collected represents the contributions of staff from all of these offices in managing oil and gas activities that occur within the jurisdiction of the Carlsbad, New Mexico, field office.

<sup>11</sup>The jurisdictions for the New Mexico and Montana state offices include some neighboring states. The New Mexico state office also has jurisdiction over Kansas, Oklahoma, and Texas. The Montana state office also has jurisdiction over North Dakota and South Dakota. The data presented in this report for the New Mexico and Montana state offices include data for all of the states under their jurisdiction.



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## Results in Brief

A dramatic increase in oil and gas development on federal lands over the past 6 years has lessened BLM's ability to meet its environmental protection responsibilities. Nationwide, the total number of oil and gas drilling permits approved by BLM more than tripled, from 1,803 to 6,399 for fiscal years 1999 through 2004.<sup>12</sup> Much of the increased oil and gas activity was concentrated in five intermountain states—Colorado, Montana, New Mexico, Utah, and Wyoming. In fiscal year 2004, the offices under the jurisdiction of these five BLM state offices collectively approved 6,204 drilling permits, or more than 95 percent of the nationwide total.<sup>13</sup> For the eight BLM field offices we visited, the increase in the number of drilling permits approved in fiscal year 2004 versus the number approved in fiscal year 1999 ranged from 70 in the Miles City, Montana, field office to 2,151 in the Buffalo, Wyoming, field office.<sup>14</sup> Overall, BLM officials in the majority of the field offices we visited said that staff had to devote increasing amounts of time to processing drilling permits, leaving less time to mitigate the environmental impacts of oil and gas development. For example, the Buffalo, Wyoming, and Vernal, Utah, field offices—the two field offices with the largest increases in permitting activity—were each able to meet their annual environmental inspection goals only once in the past 6 years. Furthermore, the Buffalo, Wyoming, field office was able to achieve only 27 percent of its required environmental inspection goals in fiscal year 2004. BLM staff in four of the eight field offices we visited acknowledged similar difficulties in trying to keep up with their environmental protection responsibilities. Four of the eight field offices had a backlog of past due idle-well reviews and seven of the eight field offices had a backlog of reclamation inspections. BLM staff from each of the field offices that had experienced difficulties in meeting their environmental protection responsibilities attributed the problem, to varying degrees, to staff spending more time processing drilling permits and less time performing environmental mitigation activities.

During the past 6 years, BLM made several policy changes that have impacted to varying degrees its ability to assess and mitigate the environmental impacts of oil and gas development on public lands. While a

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<sup>12</sup>Data as reported from BLM's Automated Fluid Minerals Support System.

<sup>13</sup>Data as reported from BLM's Automated Fluid Minerals Support System.

<sup>14</sup>Data as reported from BLM's Automated Fluid Minerals Support System and corrected by BLM field office officials. For additional information, please see appendix I.

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number of these policies were aimed at facilitating and managing increased development, others were intended to improve environmental mitigation efforts. For example, the policy changes that helped facilitate and manage oil and gas development included (1) reviewing restrictions on oil and gas development to ensure that they are the least restrictive possible while still protecting the environment; (2) expediting the update of certain resource management plans, including those that involve energy development issues; and (3) streamlining the process for permitting oil and gas development. Similarly, recent policy changes intended to improve mitigation activities included those (1) enhancing BLM's oil and gas inspection capabilities, (2) improving management of idle wells, and (3) encouraging the use of best management practices for oil and gas development. However, the combined effects of both types of policy changes on BLM's ability to assess and mitigate environmental impacts have been mixed. For example, staff from four of the eight field offices told us that policies that streamlined the permitting process also increased the emphasis on processing permits, which in turn resulted in shifting staff away from their environmental mitigation responsibilities. On the other hand, the policies issued to revitalize inspection and enforcement activities impacted BLM's mitigation activities positively because they resulted in six of the eight field offices obtaining greater resources to hire more inspection staff.

BLM state and field office staff and GAO identified several challenges that BLM faces in managing its oil and gas program, including, but not limited to, (1) managing workloads to meet all of its responsibilities, (2) using workforce planning to effectively identify and communicate its workforce needs, and (3) meeting its oil and gas program resource needs in light of budget constraints. Workload pressure, which was already at a high level due to the increases in permitting activity, has been further exacerbated by increases in public challenges to BLM's decisions and actions, according to BLM staff. Heavy workloads have led to high stress levels and low morale among some staff. In reviewing BLM's efforts to manage increasing workloads, we found that three field offices and four state offices did not effectively identify and communicate their workforce needs to either their respective BLM state office or BLM headquarters. BLM's current workforce planning process does not identify all of BLM's staffing needs, in large part because BLM headquarters directs state and field offices to identify only those needs for which funding is available. As a result, the current workforce planning process does not provide consistent and readily available information that state and headquarters decision makers can use to support budget justifications and make informed resource allocation

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decisions. Furthermore, some data needed to quantify workloads—including idle-well reviews and reclamation-related workloads—are either not tracked or not consistently tracked in a centralized database, making it difficult to identify and prioritize staffing needs for these responsibilities. Lastly, but perhaps most significantly, staffing needs are growing faster than available resources. While many federal agencies are facing tight budget constraints, BLM is in an unusual position because it has authority, which it has not exercised, to generate additional revenues to cover the costs of its program activities by assessing and collecting fees for various services that it provides. In its budget justification for fiscal year 2006, BLM proposed to impose fees for issuing oil and gas permits and said it is drafting a rule establishing a fee structure. According to the budget justification, the cost recovery fees would generate a net increase of \$7.6 million, which would allow BLM to maintain its current staffing level and use a portion of its appropriated funds to fund other program priorities such as ensuring proper inspection and enforcement actions.

We are recommending that the Secretary of the Interior take steps to ensure that BLM's staffing needs are accurately reflected in its workforce plans and considered by key decision makers. We are also recommending that the Secretary direct BLM to finalize and implement a fee structure to cover the costs of processing oil and gas drilling permits. In responding to a draft of this report, Interior generally agreed with our recommendations. See appendix III for Interior's comment letter. Also, see the "agency comments and our evaluation" section and appendix III for our evaluation of these comments.

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## Background

In recent years, both rising energy prices and new technologies have led to an increased emphasis on developing oil and gas resources on public lands. First, higher prices have created greater economic incentives to drill for oil and gas. According to the Energy Information Administration, the average of daily New York Mercantile Exchange futures prices for crude oil increased from \$19.30 per barrel in 1999 to \$41.47 per barrel in 2004.<sup>15</sup>

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<sup>15</sup>The New York Mercantile Exchange futures contract is a widely used benchmark for buying and selling crude oil. This contract is an agreement through the New York Mercantile Exchange for a future purchase or sale of 1,000 barrels of sweet crude oil, similar in quality to West Texas Intermediate oil. These prices represent the contract for delivery during the next month.

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Similarly, average wellhead prices for natural gas in the United States have increased significantly in the past 6 years, increasing from an average of \$2.19 per thousand cubic feet in 1999 to an average of \$5.49 per thousand cubic feet in 2004. Second, advances in technology have made it more profitable to drill for oil and gas. For example, advances in directional drilling and new techniques for putting wells into production have made it possible to economically produce oil and gas from reservoirs that were previously considered to be uneconomic.

Several other events in the past 6 years have also increased the emphasis on developing oil and gas resources on public lands. First, the Energy Act of 2000 directed the Secretary of the Interior, in consultation with the Secretaries of Agriculture and Energy, to prepare a report that provides an inventory of oil and natural gas resources beneath federal lands and to identify the extent and nature of any restrictions or impediments to the development of such resources.<sup>16</sup> Second, the National Energy Policy Report, issued on May 16, 2001, contained many recommendations that were intended to diversify and increase energy supplies, encourage conservation, and ensure energy distribution. For example, this report included recommendations directing the Secretary of the Interior to expedite the ongoing study of impediments to oil and gas development and to examine restrictions on oil and gas leasing and modify these restrictions where opportunities exist, as long as they were consistent with the law, good environmental practice, and balanced use of resources. The National Energy Policy Report also recommended that the President issue an executive order to “rationalize permitting for energy production in an environmentally sound manner by directing federal agencies to expedite permits and other federal actions necessary for energy related project approvals on a national basis.” Accordingly, the President signed Executive Order 13212 (Actions to Expedite Energy-Related Projects) on May 18, 2001, which incorporated these recommendations and established an interagency task force to monitor and assist the agencies in their efforts. Lastly, an oil and gas inventory, which is commonly referred to as the

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<sup>16</sup>Pub. L. No. 106-469 § 604 (2000), 114 Stat. 2029, 2041-42, *codified at* 42 U.S.C. § 6217.

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*Energy Policy and Conservation Act (EPCA) Report*,<sup>17</sup> was issued in January 2003. The EPCA Report included estimates of oil and gas resources and reserves in five major geologic basins in the interior West and a description of the extent and nature of any restrictions to the development of these resources and reserves. These five basins contain much of the onshore oil resources and the bulk of the onshore natural gas under federal ownership in the contiguous United States.

In response to these events, BLM developed a National Energy Policy Implementation Plan that outlined 54 specific tasks intended to facilitate the implementation of the President's National Energy Policy. A subset of these tasks dealt with BLM's management of its oil and gas program, including mitigating the environmental impacts of oil and gas development. This subset of tasks formed the basis for a series of BLM instructional memoranda, which among other things, directed BLM field managers to (1) use the results of the *EPCA Report* to review their restrictions on oil and gas development to make sure they are still relevant and that they were the least restrictive while protecting the environment, (2) improve and streamline the processing of drilling permits for oil and gas wells, and (3) expedite the update of certain resource management plans, including those that are time sensitive because of energy development issues. This subset of tasks also incorporated the agency's ongoing efforts to enhance its oil and gas inspections and enforcement capabilities, improve its management of idle wells, and encourage the use of best management practices for oil and gas development.

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## Environmental Impacts of Oil and Gas Development

If not properly mitigated, the environmental impacts of oil and gas development could compromise BLM's responsibility for protecting the environment. These environmental impacts range from being site specific—for example, removing several acres of vegetation at an individual well pad—to those that affect a much larger area, such as fragmenting tens of thousands of acres of crucial winter range for mule deer. (See figs. 1 and 2.) Air and water quality are also two resources that

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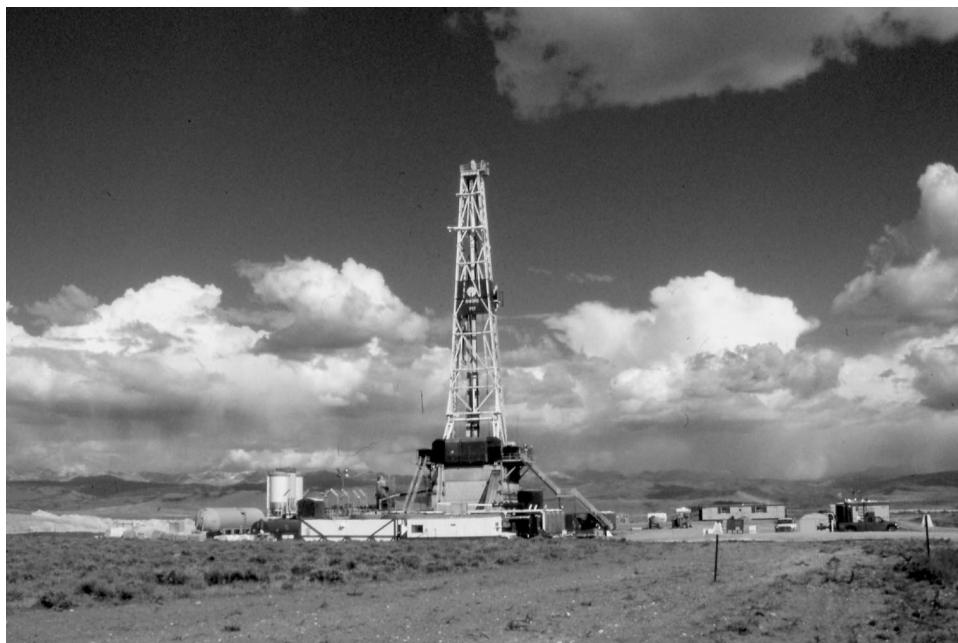
<sup>17</sup>Departments of the Interior, Agriculture and Energy, *Scientific Inventory of Onshore Federal Lands' Oil and Gas Resources and Reserves and the Extent and Nature of Restrictions or Impediments to Their Development: The Paradox/San Juan, Uinta/Piceance, Greater Green River and Powder River Basins and the Montana Thrust Belt* (January 2003). This report is a portion of the inventory of onshore oil and gas resources underlying federal lands required by section 604 of the Energy Act of 2000. The inventory will be expanded in the future to include additional federal lands and resources.

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can be affected by oil and gas development. Air quality can be degraded by increased dust from newly graded roads, and visibility can be affected in the immediate area and downwind. Air quality can also be degraded by increased nitrogen oxides from diesel engines and compressors used at drilling sites. Surface water quality can be degraded by increased sediment, salt, and other pollutants either from water draining off newly graded surfaces and roads or from the accidental discharge of oil or water produced during oil and gas production. Shallow aquifers can be polluted if required protective measures are not in place, and coal bed methane gas production can deplete shallow aquifers that serve as domestic water sources. Visual resources can also be degraded by a high density of drilling and production equipment that in extreme situations can change the appearance of the landscape from a natural setting to an industrial zone. In addition, the noises, smells, and lights from trucks, drilling and construction equipment, and production facilities can disturb wildlife and people living nearby.

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**Figure 1: Oil Drilling Site with Access Road**



Source: GAO.

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**Figure 2: Fragmentation of Wildlife Habitat by Multiple Oil and Gas Sites**



Source: GAO.

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## BLM's Land Use Planning

The primary method BLM uses to balance resource use and environmental protection is the development of land use plans (called resource management plans) under FLPMA. During the planning process, BLM determines, among other things, which parcels of land will be available for oil and gas development. BLM then publishes a notice that bids will be accepted for leases on these lands. Before approving an oil and gas lease, BLM conducts a review to determine if any restrictions—or stipulations—are necessary to mitigate the impacts from oil and gas production. As provided by BLM regulations, if stipulations are necessary, they are incorporated into the lease.<sup>18</sup> Before an oil and gas company can drill on leased lands, it must submit an application for a drilling permit with BLM.<sup>19</sup> BLM then evaluates the operator's proposal for drilling to ensure that it conforms to the land use plan and applicable laws and regulations. In

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<sup>18</sup>43 C.F.R. § 3101.1-3.

