

Energy, Minerals and Natural Resources Department: *Oil Conservation Division*

- Orphan Well Plugging & Site Remediation Update
 - Overview of Financial Assurance Requirements
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Orphan Well Plugging & Site Remediation Work

Orphan Well Plugging Program Update

- **What is an orphan well?**
 - OCD regulations do not use the term orphan well.
 - In New Mexico, orphan wells are a subset of inactive wells.
- **How many are there?**
 - 1700+ orphan wells (either known or likely) on state and private land.
 - 107 having plugging orders and are on our plugging list.
 - 354 previously plugged sites need remediation/reclamation.
- **OCD has a long-standing plugging program (averaging ~30-50/year).**
 - Industry plugs 200-400 wells per year (not orphans, just end of life).
- Historically, the primary resource for OCD plugging work has been the State Reclamation Fund
 - Fund Balance as of 6/30/2023 = \$20,451,505.
 - Fund replenishes itself through the tax established by the Oil & Gas Conservation Tax Act.
 - Anticipated revenue FY24 = \$16,262,400.
 - Legislatively authorized expenditures FY24 = \$16,262,400.
- While these resources are significant, they will not meet the ultimate need.
 - OCD is spending **\$125,000 on average** to plug each well, but costs have ranged from **\$50,386 (low-end) to \$320,481 (high-end)** just for plugging.
 - Assessment, remediation and reclamation of a typical well pad with minor issues averages \$35,000 per site, but can easily reach the millions if major remediation is required.

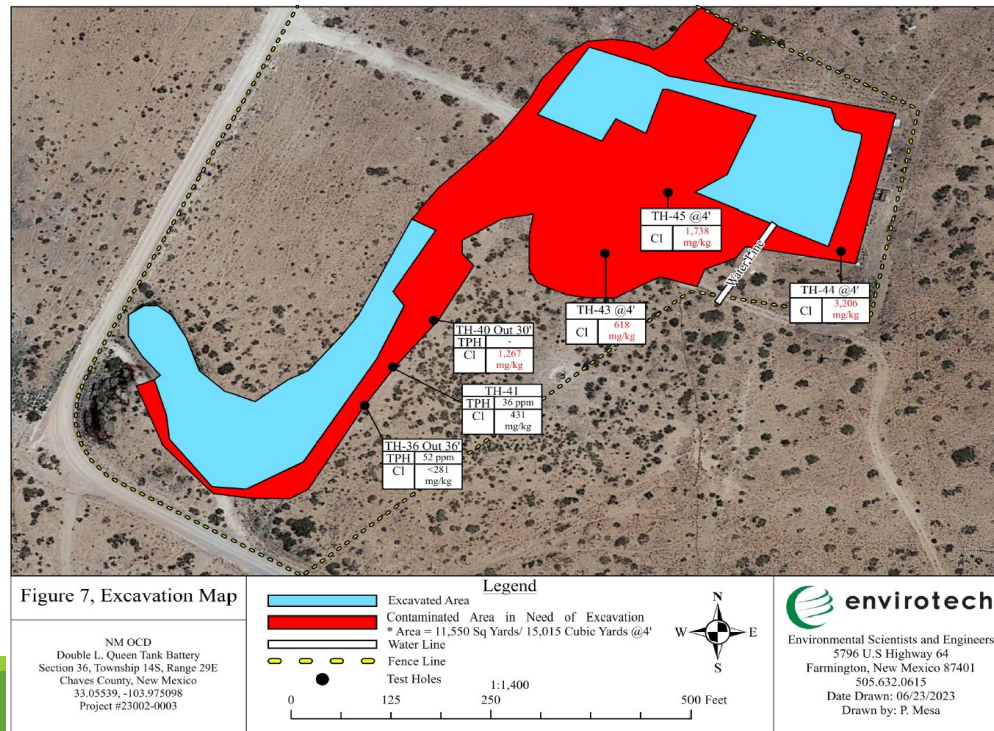


Current and Future Funding Opportunities

- **The Federal Bipartisan Infrastructure Law's \$4.7 billion in orphan well funding provides a historic opportunity from three different buckets.**
- **Initial Grant**
 - **\$25,000,000** initial grant (awarded October 1, 2022).
 - Requires contractor and subcontractor wages to be at or above the US Department of Labor/NM Workforce Solutions prevailing wage rates.
 - \$25,000,000 obligated as of 9/30/23, on track to expend fully by 10/1/2024 deadline.
 - Money will allow OCD to plug 134 orphan wells, conduct methane monitoring at 160, and complete remediation and reclamation at 6 sites.
 - The emissions avoided by this work is the equivalent to removing 4,800 tons of CO₂ annually.
- **Formula Grants**
 - OCD eligible to receive an additional **\$72,260,000** in phases.
 - Phase 1 of funding distribution open (funding opp. – \$18 to \$25 million); application in process; anticipate receipt of funds in Q3 FY24.
- **Performance & Regulatory Improvement Grants (up to \$40,000,000)**
 - Incentivizes states to make regulatory improvements to prevent orphan wells in the future.
 - New Mexico expecting to qualify through bonding increase implemented in 2018.
 - Incentivizes states to continue to spend state funds for orphan well plugging and reclamation.
 - One consideration under these grants are state expenditures which exceed previous 10 yr. avg.
 - Still waiting on guidance from DOI on implementation of these programs.

