



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

THE BUREAU OF LAND MANAGEMENT CAN IMPROVE THE OIL AND GAS DRAINAGE PROGRAM



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Memorandum

DEC 28 2017

To: Brian Steed
Acting Director, Bureau of Land Management

From: Mary L. Kendall 
Deputy Inspector General

Subject: Survey Report – The Bureau of Land Management Can Improve the Oil and Gas
Drainage Program
Report No. 2017-EAU-034

We completed the survey phase of our evaluation of the Bureau of Land Management (BLM) Oil and Gas Drainage Program. The objective of our evaluation was to determine to what extent the BLM addressed onshore oil and gas drainage and what are the impacts of drainage.

Our survey work revealed that the BLM opened numerous drainage cases, but the BLM rarely pursued protective actions because drainage was not evident. The scope and methodology of our work can be found in Attachment 1.

Background

Drainage is the gradual removal of oil and gas from beneath a specific property by a producing well on an adjoining property. Drainage regulations protect lessees, Government entities, and tribes from the loss of oil and gas resources. Under 30 U.S.C. § 226(j), the BLM may negotiate drainage agreements when it appears that Federal lands are being drained of oil or gas by wells drilled on adjacent lands.

The BLM pursues protective actions when it determines drainage is possible or is actually occurring. Protective actions involve entering into communitization agreements with adjacent land owners to pool mineral interests, drilling protective wells, or receiving compensatory royalties. When drainage occurs on unleased lands, mineral estate owners may be compensated for lost royalties through negotiated agreements with the BLM.

Results

We found the BLM opened numerous drainage cases during the years we evaluated but rarely pursued protective actions because drainage was not evident. From fiscal years (FYs) 2014 to 2016 and through the first quarter of FY 2017, the BLM established 3,591 new drainage cases and retired 2,854 cases, but only took 139 protective actions (4 percent), as shown in Figure 1, below. Further, BLM's quarterly drainage reports did not identify any significant recovery of

compensatory royalties or a significant amount of protective wells during that period, which demonstrated that drainage was not occurring.

| FYs Reviewed | New Cases | Cases Retired Without Protective Action | Protective Actions |
|--------------|-----------|---|--------------------|
| 2014 | 937 | 852 | 18 |
| 2015 | 1,786 | 1,046 | 23 |
| 2016 | 602 | 894 | 81 |
| 2017 | 266 | 62 | 17 |
| Totals | 3,591 | 2,854 | 139 |

Figure 1. The BLM established 3,591 drainage cases, retired 2,854 cases, and only took 139 protective actions. Only first quarter data is included in the 2017 numbers. Source: BLM data.

To identify drainage, the BLM follows the process established in its drainage manual during its periodic review of wells by field offices. First, the BLM has to determine whether a potential drainage case exists from its well reviews, which it does in several ways: (1) reviewing well information from a GIS to track oil and gas activities, (2) reviewing well information from State oil and gas conservation websites, (3) identifying unleased lands subject to possible drainage, or (4) reviewing proposed spacing and pooling agreements. The BLM will then initiate a drainage case when it believes that drainage is possible in a certain area. Next, the BLM processes the case through a series of actions to determine if drainage is actually possible or is occurring.

BLM's drainage manual provides a flow chart of consecutive steps to process open drainage cases (see Attachment 2). After the BLM identifies a potential drainage case, the first step is to determine whether or not the case is valid. Next, cases will move to the administrative screening process. The administrative screening process is conducted to:

- Review spacing of the potentially draining well
- Maintain the case file and prioritize drainage workload
- Identify where uncompensated loss of revenue could occur
- Identify any agreements, existing or needed, to protect Federal or Indian lands from drainage
- Identify proposed drilling that may satisfy the requirements of protective wells

In addition, the BLM will issue notifications to lessees about potential drainage findings for response and about the conclusion of the administrative screening process. This is done before arriving at the geologic review step, which determines whether drainage is geologically possible.

We learned that understanding the geology of where the oil and gas congregates and how it is extracted from a formation is a vital piece of information in identifying and determining if drainage is geologically possible. For example, the assistant field manager in the North Dakota Field Office explained the Bakken formation is so tight that it allows little to no drainage. A physical science technician also explained that drainage is not really a concern because of the knowledge of the drainage radius and characteristics of the Bakken formation. We were told geological reviews could be used earlier in the process to determine whether drainage in an area is even possible before a case is administratively screened.

Our review of data from BLM's North Dakota Field Office for 2014 through the first quarter of 2017 found that of the 1,737 cases retired administratively, only 3 protective actions were taken. This occurred because the field office opened potential cases without first conducting a geological review that could have been used to identify whether drainage was even possible.

In addition, one geologist we interviewed stated that geology has been de-emphasized and instead BLM has an engineer assessing whether drainage exists. According to the geologist, even though the BLM knows that it should be factoring geological considerations into the assessments, it is not doing so. A petroleum engineer in the same office agreed there may not be actual drainage cases if geological reviews were performed up front.

Based on our limited analysis and the interviews conducted, we learned that there may be room for efficiencies in BLM's process if it performed geological reviews earlier in its process. One petroleum engineer from one field office stated that a lot of effort goes into the drainage program without yielding any tangible results, such as identifying and generating lost royalty income. Moreover, another BLM employee explained that drainage provides a very low percentage return on investment in the long run.

We do not require a formal response to this report. If you have any questions regarding this report, please contact me at 202-208-5745.

