Ohio Department of Natural Resources

Performance Audit Summary

WHAT WE LOOKED AT

The Ohio Department of Natural Resources (ODNR) has 10 divisions and is responsible for maintaining the balance between the wise use and protection of Ohio's natural resources. The Oil and Gas Resources Division (the Division) is responsible for regulating Ohio's oil and natural gas industry while ensuring the state's abundant natural resources are developed and managed responsibly. The responsibilities of the Division include plugging orphan wells under a program known as the Orphan Well Program (the Program).

Orphan wells are abandoned oil and gas wells that have no legal owner. Many orphan wells pose a serious risk to the environment and are considered a public safety hazard. ODNR reported to the Interstate Oil & Gas Compact Commission in calendar year (CY) 2020 that an estimated 36,000 to 66,000 orphan wells exist in the Ohio. To mitigate the dangers associated with orphan wells, the Division was given the responsibility of locating and plugging orphan wells across the state. In order to accomplish this task, the Division first locates wells and confirms their orphan status. Once a well is confirmed to be an orphan well, the Division uses third party contractors to conduct the plugging process.

Orphan well plugging is paid out of the Oil and Gas Well Fund (the Fund). The Fund receives 90 percent of the severance tax on non-horizontal oil and natural gas wells, with some additional funding coming from regulatory fees for oil and gas well drilling, permit fees for plugging and abandoning wells, and civil penalties from violations of regulations. House Bill (HB) 225 of the 132nd General Assembly, effective in FY 2019, updated ORC §1509.071 to set an annual requirement for the Division to spend at least 30 percent of the previous fiscal year's Fund revenue on plugging orphan wells; previously, in FY 2011, the requirement had been set at 14 percent of the previous fiscal year's Fund revenue.

Historically, the Division has been unsuccessful in reaching the spending requirement. Our audit examined the history of the oil and gas industry in Ohio to understand why the Division has failed to meet mandated spending requirements. We also examined the Orphan Well Program's current operations to determine if the Division could make any immediate changes that would allow it to meet the current spending requirements.

WHAT WE FOUND

The Division has been able to increase the number of orphan wells that are plugged on an annual basis from 15 wells in FY 2017 to 181 wells in FY 2021. However, despite the increase in the number of wells that were plugged, the Division still fell short of the required spending target. In FY 2021, the Division spent $11.2 million on orphan well plugging contracts. The spending requirement in that year was $23 million, meaning the Division spent about 50 percent of its targeted requirement. Although ODNR has made progress in reaching the requirement, significant work remains to create a sustainable plugging program that can consistently meet expenditure requirements established in the ORC.

Plugging orphan wells can be difficult due to a variety of factors, including the general nature of the wells. Because most orphan wells were generally abandoned in the 19th or early 20th century, documentation pertaining to their location and ownership is often not readily available. In addition, wells have historically been found in remote areas where geographic features such as hills and forests can make access to the wells difficult. The lack of solid information about location and legal status for suspected orphan wells means that doing the background research and legal work necessary to prepare a well for plugging can require a significant investment of time. Finally, wells were sometimes abandoned due to issues with the initial drilling, which can mean that the Division may need to develop creative solutions to address complex plugging problems. All this pre-work creates a substantial demand on Division resources.

In addition to the inherent challenges of finding and plugging orphan wells, meeting the expenditure requirements established in ORC § 1509.071 is further complicated by ODNR's historical interpretation of ORC § 1509.071 (E) (1), which states that "The chief [of the Division] shall not make expenditures for salaries, maintenance, equipment, or other administrative purposes, except for costs directly attributed to the plugging of an idle and orphaned well." This means the expenditures related to pre-work are not counted against the 30 percent requirement, meaning that substantially mitigating the overall orphan well problem will require the Division to expand significant resources beyond the 30 percent expenditure requirement.

It should be noted that the federal Infrastructure Investment and Jobs Act (IIJA), passed in FY 2022, is expected to provide an average of $36 million in federal grants toward plugging orphan wells in each year from FY 2023 to FY 2030. The funds can be used on supplementing the internal tasks associated with orphan well plugging, including locating, researching, and planning of orphan wells. This will likely help the Division plug more wells.

