

State of New Mexico  
Energy, Minerals and Natural Resources Department

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**Susana Martinez**  
Governor

**David Martin**  
Cabinet Secretary

**Tony Delfin**  
Deputy Cabinet Secretary

**David R. Catanach, Division Director**  
Oil Conservation Division



Administrative Order SWD-1625  
May 3, 2016

**ADMINISTRATIVE ORDER  
OF THE OIL CONSERVATION DIVISION**

Pursuant to the provisions of Division Rule 19.15.26.8B. NMAC, Delaware Energy, LLC (the "operator") seeks an administrative order for its proposed Pardue 31 Com. Well No. 1 with a location 990 feet from the South line and 1980 feet from the West line, Unit N of Section 31, Township 23 South, Range 28 East, NMPM, Eddy County, New Mexico, for commercial disposal of produced water.

**THE DIVISION DIRECTOR FINDS THAT:**

The application has been duly filed under the provisions of Division Rule 19.15.26.8B. NMAC and satisfactory information has been provided that affected parties as defined in said rule have been notified and no objections have been received within the prescribed waiting period. The applicant has presented satisfactory evidence that all requirements prescribed in Division Rule 19.15.26.8 NMAC have been met and the operator is in compliance with Division Rule 19.15.5.9 NMAC.

**IT IS THEREFORE ORDERED THAT:**

Delaware Energy, LLC (OGRID 371195), is hereby authorized to utilize its Pardue 31 Com. Well No. 1 (API 30-025-10842) with a location 990 feet from the South line and 1980 feet from the West line, Unit N of Section 31, Township 23 South, Range 28 East, NMPM, Eddy County, for disposal of oil field produced water (UIC Class II only) through a perforated interval within the Devonian formation from 13650 feet to 14500 feet. Injection will occur through internally-coated, **3½-inch** or smaller tubing and a packer set within 100 feet of the uppermost perforation.

*Prior to commencing disposal, the operator shall submit mudlog and geophysical logs information to the Division's District geologist and Santa Fe Bureau Engineering office, showing evidence agreeable that only the permitted formations are open for disposal including a summary of depths (picks) for contacts of the formations which the Division shall use to amend this order for a final description of the depth for the injection interval.*

*This permit does not permit disposal into the Ellenburger formation (lower Ordovician) or lost circulation intervals directly on top and obviously connected to this formation.*

*The operator shall supply the Division with a copy of a mudlog over the permitted disposal*

*interval and an estimated insitu water salinity based on open-hole logs. If significant hydrocarbon shows occur while drilling, the operator shall notify the Division's District II office and the operator shall be required to receive written permission prior to commencing disposal.*

*The operator shall execute the following procedures prior to deepening to the Devonian formation and running the 5-inch liner.*

- *Rig up work over unit, drill out surface plug from 0-188'. Test Casing to 500 psi. Drill out cement plugs at 2676' AND 2930' and clean out to PBTD OF 10,622'. Test casing 500 psi and hold for 30 minutes, record test.*
- *Rig up wire line and run Cement Bond Log (CBL) from 10,622' TO 1,600' and determine top of cement in the 7-inch casing.*
- *Dress Off 7-inch stub in preparation for 7-inch casing patch.*
- *If cement top is determined to be within 50 feet of stub, plan to utilize DV tool above casing patch. If Cement top is greater than 50 feet from the 7-inch chasing stub, shoot squeeze holes at cement top prior to running casing patch.*
- *Run casing patch and cement 7-inch casing to surface. Test casing to 500 psi and hold for 30 minutes, record test.*
- *These procedures maybe altered with both the Santa Fe Engineering Bureau and Artesia District Office approval.*

*Operator shall ensure adequate cement across the Delaware, Bone Spring, and Wolfcamp formations.*

*After the work over and deepening, the operator shall run a CBL across the 5-inch liner to 10,000 feet to demonstrate a good cement bond between the liner and 7-inch casing.*

*Within one year after commencing disposal, the operator shall submit to the Division copies of an injection survey run on this well consisting of a temperature log, or equivalent, run under representative disposal rates.*

**IT IS FURTHER ORDERED THAT:**

The operator shall take all steps necessary to ensure that the disposed water enters only the approved disposal interval and is not permitted to escape to other formations or onto the surface. This includes the well construction proposed and described in the application.

After installing tubing, the casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge or an approved leak detection device in order to determine leakage in the casing, tubing, or packer. The casing shall be pressure tested from the surface to the packer setting depth to assure casing integrity.

The well shall pass an initial mechanical integrity test ("MIT") prior to initially commencing disposal and prior to resuming disposal each time the disposal packer is unseated. All MIT procedures and schedules shall follow the requirements in Division Rule 19.15.26.11A. NMAC.

The well shall pass an MIT every two years.

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The Division Director retains the right to require at any time wireline verification of completion and packer setting depths in this well.

Operator shall submit required sundry notices (C-103) to the Artesia District Office.

The wellhead injection pressure on the well shall be limited to **no more than 2730 psi**. In addition, the disposal well or system shall be equipped with a pressure limiting device in workable condition which shall, at all times, limit surface tubing pressure to the maximum allowable pressure for this well.

The Director of the Division may authorize an increase in tubing pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the disposed fluid from the target formation. Such proper showing shall be demonstrated by sufficient evidence including but not limited to an acceptable Step-Rate Test.

The operator shall notify the supervisor of the Division's District II office of the date and time of the installation of disposal equipment and of any MIT so that the same may be inspected and witnessed. The operator shall provide written notice of the date of commencement of disposal to the Division's District office. The operator shall submit monthly reports of the disposal operations on Division Form C-115, in accordance with Division Rules 19.15.26.13 and 19.15.7.24 NMAC.

Without limitation on the duties of the operator as provided in Division Rules 19.15.29 and 19.15.30 NMAC, or otherwise, the operator shall immediately notify the Division's District II office of any failure of the tubing, casing or packer in the well, or of any leakage or release of water, oil or gas from around any produced or plugged and abandoned well in the area, and shall take such measures as may be timely and necessary to correct such failure or leakage.

The injection authority granted under this order is not transferable except upon division approval. The Division may require the operator to demonstrate mechanical integrity of any injection well that will be transferred prior to approving transfer of authority to inject.

The Division may revoke this injection permit after notice and hearing if the operator is in violation of 19.15.5.9 NMAC.

The disposal authority granted herein shall terminate two (2) years after the effective date of this order if the operator has not commenced injection operations into the subject well. One year after the last date of reported disposal into this well, the Division shall consider the well abandoned, and the authority to dispose will terminate *ipso facto*. The Division, upon written request mailed by the operator prior to the termination date, may grant an extension thereof for good cause.

Compliance with this order does not relieve the operator of the obligation to comply with other applicable federal, state or local laws or rules, or to exercise due care for the protection of fresh water, public health and safety and the environment.

Jurisdiction is retained by the Division for the entry of such further orders as may be necessary for the prevention of waste and/or protection of correlative rights or upon failure of the operator to conduct operations (1) to protect fresh or protectable waters or (2) consistent with the requirements in this order, whereupon the Division may, after notice and hearing, terminate the disposal authority granted herein.



**DAVID R. CATANACH**  
**Director**

DRC/mam

cc: Oil Conservation Division – Artesia District Office