<sup>19</sup>43 C.F.R. § 3162.3-1.

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approving a specific drilling permit, BLM inspects the proposed drilling site and may add site-specific conditions of approval deemed necessary to protect the environment. In addition, BLM must meet the requirements of the National Environmental Policy Act of 1969 (NEPA). NEPA requires federal agencies to prepare an environmental impact statement (EIS) for major federal actions that may have a significant affect on the quality of the human environment.<sup>20</sup> When an agency is not sure whether an activity will have significant impact on the environment, the agency prepares a less detailed environmental assessment (EA).<sup>21</sup> If an environmental assessment determines that the activity will significantly affect the environment, the agency then prepares an EIS. With regard to oil and gas leasing and development, BLM implements NEPA during both the preparation of the resource management plan and at the drilling permit application stage.<sup>22</sup>

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## BLM's Environmental Inspection and Monitoring Activities

After BLM approves a drilling permit, the operator can drill the well and commence production. To ensure compliance with all stipulations in the lease and conditions of approval in the permit, as well as applicable laws and regulations, BLM has an inspection and enforcement program that is designed to verify that the operator remains in compliance with the various restrictions at a well site. The authority for inspecting wells is derived from the Federal Oil and Gas Royalty Management Act of 1982, as amended. This act requires the Secretary of the Interior to develop guidelines that specify the coverage and frequency of inspections.<sup>23</sup> Although the driver of BLM's inspection program is to verify the volumes of oil and gas produced to ensure the federal government is receiving the required royalty payments, the inspection program has evolved over time to include various environmental inspections, as well. BLM tracks data on oil and gas wells and environmental inspections in its centralized database.

## Environmental Inspections

Environmental inspections are BLM's primary mechanism to ensure that operators are complying with various environmental laws and lease stipulations. BLM staff conduct environmental inspections in order to protect the surface and subsurface environments. BLM's natural resource

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<sup>20</sup>42 U.S.C. § 4332(2)(C)(i).

<sup>21</sup>40 C.F.R. §§1501.3, 1508.9.

<sup>22</sup>43 C.F.R. §§ 1601.0-6, 3162.5-1(a).

<sup>23</sup>Pub. L. No. 97-451 §§ 101, 108, *codified at* 30 U.S.C. §§ 1711, 1718.



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specialists, who generally also have some responsibilities for processing drilling permits, conduct environmental inspections by visiting an individual well or group of wells to assess compliance with lease stipulations and conditions of approval that are written into the drilling permit.<sup>24</sup> (See fig. 3.) BLM managers determine which wells are to be inspected each year through a ranking process that places wells or groups of wells into either high- or low-priority categories, with high-priority wells requiring an annual inspection.<sup>25</sup> Environmental inspection priorities are based on several criteria, including the proximity to an area of special environmental concern, whether noncompliance with lease stipulations or conditions of approval could have a significant impact on the environment, history of noncompliance, or sites that need BLM approval for successful reclamation. If the natural resources staff determine that a violation occurred or is occurring, they can take one of several enforcement actions, including issuance of a verbal or written “incident of noncompliance.” The enforcement actions may carry fines, depending on the severity of the infraction.

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<sup>24</sup>Another mechanism BLM employs to ensure environmental compliance is through environmental compliance inspections conducted by a petroleum engineer technician. This type of inspection is completed as a component of another type of inspection, such as production or drilling. If a petroleum engineer technician determines a possible environmental violation, the technician will then notify the natural resources staff responsible for its resolution.

<sup>25</sup>In general, low-priority wells are supposed to be inspected every three years.

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**Figure 3: Typical Oil and Gas Site Subject to an Environmental Inspection**



Source: GAO.

## Resource and Environmental Monitoring Activities

Another means for BLM to mitigate the impacts of oil and gas development is through monitoring programs that are designed to measure the effectiveness of mitigation measures over a period of time. According to current BLM land use policy, each field office must develop a monitoring schedule in their land use plans to periodically (annually is recommended) revisit land use plan decisions and track progress toward their implementation. The land use plan may also identify intervals and standards for monitoring resources, such as air, water, soils, vegetation, and fish and wildlife; this type of monitoring is referred to as resource monitoring. Since 2003, when the Office of Management and Budget identified, among other things, BLM's resource monitoring activities as an area that needed improvement, BLM has been developing a National Monitoring Strategy. This is a multiyear approach that will develop an integrated data collection and assessment strategy to inform and guide land management decisions, including protocols for periodically reporting on resource conditions and the effectiveness of management actions at the local, regional, and national levels.

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With respect to oil and gas development, BLM recognizes two types of monitoring as important: (1) land use plan monitoring and (2) resource monitoring. Land use plan monitoring can alert the agency as to whether the magnitude of the overall environmental impacts resulting from oil and gas development are within the acceptable level projected in the resource management plan. BLM's policy calls for tracking the number of oil and gas wells drilled and then converting that number into a total amount of surface acres disturbed. Resource monitoring can reveal how critical resources, such as air quality, groundwater, surface water, and wildlife are directly impacted from oil and gas development over time. Scientists accomplish this by establishing a baseline condition for each resource, determining the change in this baseline condition over time, and attributing this change to a specific activity, such as oil and gas development. Land managers can then determine the effectiveness of stipulations and conditions of approval and decide whether these measures need to be modified, strengthened, or eliminated. Resource monitoring generally involves assessing cumulative impacts to resources over broad geographic areas and can be incorporated into resource management plans or environmental impact statements for large-scale oil and gas projects.

## Monitoring Idle Wells

BLM also has monitoring responsibilities for idle wells. Once the operator demonstrates to BLM that the well can no longer produce oil or gas economically or has no other use, the well must be plugged. However, the operator may delay plugging the well and instead allow the well to remain idle for various reasons, including the anticipation of higher oil and gas prices that may once again make the well economic to operate or possibly using the well for secondary recovery operations (for example, using the well to inject water into the oil reservoir and push any remaining oil to operating wells).

BLM has policies that require it to periodically review the status of these idle wells to ensure that legitimate reasons exist for allowing the wells to remain idle. According to BLM, the primary purpose of idle-well reviews are to ensure that an operator does not walk away from a nonproducing well, thereby leaving the federal government with the responsibility of plugging the well and reclaiming the site. According to BLM, idle-well reviews also help mitigate impacts from oil and gas developments by ensuring that well sites are reclaimed in a timely manner.

Idle wells consist of both temporarily abandoned and shut-in wells. BLM defines temporarily abandoned wells as wells that are physically or mechanically incapable of producing oil or gas of sufficient value to exceed

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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.<sup>26</sup> BLM policy defines shut-in wells as wells that are physically and mechanically capable of producing oil or gas in paying quantities but have not produced for 1 month. According to BLM, operators do not have to obtain BLM approval to place wells in shut-in status. BLM field office staff are directed to identify the number of idle wells and to review the justification for their idle status.<sup>27</sup> Although idle-well review policies vary by field office, BLM policy suggests that field office staff initiate the review when a well has not produced for 12 months. Staff then review well files to determine if the information submitted by the operator supports the idle status. If the justification is insufficient, BLM will require the operator to submit a plan that allows for a number of actions, including bringing the well back into production or plugging the well and reclaiming the site.

When an operator determines, and BLM agrees, that a well has no further economic value, the operator must follow an agreed-upon final reclamation plan that includes removing all visual evidence of the well and pad, recontouring the affected land, and revegetating the site with native plant species. In general, the goal is to reclaim the well site so that it matches the surrounding natural environment to the extent possible. BLM would then inspect the site to monitor the success of the reclamation, a process that typically takes several years. Once BLM determines that reclamation efforts have been successful, BLM approves a Final Abandonment Notice.

## Inspecting and Monitoring Reclamation Efforts

Two types of reclamation may occur during the life cycle of an oil and gas well. The first type is interim reclamation. Interim reclamation is the practice of reclaiming unnecessary surface disturbance after a well has been drilled. For example, operators may need a 10-acre drill pad to safely drill a series of wells. However, once the wells are drilled, operators may only need 4 acres to safely service the well over its lifetime. In this case, interim reclamation would require the reseeding and regrading of 6 acres of

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<sup>26</sup>43 C.F.R. § 3162.3-4(c).

<sup>27</sup>Justification to support continued idle status may include, for example, the use of the well for injection to recover additional oil or gas or for subsurface disposal of produced water. 43 C.F.R. § 3162.3-4(a).

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the initial pad that are no longer needed. While this practice is not a general requirement in all permits issued by BLM, the agency may choose to add it as a requirement in drilling permits for specific oil and gas developments. The other type of reclamation occurs when the operator plugs the well and initiates the final reclamation process, as described in the previous section. This type of reclamation is a requirement and the terms of the reclamation are included in the terms of the lease and the drilling permit.

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## Dramatic Increases in Oil and Gas Permitting Activity Have Lessened BLM's Ability to Ensure That Environmental Impacts Are Mitigated

Oil and gas development on BLM-managed lands has increased dramatically over the past 6 years, resulting in staff spending more time processing drilling permits and less time mitigating the environmental impacts of the development.<sup>28</sup> Nationwide, the total number of oil and gas drilling permits approved by BLM more than tripled, from 1,803 to 6,399 for fiscal years 1999 through 2004. Much of the increased oil and gas activity was concentrated in five intermountain states—Colorado, Montana, New Mexico, Utah, and Wyoming. In fiscal year 2004, the offices under the jurisdiction of these five BLM state offices collectively approved 6,204 drilling permits, more than 95 percent of the national total. BLM officials in most of the field offices that we visited stated that the increased permitting workload has led to less staff time being available for performing environmental mitigation activities. These mitigation efforts include conducting environmental inspections of oil and gas wells, implementing monitoring programs, tracking idle wells and reviewing justifications for why these wells are in idle status, and ensuring reclamation efforts are successful.

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<sup>28</sup>This report focuses on the impacts of increased oil and gas permitting activity that occurred for fiscal years 1999 through 2004. While there is evidence from prior studies that BLM did not meet its goals for certain program activities before fiscal year 1999, we did not attempt to make comparisons in this report between activity before fiscal year 1999 and activity occurring for fiscal years 1999 through 2004. These reports include Department of the Interior, Office of Inspector General, *Audit Report: Inspection and Enforcement Program and Selected Related Activities, Bureau of Land Management*, Report No. 196-I-1267 (Washington, D.C., September 1996); Department of the Interior, Bureau of Land Management, *Potential Government Liability for Plugging Oil and Gas Wells* (Washington, D.C., November 1990); and Department of the Interior, Office of Inspector General, *Audit Report: Inspection and Enforcement Program and Selected Related Activities, Bureau of Land Management*, Report No. 90-18 (Washington, D.C., November 1989).

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## BLM's Oil and Gas Permitting Activity Has More Than Tripled in the Past 6 Years

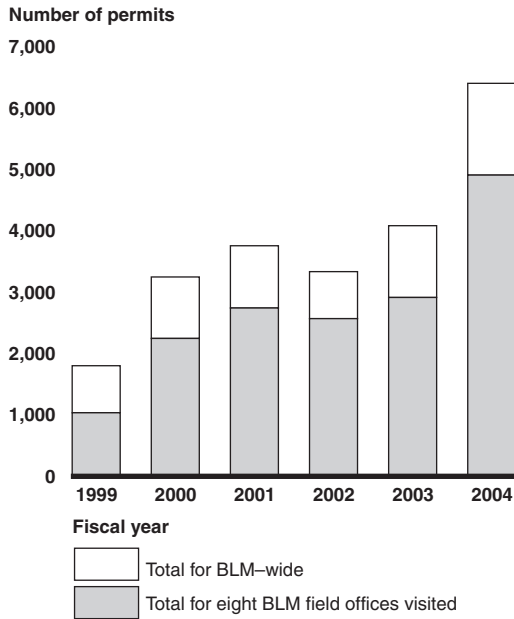
Over the past 6 years, the total number of drilling permits approved by BLM nationwide has more than tripled from 1,803 to 6,399. The permits approved under the jurisdictions of five BLM states offices—Colorado, Montana, New Mexico, Utah, and Wyoming—provided the bulk of the nationwide increase in permitting activity and accounted for over 95 percent of all the permits approved in fiscal year 2004. The eight BLM field offices we visited in these five states accounted for 77 percent of the total permits approved nationwide in fiscal year 2004. (See figs. 4 and 5.)

**Figure 4: BLM State and Field Offices Visited**



Sources: BLM (coordinates); MapArt.

**Figure 5: Number of Oil and Gas Drilling Permits Approved by BLM for Fiscal Years 1999 through 2004**



Source: BLM.

Note: These numbers are as of April 2004.

Specifically, the eight BLM field offices we visited approved 4,911 drilling permits in fiscal year 2004, an increase of 3,803 over the number approved in fiscal year 1999. The increases among the eight BLM field offices we visited ranged from 70 in the Miles City, Montana, field office to 2,151 in the Buffalo, Wyoming, field office. (See table 1.)



**Table 1: Increases in Oil and Gas Drilling Permits Approved by Eight BLM Field Offices in Fiscal Years 1999 and 2004**

| <b>BLM field office</b>    | <b>Drilling permits approved in fiscal year 1999</b> | <b>Drilling permits approved in fiscal year 2004</b> | <b>Difference</b> |
|----------------------------|--|--|-------------------|
| Miles City, Montana        | 26   | 96   | 70                |
| Rawlins, Wyoming           | 74   | 212  | 138               |
| Glenwood Springs, Colorado | 8  | 179  | 171               |
| Carlsbad, New Mexico       | 242  | 436  | 194               |
| Pinedale, Wyoming          | 124  | 323  | 199               |
| Farmington, New Mexico     | 313  | 690  | 377               |
| Vernal, Utah               | 133  | 636  | 503               |
| Buffalo, Wyoming           | 188  | 2,339  | 2,151             |
| <b>Total</b>               | <b>1,108</b>   | <b>4,911</b>   | <b>3,803</b>      |

Source: BLM.

Note: For additional information, see appendix I.

