



Ohio Department of Natural Resources

Division of Oil and Gas Resources Management

Orphan Well Program



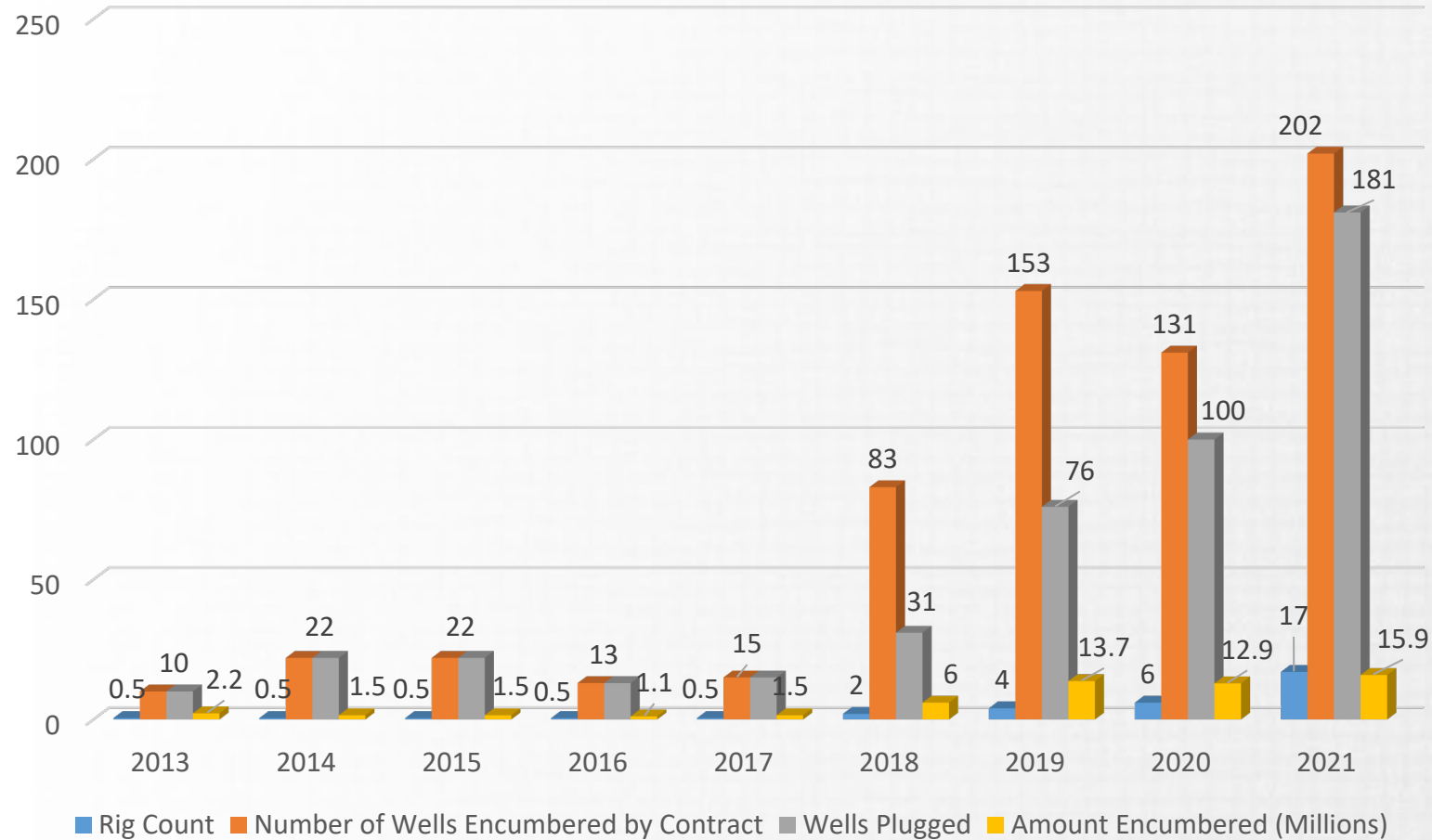
Ohio Department of
NATURAL RESOURCES

- Ohio's Orphan Well Program was created in 1976 to plug oil and gas wells that have no registered owner
 - Ohio's process for determining a well to be an orphan well is defined in Ohio Revised Code
- Program has grown exponentially in last five years...