Current Status of Plugging Work

- With the influx of federal and state money, our plugging program has grown significantly:
 - We have **5 rigs** under contract, plugging **~1 well/rig/week**
 - In FY23, we plugged **76 wells** (63 w/ federal money and 13 w/ state money).
 - In FY24, we have plugged **66 wells** (all w/ federal money).
 - We have begun work on **8 remediation sites** (3 large and 5 smaller).
- Our distribution of the plugging funds is roughly **60/40** between plugging and remediation/reclamation, with the latter costing significantly more per site.



Site Remediation Example



Before

Current State



Well Plugging Site Prioritization

- Of the subset of wells where OCD has a plugging order, we apply the following methodology to determine where we initiate work first.
- **Highest priority wells are those which threaten human health or the environment**
 - E.g., wells with integrity issues, including active leaks.
- **Other wells are reviewed using the following criteria:**
 - Adjacent to occupied structures or within a municipal boundary,
 - History of integrity issues or non-compliance with OCD rules,
 - Lack of water protection casing,
 - Abnormally high well pressure,
 - Located in an agricultural area,
 - Age of well and last date of production,
 - Presence of hydrogen sulfide and/or naturally occurring radioactivity,
 - Proximity to a water supply well, and
 - Proximity to other orphan wells (for cost efficiency)

Plugging Challenges

Common challenges when plugging orphaned wells

- **Locating the wells**
 - Older wells may not be properly surveyed or permitted.
 - Often requires consultation with other agencies.
- **OCD must obtain legal orders through a hearing prior to plugging (notice and opportunity to respond for operator)**
- **Wellsite access**
 - For wells on private land, OCD must negotiate access
 - OCD can have to re-builds roads.
- **Downhole plugging issues**
 - Neglected wells have unknown issues including collapsed casings, improperly cemented casing, and production equipment stuck downhole.
- **Environmental contamination**
 - Contamination onsite must be remediated.
 - Unknown issues may result in significantly greater costs.



Abandoned Well previously buried underground

Oil and Gas Financial Assurance Requirements

Financial Assurance Rules (Wells)

- OCD's rules differentiate between **active** and **inactive wells**.
- **Active Wells** – Operator can choose single well or blanket bonds (most choose blankets).
 - Single Well Bonds – \$25,000 plus \$2/foot of the projected depth.
 - Blanket Well Bonds –
 - \$50,000 for 1 to 10 wells;
 - \$75,000 for 11 to 50 wells;
 - \$125,000 for 51 to 100 wells; and
 - \$250,000 for more than 100 wells.
- **Inactive Wells** – Operator can choose single well or blanket bonds (most choose blankets).
 - Single Well Bonds – \$25,000 plus \$2/foot of the projected depth.
 - Blanket Well Bonds –
 - \$50,000 for 1 to 5 wells;
 - \$300,000 for 6 to 10 wells;
 - \$500,000 for 11 to 25 wells; and
 - \$1,000,000 for more than 25 wells.
- **Issues**
 - Caps above are driven, in part, by statutory requirements at 70-2-14 NMSA 1978.
 - Under current framework the State is under bonded (e.g., single well bond levels no longer reflect observed plugging costs and blankets do not reflect long-term risks).

Financial Assurance Rules (Other Facilities) & Potential Changes

- **Other Facility Types**

- Surface Waste Management Facilities: FA = Estimated closure & post closure costs.
- Recycling Containments: FA = Estimated closure & post closure costs.
- Facilities w/ Water Quality Act Permits: FA = Estimated closure & post closure costs.

- **Oil & Gas Act Legislative Reform Effort**

- The New Mexico and Oil & Gas Act has been around for a long time and has not been meaningfully updated since the late 80s/early 90s.
- OCD is working with key stakeholders to see if we can arrive at a consensus reform package for the upcoming session in the following areas:
 1. Freshwater Use,
 2. Lock-in 98% gas capture by 2026 target,
 3. Setbacks,
 - 4. *Financial Assurance/Civil Penalty Updates,***
 5. Fee Increases,
 6. Redirecting OCD Civil Penalties to Reclamation Fund, and
 7. Tighten well transfer rules/limits.

Thank You & Questions