The increases in the number of drilling permits approved in the Buffalo, Wyoming, and Miles City, Montana, field offices, according to BLM staff, were due primarily to extensive coal-bed methane developments in the Powder River Basin. In 2003, a congressional conference committee considering the 2004 appropriations bill for the Department of the Interior stated in its report that “[b]ased on the recently completed environmental impact statement for the Powder River Basin and increased staffing for the Buffalo and Miles City field offices, the managers expect more than 3,000 drilling permits will be issued in 2004.”<sup>29</sup> The two offices actually approved 2,435 permits in fiscal year 2004. Drilling for natural gas was primarily responsible for the increases in permits approved in the Rawlins and Pinedale, Wyoming, the Farmington, New Mexico, and the Glenwood Springs, Colorado, field offices, while increases in the Carlsbad, New Mexico, and Vernal, Utah, field offices were due to increases in drilling for both oil and natural gas.

<sup>29</sup>H.R. Conf. Rep. No. 108-330, at 1314 (2003).

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## Increased Oil and Gas Permitting Activity Has Decreased Staff Resources Available for Environmental Mitigation Activities

BLM officials in five of the eight field offices we visited reported that they had to shift staff from activities designed to mitigate the impacts of oil and gas development—such as environmental inspections, monitoring, idle-well reviews, and reclamation—to those associated with processing drilling permits. While some staff have had joint responsibilities for processing permits and performing environmental mitigation activities, according to BLM officials, staff have spent an increasing amount of time processing permits, leaving less time for mitigation activities. For example, the Buffalo, Wyoming, field office, which has the highest drilling permit workload, was able to meet its annual environmental inspection goal only once in the past 6 years, and achieved only 27 percent of its environmental inspection goal in fiscal year 2004.<sup>30</sup> BLM staff also acknowledged difficulties in developing and implementing monitoring plans due, in part, to the increased permitting workload. Furthermore, BLM's ability to conduct idle-well reviews—which, according to BLM, help prevent nonproducing wells from becoming a liability to the federal government—has also been impacted. According to staff from four of the eight field offices we visited, backlogs of idle-well reviews currently exist because staff who would normally be available to do these reviews have spent more time processing permits. Finally, staff at seven of the eight field offices we visited said they currently have a backlog of reclamation work. These backlogs are due, in part, to fewer staff available to inspect reclaimed sites as the result of permit-processing workloads.

## Several BLM Field Offices with Large Increases in Permitting Activity Have Not Met Their Environmental Inspection Goals

BLM officials in four of the eight field offices we visited said that staff are spending increasing amounts of time processing permits, resulting in less time to conduct environmental inspections. The routine environmental inspection of well sites is BLM's primary mechanism for ensuring that operators are complying with various environmental conditions and stipulations. Detecting violations of environmental requirements and ensuring that any violation is promptly corrected by the operator is a key component of BLM's process for mitigating the environmental impacts of oil and gas development. Taken as a whole, the eight BLM field offices we visited met their annual environmental inspection goals only about half of the time during the past 6 years (from fiscal years 1999 through 2004), due in part to staff spending an increasing amount of time processing drilling

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<sup>30</sup>We did not include environmental inspection goals for wells on Indian lands.

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permits. Specifically, two field offices—Glenwood Springs, Colorado,<sup>31</sup> and Carlsbad, New Mexico—were able to meet their environmental inspection goals during the entire 6-year span. The success of the remaining six field offices ranged from achieving their annual environmental inspection goals in 5 out of the 6 years in the Pinedale, Wyoming, field office,<sup>32</sup> to only once being able to achieve their annual goal in the 6-year period in both the Buffalo, Wyoming, and Vernal, Utah, field offices—the two field offices with the largest increases in permitting activity. These two field offices last met their annual environmental inspection goals in fiscal years 2000 and 1999, respectively. Furthermore, the Buffalo, Wyoming, field office—the field office with the highest drilling permit workload—was able to complete only 27 percent of its environmental inspection goals in fiscal year 2004. By not performing these inspections, the field offices have not ensured that the wells in their jurisdictions are being operated in compliance with applicable environmental requirements.

Although meeting annual goals for environmental inspections continues to be a challenge for some BLM field offices, BLM has been actively trying to address this issue in the last few years. As we discuss in more detail later in the report, BLM initiated efforts to revitalize its oil and gas inspection and enforcement program in February 2000. However, BLM's progress in strengthening its inspections capabilities has been somewhat undercut by the ever-increasing number of drilling permits that, in turn, continues to drive a corresponding increase in the various types of inspections that need to be performed.

### Resource Monitoring Plan Development Has Lagged Partly Because of Increased Permitting Activity

Four of the eight BLM field offices we visited had not developed any resource monitoring plans for various reasons, including that staff that could have been used to develop such plans had been busy with processing

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<sup>31</sup>The Glenwood Springs, Colorado, field office jointly plans and conducts its inspections with the Grand Junction, Colorado, field office. As a result, we were unable to desegregate the inspection numbers for the Glenwood Springs field office. For additional information, see appendix I.

<sup>32</sup>In fiscal years 2001 and 2002 the Pinedale, Wyoming, field office set a goal of zero for its required environmental inspections. However, in both years, they did conduct environmental inspections.

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drilling permits.<sup>33</sup> Monitoring plans help track management decisions to determine if desired outcomes are achieved, including those related to mitigating the environmental impacts of oil and gas development. Officials in the four BLM field offices that had developed resource monitoring plans also expressed concerns about their ability to implement their monitoring plans given resource constraints. For example, the heavy workload associated with processing drilling permits in the Wyoming portion of the Powder River Basin has slowed the development of a groundwater monitoring plan, and BLM officials in the Pinedale and Rawlins, Wyoming, field offices reported that personnel have been diverted from monitoring activities to processing drilling permits. Appendix II contains additional information on resource monitoring, the role of federal and state governments in monitoring, the resource management plans and environmental impact statements we reviewed, and how budget constraints are affecting monitoring.

#### Idle-Well Reviews Have Been Impacted by Increased Permitting Activity

Officials from four of the eight BLM field offices we visited said their offices had a backlog of idle-well reviews. According to the BLM database containing idle-well information, only 44 percent of the wells in temporarily abandoned status had all of the data needed to determine whether idle-well reviews were being performed in a timely fashion. However, for those wells in temporarily abandoned status that had the necessary information, 65 percent of the idle-well reviews were past due.

Due in large part to the increased drilling permit workload, BLM officials in four of the eight field offices we visited indicated they had not been able to complete their idle-well reviews in a timely manner. However, staff from a fifth field office told us while they had diverted staff from idle-well reviews to processing drilling permits, this diversion had not impacted their ability to do idle-well reviews.

As with environmental inspections, completing the necessary idle-well reviews remains a challenge for some BLM offices. As we discuss in more detail later, BLM initiated a concentrated effort in May 2000 to reduce the total number of idle wells. In part as a result of this effort—and also

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<sup>33</sup>Other reasons why BLM field offices had not developed resource monitoring plans included the following: (1) key staff have been diverted from monitoring to address litigation concerns; (2) they believe monitoring to be more of a responsibility for state government; or (3) they simply have not tied together a number of disjointed monitoring efforts.

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because increases in oil and gas prices resulted in more idle wells being brought back into production—the total number of idle wells in four of the five states we visited (excluding Montana) decreased from fiscal years 1999 through 2003. Of the five states we reviewed, Wyoming appeared to have the greatest decrease in idle wells, while Utah appeared to have the smallest decrease.<sup>34</sup> Despite progress in reducing the total number of idle wells, the percentage of wells in idle status for more than 5 years, which, according to BLM, represents a greater financial risk to the federal government, increased in four of the five states.

### A Backlog of Reclamation Reviews Exists Partly Because of Increased Permitting Activity

BLM officials in seven of the eight field offices we visited stated that the workload associated with processing drilling permits has affected their ability to complete their reclamation work. The reclamation backlog consists of several activities, including visiting well sites to verify the success of efforts to partially reclaim drilling-well pads—called interim reclamation—as well as visiting well sites where the well bore has been plugged and the entire well pad has been reclaimed—called final reclamation. BLM officials in five of the seven field offices responded that they have interim reclamation backlogs (the Carlsbad, New Mexico, field office does not have any well sites with interim reclamation requirements). Interim reclamation is important because it mitigates adverse visual and environmental impacts quickly. Since more acreage is needed for drilling a well than for its ongoing operations once it is brought into production, the opportunity exists to reclaim some of the drilling-well pad soon after drilling has been completed. The purpose of an interim reclamation site visit is to ensure that the interim reclamation was performed in accordance with any applicable environmental requirements.

BLM officials in seven of the eight field offices largely attributed their final reclamation backlogs to their significant workloads associated with processing drilling permits. The final reclamation backlog at these field offices consists of site inspections that needed to be performed to assess the status of final reclamation efforts. If done correctly, final reclamation should mostly remove any visible evidence that an oil or gas well was ever on the site. BLM staff told us that final reclamation typically takes anywhere from 2 to 6 years, depending on precipitation and other factors. Our review of BLM data showed that there were 1,975 wells in the eight field offices that were abandoned over 4 years ago that did not have an

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<sup>34</sup> Knowledgeable officials have voiced concerns about the consistency with which data describing idle wells is collected. For more information, please see appendix I.

approved Final Abandonment Notice as of February 17, 2005.<sup>35</sup> (See table 2.)

**Table 2: Number of Abandoned Wells That Still Needed Approved Final Abandonment Notices for Eight BLM Field Offices, as of February 17, 2005**

| <b>BLM field office</b> | <b>Number of abandoned wells prior to September 30, 2000</b> | <b>Number of abandoned wells from October 1, 2000, through September 30, 2004</b> |
|-------------------------|--|---|
| Glenwood Springs, Colo. | 28   | 12  |
| Miles City, Mont.       | 43   | 43  |
| Rawlins, Wyo.           | 68   | 75  |
| Carlsbad, N. Mex.       | 105  | 241   |
| Pinedale, Wyo.          | 154  | 43  |
| Vernal, Utah            | 168  | 60  |
| Buffalo, Wyo.           | 492  | 157   |
| Farmington, N. Mex.     | 917  | 119   |
| <b>Total</b>            | <b>1,975</b>   | <b>750</b>  |

Source: BLM.

An official at the Buffalo, Wyoming, field office said that approximately 40 percent the Final Abandonment Notices could be approved for sites where they have been submitted if staff had time to verify that final reclamation had occurred and was successful. However, due to the significant increase in permitting workloads, staff have been unable to visit these sites.

<sup>35</sup>In some cases, BLM allows operators to not submit a Final Abandonment Notice, but retain the site in order to redrill a new well at a future date. However, BLM still requires the operator to reclaim the site.

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## Recent BLM Policy Changes Have Had Mixed Impacts on Environmental Mitigation Activities for Oil and Gas Development

The policy changes BLM made in the past 6 years to help facilitate and manage increased oil and gas development and to enhance environmental mitigation efforts have had mixed impacts on the agency's environmental mitigation activities. Specifically, while most of BLM's recent policy changes to help facilitate and manage increased oil and gas development have had little overall impact on environmental mitigation activities, some have had a negative impact. Because some of these policies placed greater emphasis on processing drilling permits, the effect of these policies was to cause field office staff to spend more time processing permits and less time performing environmental mitigation activities. In contrast, most of BLM's policy changes to enhance environmental mitigation activities have had some positive impacts on the ability of the field office staff to conduct such activities. However, the effect of these policies has been somewhat constrained by increases in the permitting workload.

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## Some BLM Policy Changes to Help Facilitate and Manage Oil and Gas Development Indirectly Limited BLM's Ability to Meet Its Mitigation Responsibilities

For the eight field offices visited, most of the recent BLM policy changes that were designed to facilitate and manage oil and gas development have, thus far, had little direct impact on environmental mitigation activities, but some have indirectly limited BLM's ability to carry out its mitigation responsibilities. For example, BLM's policy changes that required field offices to review restrictions on oil and gas development had little impact on environmental mitigation activities because they generally did not result in any revisions to lease stipulations or conditions of permit approval. Similarly, the policy changes that expedited the completion of revised energy-related resource management plans had little impact on environmental mitigation activities, because the completion of these plans has been delayed for various reasons, including to allow more time for key stakeholders to comment on the plans and for necessary environmental reviews. In contrast, BLM's policy changes to improve and streamline the processing of drilling permits have indirectly had a negative impact on environmental mitigation activities, because they have reinforced processing drilling permits as a top priority. Consequently, these policies have resulted in staff spending less time performing environmental mitigation activities.

## Policy Changes on Reviewing Restrictions on Oil and Gas Development Have Had Little Impact on Environmental Mitigation Activities

BLM officials from the eight field offices we visited stated that recent policy changes on reviewing restrictions on oil and gas development have had little or no impact thus far on their environmental mitigation activities. In April and July 2003, BLM issued policy changes that provided direction to BLM state and field offices on ways to incorporate the findings of the

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*EPCA Report* into the agency's land use planning process and into oil and gas use authorizations (such as leases and drilling permits). These policies were aimed at reducing or eliminating impediments to oil and gas leasing on BLM land while continuing to protect resources. These policies directed BLM land use planners to evaluate the necessity of existing constraints on energy development in high-potential oil and gas areas—including such environmental mitigation measures as lease stipulations and conditions of permit approval.

Since these policy changes generally did not result in revisions to stipulations in existing land use plans or revisions to existing lease stipulations or conditions of permit approval for the eight BLM field offices we visited, they have had little impact thus far on the field offices' environmental mitigation activities. Seven of the eight field offices reported making no revisions to land use plan stipulations or to existing lease stipulations or conditions of approval as a result of these policy changes, while one field office reported making a significant revision to stipulations in a land use plan. Specifically, the Farmington, New Mexico, field office revised stipulations for the Negro Canyon area from “no leasing” to “no surface occupancy” with seasonal drilling restrictions, noise standards, and designated bald eagle resource areas. This modification allowed an operator to lease Negro Canyon and drill directionally from land adjacent to the canyon. The field office staff said this revision allowed BLM to collect additional royalties and prevented the oil and gas from being drained by drilling activity on private and state land adjacent to the canyon. With this new oil and gas development, staff in the Farmington field office will need to perform additional environmental inspections to ensure compliance with the new lease stipulations.