Orphan Well Program Highlights

Orphan Well Program Plugging



Fiscal year from July 1 to June 30

However, the next ten years present an **unprecedented** opportunity for growth beyond anything previously imagined



Potentially more than \$500 MILLION in investment

Division is excited to share our vision for involving **YOU AND YOUR COMPANY** in this growth



Introduction

- Infrastructure Investment and Jobs Act
 - Title VI – Methane Reduction Infrastructure
 - Section 40601 Orphaned Well Site Plugging, Remediation, and Restoration
 - <https://www.congress.gov/117/plaws/publ58/PLAW-117publ58.pdf>
- Ohio's Plan
 - Locating Wells
 - Designing Plans
 - Plugging & Restoration



- **\$4.7 Billion** available for Orphaned Well Site Plugging, Remediation, and Restoration
 - State Funding Breakdown (\$4.275 billion)
 - Initial Grants = \$775 million
Ohio = \$25 million
 - Formula Grants = \$2 billion
Ohio = \$231 million
 - Performance Grants = \$1.5 billion
Ohio = \$70 million
 - Initial Grant must be in contract in 90 days and obligated in one year



- Formula and Performance Grants are available until 2030 and have five years to be spent
 - Funds have a 10% maximum administrative cost cap
 - Davis-Bacon Act prevailing wage provisions apply to grant-funded contracts



- What can Ohio spend the money on?
 - Initial Grant

- Option 1 (\$25M) = Plugging, remediating & reclaiming wells
- Option 2 (\$5M) = Developing the program



- What can Ohio spend the money on?
 - Formula and Performance Grants
 - Plugging, remediating & reclaiming wells
 - Identifying and characterizing wells
 - Ranking wells
 - Making information available to the public
 - Measuring and tracking emissions of gases and water contamination
 - Remediating soil and restoring native habitat damage caused by wells



- What can Ohio spend the money on?
 - Formula and Performance Grants (continued)
 - Decommissioning or removal of pipelines, facilities, and infrastructure
 - Identifying and addressing any disproportionate burden of adverse effects on communities of color, low-income, tribal, and indigenous
 - Administering the program



- Current State Biennium Funding
 - **~\$22M/year**
- Total Infrastructure Investment and Jobs Act Funding for Ohio
 - **\$326M to be available thru 2035**
- If Ohio's production holds steady thru 2035, the total amount available for both Federal and State Funding would be:
 - **~\$634M thru 2035**
- **Ohio has potential to be one of the top two-funded states**



- **Step 1: Locate and Refer Wells**

- Landowner Submittals
- Public Information Campaign
- ODOT UAS Center Drone Flights with DOGRM Magnetometer
- Referral/Drone Flight Consultant Contracts
 - Future Opportunity
 - <https://ofcc.ohio.gov/Opportunities2>



- **Step 2: Design Plugging Plans**

- Division Traditional Program - Staff Design of Scope of Work
- Consultant Design Contracts
 - Current Opportunity
 - <https://ofcc.ohio.gov/Opportunities2>