Key Observations

Key Observation 1: The Division has historically struggled to develop a fully accurate inventory of orphan wells. The low-end estimate is that there could be 36,000 orphan wells, statewide. Of the possible 36,000 orphan wells, the Division maintains an inventory of almost 1,000 known orphan wells. However, the existing orphan well inventory includes a significant number of wells that could have issues with either their location or status as orphan wells. Inventory limitations may hinder the Division's ability to attract qualified plugging contractors, leaving it a small pool of viable contractors. In addition, the Division does not track all key data points related to bidding or contracting, nor does the Division store data in such a way to support the creation and curation of modern business intelligence tools.

Key Observation 2: The Division has never met the expenditure requirements established in the ORC. This is in part to recent significant increases in tax revenues associated with oil and gas exploration in the state. Revenue from the severance tax has increased from $7 million in FY 2012 to $72 million in FY 2021, with a commensurate increase in expenditure requirements. The Division has significantly increased the wells plugged and corresponding financial outlay between FY 2019 and FY 2021, but it is still short of expenditure requirements.

Key Observation 3: The Division has historically elected to perform most preparation work using ODNR employees. The reliance on state employees creates a budgetary and logistical constraint on the Orphan Well Program, as the Division can only increase efforts dedicated to well plugging preparation work as fast as it can recruit, train, and hire permanent employees. Increasing the use of contractors could help the Division overcome these constraints.

SUMMARY OF RECOMMENDATIONS

Recommendation 1: The Division collects extensive data on orphan wells. However, of the 970 wells in the orphan well inventory, 704 of the wells, or 72 percent, may lack accurate location and environmental data. Furthermore, the analysis found that key pieces of data that are helpful for tracking the orphan well plugging process are either missing or not regularly curated in a manner that makes the data useful for management decision-making. The Division should improve the quality of orphan well data by collecting more data, aggregating data for business intelligence, and reducing the need for manual processes. Easily accessible data on the orphan well process will be essential as the Division works to increase its annual plugging capacity.

Recommendation 2: The Division is required, per ORC § 1509.071, to spend 30 percent of the previous year's Oil and Gas Fund revenue plugging orphan wells. The Division has historically struggled to meet this goal. ODNR should develop and publish a compliance plan to increase the capacity of the Division under the current interpretation of ORC § 1509.071. This compliance plan should include a plan to accurately capture all direct and indirect costs associated with researching, locating, and plugging orphan wells. In addition, the Division should make efforts to maximize the use of existing contractors within the current interpretation of the ORC. This published plan will allow the legislature to better understand the undertaking the Division would need to implement to reach the required spending amounts.

Recommendation 3: ORC § 1509.071 sets an expenditure requirement equal to 30 percent of the previous year's Oil and Gas Fund revenue to be spent plugging orphan wells. Even though an orphan well requires a significant amount of pre-work before it can be put out to bid, ODNR's interpretation of ORC § 1509.071 limits which expenditures can be counted against the 30 percent requirement to only contract payments directly for the plugging of wells. If ODNR can expand the interpretation of ORC to include all direct costs associated with plugging an orphan well, the Division would come closer to reaching its 30 percent spending requirement and have more money available for locating and conducting background research and verification on orphan wells.

During the audit, ODNR worked with the General Assembly to change the text of ORC § 1509.071 (E) (1) to state that "The chief may make expenditures for salaries, maintenance, equipment, or other administrative purposes, for costs directly attributed to the locating, analyzing, stabilizing, designing, plugging of, remediating, or restoring an idle and orphaned well, and for determining if a well is an orphaned well." In FY 2021, this change would have increased the Division's expenditures from $11.2 million to $14.2 million, bringing the Division's 14.9 percent of the previous year's revenue to 19.0 percent of the previous year's revenue. Moreover, the change in ORC § 1509.071 will help the Division more accurately assign the full cost of locating, researching, and plugging orphan wells. In addition, the Division expects to receive an additional $36 million per year as part of the Federal Infrastructure Investment and Jobs Act (2021) and that additional funding will be used to help bolster the Orphan Well Program.