

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

**APPLICATION OF FAE II OPERATING, LLC  
FOR REINSTATEMENT OF INJECTION  
AUTHORITY AND AUTHORIZATION TO  
CONVERT PRODUCING WELLS TO INJECTORS  
FOR WATERFLOOD OPERATIONS,  
LEA COUNTY, NEW MEXICO.**

**CASE NO. 22133  
ORDER NO. R-22349**

**ORDER OF THE DIVISION**

The Director of the New Mexico Oil Conservation Division (“OCD”), having heard this matter through Hearing Examiner Baylen Lamkin on September 9, 2021, and after considering the testimony, the evidence, and the recommendations of the Hearing Examiner, issues the following Order.

**FINDINGS OF FACT**

1. Due public notice has been given, and the OCD has jurisdiction of this case and of the subject matter.
2. The application by FAE II Operating, LLC (“FAE” or “Applicant”) seeks an order reinstating injection authority for its proposed Blackbeard North Waterflood Project utilizing the original four injection wells and approval to convert an additional four producing wells to injectors for waterflood operations.
3. On March 14, 1967, the Oil Conservation Commission (“OCC”) issued Order No. R-3200 in Case No. 3531, which established a waterflood, the Texas Pacific South Eunice State Waterflood, within the South Eunice Pool with injection into the Seven Rivers and Queen formations.
4. Order No. R-3200 approved a project area comprising 2,080 acres (more or less) of State trust lands located in Lea County, New Mexico:

**TOWNSHIP 22 SOUTH, RANGE 36 EAST, NMPM**

Section 5: W/2 and SE/4  
Section 7: E/2 and SW/4  
Section 8: all  
Section 9: N/2 and SW/4

5. On September 15, 1970, the OCC entered Order No. R-3200-A in Case No. 4418 to substitute six injection wells for the wells originally approved in Order No. R-3200.
6. On September 6, 1983, the OCD approved administrative order WFX-518 to expand injection with the following wells: the State A Account 2 No. 65, the State A Account 2 No. 67, the State A Account 2 No. 69 and the State A Account 2 No. 71. Order WFX-518 identified the project as the Sun State A Account 2 Waterflood Project in South Eunice Seven Rivers-Queen Pool and limited injection into only the Queen formation.
7. On September 11, 1984, the OCD approved administrative order WFX-530 to authorize injection with the following wells: the State A A/C 2 No. 64, the State A A/C 2 No. 66, the State A A/C 2 No. 68, State A A/C 2 No. 70, and the State A A/C 2 No. 72. Order WFX-530 identified the waterflood as the South Eunice Seven Rivers-Queen Waterflood Project and approved injection into the Seven River and Queen formations.
8. FAE acquired the project in June 2021 and became the designated operator of the waterflood project.
9. The injection authority for individual wells has expired due to inactivity; however, production did not lapse in the unit during this same time period and the waterflood remains intact as statutory unit.
10. FAE now seeks an order to reinstate the injection authority the following four wells previously approved for injection in the initial enhanced recovery project now proposed as the Blackbeard North Waterflood Project.

	<b>Well Name and Number</b>	<b>Location Within Township 22 South, Range 36 East, NMPM</b>	<b>Proposed Interval (ft.)</b>
(a)	State A A/C 2 No. 65 (API 30-025-28274)	1345' FNL & 25' FWL, Unit E, Sec. 9	3695 to 3875
(b)	State A A/C 2 No. 67 (API 30-025-28276)	2615' FSL & 1345' FWL, Unit K, Sec. 9	3660 to 3850
(c)	State A A/C 2 No. 69 (API 30-025-28278)	2615' FSL & 1295' FEL, Unit I, Sec. 8	3700 to 3890
(d)	State A A/C 2 No. 71 (API 30-025-28280)	1295' FSL & 25' FWL, Unit M, Sec. 9	3715 to 3890

11. FAE additionally seeks approval to convert the following four producing wells to injection wells as part of the Blackbeard North Waterflood Project.