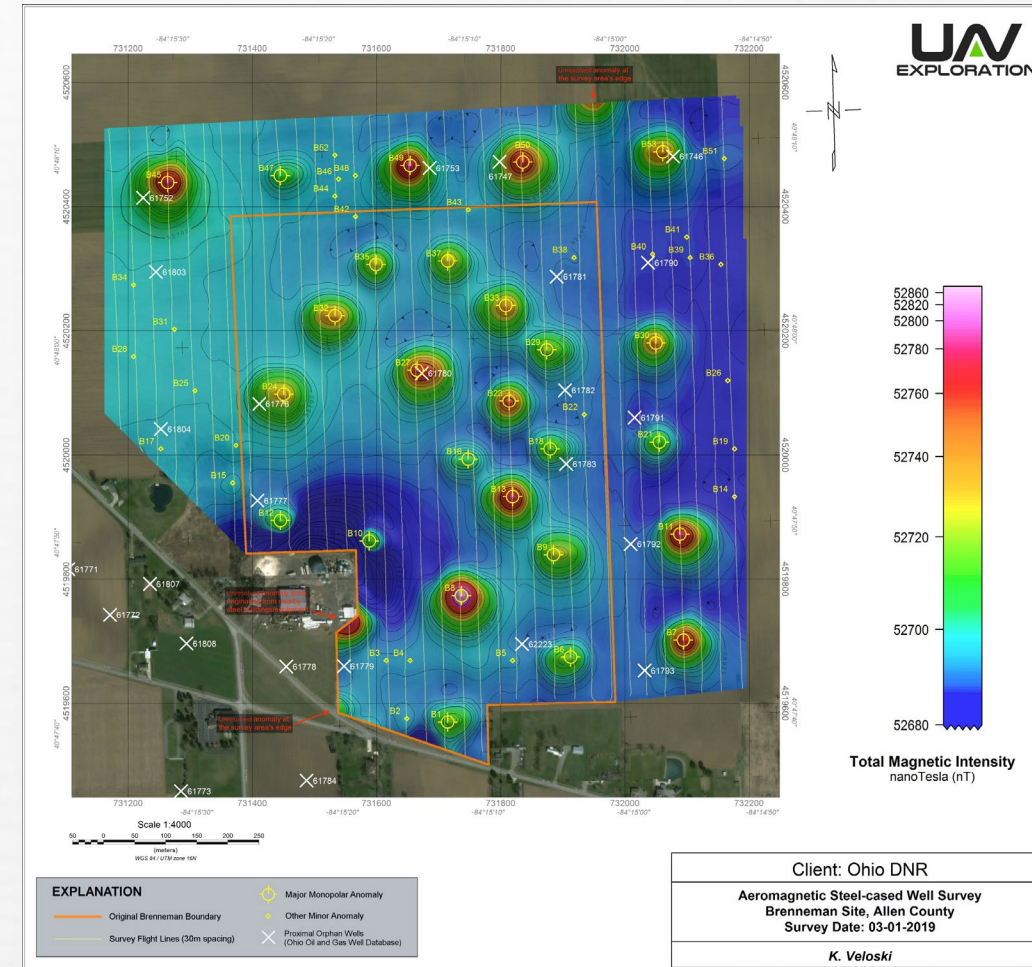


- **Step 3: Award Contracts to Plug the Wells**

- Traditional Program
 - DAS Multiple Award Contract: CSP900922
 - <https://procure.ohio.gov/proc/currentcontracts.asp>
 - Or google “DAS procurement”
- Landowner Pass-through Program
- Construction Manager at Risk
 - Opportunity in March
 - <https://ofcc.ohio.gov/Opportunities2>

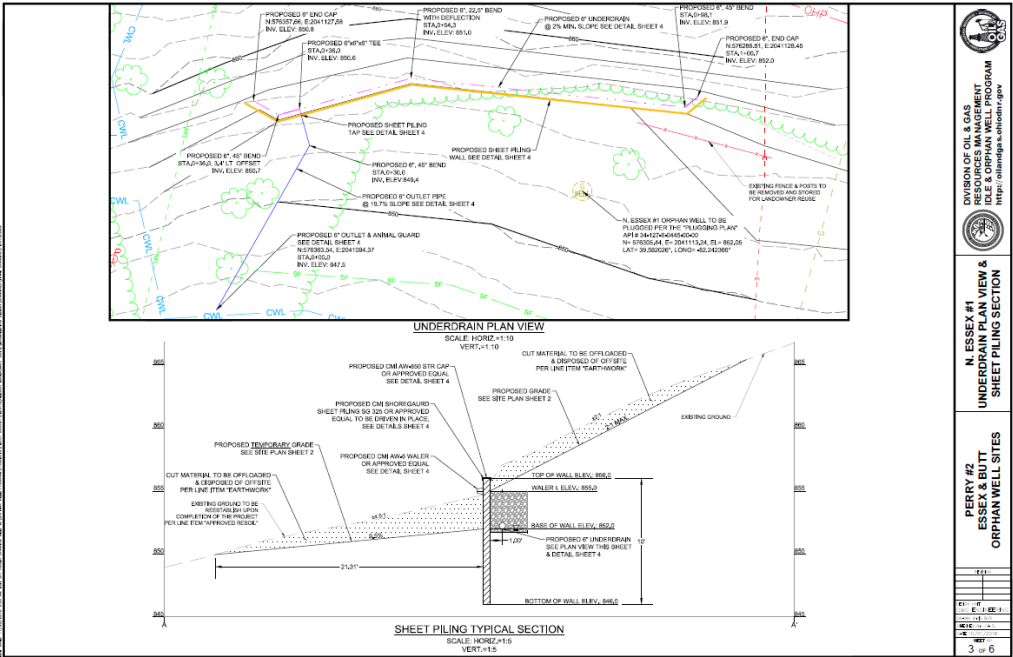


- Referral/Drone Consultant Contract
 - Program intended to locate unknown wells and increase efficiencies of packages
 - Two firms in contracting process for pilot project
 - RFQ for large contract to all qualified firms this spring
 - Contract Components
 - Obtain landowner approval
 - Fly drone with magnetometer
 - Process and ground truth data
 - Inspect the well
 - Complete referral review (last known owner research)



