

What is the Orphaned Oil and Gas Well Program?

Funded by a \$25 million competitive grant awarded by the U.S. Department of Interior as part of the Infrastructure Investment and Jobs Act, also known as the Bipartisan Infrastructure Law, Arizona's Orphaned Oil and Gas Well Program is working to identify, plug and properly abandon eligible orphaned oil and gas wells in Arizona. ADEQ is conducting this work in partnership with the Arizona Oil & Gas Conservation Commission (AZOGCC) to mitigate potential safety, public health and environmental risks associated with these wells.

What is an orphaned well?

Orphaned wells are oil and gas wells that are not plugged, not producing, and have no owner or responsible party.

What do orphaned wells look like?

Orphaned oil and gas well sites can have a broad range of appearances, from deserted oil and gas production equipment, e.g., tall metal pipes, to an open hole in the ground.

Why do orphaned wells need to be plugged?

Orphaned oil and gas wells may provide a pathway from the wellbore for oil, gas, and other fluids to move underground between different layers into groundwater and/or to the land surface. Unplugged or improperly plugged orphaned wells can also be a potential pathway for methane gas to be released into the air from the wellbore, contributing to increased levels of greenhouse gases.

How long will the project take?

Awarded in the fall of 2022, the three-year grant project is slated to be completed in December 2025. The grant project has four phases: Site Assessment, Site Characterization, Well Plugging and Site Restoration/Remediation.

Who will be plugging the wells?

ADEQ's experienced and specialized contractors will conduct well plugging activities with our oversight. Grant funds cover all costs associated with the activities, which are provided at no cost to the landowners.

What kind of equipment is used?

Typically, a service rig is used to plug wells based on the condition and depth of the well and the size and amount of casing in the well. Service rigs weigh about 16 tons and can stand up to 100 feet tall. Other associated equipment includes water tanks and mud pumps. All waste materials (construction debris and liquids) generated during plugging activities are disposed of at state licensed and registered non-hazardous waste disposal facilities. The contractor will talk to the landowner about the location of utilities, drain tiles, gates, and other information to determine the best access route.

How is the well plugged and abandoned?

For identified wells, ADEQ works with landowners to determine a plugging and abandonment schedule and gain access to conduct the work:

1. Remove any old orphaned equipment, e.g., wellheads, pipes, electrical wiring and poles, tubing downhole, etc.
2. To plug the well, we seal the bottom of the wellbore by installing a mechanical bridge plug at the bottom of the hole and pour 100 feet of cement, designed in compliance with state regulations, every 750 feet to the surface.
3. The well casing will extend 4 feet above ground level and be marked with a permanent inscription of the well location and identity.
4. The final step is to grade and seed the well site to its original state, which is called surface reclamation. This last step is conducted as seasonal conditions allow.

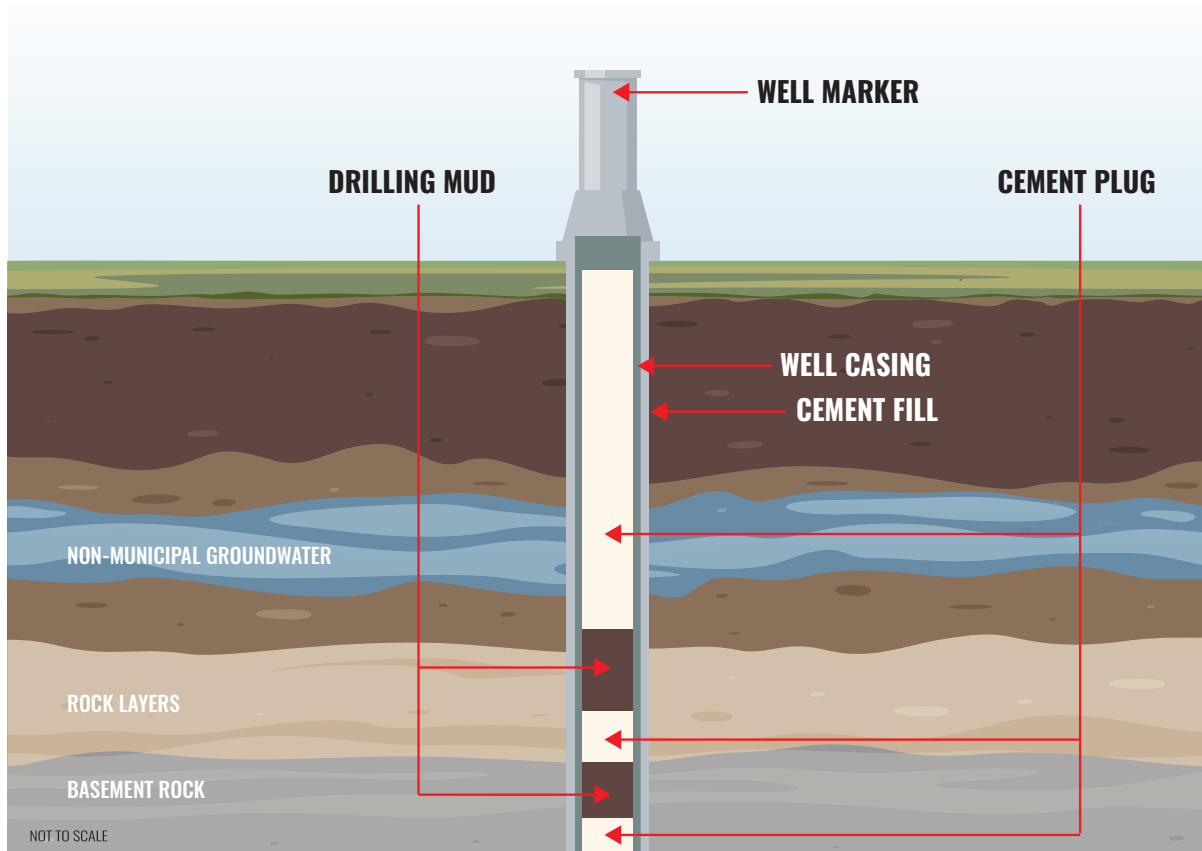


Figure 1: Example of a plugged and abandoned well.

How long does the plugging process take?

The plugging process typically takes one to six weeks, depending on the condition, depth, and contents of the well.

Why are drones used on this project?

Using drones to confirm the exact location and depth of existing wells and gather similar information for additional potential orphaned wells allows ADEQ to cover large geographic areas much more quickly and efficiently as well as identify wells that are not visible above ground. Drones are flown with an attached magnetometer (an upgraded magnet that can detect underground well steel casing) over an approximate 40-acre area around the estimated well location.

Want to find out more about the Arizona Orphaned Oil and Gas Well Program?

- Visit azogcc.az.gov/content/orphaned-oil-and-gas-well-program and azdeq.gov/orphanedwells
- Contact us at azorphanedwells@azdeq.gov or 602-771-4501

For translations or other communications aids, please email the Title VI Coordinator, Leonard Drago, at Drago.Leonard@azdeq.gov or call 602-771-2288.

Para traducciones u otras ayudas de comunicación, envíe un correo electrónico al Coordinador del Título VI, Leonard Drago, a Drago.Leonard@azdeq.gov o llame al 602-771-2288.