



# PROBLEMS AND PLANS

## Plugging Oklahoma's Abandoned Oil and Gas wells

Report prepared at the request  
of Oklahoma Senator Darcy Jech

Respectfully submitted January  
27, 2025

## BACKGROUND

Under Oklahoma’s rules and statutes, an “abandoned” oil or gas well is one that has no responsible party, leaving the state responsible for the well.

There are a variety of circumstances under which a well would be deemed abandoned, including:

- a) The entity once responsible for the well no longer exists or cannot be located
- b) An operator has forfeited surety

Depending on condition, abandoned wells may be placed on the Orphan Well List (OWL) or the State Funds List (SFL - also known as the "Plugging List"). OWL wells are available for “adoption” by oil and gas operators. SFL wells are wells slated to be plugged using the State Plugging Fund, traditionally comprised of a percentage of the excise tax paid by oil and gas operators, but currently augmented by funds from a Federal Grant (see IIJA, page 6). Most OWL wells eventually end up on the SFL.

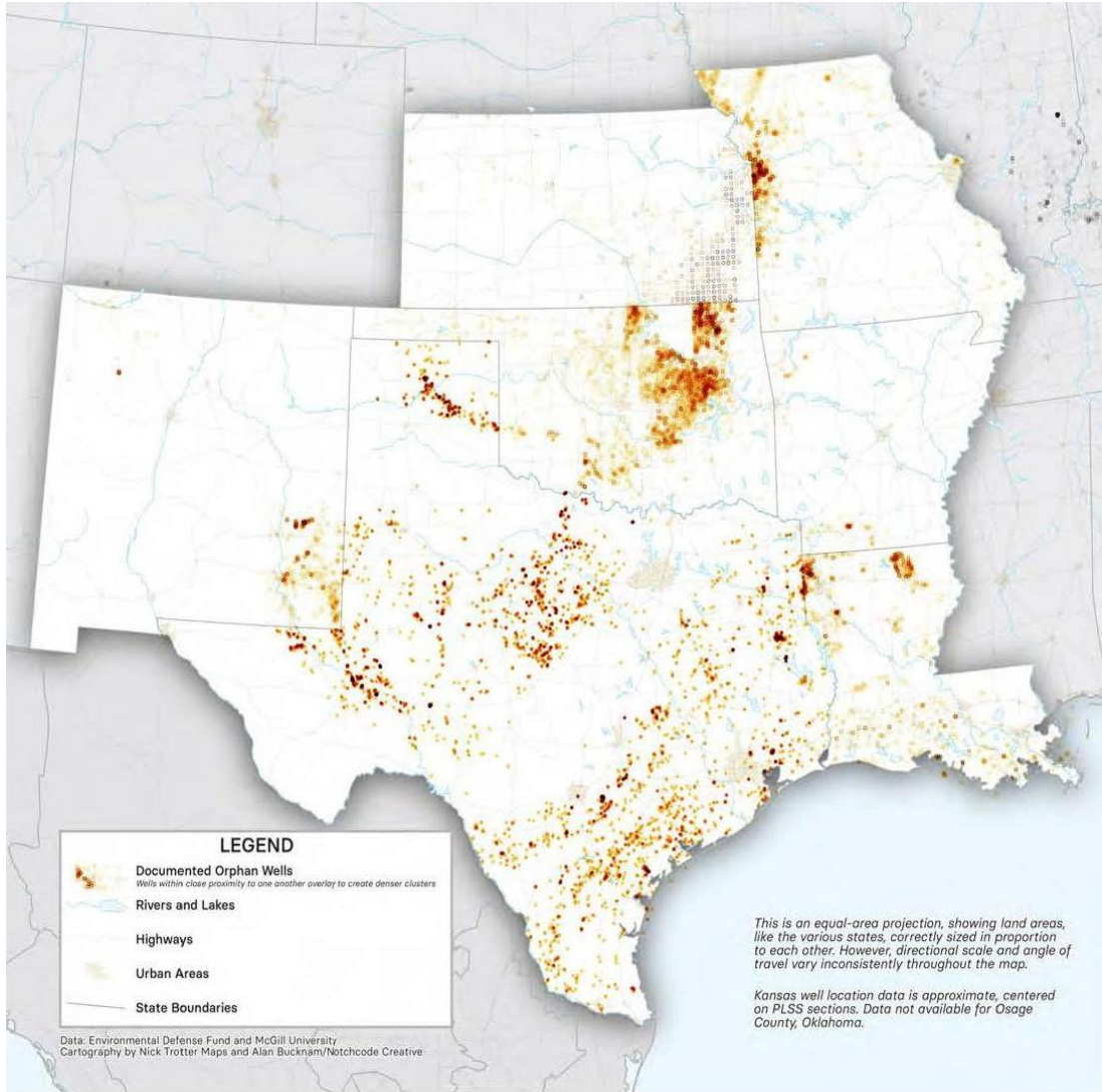
SFL wells are categorized based on the risk potential of the well purging and posing a threat to human health and safety. The categories range from 1 to 5. A category 1 well is usually actively purging and must be plugged ASAP on an emergency basis. Category 5 wells are deemed the lowest risk. A well’s category can change because of a change in conditions.