- Design Consultant Contract
 - RFQ is currently posted to OFCC website
 - Initial contract for \$6M
 - Plan to contract with 2 consultants to develop Scopes of Work for Plugging Wells
 - Areas of Professional Expertise Required:

- Geology/Well Plugging
- Hydrogeology
- Civil/Site Engineering
- Surveying
- Environmental Permitting
- Safety (Radiation and Occupational)



SCOPE OF WORK
ASHLAND #7 PROJECT
 Ashland County, General & Saxton Townships

PLUGGING PLAN

This Plugging Plan is for:
Tapco #1, API 654-007-6-0369-00, General Township, Ashland County

For the purpose of this Plugging Plan, it is assumed that the Tapco #1 was drilled to a total depth of 1000 feet, that it is equipped with 100 feet of 8-inch outside diameter (OD) casing and 200 feet of 2.4-inch OD tubing with a packer set at the base of the tubing, that the casing tubing annulus and tubing are full of debris, and that there are no other subsides in the well. Further details of the Plugging Plan requirements can be found in the Detailed Specifications. Photos and well records of each well are provided in Appendix II.

- The Contractor will accurately and visually examine the casing and tubing to evaluate their condition immediately below grade. If this portion of the casing/tubing is found to be severely degraded, the Contractor will remove the deteriorated section of casing/tubing and install enough new casing/tubing, of similar diameter, to bring them to a suitable working length.
- The Contractor will install an appropriately sized and lined corrugated collar around the wellhead to capture any fluids generated during the cleanout process.
- The Contractor will install an appropriate wellhead and an approved method of well control on the 8-inch OD casing to ensure there is control of gas and/or fluids generated from the well. The Contractor will establish and maintain well control throughout the entire plugging process and maintain 100 barrels of fresh water on location for well control. The Contractor may be required to use a heavy freshwater mud to kill this well and will have the equipment necessary to pump this fluid.
- The Contractor will clean out the tubing and the well to its anticipated total depth of 1,000 feet, or a depth approved by the Division.
- Once the approved depth is reached and the well is static, the Contractor will load the tubing and well with water and run CCL and Bond logs to verify total depth, determine the depth of the tubing and the depth and thickness of the packer. All plug depth and thicknesses will be based on log data.
- The Contractor will set staged plug through a working string of 1.5-inch diameter collared tubing from the well's anticipated total depth of 1,000 feet to the base of the field packer, estimated to be at a depth of 300 feet. Due to a narrow tubing annulus, the Contractor will get run lost circulation material (LCM) prior to setting this cement plug. The straight Class A cement will be mixed at a lighter weight (14.5-16.0 pounds/gallon) to accommodate the narrow tubing annulus. Once this plug is set, the Contractor will run the working string of tubing to just above the packer depth and circulate any residual cement out of the existing tubing. The Contractor will wait on cement a minimum of eight (8) hours and then run their tools into the well to verify the depth to the top of the plug. If the plug level has dropped or it is determined that a competent plug has not been achieved, additional staged between plugs may be required, at the discretion of the Division.

- The Contractor will then shoot the tubing at the lowest flow point above the packer, estimated to be at 250 feet. All tubing removed from the well will be placed in a banded line for further evaluation. The Contractor will provide the Division with an accurate tally of the tubing retrieved from the wellbore.
- The Contractor will load the well with fresh water and run CCL and Bond logs to verify total depth of the 8-inch OD casing and determine the bond and flow point below this casing for cementing purposes.
- The Contractor will set a cement plug from the tubing shoe point, estimated at 250 feet, to within 30 inches of the surface. This cement plug will be set through a working string of 1.5-inch minimum diameter tubing using Class A cement with 2 percent calcium chloride, mixed at 15.6 pounds/gallon using the pump method unless approved by the Division. The well will be static prior to setting the plug; circulation will be established, and all free fluids will be circulated from the wellbore. The Contractor shall ensure cement slurry density by mud scale balance prior to displacing the slurry downhole.
- If access and well conditions allow and with Division approval, the top plug may be set in one stage using the Drill and Grout Method with a 2.5-inch Jack Grout mix in lieu of cementing. The Contractor will run this grout at a consistency that will allow the grout to flow to the bottom of the well without bridging off in the well bore. All water and free fluids will be bailed from the wellbore prior to setting any grout plug. If the well cannot be bailed dry then the Contractor will use a slicken string, that is plugged to the open top steel tank, when applying the grout to evacuate the fluid in the hole.
- The Contractor will wait on cement/grout a minimum of eight (8) hours, after which the Contractor will check the cement/grout level and top off with additional cement/grout, if necessary.
- No sooner than three (3) business days after plugging the well, the Division will inspect the well at surface to determine if any additional plugging work shall be required at that time. If additional work is not needed the Contractor shall cut the casing to a depth of 20 inches below the surface and set the plugged well identification as outlined in the General Specifications and Ohio Administrative Code 1501.9-11.10.

