State of New Mexico
Energy, Minerals and Natural Resources Department

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Oil Conservation Division

Administrative Order WFX-946
June 4, 2015

ADMINISTRATIVE ORDER
OF THE OIL CONSERVATION DIVISION

Under the provisions of Commission Order No. R-3185 (as amended), Linn Operating, Incorporated (OGRID No. 269324) has made application to the Division for approval to add 12 injection wells to its Turner "A" Waterflood Project and the Turner "B" Waterflood Project. Both projects are approved for enhanced oil recovery in the Grayburg-Jackson; Seven Rivers-Queen-Grayburg-San Andres Pool (Pool code 28509) in Eddy County, New Mexico.

These wells are being proposed for conversion to injection to complement existing injection wells for enhanced oil recovery in the Seven Rivers formation of the two waterflood projects and Linn's adjacent Skelly Unit Waterflood Project.

For the well locations listed in this application, the vertical description of the Grayburg-Jackson Pool includes the Seven Rivers formation under Division Order No. R-10654 dated August 27, 1996.

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 remain outstanding. The applicant has presented satisfactory evidence that all requirements prescribed in Rule 19.15.26.8 NMAC have been met and the operator is in compliance with Rule 19.15.5.9 NMAC.

The proposed expansion of the above-referenced waterflood projects, will prevent waste, is in the best interests of conservation, will not impair correlative rights, and should be approved.

IT IS THEREFORE ORDERED THAT:

Linn Operating, Inc., as operator, is hereby authorized to inject water into the following wells for the purpose of secondary recovery through plastic-lined tubing set into a packer:

API No.	Well Name	Unit	Sec	Twp	Rng	Footage N/S	Footage E/W	Approved Injection Interval (in ft.); type	Maximum Surface Injection Pressure
30-015-05190	Turner B No. 31	P	17	17 S	31E	330 FSL	330 FEL	1858 to 2067; perforations and open hole	372 psi
30-015-05191	Turner B No. 32	O	17	17 S	31 E	330 FSL	1650 FEL	1800 to 2021; perforations and open hole	360 psi
30-015-05193	Turner B No. 37	M	17	17 S	31 E	330 FSL	990 FWL	1759 to 1969; perforations and open hole	352 psi
30-015-05194	Turner B No. 40	L	17	17 S	31 E	1650 FSL	990 FWL	1774 to 1992; perforations and open hole	355 psi
30-015-05230*	Turner A No. 32	J	18	17 S	31 E	1650 FSL	1650 FEL	1758 to 1965; perforations	352 psi
30-015-05231*	Turner A No. 33	K	18	17 S	31 E	1650 FSL	2058 FWL	1802 to 2007; perforations and open hole	360 psi
30-015-05290	Turner B No. 18	J	20	17 S	31 E	1980 FSL	1980 FEL	1826 to 2067; perforations and open hole	365 psi
30-015-05291*	Turner B No. 19	I	20	17 S	31 E	1980 FSL	660 FEL	1864 to 2096; perforations and open hole	373 psi
30-015-05305	Turner B No. 33	O	17	17 S	31 E	990 FNL	330 FEL	1830 to 2039; perforations and open hole	366 psi
30-015-05306	Turner B No. 34	H	20	17 S	31 E	2310 FNL	330 FEL	1834 to 2046; perforations	367 psi
30-015-05309	Turner B No. 39	G	20	17 S	31 E	2310 FNL	1650 FEL	1796 to 2010; perforations	359 psi
30-015-20097*	Turner A No. 35	H	19	17 S	31 E	1800 FNL	660 FEL	1706 to 3380; perforations	341 psi

***Bold API numbers** indicate plugged and abandoned wells to be re-entered and recompleted for injection.

The approved maximum surface injection pressure shall be based on a gradient of 0.2 pounds per square inch (psi) and limited to the pressure listed for the individual wells in the previous table. The operator shall set the injection packer in individual wells no more than 100 feet above the shallowest perforation for the permitted injection interval.

The operator shall complete the injection wells as proposed in the application dated March 12, 2015, *including the remedial actions for the following three proposed injection wells:*

1. *Turner B Well No. 31 (API No. 30-015-05190)*
2. *Turner B Well No. 32 (API No. 30-015-05191)*
3. *Turner B Well No. 33 (API No. 30-015-05305)*

For each well, cement shall be emplaced for the 7-inch production casing from the estimated top of cement to either the surface or, at a minimum, 100 feet above the respective upper contact of the salt interval in each well. If the remedial cement work for the 7-inch casing is not circulated to surface, the operator shall run a cement bond log (CBL) to determine the top of cement. The operator shall submit to the Division's District II office a copy of each CBL with a summary of the results of the remedial action.

IT IS FURTHER ORDERED THAT:

The operator shall take all steps necessary to ensure that the injected fluid enters only the approved injection interval and is not permitted to escape to other formations or onto the surface. This includes the completion and construction of the wells as proposed in the application.

After installing tubing, the casing-tubing annulus for each well 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.

All wells shall pass an initial mechanical integrity test ("MIT") prior to initially commencing injection and prior to resuming injection each time any injection packer is unseated. All MIT procedures and schedules shall follow the requirements in Division Rule 19.15.26.11A. NMAC. The Division Director retains the right to require at any time wireline verification of completion and packer setting depths in the subject wells.

The wellhead injection pressure on the subject wells shall be limited as listed above. In addition, the injection well or header system shall be equipped with a pressure limiting device in workable condition which shall, at all times, limit surface tubing pressures to the maximum allowable pressures for these wells.

Subject to the limitations within the hearing order permitting this project, the Director of the Division may authorize an increase in tubing pressure upon a proper showing by the operator of said wells that such higher pressure will not result in migration of the injected fluids from the approved injection interval. Such proper showing shall be demonstrated by sufficient evidence including but not limited to an acceptable Step-Rate Test.

If the applicant, or subsequent operator of the subject wells, makes application for an increase in injection pressure above the administratively approved pressure listed in the prior table, the applicant will be required to complete notice of affected person(s) and interested parties following Division Rules 19.15.26.8B(2) NMAC and 19.15.26.8C(1) NMAC. If a written protest is received by Division within 15 days following the receipt of the complete application by Division, a hearing will be required for approval of the application. Failure to provide proper notice shall result in the immediate denial of any application for increase in injection pressure.

The operator shall notify the supervisor of the Division's District II office of the date and time of the installation of injection equipment and of any MIT test so that the same may be inspected and witnessed. The operator shall provide written notice of the date of commencement of injection for each well to the Division's District II office. The operator shall submit monthly reports of the injection 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 Rules 19.15.29 and 19.15.30 NMAC, or otherwise, the operator shall immediately notify the District II office of any failure of the tubing, casing or packer in the approved injection wells, 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 Rule 19.15.5.9 NMAC.

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. The subject wells shall be governed by all provisions of Order R-3185 (as amended) and associated administrative orders.

The injection authority granted herein shall terminate two (2) years after the effective date of this order if the operator has not commenced injection operations into at least one of the subject wells, provided however, the Division, upon written request by the operator received prior to the two-year deadline, may grant an extension thereof for good cause shown.

David R. Catanach

DAVID R. CATANACH
Director

DRC/prg

cc: Oil Conservation Division – Artesia District Office
Bureau of Land Management – Carlsbad Field Office
State Land Office – Oil, Gas and Minerals Division
File Case No. 3521