In addition, three of the eight BLM field offices reported that these policy changes may result in modifications to their future environmental mitigation activities as resource management plans are updated. For example, staff from the Vernal, Utah, field office said that as a result of these recent policy changes, standardized lease stipulations would be adopted in the current revision of the Vernal Resource Management Plan. According to these staff, so far, this has involved clarifying stipulations as opposed to revising them. Since this resource management plan is still being drafted, any final changes to lease stipulations and their subsequent potential impact on environmental mitigation activities have yet to be determined. Also, staff from the Glenwood Springs, Colorado, field office said these policies may result in modifications to stipulations in the amendment under development for the Roan Plateau Resource



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Policy Changes to Expedite  
Energy-Related Resource  
Management Plans Have Had  
Little Impact on Environmental  
Mitigation Activities

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Management Plan. The staff are performing an in-depth analysis to determine if less-restrictive stipulations can be used. For example, currently there is a 5-month restriction in the Roan Plateau area on oil and gas drilling activity to protect winter range habitat for deer and elk. The field office staff are looking at the impacts of reducing this restriction to 2 months or dropping it altogether. This resource management plan amendment is also still in draft form, and it is too early to determine what, if any, impact any revisions may have on environmental mitigation activities. Similarly, staff from the Miles City, Montana, field office said the EPCA policies will likely impact the stipulations in an upcoming land use plan revision that is scheduled to begin in fiscal year 2005.

Overall, staff from the seven BLM field offices we visited that were responsible for developing time-sensitive energy-related resource management plans (Carlsbad, New Mexico, was not) said the recent policy changes to expedite these plans have had little or no impact on their environmental mitigation activities. In February and August 2002, BLM issued policy changes that placed a high priority on expediting the update of 21 resource management plans, including 10 energy-related plans.<sup>36</sup> Many of these plans had not been updated in several years and did not contain the latest available information needed to make land use and resource protection decisions. The February 2002 policy noted that BLM had received increased funding for updating and preparing these plans. With respect to environmental issues, the concern was that the environmental analyses associated with these updated plans would be compromised in the rush to complete them within their expedited time frames. However, for the expedited plans being developed by the BLM field offices we visited, none have been completed on time—only 4 of the plans have been completed, ranging from 7 months to 1 year past their original deadlines—and there was time to complete the necessary environmental analyses.

The seven BLM field offices we visited that were developing energy-related expedited plans were responsible for eight of these plans (the Pinedale, Wyoming, field office had two plans). (See table 3.) BLM officials from these field offices said the original deadlines were too optimistic. Among the reasons cited for why the deadlines were not met for several of these

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<sup>36</sup>The February 2002 policy indicated the other 11 resource management plans were designated time sensitive because they respond to nationally significant lawsuits or have legislatively mandated time frames.

plans were because time frames had to be extended to allow key stakeholders more time to comment on the plans and to accommodate required environmental reviews, including public comment periods. Thus, staff from four of the seven field offices believed the environmental analyses associated with their plans were not affected by these policy changes. Staff from two field offices felt the policies slightly improved the quality of their environmental analyses. For example, staff from the Glenwood Springs field office said that because their plan was time sensitive, it was deemed high profile and received more scrutiny than usual. Staff from one field office said the policies may have had a slightly negative impact on the environmental analysis supporting their expedited plan because, among other things, time was not sufficient to allow some stakeholders to participate as much as they would have liked. Consequently, overall, the field staff believed these policy changes had little or no impact on environmental mitigation activities.

**Table 3: Status of the Energy-Related Expedited Resource Management Plans for Eight BLM Field Offices as of March 2005**

| <b>BLM field office</b> | <b>Energy-related expedited resource management plan</b> | <b>Date originally scheduled for completion</b> | <b>Status</b>   |
|-------------------------|--|---|---|
| Carlsbad, N. Mex.       | None   | Not applicable                                  | Not applicable  |
| Miles City, Mont.       | Powder River/Billings Plan Amendment                     | June 2002                                       | Completed April 2003  |
| Buffalo, Wyo.           | Buffalo/Powder River Resource Management Plan            | September 2002                                  | Completed April 2003  |
| Farmington, N. Mex.     | Farmington Resource Management Plan                      | September 2002                                  | Completed September 2003  |
| Pinedale, Wyo.          | Snake River Resource Management Plan                     | June 2003                                       | Completed April 2004  |
| Glenwood Springs, Colo. | Roan Plateau Area Plan Amendment                         | September 2003                                  | Draft resource management plan and draft EIS released for comment in November 2004; public comment period ends in April 2005        |
| Vernal, Utah            | Vernal Resource Management Plan Revision                 | March 2004                                      | Draft resource management plan and draft EIS released for comment in January 2005; public comment period ends in April 2005         |
| Pinedale, Wyo.          | Pinedale Resource Management Plan                        | October 2004                                    | Draft resource management plan and draft EIS to be released for comment in November 2005  |
| Rawlins, Wyo.           | Rawlins Resource Management Plan                         | October 2004                                    | Draft resource management plan and draft EIS released for public comment in December 2004; public comment period ends in March 2005 |

Source: BLM.

**Policy Changes to Improve and Streamline the Processing of Drilling Permits Have Indirectly Had a Negative Impact on Environmental Mitigation Activities**

Overall, BLM officials from four of the eight field offices we visited stated that the most significant impact of the recent policy changes for streamlining the processing of drilling permits was that the policies re-emphasized that processing permits was BLM headquarters' top priority. As a result, for these four offices, the emphasis on processing permits has indirectly limited environmental mitigation activities by shifting staff resources from performing environmental mitigation activities to processing drillings permits. In April 2003, BLM issued five policy changes that were aimed at improving procedures for processing drilling permits. (See table 4.) However, only two of the five policies were to be implemented immediately.

**Table 4: Policy Changes to Improve and Streamline the Processing of Drilling Permits**

| <b>Policy change</b>   | <b>Purpose</b>   | <b>Status</b>   |
|--|--|---|
| Comprehensive strategies to more efficiently and effectively process drilling permit applications, including <ul style="list-style-type: none"> <li>• multiple drilling permit application package with a master drilling plan</li> <li>• geographic area development plan</li> <li>• standard operating practice agreement</li> <li>• geographic area NEPA</li> </ul> | <ul style="list-style-type: none"> <li>• Provide for the simultaneous processing and completion of environmental analyses on multiple permit applications with similar characteristics</li> <li>• Implement a geographic area development plan approach for an oil and gas field or limited area within a field, designed to meet BLM's environmental goals while addressing the operator's business needs</li> <li>• Develop standard operating agreements to identify the drilling and surface practices operators will use for an entire oil and gas field or geologic formation</li> <li>• Provide for NEPA analysis of an entire oil and gas field or a logical portion of a field, covering multiple wells, access routes, production facilities, utilities, etc.</li> </ul> | Field offices asked to implement policy                   |
| Cultural resources   | Allow, as an alternative to the traditional "linear" approach, a "block" survey of cultural resources to cover larger areas, resulting in a more thorough survey and greater flexibility in planning   | Field offices asked to implement policy                   |
| Condition of approval  | Collect information on current use of conditions of approval and use this information to develop future guidance on how to ensure that conditions of approval are consistent and of high quality   | Information collected, guidance drafted but not finalized |
| Revise Onshore Oil and Gas Order No. 1   | Revise the established procedures for completing drilling permits  | Draft completed but not finalized                         |
| Revise Oil and Gas "Gold Book"   | Initiate a working group to revise and update a brochure formally known as <i>Oil and Gas Surface Operating Standards for Oil and Gas Development</i> ; the purpose of updating and revising the brochure is to help industry better understand BLM's surface operating standards  | Draft completed but not finalized                         |

Source: BLM.

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Despite the general overall sense of several of the field office staff with whom we spoke that these five policy changes collectively have had an indirect negative impact on their environmental mitigation activities, the direct impact of the two policy changes that have been implemented has been mixed. For the first policy change, BLM officials from six of the eight field offices stated that some of the strategies in the policy on efficiently and effectively processing drilling permits have had some positive impacts on their environmental mitigation activities. For example, four of the eight field offices successfully used the strategy of encouraging companies to bundle together multiple drilling permits that share certain characteristics and submit them for review together. This strategy is most suitable for use in areas of intense drilling activity or where it is certain that drilled wells can be put into production immediately. Among other benefits, this strategy can encourage companies to plan their drilling operations more carefully and help BLM better assess the cumulative environmental impacts of drilling activities.

For the second policy change, BLM officials from the eight field offices said the policy on ways to reduce the time needed to identify and protect cultural resources has had limited or no impact on their environmental mitigation activities. This policy recommended strategies for (1) identifying cultural resources early, and (2) using “block” surveys to allow all of the components of a proposed project to be sited and to help better facilitate the protection of both environmental and cultural resources. According to BLM, where block surveys are used, the cultural resources of concern can be readily identified and companies can have more flexibility to move project components around without additional surveys. Staff from four field offices said this policy has had a slightly positive impact on their environmental mitigation activities. For example, staff from the Glenwood Springs field office said using block surveys has helped them improve the quality of their environmental analyses. Staff from two field offices said this policy has had no impact because they were already using these practices before the policy was issued. Staff from two other field offices said the policy has had no impact because they were having difficulties getting companies to use the strategies. For example, staff from one of these field offices said companies were hesitant to use block surveys because they believe they incur higher costs than if they use more traditional “piecemeal” cultural surveys.

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## BLM Policy Changes to Enhance Environmental Mitigation Activities Have Had Some Positive Impacts

Two of the three policy changes BLM issued to enhance certain environmental mitigation activities have had some positive impacts, although increases in the permitting workload have limited their usefulness. The first policy change, to enhance BLM's inspection and enforcement capabilities, has had a positive impact on environmental mitigation activities because it resulted in additional resources to hire new staff. However, BLM staff in many of the eight field offices we visited still do not have the necessary resources to perform their required environmental inspections. The second policy change, to address the large inventory of idle wells, has had a limited impact on environmental mitigation activities by helping somewhat reduce the number of idle wells.<sup>37</sup> However, increases in the permitting workload have resulted in staff having less time to perform idle-well reviews and to make sure that their justification for being in idle status is valid. The third policy change, on encouraging the use of best management practices for oil and gas development, has had no impact on environmental mitigation activities because the eight field offices we visited were already using these practices.

### Policy Change to Enhance Oil and Gas Inspection Capabilities Has Had a Positive Impact on Environmental Mitigation Activities

BLM officials from six of the eight field offices we visited said that the policy change to enhance their inspection and enforcement capabilities has had a positive impact on their environmental mitigation activities. In February 2000, BLM initiated efforts to revitalize its oil and gas inspection and enforcement program. BLM continued this effort by incorporating goals for enhancing inspection and enforcement capabilities in its National Energy Policy Implementation Plan. For example, two of these goals were to (1) increase the resources needed to conduct the required number of inspections, and (2) establish a method for ensuring that inspection personnel maintain the knowledge, skills, and ability to conduct high-quality inspections.

Six of the eight field offices we visited reported they were able to obtain the additional resources to hire 44 new enforcement personnel. The number of additional staff hired ranged from 15 in the Farmington, New Mexico, field office to 1 in the Glenwood Springs, Colorado, office. According to BLM, funding for additional enforcement staff was secured through additional appropriations. Although the additional staff have been helping field offices

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<sup>37</sup>As mentioned previously in this report, some idle wells have been brought back into production because of the increase in oil and gas prices.

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deal with their inspection workloads, a majority of the field offices indicated that they were still understaffed. In addition to hiring more personnel, this policy change has also resulted in the development of a National Certification Program for BLM's inspection and enforcement staff. All new inspection staff are required to complete this course to be certified to conduct inspections. However, BLM officials from five of the eight field offices stated that the new certification course cannot accommodate all of the new inspectors that need to be trained and, as a result, some of their inspection personnel have not been able to complete the course and are not yet certified.

**Policy Changes to Improve the Management of Idle Wells Have Generally Had a Limited Impact on Environmental Mitigation Activities**

BLM officials from the eight field offices stated that the policy changes on reducing the number of idle wells have generally had a limited impact on environmental mitigation activities. In May 2000 and May 2001, BLM issued policies that established an agencywide program to help manage its significant inventory of idle wells and help prevent these wells from becoming abandoned, falling into disrepair, causing environmental damage, and becoming a liability to the federal government. Certain aspects of this effort were incorporated into BLM's National Energy Policy Implementation Plan. Specifically, the policy changes required each BLM state office that administers an oil and gas program to establish a plan that outlines procedures—including roles and responsibilities for conducting idle-well reviews—to help ensure that every well without a viable future use is properly plugged and abandoned.

Staff from four of the eight field offices indicated that the effect of the policies has been hampered by increases in permitting workloads, which has not allowed staff time to perform idle-well reviews. In contrast, staff from the Miles City, Montana, field office stated that the policies have had a moderately significant impact in reducing the number of idle wells in their jurisdiction, because they made a concentrated effort to contact operators and notify them that all wells capable of production must be returned to production or evaluated for plugging and abandonment. Similarly, staff from the Carlsbad, New Mexico, field office said the policy changes had greatly reduced the number of idle wells in their jurisdiction because they successfully used it in discussions with operators to convince them to bring wells back into production or plug them. They believe this policy has helped them plug 450 to 500 wells in the last 3 years. Also, they said the increased emphasis on the need to address idle wells has encouraged operators to plug wells without BLM directing them to do so.

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## Policy Change on Using Best Management Practices Has Had No Impact on Environmental Mitigation Activities

BLM officials from each of the eight field offices stated that the policy change on using best management practices has had no impact on their environmental mitigation activities because they were already using these practices. In June 2004, BLM issued a policy that required all of its field offices to consider incorporating best management practices for oil and gas development into drilling permits. In particular, this policy encouraged BLM staff to meet with oil and gas operators prior to the submission of a drilling permit application to plan for development, identify resources to be protected, and discuss the use of appropriate best management practices. Among other things, those practices included the interim reclamation of well locations and access roads soon after the well is put into production; painting all new oil and gas facilities a color that best blends with the surrounding environment; reusing old roads and pads, if possible; and finalizing reclamation of all disturbed areas, including access roads, to the original contour or a contour that blends with the surrounding topography.

Since staff from the eight field offices we visited said they were already following the best management practices described in the policy change to the extent possible, the policy has had no impact on their environmental mitigation activities. For example, staff from the Rawlins, Wyoming, field office said they have been encouraging practices such as interim reclamation and use of appropriate paint color for years, and that they meet annually with oil and gas operators to discuss and encourage the use of these practices. Also, staff from the Buffalo field office said they were using these practices long before this policy was issued and have found them to be beneficial in mitigating the environmental impacts of oil and gas activity.