- Contractors must be certified on the DAS contract through this RFP
- Participate in Division Secondary Solicitation Process
 - Division creates a Scope of Work including:
access plans, engineered drawings, and plugging plans that include environmental, radiation, hydrogeological and safety assessments
 - Scope of Work posted to Division website
 - <https://ohiodnr.gov/wps/portal/gov/odnr/business-and-industry/business-opportunities/orphan-well-plugging-contracts/orphan-well-plugging-contracts>

- Mandatory on-site review of all wells for which a Scope of Work is released
- Certified contractors submit an offer to complete the work outlined in the Scope of Work
- Awarded based on the most responsive and responsible offer received
- Design – Bid - Build



- First two applications received under updated program in fall 2021
- First well plugged in January 2022
- **Large amount** of funds available to program
- Details on Division Website with instructions and sample documents
- Program open to “Contractors regularly engaged in the business of plugging wells”



- General Conditions

- Contract between Landowner and Contractor; Division provides permit and purchase order
- Well must have a formation determined
- Landowner must provide three estimates
- Amount Division can pay is a “not to exceed” amount



- Division will issue request in March 2022 to establish multiple Construction Managers at Risk (ORC 9.33)
 - Construction Manager at Risk Role
 - Bid work generated by the Design Consultants
 - Opportunity to establish subcontractors based on qualifications and past performance; not just lowest bids
 - Opportunity to break work down into smaller pieces with many subcontractors to allow contractors to focus on skill set



- Construction Manager at Risk Role
 - Manage completion of the work
 - Manage bidding
 - Manage subcontractors
 - Manage schedules/ timeliness of work
 - Track work/quantities/payment
 - Coordinate with ODNR DOGRM to witness and regulate the plugging of the well.



- Contractor List
 - Dirt Work
 - Clearing Grubbing
 - Aggregate
 - Road Mats
 - Drainage
 - Sediment and Erosion Controls
 - Containment
 - Well Control
 - Logging
 - Downhole Videography
 - Shooting
 - Rig Operator (Cleanout, Drillout, Milling, Fishing, Cutting)

- Contractor List
 - Downhole materials (Casing, tubing, tools, muds, LCM, packers, etc.)
 - Material Disposal
 - Fluid
 - Solids
 - Semi-solids
 - Salvage
 - TENORM
 - Vault & Vent
 - Site Restoration
 - Landscaping
 - H2S Safety Team



Locate and Refer Wells

Landowner Complaints

Public Information Campaign

Division Magnetometer Survey

Consultant Referral/
Drone Contract

Project Package

Plugging and Restoration Design

Division Design

Consultant Design

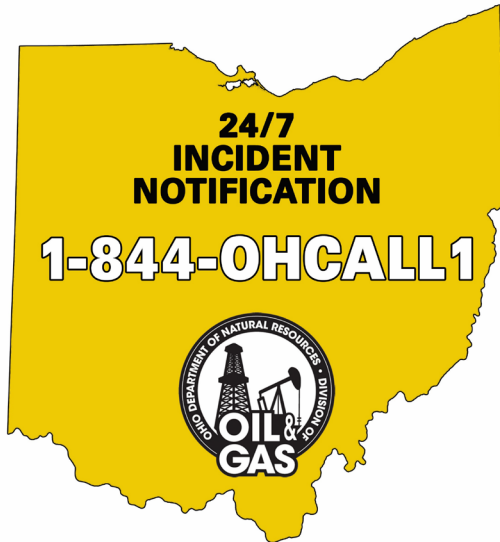
Plugging and Restoration

Traditional Program

Construction Manager at Risk

Landowner Pass-Through Payment





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New Philadelphia, Ohio 44663
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Lore City, Ohio 43755
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