OIL AND GAS

Interior Should Strengthen Management of Key Data Systems Used to Oversee Development on Federal Lands

What GAO Found

The Department of the Interior (Interior) uses three key data systems to oversee oil and gas development on leased federal lands: the Automated Fluid Minerals Support System (AFMSS), Legacy Rehost 2000 (LR2000), and the Minerals Revenue Management Support System. Interior’s Bureau of Land Management (BLM) and Office of Natural Resources Revenue (ONRR) staff rely on data across these systems to carry out responsibilities such as processing permits for drilling wells and ensuring appropriate payments are made based on production.

According to agency documents and officials, limited automated sharing of data among these systems is one of four challenges. Although the systems use some of the same information, such as lease and well numbers, they do not fully connect or communicate with each other, complicating oversight. For example, GAO calculated, based on agency estimates, that ONRR spends the equivalent of approximately 10 full-time employees in staff hours every year on conversion and error correction due to fragmented systems. Best practices call for coordinating and sharing data assets across federal agencies. Though Interior is developing replacement data systems, it does not have a finalized plan to facilitate comprehensive data sharing among them. Without such a plan, Interior risks continuing to spend staff time that could be better spent on other priorities.

Example of Oil and Gas Data Shared between BLM and ONRR Data Systems

Interior has not fully implemented leading practices in developing requirements to ensure the replacement systems meet user needs. Such practices have been found to improve development of federal data systems. BLM officials said they are developing replacement systems using an agile software development approach, which builds software incrementally based on users’ requirements and continuously evaluates functionality, quality, and customer satisfaction. For example, BLM program offices responsible for developing systems to replace AFMSS and LR2000 stated that they meet quarterly with system stakeholders to prioritize and agree on features and functionality. However, the program offices do not have a defined process to implement the agile approach because it is not addressed in Interior’s guidance on data system development. By updating the guidance to reflect how program offices can implement an agile development approach, Interior would have better assurance that its new data systems will function as intended to meet user needs and reduce budget and schedule risks.