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## BLM Faces Several Major Challenges in Implementing Its Oil and Gas Program

BLM state and field office staff and GAO identified several challenges that BLM faces to effectively manage its oil and gas program, including, but not limited to, (1) managing growing workloads to meet all of its responsibilities, (2) using workforce planning and workload-related data to effectively identify and communicate its workforce needs, and (3) meeting its oil and gas program resource needs in light of budget and funding constraints. According to BLM staff, workload pressure, which was already at a high level due to the increases in permitting activity, has been further

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exacerbated by increases in public challenges<sup>38</sup> to BLM's decisions and actions. Further, in reviewing their efforts to manage increasing workloads, we found that BLM's current workforce planning process does not allow all of BLM's staffing needs to be effectively communicated to BLM state and headquarters decision makers for use in supporting budget justifications and resource allocation decisions and that some data needed to quantify workloads are either not tracked or not consistently tracked. Moreover, BLM is faced with managing the oil and gas program at a time when increases in program resources are greatly outpaced by workload activities necessary to manage the rapidly expanding oil and gas permitting activity. While many federal agencies are facing tight budget constraints, BLM is in an unusual position because it has authority, which it has not exercised, to generate additional revenues to cover its oil and gas program activities.

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## Managing Increasing Oil and Gas Workload

As previously discussed, the recent upswing in oil and gas permitting activity has made it increasingly difficult for BLM to manage its workloads and meet all of its oil and gas program responsibilities. According to some of the BLM state and field office staff with whom we spoke, these workload management issues have been exacerbated by an increase in public challenges to BLM decisions about oil and gas development. Generally, such challenges stem from differing views on how public lands should be managed, and the perception by some groups and individuals that BLM is not adequately protecting the environment and is not achieving the appropriate balance among the multiple ways land can be used (for example, oil and gas development versus recreation). BLM officials from each of the five state offices and each of the eight BLM field offices we visited identified public challenges to agency decisions as an issue their office faces, with staff from four of the five state offices and six of the eight field offices anticipating the workload associated with public challenges to moderately or greatly increase over the next 5 years. One BLM official explained that attending to these challenges consumes the time of specialists who would otherwise be processing drilling permits or conducting inspections. A few BLM staff also explained that as leasing and

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<sup>38</sup>During each of the four stages of oil and gas development, the public can make one or more of the following types of challenges to BLM decisions: protests, requests for state director review, appeals, and litigation. Through protests and requests for state director review, challengers essentially ask BLM to reconsider a decision. An appeal is a request to the Interior Board of Land Appeals—a body of administrative judges within the Department of Interior—to review a BLM decision. In this report, we use the term “litigation” to mean a challenge to an agency or departmental decision that is brought in federal court.



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permitting increasingly encroach upon residential and environmentally sensitive areas, public challenges will likely increase.

In addition to affecting BLM's ability to meet its oil and gas program responsibilities, heavy workloads have also led to high stress levels and low morale among BLM field office staff, according to several BLM staff with whom we spoke. Several BLM managers expressed concern over staff burnout and that staff turnover could require offices to spend more time hiring and training new employees. One field office employee substantiated this concern by explaining that a few employees in the office, who used to spend their days in the field conducting environmental inspections, now spend all of their time in offices processing drilling permits and are under pressure to approve the permits quickly. Consequently, these staff are considering retiring earlier than they had planned to, which would leave the office with a severe gap in experience during a critical period of high workload.

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## Effectively Identifying and Communicating Workforce Needs

When asked to identify actions necessary to minimize the impacts of workload management and other challenges their offices face, BLM officials consistently cited the need to secure budgets and staff that could adequately sustain the increasing workloads associated with oil and gas program responsibilities. However, during the course of our review, we found that BLM's current workforce planning process, a crucial tool in managing workload and associated staff needs, is not effective in identifying and communicating all BLM state and field office needs to the decision makers at headquarters. In addition, BLM does not consistently track certain data types in a way that provides an accurate assessment of workloads. Collectively, these shortfalls make it difficult for BLM to effectively manage and prioritize workloads and staffing decisions and meet the agency's strategic goals within constrained budgets.

## BLM's Workforce Planning Process Is Not Effective in Identifying and Communicating Needs

The way BLM utilizes the workforce planning process limits the ability of the agency to use the information gathered to support informed oil and gas workload management decisions. As described by the Department of the Interior's Workforce Planning Instruction Manual, one of the key applications of the workforce planning process is to determine the workforce required to meet strategic goals and use this information to present a strong justification to appropriators. In making workforce requirement determinations through the workforce planning process, it is widely recognized that an agency must identify any workforce gaps, or the difference between forecasted staff needs and future staff supply. Our

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December 2003 report on this subject specifically states that it is essential that agencies determine the skills and competencies that are critical to successfully achieving their missions and goals, especially as changes in factors such as budget constraints change the environment within which the agencies operate.<sup>39</sup> Once a gap is identified, workforce planning dictates that management must prioritize the gap by determining the staff needs that are most critical in attaining organizational goals, and then, as our 2003 report highlights, they can develop strategies tailored to address the gaps.

We found that BLM's current workforce planning process does not effectively identify all of BLM's staffing needs, or its workforce gap, in large part because BLM headquarters directs state and field offices to identify only those needs for which funding is available. While five out of the eight field office managers we interviewed reported communicating their full staffing needs to their respective state offices, regardless of funding expectations, three of the eight field office managers acknowledged that they factor the budget into the needs they communicate, and therefore forward only a subset of the field offices' workforce gap to the state office. For example, in its most recent workforce planning document, the Farmington field office included only half of the staff needs they identified to us. Similarly, the Buffalo field office included only a quarter of its needs in its most recent workforce planning document. In addition, officials in the Wyoming state BLM office, which oversees three of the eight field offices we visited, explained that the needs for their state that they reported to us were actually lower than what was needed because they directed field office managers in their state to submit needs based on flat or restricted budgets.

Even when actual needs are effectively communicated from the field offices to their respective state offices, the state offices are not communicating these needs to BLM headquarters, where key budget decisions are made. In fact, four out of the five state offices we interviewed indicated needing more staff for the oil and gas program than was reflected in the workforce planning documents they submitted to headquarters. Specifically, these four state offices included in their workforce plans less than half of the workforce needs they identified during our interviews. Collectively, of the roughly 174 full-time equivalents (FTE) identified during

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<sup>39</sup>GAO, *Human Capital: Key Principles for Effective Strategic Workforce Planning*, GAO-04-39 (Washington, D.C.: Dec. 11, 2003).

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our interviews, the states included only 50 FTEs in their workforce plans. When asked to provide a reason for the discrepancy, all four offices cited BLM headquarters' direction to only include in their workforce plan the needs that the office expects to have funding to support. In one instance, this direction resulted in a state office deciding not to forward workforce planning documents to headquarters because they were aware that BLM was anticipating budget cuts and consequently did not believe there was any reason to identify positions that could not be funded.

Because BLM's workforce planning process does not effectively communicate all of the critical workforce needs of its field offices to the state offices and ultimately to BLM headquarters, the process does not provide agency officials responsible for making key management decisions with consistent and readily available information capable of supporting budget justifications and resource allocation decisions. In fact, one BLM headquarters workforce planning official stated that BLM faces a dilemma when assessing needs between programs through the current workforce planning process. In order to assess, compare, and prioritize needs, BLM decision makers need to have complete and consistent information describing the gap among all of the state and field offices. While it is reasonable that budget considerations must come into play when managing workloads and making workforce decisions, workforce planning is designed to help an agency meet its organizational goals by assessing all of its needs, which in turn helps ensure key management decisions are fully informed.

Data Needed to Identify Some Workload Needs Are Either Not Tracked or Not Consistently Tracked

The lack of readily available and consistent data to measure some of BLM's oil and gas program activities has limited the agency's ability to effectively manage program workloads. Specifically, in our efforts to determine the extent to which the recent increase in permitting activity has affected BLM's ability to assess and mitigate environmental impacts, we attempted to gather data that conveyed workloads and the related work accomplishments for environmental inspections, idle-well reviews, interim reclamation inspections, and final reclamation inspections. While we found that BLM generally had suitable data to measure the workloads and progress in attaining workload goals for environmental inspections,<sup>40</sup> we

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<sup>40</sup>Environmental inspections take place at different stages of well activity, including prior to drilling, during production, and after abandonment/reclamation. According to a BLM official, the abandonment/reclamation inspections are inspections where a natural resource specialist visits a site to inspect the progress of final reclamation.

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found that data on idle-well reviews, final reclamation inspections, and interim reclamation inspections were incomplete or inconsistent, incomparable, or not tracked at all, respectively, making it difficult to determine for each field office the workloads and related accomplishments for these activities.

According to one of the administrators of the BLM database containing idle-well information, the database is already capable of accepting the idle-well data that we attempted to gather, which included the number of idle wells that needs to be reviewed within a given year and the corresponding number of those idle wells actually reviewed. However, he explained that field office staff are not consistently entering the information into the database because it is not required, and all staff are not aware of the capability. Many staff, however, have opted to use their own tracking systems. Out of the eight field offices we interviewed, six reported relying on their own systems to track idle wells. As a result, queries from the database do not provide complete information on the workload and related work accomplishments for idle-well reviews for each field office.

The database is also capable of tracking the final reclamation data we attempted to gather, including the number of final reclamation inspections planned and completed. However, we found that the criteria used to determine the number of planned inspections vary among the field offices. For example, an official in one field office told us that staff in that office used the estimated number of wells that will be plugged in the coming year as the planned number of reclamation inspections. This is inconsistent with the criteria used in another field office, which, according to an official in that office, plans the number of reclamation inspections for the upcoming year based on the total number of wells in abandoned status. This variation precludes senior BLM staff from gathering accurate and comparable data on the final reclamation workloads for each field office.

The database does not, however, have the capacity to track data that measure the workload and related accomplishments associated with interim reclamation inspections. While the database tracks a number of different types of inspections, it does not currently provide a means to track interim reclamation inspections as a separate inspection type. Consequently, as a senior BLM official explained, BLM is unable to separately plan and track workloads for interim reclamation inspections. This official indicated that it would be helpful to have this capacity in order to better manage these workloads.

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Without consistent and readily available data, BLM state and headquarters offices cannot easily determine if field offices are completing all of their necessary idle-well reviews—a key action in achieving the agency’s strategic goals—and they cannot assess the interim and final reclamation workloads or their progress in addressing these workloads to ensure timely surface restoration. Moreover, without these critical data, BLM state and headquarters offices do not have the information necessary to make appropriate staffing and budget decisions to ensure that these key mitigation and reclamation activities are accomplished.

In addition to mitigation and reclamation data, BLM also lacks consistent, readily available data on the extent to which public challenges to agency decisions are affecting agency workloads. Our November 2004 report on this subject, which sought to determine the extent to which BLM gathers and uses public challenges data to manage its onshore oil and gas program, found that BLM does not systematically gather and use nationwide information on public challenges in a way that helps the agency manage the program.<sup>41</sup> While a number of BLM state and field office staff we interviewed indicated that an increase in public challenges has exacerbated their office’s oil and gas program workloads, our previous review found that the system state offices use to collect data on public challenges does not provide consistent information that BLM headquarters can use to assess workload impacts on its state offices and to make staffing and funding resource allocation decisions. Specifically, we reported that the system does not provide useful data to headquarters because state offices use the system inconsistently (due to a lack of clear guidance from headquarters on which data to enter) and because the system tracks challenges only during leasing, rather than challenges at all four stages of oil and gas development—planning, exploration, leasing, and operations. Our November 2004 report recommended that the Secretary of the Interior direct BLM to (1) include public challenge data in BLM’s new agencywide automated system for selling leases, and (2) issue clear guidance on how public challenge data should be entered into the new system. In its response to our report, BLM stated that it does plan to design the system in a way that allows BLM to track public challenge data on lease sales.

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<sup>41</sup>GAO, *Oil and Gas Development: Challenges to Agency Decisions and Opportunities for BLM to Standardize Data Collection*, GAO-05-124 (Washington, D.C.: Nov. 30, 2004).

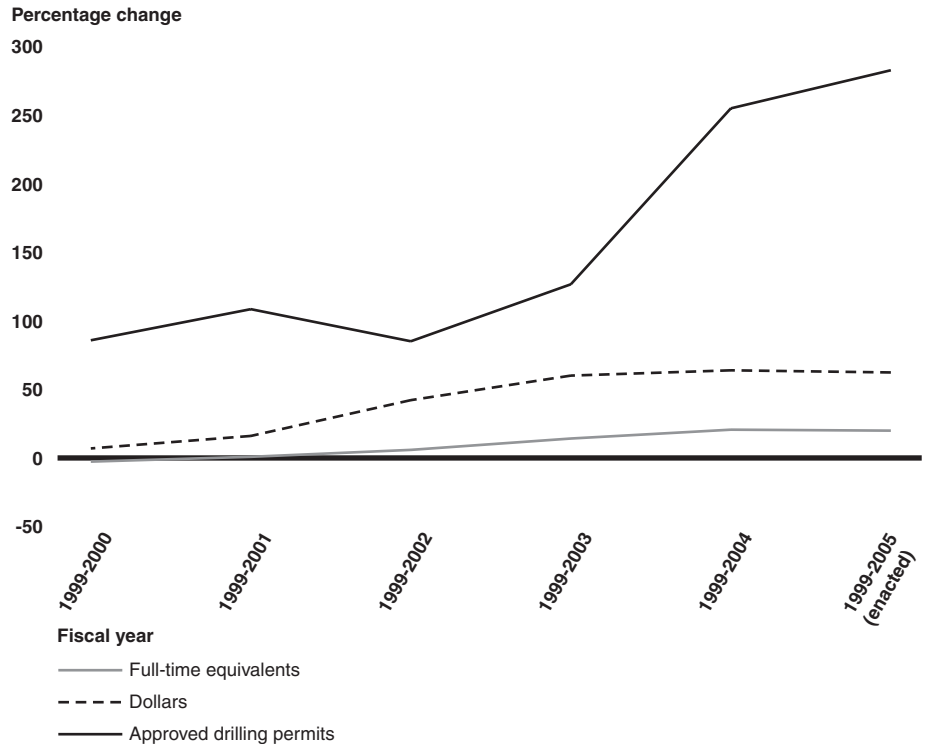
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## Meeting Oil and Gas Program Resource and Staffing Needs in a Period of Declining Budgets

Lastly, but perhaps most significantly, BLM is presented with the challenge of meeting its oil and gas program resource and staffing needs in a period when these needs are growing faster than available resources. Although the percent change in the number of approved drilling permits increased by roughly 255 percent from fiscal years 1999 through 2004, and the need for several other activities, such as inspections, rose along with permit approval increases, the percentage changes in BLM's oil and gas management budget and staff levels, as measured in authorized FTEs, rose only 64 percent and 21 percent, respectively. (See fig. 2.) In addition, according to BLM budget justification documents, budget levels and authorized FTEs decreased slightly for fiscal year 2005 compared with the previous year, despite the expected continuing increase in approved drilling permits and corresponding mitigation and reclamation responsibilities.