The legislation creating the Office of Inspector General requires that we report to Congress semiannually on all audit, inspection, and evaluation reports issued; actions taken to implement our recommendations; and recommendations that have not been implemented.

cc: Weldon "Bruce" Loudermilk, Director, Bureau of Indian Affairs

Scope and Methodology

The objective of our evaluation was to determine to what extent the U.S. Department of the Interior addressed onshore oil and gas drainage and what are the impacts of drainage. To accomplish our objective, we—

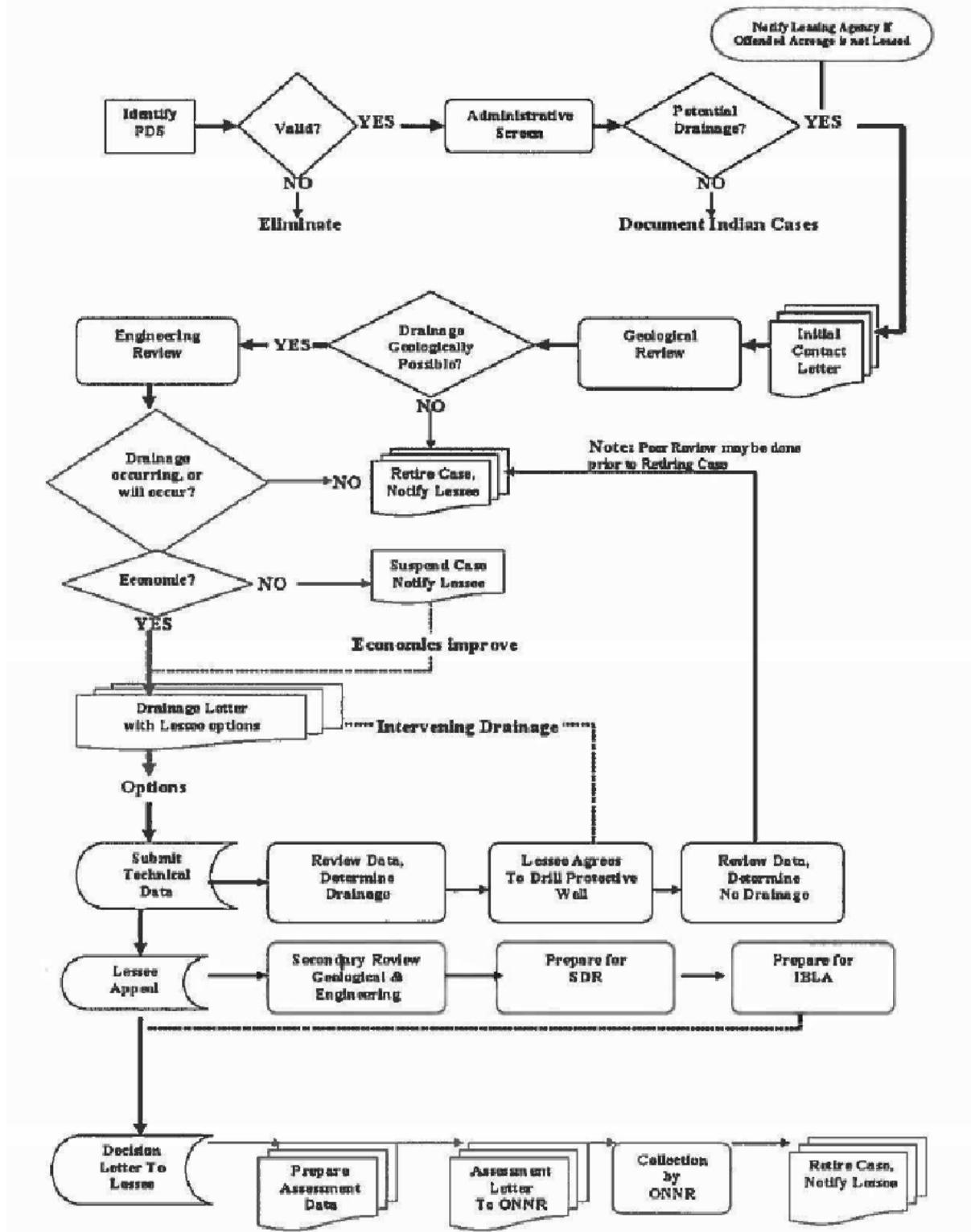
- Reviewed laws, regulations, and policies pertaining to the Bureau of Land Management (BLM) drainage program
- Reviewed prior Office of Inspector General and Government Accountability Office reports
- Reviewed Quarterly Fluid Minerals Reports related to drainage cases provided by BLM for fiscal years 2014 through the first quarter of 2017
- Visited the BLM Colorado State Office in Lakewood, CO and the BLM North Dakota Field Office in Dickinson, ND
- Contacted the BLM Oklahoma Field Office in Norman, OK and BLM Headquarters' officials in Washington, D.C.
- Contacted Bureau of Indian Affairs' offices and tribal entities

We did not test operation and reliability of internal controls related to the drainage program. BLM provided computer-generated data related to identification and closure of drainage cases, which we used but did not test for completeness and accuracy.

We conducted our evaluation in accordance with the Quality Standards for Inspection and Evaluation as put forth by the Council of the Inspectors General on Integrity and Efficiency. We believe that the work performed provides a reasonable basis for our conclusions and recommendations.

Flow Chart from BLM's Drainage Manual

Illustration 3 – Drainage Flowchart



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