

**STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION COMMISSION**

**APPLICATION OF FRONTIER FIELD SERVICES, LLC,
TO AMEND ORDER R-13443, AS AMENDED, TO
INCREASE THE MAXIMUM RATE OF INJECTION,
MALJAMAR AGI WELLS NO. 1 AND 2,
LEA COUNTY, NEW MEXICO.**

**CASE NO. 15193 (Re-opened)
ORDER NO. R-13443-C**

ORDER OF THE COMMISSION

THIS MATTER came before the Oil Conservation Commission ("Commission") on the application of Frontier Field Services, LLC ("Frontier") to amend Order No. R-13443, as amended, to increase the maximum daily injection rate. The Commission, having conducted a public hearing on September 10, 2015, and having considered the testimony, the record, and the arguments of the parties, and being otherwise fully advised, enters the following findings, conclusions and order.

THE COMMISSION FINDS THAT:

1. Notice has been given of the application and the hearing of this matter, and the Commission has jurisdiction of the parties and the subject matter herein.
2. Frontier submitted an application ("Application") to amend Order Nos. R-13443-A and R-13443-B to provide for an increase of the maximum rate of injection of treated acid gas ("TAG") into the Wolfcamp formation through two previously approved acid gas injection ("AGI") wells located near Frontier's Maljamar Processing Plant identified as follows: Maljamar AGI Well No. 1 API No. 30-025-40420, 130 feet from the South line and 1813 feet from the East line, Section 21, Township 17 South, Range 32 East, NMPM and Maljamar AGI Well No. 2 API No. 30-025-42628, 400 feet from the South line and 2100 feet from the East line (Surface), 350 feet from the South line and 650 feet from the West line (Bottomhole) of Section 21, Township 17 South, Range 32 East, NMPM. Frontier proposes to increase the maximum daily rate of injection through the wells to 3.5 MMSCFD.
3. Injection into the Maljamar AGI Well No. 1 was approved by Commission Order No. R-13443-A, Case No. 14664 (March 19, 2013). The well has been drilled and completed and injection operations have commenced.
4. Injection into the Maljamar AGI Well No. 2 was approved by Commission Order No. R-13443-B, Case No. 15193 (November 19, 2014). The well has not yet been

drilled. Injection into the Wolfcamp formation at depths of approximately 9,600-10,220 feet subsurface is authorized.

5. Order No. R-13443-B provided for a maximum daily injection rate of 2 MMSCFD through either well or both wells combined. Order ¶¶ 1, 2. Frontier seeks to increase the maximum daily injection rate to 3.5 MMSCFD.

6. In support of the Application, Frontier presented direct testimony from two witnesses: one fact witness, Coy Bryant, Frontier's Director of Operations; and an expert witness, Alberto Gutierrez, RG, President of Geolex, Inc.

7. The Oil Conservation Division ("Division") filed an entry of appearance as an intervener and appeared at the hearing through its attorney, Gabriel Wade, but presented no testimony. The Division presented a written statement of support for the Application.

8. Mr. Bryant testified that concentrations of H₂S and CO₂ in plant inlet gas have increased since the commencement of injection operations, requiring the addition and modification of AGI compression facilities. Initially, the TAG was composed of 88 percent CO₂ and 12 percent H₂S, along with trace components of C₁ – C₇. It is expected that the composition of the injection fluids will change to 70 percent CO₂ and 30 percent H₂S. These circumstances, along with the anticipated consolidation of processing plants in southeast New Mexico, will result in an increase in treated acid gas production of up to 3.5 MMSCFD. With the increased injection rate, Frontier expects to be able to treat the full volumes of gas delivered by producers while avoiding curtailments of processing services from capacity constraints.

9. Mr. Bryant further testified that the circumstances that existed at the time of the filing of the earlier application which resulted in the issuance of Order No. R-13443-B remain unchanged. Frontier does not seek an increase of surface injection pressures. There are no new wells in the half-mile area of review ("AOR") which penetrate the Wolfcamp formation. The single plugged and abandoned well within the AOR, the Queen "B" No. 036, has maintained casing and cementing integrity and continues to be isolated from the injection zone. The design and construction of the Maljamar AGI Well No. 2 will be unchanged. The ownership of the surface within one-half mile has not changed. The offsetting operators remain the same.

10. Order No. R-13443-B requires Frontier to modify the current H₂S Contingency Plan when the Maljamar AGI Well No. 2 is brought online. Order No. R-13443-B, Order ¶ 6. Mr. Bryant testified that at such time, the Contingency Plan will be modified to account for the additional volumes of hydrogen sulfide that the Maljamar Processing Plant will be handling.