**Figure 6: Cumulative Percentage Change in Drilling Permits Approved, BLM's Oil and Gas Program Budget, and Staff Resources for the Oil and Gas Program for Fiscal Years 1999 through 2005**



Source: GAO analysis of BLM data.

However, as reflected in BLM's fiscal year 2006 Budget Justification, the agency is considering steps to improve the disparity between needed and available resources. Since it is unlikely, given current and anticipated federal fiscal conditions, that BLM will receive budget increases commensurate with its oil and gas program workloads, BLM is considering other options for generating additional revenues. Under FLPMA, BLM has the authority to assess and collect fees for various services that it provides.<sup>42</sup> FLPMA provides specific authority to the Department of the Interior, through BLM, to "establish reasonable filing and service fees and

<sup>42</sup>BLM also has authority under the Independent Offices Appropriation Act of 1952 (also referred to as IOAA or the user charge statute), which provides generally for cost recovery by federal agencies. Under IOAA, funds collected are deposited into the general fund of the Treasury.

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reasonable charges”<sup>43</sup> FLPMA further provides that the funds received (1) must be deposited in a special account in the U.S. Treasury and (2) are authorized to be appropriated and made available until expended. In December 2000, BLM proposed collecting fees associated with processing documents for oil and gas, mining, geothermal, and nonenergy activities, but this proposal, which was never finalized, did not include collecting fees to recover costs associated with issuing oil and gas permits.<sup>44</sup> According to BLM headquarters officials, BLM has recently decided to revisit this proposal and incorporate a fee structure to recover the costs of processing drilling permits. In commenting on this report, BLM stated that this revised fee collection structure, which BLM plans to issue as a final rule, is currently being reviewed by the Administration. BLM’s fiscal year 2006 Budget Justification includes language describing BLM’s intent to publish regulations that would require industry to pay more of the recoverable costs of processing new applications for drilling permits as well as documents associated with oil and gas lease transactions. BLM estimates that the cost recovery fees would generate a net increase of \$7.6 million, which would allow the agency to maintain its FTE level and shift a portion of its appropriated funds to other program priorities such as ensuring proper inspection and enforcement actions, assuming that more of the fees are not used to reduce BLM’s appropriation.

During our interviews at BLM state and field offices, staff expressed a variety of concerns related to the feasibility of cost recovery implementation and its utility in helping offices meet programmatic goals and requirements. Among these concerns was the notion that industry would be opposed to any cost recovery because many companies are already paying for costs for which BLM would otherwise be responsible, such as environmental assessments, cultural surveys, and wildlife inventories, in addition to lease bonuses, annual lease rentals, and royalties. Another concern was that industry might expect a reduction in permit approval processing times if cost recovery were implemented, even though, in the opinion of a few BLM staff, the processing times would likely not change because a large portion the time is spent complying with NEPA procedural requirements, which could not be shortened. Our discussions with industry groups supported both of these concerns. One company

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<sup>43</sup>43 U.S.C. § 1734(a).

<sup>44</sup>“Oil and Gas Leasing; Geothermal Resources Leasing; Coal Management; Management of Solid Minerals Other than Coal; Mineral Materials Disposal; and Mining Claims Under the General Mining Laws,” 65 Fed. Reg. 78440 (2000).



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official stated that under the current BLM permitting structure, any cost recovery measure would be unreasonable because the industry already pays for a number of expenses, such as those highlighted above. The company official also commented that industry might support a cost recovery proposal if the fee payment would generate a higher degree of permitting accountability within BLM and if industry were guaranteed that a project would be permitted within a reasonable time frame (no more than 90 days).

In discussing the utility of cost recovery, staff in some of the BLM state and field offices we visited asserted that the usefulness of cost recovery would largely depend upon whether the fee would be an offset or an addition to existing appropriations. Some of the staff with whom we spoke stated that cost recovery fees would not be helpful if the revenues offset a decrease in appropriations, rather than providing additional funds to help meet programmatic responsibilities. BLM's cost recovery proposal for fiscal year 2005 was to implement a fee structure that would generate approximately \$3 million in revenues and a corresponding \$3 million reduction in the Oil and Gas Management Program. However, the proposal was not implemented. BLM's cost recovery proposal for fiscal year 2006 has addressed the offset concerns expressed by the state and field office staff with whom we spoke. Under the current proposal, BLM estimates that about \$9.7 million in revenue would be generated and that \$7.6 million of this revenue would be used to supplement BLM's budget rather than offset a corresponding decrease in their annual appropriation.

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## Conclusions

Processing drilling permits, while always a priority of BLM's oil and gas program, has received renewed emphasis following publication of the *National Energy Policy Report*. The emphasis on processing permits reflects, in part, the desire to reduce the country's dependence on foreign sources of oil and gas. While an important goal, BLM recognizes, and the public demands, that the development of federal oil and gas resources be done in an environmentally responsible manner. Over the past 6 years, BLM has experienced a significant increase in applications for drilling permits and has struggled to deal with this increase in permitting activities while carrying out its environmental mitigation responsibilities during a time of austere federal budgets. In field offices that have experienced the greatest increases in applications for drilling permits, staff that once had more time for conducting environmental inspections now find their days filled with processing drilling permits.

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BLM's ability to respond to increasing workload demands brought on by increasing applications for drilling permits is hampered by its ineffective workforce planning process, lack of key data on workload activities, and lack of resources. Relying on a workforce planning process that is not open and transparent is ultimately not particularly instructive or useful for informing key management decisions, such as staffing and resource allocation determinations. For workforce planning to be effective, it must incorporate and reflect actual staffing needs. While budgetary considerations are clearly important factors in the decision-making process, effective resource allocation decisions can only be based on complete information on what staffing gaps exist beyond those positions for which funding is available.

Further, BLM must have reliable and consistent data on the workload activities related to oil and gas development—specifically the staffing required to carry out environmental mitigation responsibilities, in order to accurately reflect this information in its management decisions and resource allocations. While BLM's centralized database has a wealth of information on BLM's oil and gas program activities, without complete and accurate workload data covering the entire life cycle of oil and gas wells, BLM will be unable to develop comprehensive and useful workforce plans.

Finally, it is unlikely in the current fiscal environment that BLM will be able to obtain adequate appropriations to meet all of its needs. Therefore, BLM should pursue every opportunity to generate additional revenues that could potentially be used to meet these needs. Currently, BLM is not exercising its statutory authority to recover the cost of processing applications for drilling permits. Implementing such a fee structure, as proposed in BLM's fiscal year 2006 Budget Justification, would help BLM obtain the resources it needs to perform environmental mitigation duties.

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## Recommendations for Executive Action

We recommend that the Secretary of the Interior take the following four actions.

To ensure that BLM's staffing needs are accurately reflected in its workforce plans and considered by key decision makers, we recommend that the Secretary direct BLM to

- reflect in its workforce plans the staffing levels needed to perform the necessary number of environmental inspections and other mitigation

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activities in addition to those positions that the agency expects to be funded;

- determine the data necessary to track workloads associated with idle-well reviews and reclamation inspections; and
- ensure that the field offices consistently enter the data on idle-well reviews and reclamation inspections into BLM's centralized database.

To generate additional revenues that could potentially help BLM better respond to its increased workload due to the significant increase in oil and gas production on public lands, we recommend that the Secretary direct BLM to finalize and implement a fee structure to recover BLM's costs for processing applications for drilling permits.

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## Agency Comments and Our Evaluation

We provided a draft of this report to the Department of the Interior for review and comment. Overall, Interior agreed with our recommendations and stated that the report generally does much to capture the many demands placed on BLM's oil and gas program. Specifically regarding the recommendation for fee collection, BLM stated a draft fee collection rule is currently being reviewed by the Administration. Interior also commented that our report does not support the conclusion that BLM policy changes have had a negative impact on mitigation activities. We disagree with BLM's comment because it mischaracterizes the information presented in our report. Our report concludes that the six BLM policy changes that we analyzed had varying impacts on mitigation activities. We found, for example, that the policies that streamlined the permitting process had an indirect negative impact on mitigation activities because the policies also increased the emphasis on processing permits, which in turn resulted in shifting staff away from their environmental mitigation responsibilities. On the other hand, our report points out that BLM policies issued to revitalize inspection and enforcement activities impacted BLM's mitigation activities positively because they resulted in six of the eight field offices obtaining greater resources to hire more staff. We found the remaining four policy changes had little or no impact on BLM's mitigation activities.

Interior also commented that we used the term "environmental mitigation activities" in this report for a range of activities that are only part of the mitigation process. According to Interior, environmental mitigation also encompasses other activities, including NEPA analysis, conditions of approval in drilling permits, and best management practices, and that these

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methods help BLM moderate its dependence on reclamation. We agree that the NEPA analysis performed by BLM during the land use planning, leasing, and permitting stages of oil and gas development; the conditions of approval placed on oil and gas permits; and use of best management practices are critical parts of the environmental mitigation framework, along with other activities, such as inspections and monitoring. However, the main focus of this report was on whether BLM was adequately conducting activities meant to ensure that oil and gas operators are complying with the environmental mitigation requirements and conditions of their permits. Based on the information we gathered, we found that increases in permitting activity are compromising the agency's ability to conduct certain mitigation activities—such as inspections and idle-well reviews—because staff responsibilities are being shifted away from these important activities to process permits.

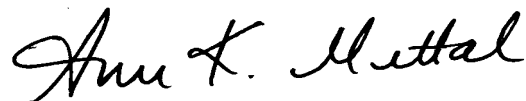
Interior also provided technical comments and editorial suggestions that we have incorporated throughout the report, as appropriate.

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As arranged with your office, unless you publicly announce the contents of this report earlier, we plan no further distribution of this report until 30 days after the date of this letter. At that time, we will send copies to other interested congressional committees. In addition, we will send copies of this report to the Secretary of the Interior and the Director of BLM. We will also make copies available at no charge on the GAO Web site at <http://www.gao.gov>.

If you or your staff have questions about this report, please contact me at (202) 512-3841 or [mittala@gao.gov](mailto:mittala@gao.gov). Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. Key contributors to this report are listed in the appendix IV.

Sincerely yours,



Anu K. Mittal  
Director, Natural Resources  
and Environment

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# Objectives, Scope, and Methodology

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We were asked us to address several issues concerning the Bureau of Land Management's (BLM) management of its oil and gas programs. Specifically, we were asked to determine (1) the extent to which the level of oil and gas production on public lands managed by BLM has changed over the past 6 years and how these changes have affected, if at all, BLM's ability to assess and mitigate environmental impacts; (2) what policies BLM has issued in the past 6 years related to facilitating and managing oil and gas production and how these policies have affected, if at all, BLM's ability to assess and mitigate environmental impacts; and (3) what challenges BLM faces in managing its oil and gas program.

To obtain BLM headquarters' insights on all three objectives, we met with officials from BLM's Fluid Minerals Group to discuss the agency's responsibilities for managing its oil and gas program. Through these discussions, we obtained an array of documents and high-level perspectives related to all three objectives. We also met with officials from BLM's National Energy Office to discuss the agency's efforts to implement the National Energy Policy, and spoke with leaders and other staff assigned to relevant tasks in BLM's National Energy Policy Implementation Plan. Through these efforts, we obtained documents and information related to policies issued in recent years, as well as high-level perspectives of the impacts of these policies and related management challenges.

To obtain on-the-ground perspectives regarding all three objectives, we visited a nonprobability sample of BLM field offices.<sup>1</sup> We selected field offices that experienced some of the greatest increases in oil and gas permitting activity from fiscal years 1999 through 2003 (at the time of site selection, fiscal year 2004 data were not available). Additional criteria for selection included offices with and without energy-related time-sensitive plans and offices that vary in their ability to meet inspection and enforcement requirements. Using these criteria, we selected eight offices to visit: the Glenwood Springs field office in Colorado;<sup>2</sup> the Miles City field office in Montana; the Carlsbad and Farmington field offices in New

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<sup>1</sup>Results from nonprobability samples cannot be used to make inferences about a population, because in a nonprobability sample, some elements of the population being studied have no chance or an unknown chance of being selected as part of the sample.

<sup>2</sup>The Glenwood Springs, Colorado, office shares oil and gas program staff with the Grand Junction, Colorado, field office. The information we collected represents the contributions of staff from both offices to managing oil and gas activities that occur within the jurisdiction of the Glenwood Springs office.

Mexico;<sup>3</sup> the Vernal field office in Utah; and the Buffalo, Rawlins, and Pinedale field offices in Wyoming.

We developed a structured interview guide to assist in collecting information about how each of the eight field offices manages its oil and gas program, including staffing and workload issues. We developed another structured interview guide to assist in collecting information from officials in each of the five BLM state offices—in Colorado, Montana, New Mexico, Utah, and Wyoming—that have oversight authority for the eight field offices we visited. The officials we interviewed at these state and field offices, including the state and field office managers, were responsible for the day-to-day administration of BLM’s oil and gas program. The structured interview guides were developed between May 2004 and September 2004.

The practical difficulties of administering a structured interview guide may introduce errors, commonly referred to as nonsampling errors. For example, difficulties may arise in how a particular question is interpreted or from differences in experience and information available to respondents in answering a question. We took steps in the development, administration, and analysis of our structured interview guides to minimize these nonsampling errors. We conducted pretests of the structured interview guides with two state offices in Montana and Utah and four field offices—the Glenwood Springs, Colorado, field office; Miles City, Montana, field office; Vernal, Utah, field office; and Buffalo, Wyoming, field office—to ensure that (1) the questions were clear and unambiguous, (2) terminology was used correctly, and (3) the guide was comprehensive and unbiased. We made changes to the content and the format of the final structured interview guides based on the pretests. The guides were also internally reviewed by one of our survey methodologists. To ensure that the information from the interview guides was analyzed correctly, 100 percent of the data and formulas used were internally and independently checked and verified.