*Plugging a Category 1 emergency SFL well (the “Mabel Castillo”) under a Tulsa neighborhood street, January 1, 2025*

Calculating a precise total of the number of abandoned wells in Oklahoma that need to be plugged is not possible. (See table on page 7.) The current total of 20,406 (OWL and SFL combined) are only those known abandoned wells that need to be plugged or adopted in 76 of the state’s 77 counties (Osage is not included - see caption for image on pg. 2). Based on the number of previously unknown wells that have been found since the start of this century, the

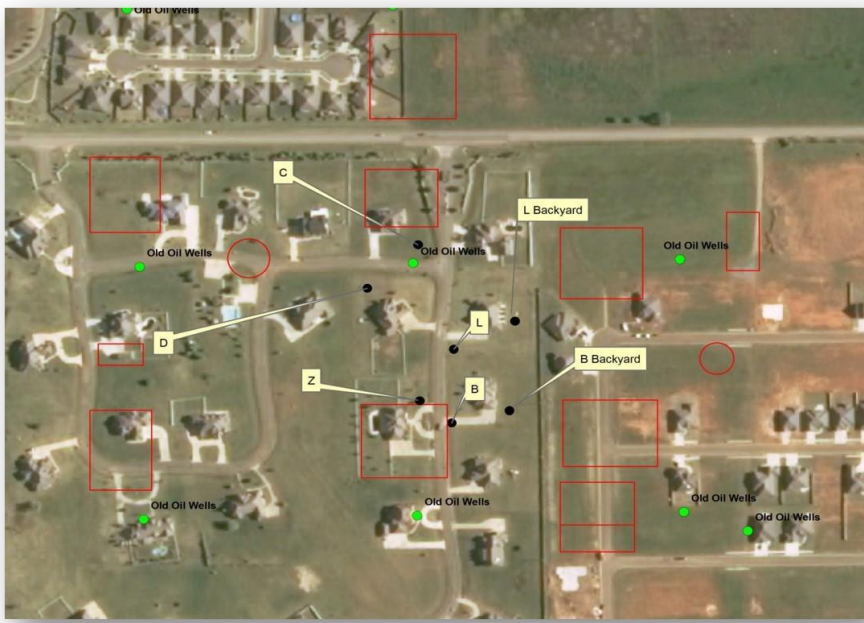
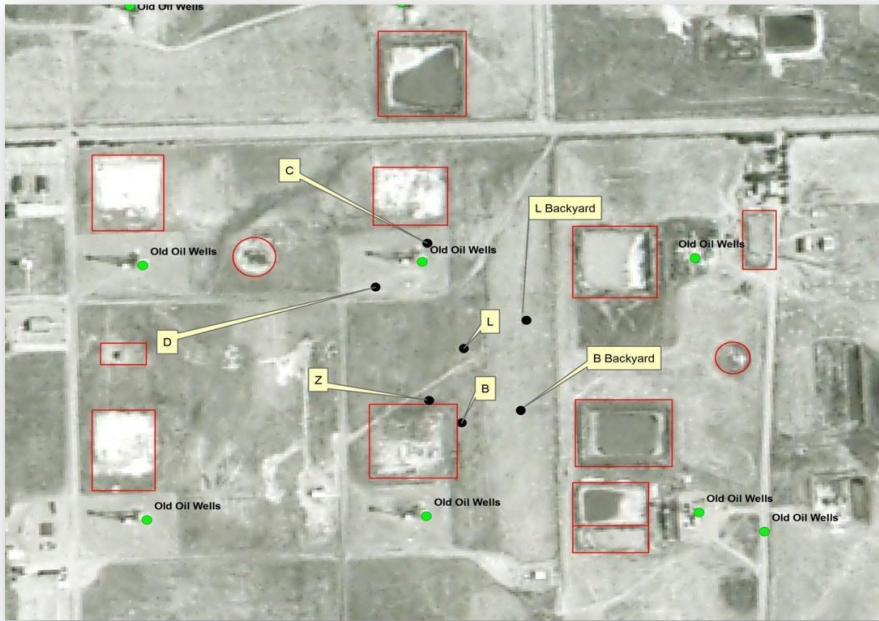
actual number is almost undoubtedly appreciably higher, as no records were submitted for many wells drilled in the early 20<sup>th</sup> century and locations given for documented wells from that time period were often extremely inaccurate.



