

August 19, 2020

Part 3: Reclamation of Wells

The Emergency Commission and legislative Budget Section approved a total of \$66 million dollars of CARES Act funding to be used to kickstart plugging and reclamation of orphaned assets in the state. This approval came in two packages: \$33 million for plugging and \$33 million for reclamation. The Oil and Gas Division is eager to put 300-500 service company employees back work as part of the reclamation process but just as important is the plan to return use of land back to North Dakota citizens. Collectively, the plugging and reclamation of wells confiscated as part of this program is expected to return over 2,000 acres of North Dakota land back to its original use. This process does not happen quickly or naturally, on its own, without proper regulation and these acres will not be beneficial to farmers, ranchers, and citizens if they are improperly reclaimed.

The Oil and Gas Division and the operator prepare for decommissioning and reclamation of a location even before it has been constructed. Operator's must understand the North Dakota Rules and Regulations in place at the time for proper reclamation - in addition to the requirements of other state and federal agencies. This includes having proper bonding and financial assurance in place as well as a plan for reclaiming the well pad. Reclamation requires an understanding of the location's overall size, geography, land use, past or existing contamination, access roads, and any remaining assets belonging to the well. Reviewing this information results in customized site-by-site reclamation. Each location is unique, and no reclamation is "one size fits all" in North Dakota.

Once a well has been plugged or a facility has been safely decommissioned to the satisfaction of the Division the reclamation of the site begins. Land reclamation is not just placing a layer of topsoil over the site, planting seed, and calling it complete. A

reclamation plan based on the current conditions of the location must be submitted to the Oil and Gas Division for approval prior to commencing work. This proposal and process should include pre-work preparation such as aerial imagery of the site prior to the start of reclamation, making proper North Dakota One Call notifications, and identification of surface ownership. The surface owner of a site to be reclaimed should receive a copy of the reclamation plan at least 10 days prior to starting work. Once the reclamation plan has been approved by the NDIC, utility services will be removed, equipment cleaned and removed, and remediation of contamination on and off location needs to be completed with any impacted materials appropriately disposed of. The operator must flush flowlines with freshwater and cap them three to four feet below the final surface contours.

Prior to the final stages of replacing topsoil and seeding sites are checked for soil quality and any additional indicators of contamination. The top four feet beneath the surfacing material may be field tested by trained North Dakota inspectors for naturally occurring or industry caused salts and hydrocarbons (oil). This can be done through electrical conductivity testing – which is one method to tell if salts are present since salt carries an electrical current. Inspectors also test chloride levels - which is a secondary measure taken to indicate presence of salt.

Once the site is stabilized, recontouring of the land to match with the surrounding topography is critical in creating a smooth transition from industrial land to reclaimed land for farming, ranching, and other use. Access roads that were constructed as part of a site are also required to be recontoured and reclaimed however in some cases may be left at the request of the surface owner for better access into fields or other locations. Next, topsoil is spread across the recontoured location and the area is seeded, unless

otherwise indicated by the surface owner, then final documentation is submitted to the NDIC for approval.

The time between submittal of the final documentation and the Oil and Gas Division approving the work and releasing the bond, includes field inspection staff visiting the location to monitor how the seed is growing or crops are filling in. This can include flying a drone over the location to capture images to compare throughout the reclaim process. The final documentation of the site can include a signed affidavit from the surface owner indicating the site has been properly reclaimed and a review of all financial responsibility before releasing the bond back to the operator.

The Oil and Gas Division understands a stipulation of receiving CARES Act funding is that it needs to be spent by the close of 2020, and we estimate that 30-40% of locations may need continued remediation past this deadline. From start to finish the reclamation of a well can take anywhere from 6 months to several years depending on the complexity of each scenario. Regardless, proper reclamation, remediation, and monitoring despite these deadlines will remain a priority of the North Dakota Oil and Gas Division.

Previous weeks:

[Part 2 – Proper Plugging in North Dakota & Podcast Special Episode: Plugging of Wells in North Dakota recorded with Dave Thompson of Prairie Public](#)

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