In addition to BLM officials, we also contacted officials from industry groups, environmental and citizen-based groups, and state governments, in order to gain outside perspectives on the three objectives. Industry group

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<sup>3</sup>The Carlsbad, New Mexico, office shares oil and gas program staff with the Roswell, New Mexico, field office and the Hobbs, New Mexico, field station. The information we collected represents the contributions of staff from all of these offices to managing oil and gas activities that occur within the jurisdiction of the Carlsbad office.

participants included the Colorado Oil and Gas Association, New Mexico Oil and Gas Association, and Public Lands Advocacy. Environmental and citizen-based group participants included Colorado Environmental Coalition, Natural Resources Defense Council, Northern Plains Resource Council, Powder River Basin Resource Council, Southern Utah Wilderness Alliance, The Wilderness Society, and Wyoming Outdoor Council. State government participants included Colorado Department of Public Health and Environment's Air Pollution Control Division and Water Quality Control Division; Colorado Oil and Gas Conservation Commission; Montana Board of Oil and Gas Conservation; Montana Department of Environmental Quality Air Resources Management Bureau; New Mexico Energy, Minerals, and Natural Resources Department's Oil Conservation Division; New Mexico Office of the Governor; Utah Division of Oil, Gas, and Mining; Wyoming Department of Environmental Quality's Air Quality Division and Water Quality Division; Wyoming Game and Fish Department; Wyoming Office of the Governor; and Wyoming Oil and Gas Conservation Commission.<sup>4</sup>

To respond to the first objective and provide context to the second and third objectives, we gathered data on levels of oil and gas production on public lands managed by BLM from fiscal year 1999 through fiscal year 2004 as well as other workload-related data from staff responsible for managing BLM's Automated Fluid Minerals Support System (AFMSS) and from individual field office records. Specifically, we gathered information on (1) approved drilling permits, (2) environmental inspections, (3) temporarily abandoned idle wells, and (4) abandoned wells that do not have an approved final abandonment notice. To assess the reliability of the data for purposes of our report, we interviewed agency officials with knowledge of the data and the AFMSS system; reviewed related documentation, including software user guides, the data element dictionary, and training manuals; and corroborated the data with other sources to the maximum extent possible. We obtained responses from a key database official to a series of data reliability questions covering issues such as data entry, access, quality control procedures, and the accuracy and completeness of the data. Follow-up questions were added when necessary. Agency officials knowledgeable about AFMSS provided the following views on the accuracy and completeness of the data in AFMSS:

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<sup>4</sup>We also attempted to contact representatives of other state agencies/divisions in Utah, five other industry groups, and one other environmental group, but were unable to obtain responses from these contacts.

- *Approved drilling permit data.* An agency official knowledgeable about AFMSS commented that approved drilling permit data are generally accurate and complete because there are so many checks on those data. To corroborate these numbers to the maximum extent possible, we presented these numbers to the eight BLM field offices during our site visits and asked them to verify or, where applicable, to correct the numbers.<sup>5</sup> Of these eight field offices, two offices confirmed that the numbers were correct, and one of the field offices indicated that the data provided by the central AFMSS contact included only one of the two counties under the field office's jurisdiction (and would have matched if queried correctly). In the other five field offices, we found that AFMSS is generally underreporting the data the field offices have, in one case by as much as 34.9 percent. As a result, the numbers in AFMSS are likely understated. Field offices reported two primary reasons for the differences in the numbers: (1) the inability to enter data during the Internet shutdowns related to the lawsuit concerning Indian trust lands, and (2) the cancellation of approved drilling permits in AFMSS when drilling does not occur. As a result of the steps taken to assess the reliability of the approved drilling permit data, we have determined that the data are adequate to provide a conservative, or minimum, indication of the numbers of approved drilling permits.
- *Environmental inspections data.* An agency official knowledgeable about AFMSS also told us that there are many checks on the environmental inspections data and, as a result, that they are also generally accurate and complete. In our efforts to corroborate these data, we asked the five BLM state and eight BLM field offices we visited to provide data on the total number of required, planned, and completed federal inspections in their jurisdiction for fiscal years 1999 through 2003.<sup>6</sup> We then compared the federal environmental inspection completed numbers provided by the field offices to numbers from the AFMSS inspection roll-up reports by fiscal year for each of the field and state offices. Of the five state offices, one office provided numbers that matched and another office provided numbers that matched in all but

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<sup>5</sup>Field offices only verified/corrected approved drilling permit data for fiscal years 1999 through 2003. Fiscal year 2004 data were not available at the time of our site visits. As a result, the numbers presented in our report are those verified by the field offices for fiscal years 1999 through 2003, and those provided by our central AFMSS contact for 2004.

<sup>6</sup>Data for fiscal year 2004 was only provided by the central AFMSS contact because GAO's field and state office site visits took place prior to the end of that reporting period.



one fiscal year, where AFMSS underestimated the numbers the state office reported by 21 percent. In the remaining three offices, the numbers matched once data on Indian-well inspections were removed. Of the eight field offices, five offices provided numbers that matched,<sup>7</sup> and one office matched in all but one fiscal year, where AFMSS overestimated the numbers the field office reported by 22 percent. In another office, the variation could not be explained, and AFMSS underestimated the inspections between 1 percent and 20 percent across the five years. Finally, in one instance, the field office jointly planned inspections with another field office, which was not among those we reviewed. Because of this joint planning, there was no way to disaggregate the inspections. As a result of our work to assess the accuracy and completeness of the environmental inspections data, we have determined that the data are adequate to provide a conservative, or minimum, indication of the number of environmental inspections.

- *Temporarily abandoned idle wells.* To determine the total number of federal temporarily abandoned (TA) wells, TA wells with both approval and expiration dates entered, and TA wells with current approval, we asked an AFMSS manager to provide an AFMSS report on temporarily abandoned wells (*SNT:59*). To calculate the number of federal wells in TA status with both approval and expiration dates entered, we manually counted the entries for the eight field offices. Finally, to determine the number of federal TA wells that had current approval, we manually counted only those federal TA wells with both an approval and expiration date that had not expired. However, interviews with the responsible officials in the eight field offices indicated that in six of the eight field offices, officials had concerns about operators properly reporting TA status to BLM. For example, officials expressed concern that operators were misreporting wells in shut-in status (which does not require BLM approval) rather than in temporarily abandoned status (which does require BLM approval). The effect of this mischaracterization would be an underreporting of temporarily abandoned wells. As a result of our work to assess the accuracy and completeness of the federal TA data, we have determined that the data are adequate to provide a conservative, or minimum, indication of the numbers of temporarily abandoned wells.

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<sup>7</sup>Data for three of the field offices matched after they were adjusted—Indian-well inspection records were removed from two, and another jurisdiction's inspections were removed from the third.

- *Wells in abandoned status.* To determine the number of wells in abandoned status, we asked our central AFMSS contact to provide AFMSS reports on the number of federal wells, by field office, in abandoned status in 4-year increments starting in fiscal year 1980. AFMSS was fully implemented in all 31 offices in October 1997. Prior to that date, there was no automated system that tracked the historical status of a well. The previous database, Automated Inspection Records System (AIRS), was in place before AFMSS, and any data related to abandoned wells were transferred to AFMSS at the system's implementation. A BLM official stated that because of the transfer, the total number of wells in abandoned status in AFMSS may be underestimated. As a result of our work to assess the accuracy and completeness of these data, we have determined that the data are adequate to provide a conservative, or minimum, indication of the numbers of wells in abandoned status.
- *Wells in idle status.* To determine the total number of federal wells in idle status, we asked the five BLM state and eight BLM field offices we visited to provide data on the total number of federal idle wells for fiscal year 1999 through 2003. All five state offices and all eight field offices indicated AFMSS as the source of the idle-well data they provided. A knowledgeable official indicated that although the primary idle-well report in AFMSS is retrieving data in an accurate manner at this time, questions have been raised as to the consistency of data used for the report. At this time, there is no formal guidance from BLM Headquarters making it mandatory to enter that data into AFMSS. Also, officials in five of the eight field offices stated they did not believe that their current idle-well inventory was accurate. As a result of our work to assess the accuracy and completeness of these data, we have determined that the data are of uncertain reliability. These data, along with information from knowledgeable officials, are used in this report to illustrate the problems with the idle-well data.

In summary—with the exception of the data describing wells in idle status—although there are definite limitations associated with the data describing approved permits, environmental inspections, temporarily abandoned wells, and wells in abandoned status, these data are sufficient to provide indications of general trends, given the magnitude of the changes occurring over time.

We conducted our work from February 2004 through April 2005 in accordance with generally accepted government auditing standards.

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# Resource Monitoring

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Resource monitoring generally involves assessing cumulative impacts to resources over broad geographic areas and can be incorporated into resource management plans or environmental impact statements for large-scale oil and gas projects. BLM managers stated that it is important to assess cumulative impacts to air quality, groundwater, surface water, and wildlife and its habitat over broad geographic areas. When issues are raised about the extent of impacts or the effectiveness of mitigation measures, federal managers may propose to design and implement a resource monitoring plan. However, in different geographic areas, certain resources are more susceptible to the impacts of oil and gas development and, hence, more important to monitor than in other areas. For example, in the Powder River Basin of Wyoming and Montana, groundwater is very susceptible to the impacts of coal-bed methane gas production because production entails the simultaneous pumping of both gas and groundwater out of shallow aquifers, lowering the aquifers' pressure and decreasing the amount of groundwater that can be used to supply homes and ranches. Because of this impact, BLM is developing a monitoring plan for groundwater in the Powder River Basin. In contrast, the proper extraction of gas in northwestern Colorado does not impact shallow groundwater resources to this degree because these shallow aquifers are sealed off during drilling and gas is extracted from much deeper zones. Hence, BLM resource managers did not believe that a detailed groundwater monitoring plan was necessary for the Glenwood Springs Field Office.

The responsibility for monitoring the cumulative impacts of oil and gas production on air quality, surface water, groundwater, and wildlife and its habitat across broad geographic areas is shared by federal, state, and local governments. However, much of the implementation of programs to protect and monitor impacts to these resources is carried out by state governments.<sup>1</sup> While some state agencies conduct broad-scale efforts to monitor cumulative impacts to air quality, surface water, groundwater, and wildlife in the West, these efforts are seldom comprehensive enough or involve enough monitoring stations to relate changes in baseline conditions directly to impacts from oil and gas development. For example, in Colorado, the state Department of Public Health and Environment, Air Pollution Control Division has established a network of air quality

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<sup>1</sup>For example, under the Clean Air Act, the Environmental Protection Agency (EPA) sets national ambient air quality standards, and states are responsible for achieving these standards. Under the Clean Water Act, EPA may approve state pollution discharge permit programs, authorizing states to carry out duties that would otherwise be performed by EPA.

monitoring stations, but these stations are more concentrated along the highly populated Front Range, which includes the cities of Denver, Boulder, Fort Collins, and Colorado Springs, while oil and gas development on federal lands in Colorado is more concentrated in the less populated northwestern part of the state, where there are fewer monitoring stations. Also, the Clean Water Act provides for states to establish a list of waters that are impaired by specific pollutants.<sup>2</sup> This list contains known waters that have been polluted by various contaminants and are to be monitored by the states for changes in these pollutants. However, because of the diverse sources and types of pollutants within the watersheds that these rivers and streams drain, it is difficult under most circumstances to attribute changes in the baseline levels of pollutants directly to oil and gas development. With respect to groundwater, states generally do not have an extensive network of groundwater monitoring wells, although groups of monitoring wells have been identified in the Powder River Basin of Montana and Wyoming that are being used to develop a network for monitoring the impacts of oil and gas development. Monitoring the impacts of oil and gas on wildlife is even more of a challenge because responsibility for managing the wildlife and habitats may be divided among different government agencies.

Of 16 resource management plans and environmental impact statements prepared in the eight BLM field offices we visited, only six documents called for detailed plans for monitoring the environmental impacts of oil and gas development. A BLM official explained that detailed written plans for monitoring resources were not included in some of the resource management plans because these plans are old, having been written in the 1980s—when the need for monitoring was not fully appreciated and when the number of oil and gas wells was less than it is today. Furthermore, BLM officials explained that they have not developed plans for monitoring resources for some of the more recently developed resource management plans for various reasons, including that BLM staff (1) have concentrated more on processing drilling permits, (2) have been diverted from monitoring to address litigation concerns, (3) believe monitoring to be more of a responsibility for state government, or (4) simply have not tied together a number of disjointed monitoring efforts.

We found detailed written resource monitoring plans for addressing oil and gas impacts only in amendments to the resource management plans

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<sup>2</sup>33 U.S.C. § 1313 (d).

developed for the Buffalo, Wyoming and Miles City, Montana, field offices in 2003. In the Pinedale and Rawlins field offices, where the resource management plans currently in effect were published in 1988 and 1990, respectively, monitoring plans are also included in the environmental impact statements prepared for major oil and gas developments at the Jonah Gas Field and the Continental Divide/Wamsutter Natural Gas Project, and requirements for drafting a monitoring plan also exist in the environmental impact statement for the Pinedale Anticline. Monitoring plans for Buffalo, Miles City, Rawlins, and the Pinedale Anticline require the monitoring of impacts to air quality, groundwater, surface water, and wildlife and its habitat, while monitoring plans for the Jonah Gas Field and the Continental Divide/Wamsutter Project contain monitoring plans only for wildlife and its habitat. Table 5 describes the monitoring plans associated with the 16 resource management plans and environmental impact statements we examined.