*Environmental Defense Fund map indicating at least some of the abandoned wells in Oklahoma and surrounding states. Each well is represented by a tiny dot. The blank spot in northeastern Oklahoma is Osage County, which is under tribal and federal control. The OCC has no data on and no jurisdiction concerning oil and gas activity in Osage County.*

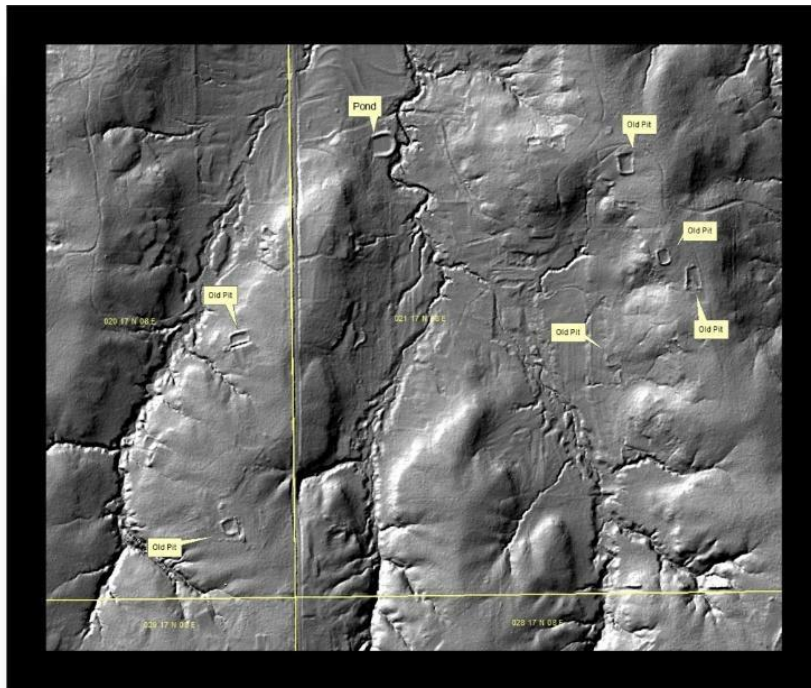


The OGCD uses both “boots on the ground” in conjunction with sophisticated methods developed by staff to pinpoint abandoned wells. Using various sources, staff has built a huge historical aerial photo database. Each photo is geo-referenced by a staff GPS specialist. The photos of the same area taken years apart can be used to pinpoint oil and gas development that can no longer be seen.



*Top photo – 1941 aerial photo showing oil and gas activity. Bottom photo: Current aerial photo of same area using the data obtained from the 1941 photo to pinpoint precise locations for abandoned well and associated locations*

The OGCD has also used LIDAR (“Light Detection and Ranging”) imaging to locate old oil and gas infrastructure locations. LIDAR allows a “clear” view of a given location, which then allows the trained eye to find such locations.