	<b>Well Name and Number</b>	<b>Location Within Township 22 South, Range 36 East, NMPM</b>	<b>Proposed Interval (ft.)</b>
(a)	State A A/C 2 No. 64 (API 30-025-28273)	1250' FNL & 1250' FEL, Unit A, Sec. 8	3720 to 3885
(b)	State A A/C 2 No. 68 (API 30-025-28277)	2570' FNL & 70' FWL, Unit E, Sec. 9	3695 to 3885
(c)	State A A/C 2 No. 70 (API 30-025-28279)	1295' FSL & 1295' FEL, Unit P, Sec. 8	3725 to 3890
(d)	State A A/C 2 No. 72 (API 30-025-28281)	1410' FSL & 1440' FWL, Unit K, Sec. 9	3675 to 3875

12. Applicant appeared at the hearing through counsel and presented evidence to the effect that:

a. The project area will contain the original 2,080 acres of State trust land approved in Order No. R-3200 for the waterflood operation.

b. The project area is within a single state lease where FAE owns approximately 95.7 percent of the working interest with the remaining working interest owned by a single operator.

c. The proposed perforated injection interval in the eight wells ranges from 3660 feet to 3890 feet within the Seven Rivers and Queen formations. The injector wells will inject fluids through a plastic-lined, 2.375-inch tubing set in a packer that is within 100 feet of the top perforation.

d. The source of the water to be injected will be produced water from other Seven Rivers and Queen wells drilled on the lease and is not expected to cause compatibility issues.

e. The waterflood will be injecting into the Seven River-Queen reservoir interval which consists primarily of sandstones interbedded with dolomites and anhydrites. The log shows the interval top at 3640 feet and the top is sealed by a low porosity/low permeability non-oil bearing Seven Rivers carbonate layer. The bottom of the interval is sealed by a low porosity/low permeability section of the Grayburg carbonate.

f. Productive porosity typically ranges from 10% to 20% and averages around 16% throughout the interval.

g. There is no evidence of open faults of hydrological connection between the proposed injection zone and underground sources of drinking water.

h. Six freshwater wells were identified within one mile of the proposed injection wells. Applicant provided analyses from two freshwater wells representative of shallow

groundwater.

i. Applicant proposes a maximum daily injection rate of 1,000 barrels of water per day (“BWPD”) with an expected maximum injection pressure of 700 pounds per square inch (“PSI”).

j. The Applicant identified wells that penetrate the injection interval within the one-half mile Area of Review (“AOR”) for each of the proposed eight injection wells and provided detailed wellbore information for the plugged and abandoned wells.

k. The Applicant states that the injection interval is confined by an upper and lower low porosity and permeability barriers which will keep the injected fluids from migrating out of the formation.

l. The proposed construction of the proposed injection wells will isolate and protect the underground sources of drinking water (“USDWs”).

m. The Applicant provided evidence of proper notification of this application to all "affected persons" and a notice of publication in a newspaper of general circulation in the county.

n. The Applicant stated that the conversion of the proposed wells from production to injection was proper for the waterflood and with the new configuration would increase the Estimated Ultimate Recovery for the project by an additional 1,900,000 barrels of oil.

13. No other party appeared at the hearing, or otherwise opposed the granting of this application.

14. The application describes the proposed injection interval as follows:

*“The “unitized interval” was defined by Order R-12496-A as the South Eunice pool which has a depth of 3,269’ to 3,983’ in State A A/C2-39 (API:3002508858) log.”*

[Item 8 of the Self-Affirmed Statement of Steven Lehrbass, Director of Land, provided at hearing and Item 4 of Exhibit B, the Self-Affirmed Statement of Jessica LaMarro, Geologist, provided in the hearing application.]

OCD review of the referenced order, Order No. R-12496-A, found no relevancy with the proposed waterflood and the related usage of the log cited for determination of the interval. Based on the testimony at hearing, the target for the waterflood was described as *“the lower part of the Seven Rivers and the Upper Queen seems to be the main injection interval in the south, and in the north it seems to be the upper to middle part of the Queen.”*

OCD review of Division and Commission cases identified the following as relevant for the determination of the “unitized interval” for this waterflood project: Commission Order No. R-520; Case No. 673; Commission Order No. R-3800; Case No. 3531; Commission Order No. R-3800-A; Case No. 4418; Division Order No. R-7678; Case No. 8312; and Division Order No. R-9503; Case No. 10269.