**Table 5: Nature of Resource Monitoring Plans That Address Impacts from Oil and Gas Development across Broad Geographic Areas**

| BLM field office        | Resource management plan or EIS  | Date of record of decision    | Nature of resource monitoring plan  |
|-------------------------|--|-------------------------------|---|
| Glenwood Springs, Colo. | Oil and Gas Leasing and Development, Record of Decision and Resource Management Plan Amendment   | March 1999                    | No resource monitoring plan included in the resource management plan amendment.   |
| Glenwood Springs, Colo. | Roan Plateau Planning Area, Resource Management Plan and draft EIS   | Draft EIS dated November 2004 | No resource monitoring plan in draft EIS. The final EIS and the Record of Decision are yet to be released.  |
| Miles City, Mont.       | Big Dry Resource Management Plan/Environmental Impact Statement  | April 1996                    | No resource monitoring plan for oil and gas impacts, but the final EIS calls for some general monitoring of big game and nongame species and for surface water quality.   |
| Miles City, Mont.       | Record of Decision for the Final Statewide Oil and Gas EIS and Proposed Amendment of the Powder River and Billings Resource Management Plans | April 2003                    | The Record of Decision calls for monitoring plans for air quality, surface water, aquatic resources, groundwater, and wildlife and wildlife habitat. However, implementation of the plans is dependent upon funding. The Record of Decision delegates responsibility for developing monitoring plans to the Powder River Basin Interagency Work Groups, which have developed detailed plans for surface water, groundwater, aquatics, and wildlife and wildlife habit, but not for air quality. |

**Appendix II  
Resource Monitoring**

*(Continued From Previous Page)*

| <b>BLM field office</b>           | <b>Resource management plan or EIS</b>  | <b>Date of record of decision</b>                               | <b>Nature of resource monitoring plan</b>   |
|-----------------------------------|---|---|---|
| Carlsbad, N. Mex.                 | Carlsbad Resource Management Plan   | Resource management plan dated September 1988                   | No resource monitoring plan included in the resource management plan.   |
| Farmington, N. Mex.               | Farmington Resource Management Plan with Record of Decision   | September 2003  | No detailed monitoring plan but recognizes some limited historical monitoring of wildlife and wildlife habitat, which are not tied to oil and gas development.  |
| Vernal, Utah                      | Vernal Field Office Draft Resource Management Plan and draft EIS  | Draft resource management plan and draft EIS dated January 2005 | No resource monitoring plan. Replaces the Book Cliffs Resource Management Plan (1985) and the Diamond Mountain Resource Management Plan (1993), neither of which had resource monitoring plans. The final EIS and the Record of Decision for the Vernal Resource Management Plan are yet to be released.  |
| Vernal, Utah                      | Draft EIS for Castle Peak and Eightmile Flat Oil and Gas Expansion Project, Inland Resources Inc.         | Draft EIS dated September 2004                                  | No resource monitoring plan.  |
| Buffalo, Wyo.                     | Record of Decision and Resource Management Plan Amendments for the Powder River Basin Oil and Gas Project | April 2003  | The Record of Decision calls for monitoring plans for air quality, surface water, aquatic resources, groundwater, and wildlife and wildlife habitat. However, implementation of the plans depends on funding. The Record of Decision delegates responsibility for developing monitoring plans to Powder River Basin Interagency Work Groups, which have developed detailed plans for surface water, aquatics, and wildlife and wildlife habit, but not for groundwater and air quality. |
| Pinedale, Wyo.                    | Pinedale Resource Management Plan   | December 1988, with amendments in 2000 for oil and gas activity | No resource monitoring plan for oil and gas impacts but contains a rangeland monitoring plan.   |
| Pinedale, Wyo.                    | Record of Decision for the Pinedale Anticline Oil and Gas Exploration and Development Project EIS         | July 2000   | The Record of Decision calls for oil and gas operators to pay for monitoring impacts to air quality, surface water, groundwater, and wildlife and wildlife habitat, and it authorized and established the Pinedale Anticline Working Group to advise BLM on the creation of monitoring plans for these resources. Formal monitoring plans have not yet been drafted, although surface water and wildlife monitoring has occurred.   |
| Pinedale (and Rock Springs), Wyo. | Record of Decision for the Jonah Field II Natural Gas Development Project EIS                             | April 1998  | Includes detailed monitoring plan for wildlife.   |

**Appendix II  
Resource Monitoring**

*(Continued From Previous Page)*

| <b>BLM field office</b>           | <b>Resource management plan or EIS</b>   | <b>Date of record of decision</b> | <b>Nature of resource monitoring plan</b>   |
|-----------------------------------|--|-----------------------------------|---|
| Pinedale (and Rock Springs), Wyo. | Draft EIS, Jonah Infill Drilling Project, Sublette County, Wyoming   | Draft EIS released February 2005  | Calls for establishing in the Record of Decision (yet to be released) a Jonah Infill Working Group that will oversee the development and implementation of monitoring plans for various resources.                  |
| Rawlins (and Rock Springs), Wyo.  | Record of Decision for EIS on Continental Divide/Wamsutter II Natural Gas Project, Sweetwater and Carbon Counties, Wyoming | May 2000                          | Includes detailed monitoring plan for wildlife.   |
| Rawlins, Wyo.                     | Great Divide Resource Area Record of Decision and approved resource management plan  | November 1990                     | No resource monitoring plan.  |
| Rawlins, Wyo.                     | Rawlins Resource Management Plan, draft EIS  | Draft EIS released December 2004  | Calls for generalized monitoring of air quality, wildlife, surface water, and groundwater but does not include detailed resource monitoring plans. The final EIS and the Record of Decision are yet to be released. |

Source: GAO analysis of BLM Resource Management Plans and EISs.

BLM officials have expressed concerns about obtaining the necessary appropriations to implement their monitoring plans. Specifically, BLM officials estimate that about \$2.3 million per year in additional funding is necessary for implementing monitoring programs for wildlife, groundwater, and surface water in the Powder River Basin of Wyoming and Montana over the next 3 to 10 years. According to the resource management plans for the Buffalo and Miles City field offices, implementation of these monitoring plans is dependent on the availability of federal funding. BLM personnel expressed uncertainty over whether BLM would be able to obtain in future years the federal funding for its share of the surface water and the wildlife monitoring plans. Similarly, a BLM official also reported uncertainty in funding future groundwater monitoring in the Powder River Basin. However, BLM officials with whom we spoke did report some success in designing and implementing resource monitoring plans in those locations where industry primarily paid for the costs of monitoring. For example, an operator on the Pinedale Anticline has been tracking the movements of mule deer through radio collars in an effort to determine the impacts of wintertime drilling, and a Montana operator of coal-bed methane wells paid for monitoring the impacts of discharging produced water into the Tongue River.

In an effort to place more emphasis on monitoring, BLM announced in January 2005 that it is developing a National Monitoring Strategy. BLM cited the need to develop this strategy because it had previously identified monitoring as a weakness in its restoration activities and because the Office of Management and Budget identified the need for improving BLM's baseline data collection, resource monitoring, and effectiveness monitoring. BLM intends to develop four work groups to identify issues at the national, regional, and local levels related to land health, assess whether current data collection efforts address these issues, identify other data sources that may address land health, and determine what else needs to be done to provide land health information. One of the work groups will be tasked with addressing energy issues at the regional level, and thus could address monitoring the impacts of oil and gas development on critical resources.



# Comments from the Department of the Interior

Note: GAO comments supplementing those in the report text appear at the end of this appendix.



## United States Department of the Interior

OFFICE OF THE SECRETARY  
Washington, D.C. 20240

MAY 26 2005

Ms. Anu Mittal  
Director, Natural Resources and Environment  
Government Accountability Office  
441 G Street, N.W.  
Washington, DC 20548-0001

Dear Ms. Mittal:

Thank you for the opportunity to review the U.S. Government Accountability Office (GAO) Draft Audit Report, OIL AND GAS DEVELOPMENT, *Increased Permitting Activity Has Lessened BLM's Ability to Meet Its Environmental Protection Responsibilities* (GAO-05-418).

The draft report generally does much to capture the myriad demands on the Oil and Gas Program of the Bureau of Land Management (BLM). It needs to be repeated that the Administration is committed to managing the BLM lands for multiple use and sustained yield, in accordance with the requirements of the Federal Land Policy and Management Act. This includes providing for orderly energy development in an environmentally responsive manner. Permit demand, however, is not driven by the 2001 National Energy Policy – demand for energy from public lands is driven by American consumers and high prices. The Administration is working to respond to that demand and the National Energy Policy Report provides a comprehensive strategy to address it.

Our general and specific comments follow for you to consider incorporating into the final report.

*Recommendation #1: Reflect in its workforce plans the staffing levels needed to perform the necessary number of environmental inspections and other mitigation activities in addition to those positions that the agency expects to be funded.*

The BLM annually conducts workforce planning for all its programs at the State and Field Office level. During the next round of workforce plans and relevant to the number of environmental inspections and other mitigation activities, the field offices will be instructed to provide workforce needs with and without funding limitations so that the BLM management can ascertain the level of unmet demand for these types of activity. As you noted on page 34, BLM is working to hire and train additional enforcement personnel and to develop a National Monitoring Strategy.

*Recommendation #2: Determine the data necessary to track workloads associated with idle well reviews and reclamation inspections.*

The Automated Fluid Minerals Support System (AFMSS) data base currently has data fields for idle wells and final reclamation inspections, but not for intermediate reclamation inspections.

Now on pp. 14 and 33.

Appendix III  
Comments from the Department of the  
Interior

2

The BLM has evaluated AFMSS and has identified that the addition of an inspection type field will allow us to track intermediate reclamation inspections.

Recommendation #3: *Ensure that field offices consistently enter the data on idle well reviews and reclamation inspections into BLM's centralized data base.*

Once the new inspection type under Recommendation #2 has been developed, the BLM will issue guidance on the data entry of idle well reviews and intermediate and final reclamation inspections.

Recommendation #4: *To generate additional revenues that could potentially help BLM better respond to its increased workload due to the significant increase in oil and gas production on public lands, we recommend that the Secretary direct BLM to finalize and implement a fee structure to recover BLM's costs for processing applications for drilling permits.*

Fees to cover Applications for a Permit to Drill (APD) were not included in the 2000 cost recovery proposal; however, the BLM has decided to include APD fees in its current proposed cost recovery rule. This draft rule is being reviewed by the Office of Management and Budget. The BLM proposes to phase in the APD fees, beginning with a fixed fee. The BLM would implement any fee increases through future rulemaking. Comment will be invited on whether this initial fixed fee is appropriate, or whether it should be higher or lower.

The BLM has the following specific comments:

The number of APDs approved in Fiscal Year 1999 should be 1,759 (not 1803) and for FY 2004, 6,452 (not 6,399). [GAO Highlights, page 5 and page 18]. The percentage of APDs for the five states should be adjusted to 89 percent (page 5).

--p. 9, lines 17 and 19: In the discussion of the EPCA report, insert "resources and" before the word "reserves" for more appropriate use of technical terms.

--p. 13: The Secretary is responsible to ensure oil and gas operations are in compliance with all laws and regulations governing Federal and Indian oil and gas operations: 1) to protect the surface and subsurface environment and public health and safety, 2) to ensure that the public's oil and gas resources are properly developed in a manner that maximizes recovery while minimizing waste, and 3) to ensure production from Federal and Indian lands is properly handled, measured and reported correctly. As noted in Appendix 2, p. 58, however, much of the implementation, permitting and monitoring for environmental impacts is carried out by state governments operating via delegation from the Environmental Protection Agency.

--p. 16, line 12: Change to: "The BLM policy defines shut-in wells as oil and gas wells which are physically and mechanically capable of producing oil and/or gas in paying quantities."

--p. 17: It would be rare for a lease to contain "specific terms" of reclamation. Those are set forth in an onshore order, in conditions of approval on drilling permits, and in the review of the

See comment 1.

Now on p. 12.

See comment 2.

Now on p. 55.

Appendix III  
Comments from the Department of the  
Interior

3

abandonment plans submitted when the operator is preparing to commence abandonment (i.e. reclamation).

Now on p. 32.

--p. 27: The report does not support its conclusion that BLM policy changes have had a negative impact on mitigation activities. GAO suggests that since April 2003, "policy changes to improve and streamline processing of drilling permits has [sic] indirectly had a negative impact on environmental mitigation activities. . .". It is unclear, however, how this reconciles with comments on p. 33, that correctly note a streamlining strategy to bundle permit applications "can encourage companies to plan their drilling operations more carefully and help BLM better assess the cumulative environmental impacts of drilling activities." Nor does it seem consistent with BLM field office comments that, "where block surveys are used, the cultural resources of concern can be readily identified and companies can have more flexibility to move project components around without additional surveys." (p. 33). Half of the offices felt this improved their environmental mitigation activities and one said it improved the quality of environmental analysis.

Now on p. 32.

--p. 35: While various field offices have been and are using best management practices (BMPs), the BLM intends to build on lessons learned in those offices, and to expand the use of them to other field offices.

Now on p. 17.

Overall comment – GAO uses the term "environmental mitigation activities" (p. 18) for a range of activities, such as monitoring and enforcement, that is only a part of mitigation. Environmental mitigation encompasses proactive activities, including NEPA analysis, APD conditions of approval, and best management practices. Using these methods, the BLM moderates its dependence on reclamation. It may be true that increased oil and gas activity means that the BLM needs more resources to keep up with all of its responsibilities, and the President's Budget proposes to do this through increased cost recoveries, but that's not the same as saying that "increased permitting has lessened BLM's ability to meet its environmental protection responsibilities" (GAO-05-418).

Again, thank you for the opportunity to review and comment on this report. If you have any questions, please contact Tim Spisak, Group Manager, Fluid Mineral Group, on 202-452-5061, or Andrea Nygren, BLM Audit Liaison Officer, on 202-452-5153.

Sincerely,



Rebecca W. Watson  
Assistant Secretary  
Land and Minerals Management

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The following are GAO's comments on the Department of the Interior's letter dated May 26, 2005. See the "agency comments and our evaluation" section for additional responses to BLM's comments.

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## **GAO Comments**

1. We asked BLM to provide documentation for the revised drilling permit numbers for fiscal years 1999 and 2004. Because the AFMSS database was unavailable due to security concerns, we could not establish why our previous permit numbers differed from the revised numbers. As a result, we did not make any changes. However, we clarified that the permit numbers in figure 5 are as of April 2004.
2. We asked BLM for support for the sentence describing the Secretary of Interior's responsibilities for managing oil and gas operations. Because the support provided was incomplete, we did not make any changes. However, we do describe BLM's responsibilities for mitigating the environmental impacts of oil and gas production in the report.

# GAO Contact and Staff Acknowledgments

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## GAO Contact

Anu K. Mittal, (202) 512-3841

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## Staff Acknowledgments

In addition to those named above, Ronald Belak, Glenn C. Fischer, Laura Gatz, Jeff Malcolm, and Lisa Turner made key contributions to this report. Also contributing to the report were Christine Bonham, John Delicath, Doreen Feldman, Julian Klazkin, Rob Martin, Mary Mohiyuddin, Marmar Nadji, Judy Pagano, and Lisa Shames.

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