*Above: A LIDAR image of an old oil and gas area in a heavily wooded area*

*Below: What area looks like to the naked eye*



The OGCD receives many “abandoned well” complaints that actually involve wells that are not technically abandoned but are “shut in” (not producing, but with a responsible operator). These wells often pose the same potential problems as an abandoned well, but under current law they cannot be addressed. The two most common examples are:

- 1) Shut-in oil wells “held by production.” These wells are part of a lease that has at least 1 producing well. Under current law, they cannot be ordered plugged by the OCC unless there is an active environmental or safety threat (e.g., a purge).
- 2) Shut-in gas wells – under current law, the OCC cannot order a shut-in gas well plugged, regardless of age or condition, unless there is an active environmental or safety threat (e.g., a purge).

Oklahoma’s low oil and gas surety requirements and loopholes in existing statutes and rules have also created an environment that may result in significant numbers of wells being abandoned by some who have no intent to be a legitimate oil and gas operator, but rather form shell companies under false ownership names, strip existing wells and sell the salvaged material. The "operator" then goes out of business, abandoning the wells.

Finding qualified pluggers to perform the needed work on abandoned wells has been a problem in the past, as many saw confirmed contracts with the state cancelled because of a diversion of money by state finance officials from the State Plugging Fund some years ago. Pluggers were also critical of the bidding system that has traditionally been used for abandoned well plugs. The state legislature has put safeguards in place to prevent diversion of funding from the state abandoned well plugging program, and OGCD has instituted reforms in the bidding process. This has resulted in a significant increase in the number of pluggers interested in taking on abandoned well plugging work.

The Federal funding of abandoned well plugging under the Infrastructure Investment and Jobs Act (IIJA) has also helped attract pluggers. However, the federal program is hampered by additional requirements added by the Department of Interior that were not in the original bill (e.g., methane testing, compliance with National Preservation Act, etc.)

#### State Funds and IIJA Grants

- State Funds FY 24: 27 wells plugged with a total cost of \$1,012,004.08.
  - The State Fund well numbers were low because the State Funds budget was drawn down low enough that staff had to wait for the funds to rise enough before more wells could be plugged.
- Surety Only FY 24: 17 wells plugged with a total forfeited amount of \$254,003.00.
- IIJA FY 24: 938 wells plugged with a total cost of \$19,864,895.54.
- IIJA to date (1/7/25): 1110 wells plugged with a total cost of \$23,865,670.01.

**ABANDONED WELL PLUGGING PLAN GOING FORWARD**

- Continued use and further development of cost-effective methods to locate and assess abandoned wells in Oklahoma.
- Work with all stakeholders, Interstate Oil and Gas Interstate Compact Commission, and the Oklahoma congressional delegation to address problems with IJJA.
- Hire a third-party administrator to ensure compliance and transparency in administration of money received under IJJA.
- Work with stakeholders and legislators on improving existing rules and state law to make the abandoned well plugging program more effective and address issues with certain types of shut-in wells while protecting the property rights of stakeholders.
- The following is an estimate for illustrative purposes only to offer some broad guidance on the anticipated cost of plugging known abandoned wells.
  - **\*\*It is important to note that there are simply too many variables to offer anything but a very broad estimate. It does not include the cost of any methane testing that would be required for wells plugged using IJJA Grant funding.**

Wells on OWL	Wells on SFL	**Median Cost to Plug	**Total Monies Needed
18,160	2,361	\$28,000	\$574,588,000

- It is Important to note that the OGCD continues to actively search out and respond to previously unknown abandoned wells. As of this writing, there are approximately 18,000 old wells remaining on the list for further “boots on the ground” investigation as to actual status and location. Given that and the fact that more undocumented wells will be located in the future, OGCD recommends a doubling in the number of wells in the table above to develop further funding estimates.

**State Funds Well Categories**

Category 1:	LIFE THREATENING				
Category 2:	EMERGENCY (Environmental pollution, purging, etc.)				
Category 3:	POTENTIAL DANGER TO PERSONAL PROPERTY				
Category 4:	NOT LIFE THREATENING (Not an immediate danger to the environment or personal property.)				
Category 5:	NO IMMEDIATE DANGER (Conditions have existed for many years and pose no immediate danger.)				
		<b>Category</b>	<b>Number of Wells by category</b>		
		1	0		
		2	32		
		3	462		
		4	559		
		5	1,225		
		Unassigned	15,882	*	
		<b>TOTAL</b>	<b>18,160</b>		
7		*Unassigned wells do not currently have an order. The Category is assigned during the order process.			