11. Frontier's technical witness, Alberto Gutierrez, RG, testified that at a constant 2.0 MMSCFD injection rate the calculated injection radius would be 0.26 miles and an area of 139 acres. With a safety factor of 100 percent, or the injection of 4.0 MMSCFD of TAG, the radius of influence after injecting for thirty years will be approximately 0.37 miles with a reservoir area of 278 acres. Based on proposed injection

volumes of 3.5 MMSCFD, the injection radius will increase to 0.32 miles with an area of approximately 207 acres. When calculated using the 100 percent safety factor, the radius increases to 0.45 miles and the area will increase to 292 acres. There is sufficient pore volume to contain the additional volumes of TAG. The actual configuration of the plume of injected fluid volumes will depend on depositional variability, but is expected to remain within the one-half mile AOR.

12. In the area of reservoir expected to be occupied by the larger injection plume, the proposed injection zone provides a sufficient geologic seal to contain the injected TAG and prevent its migration into other zones. The injection zone is sufficiently isolated from any protectable groundwater sources and there is no evidence injection will impair existing or potential hydrocarbon production in the area. In addition, there is not any faulting or other geologic or man-made conduits that will allow the treated injected acid gas to migrate out of the injection zone.

13. The increased rate of injection will not result in increased surface injection pressures. The Maljamar AGI Well No. 1 and the Maljamar AGI Well No. 2 are designed to operate independently or with flows split between them, allowing both wells to inject at pressures well below the maximum authorized operating pressure.

14. Frontier provided evidence that the injection of the proposed waste stream at the increased rate in conformance with this Order will protect the environment and human health, and will not cause waste or impair correlative rights.

15. Frontier provided personal notice, via certified mail, return-receipt requested, of the submission of its application and the Commission hearing to all operators, surface owners, and lessees within a one-half mile radius of the bottomhole location for both wells.

16. Pursuant to Rule 19.15.4.9.B(3) NMAC, the Division provided public notice by publishing notice of Frontier's application and the Commission hearing in a newspaper of general circulation in Lea County.

17. No objections to the Application were filed and no other party appeared at the hearing in this matter.

THE COMMISSION CONCLUDES THAT:

1. The Commission has jurisdiction over the parties and the subject matter of this case.
2. Proper public notice has been given.
3. Proper individual notice has been given to all operators, surface owners, and lessees within a one-half mile radius of the planned bottomhole location of the Maljamar AGI Well No. 2.
4. Under the provisions of this Order and Orders R-13443-A and R-13443-B, Frontier's injection of treated acid gas at the increased rate can be conducted in a safe

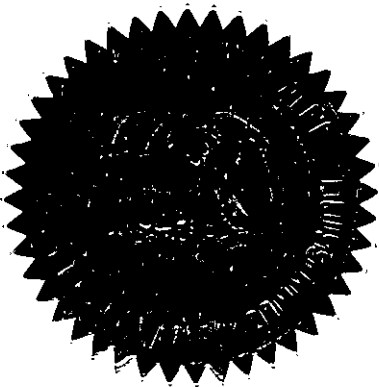
manner without causing waste, impairing correlative rights, adversely affecting oil and gas producing zones, or endangering fresh water, public health, or the environment.

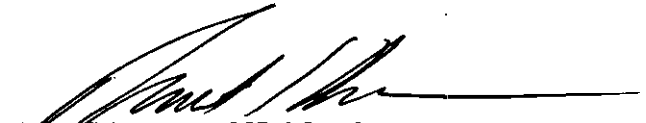
IT IS THEREFORE ORDERED THAT:

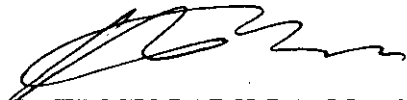
1. Frontier is hereby authorized to inject acid gas and carbon dioxide through the Maljamar AGI Well No. 1 and the Maljamar AGI Well No. 2 at an increased rate not to exceed 3.5 MMSCFD. The maximum daily injection rate applies to the proposed Maljamar AGI Well No. 2 and the existing Maljamar AGI Well No. 1 (for either well, or both wells combined).
2. Ordering Paragraph 1 of Order No. R-13443-B is hereby amended to provide for a maximum daily injection rate of 3.5 MMSCFD. The remaining provisions of Order Nos. R-13443-A and R-13443-B are unchanged and continue to be applicable.
3. Prior to commencing injection through the Maljamar AGI Well No. 2, the operator shall prepare and secure approval by the Division's Environmental Bureau of a hydrogen sulfide contingency plan that complies with 19.15.11.9 NMAC and accounts for the additional volumes of injected H₂S.
4. 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.

DONE at Santa Fe, New Mexico on this 7th day of October, 2015.

**STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION**




ROBERT BALCH, Member


PATRICK PADILLA, Member


DAVID R. CATANACH, Chair

SEAL