### CONCLUSION OF LAW

15. The application has been duly filed under the provisions of 19.15.26.8 NMAC and FAE has presented satisfactory evidence that all requirements prescribed in 19.15.26.8 NMAC have been met.
16. The waterflood unit has maintained production retaining the designation of a statutory unit while losing authority to inject due to abandonment under 19.15.26.12 NMAC based on the inactivity of all approved injection wells within the unit.
17. The construction plans for four of the proposed injection wells provided in the application are protective of USDWs.
18. All wells that penetrate the proposed injection interval within a one-half mile AOR of the proposed injection wells are adequately cased and cemented to isolate and confine the injected fluid within the permitted injection interval.
19. The vertical limits for the waterflood should be consistent with Eunice;Seven Rivers-Queen, South pool as provided in Commission Order No. R-3800 and as defined in Ordering Paragraph (6) of Commission Order No. R-520.
20. Approval for conversion of producing wells in the project area to injection wells should have construction that conforms to the vertical limits of the waterflood.
21. The OCD is responsible for the orderly development and production of hydrocarbon resources including the authority to regulate the disposition of produced water as described in NMSA 1978, Section 70-2-12(B)(15). It is obligated to prevent waste, to protect correlative rights, and to protect human health and the environment.
22. To prevent waste of oil and gas and protect correlative rights, the re-instatement of the injection authority of the waterflood project should be approved for the injection wells used in prior waterflood operations.

### **ORDER**

1. The application of FAE II Operating, LLC (“FAE” or “Operator”) to authorize injection wells for enhanced oil recovery within the existing waterflood **is hereby approved**. The operation is designated the **Blackbeard North Waterflood Project** (“Project”) and has the same authority for enhanced recovery in the Seven Rivers and Queen formations as approved in Order No. R-3800.

2. The unit area (or “project area”), comprised of 2,080 acres (more or less) of State trust lands located in Lea County, New Mexico, shall remain unchanged as approved in Order No. R-3800 and as described in Findings Paragraph (4).

3. FAE II Operating, LLC (OGRID No. 329326) is hereby designated the operator of the project.

4. The “unitized interval” remains the Eunice; Seven Rivers-Queen, South pool (pool code: 21430) as approved in Order No. R-3800 and as originally defined in Ordering Paragraph (6) of Commission Order No. R-520. Vertical extent of the unitized interval for the purpose of correlation in the project area is from the upper contact of the Seven Rivers formation at a depth of 3320 feet to the upper contact of the Grayburg formation at a depth of 3983 feet as measured on the electric log called “Schlumberger Resistivity-Self Potential Log” ran in March 1949, on the Texas and Pacific Coal and Oil Company’s State A A/C 2 Well No. 39 (API No. 30-025-08588) located in Unit C, Section 9, Township 22 South, Range 36 East, NMPM, Lea County, New Mexico.

5. The unitized interval **shall not include** the Jalmat;Tan-Yates-7 Rvrs (gas) pool (pool code: 79240) or the Jalmat;Tan-Yates-7 Rvrs (oil) pool (pool code: 33820). Any operation of the Project, either injection or production, in these pools is not approved by this order.

6. The application of FAE to inject produced water into the Seven Rivers and Queen formations **is hereby approved** for the following eight wells:

	<b>Well Name and Number</b>	<b>Location within T23S, R36E, NMPM</b>	<b>Injection Interval (ft.)</b>	<b>MSIP (PSI)</b>
(a)	State A A/C 2 No. 64 (API 30-025-28273)	1250’ FNL & 1250’ FEL, Unit A, Sec. 8	3720 to 3885	744
(b)	State A A/C 2 No. 65 (API 30-025-28274)	1345’ FNL & 25’ FWL, Unit E, Sec. 9	3695 to 3875	739
(c)	State A A/C 2 No. 67 (API 30-025-28276)	2615’ FSL & 1345’ FWL, Unit K, Sec. 9	3660 to 3850	732
(d)	State A A/C 2 No. 68 (API 30-025-28277)	2570’ FNL & 70’ FWL, Unit E, Sec. 9	3695 to 3885	739
(e)	State A A/C 2 No. 69 (API 30-025-28278)	2615’ FSL & 1295’ FEL, Unit I, Sec. 8	3700 to 3890	740
(f)	State A A/C 2 No. 70 (API 30-025-28279)	1295’ FSL & 1295’ FEL, Unit P, Sec. 8	3725 to 3890	745
(g)	State A A/C 2 No. 71 (API 30-025-28280)	1295’ FSL & 25’ FWL, Unit M, Sec. 9	3715 to 3890	743

(h)	State A A/C 2 No. 72 (API 30-025-28281)	1410' FSL & 1440' FWL, Unit K, Sec. 9	3675 to 3875	735
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7. FAE shall be required to complete the following activities prior to the commencing injection for the wells listed in Ordering Paragraph (5):

a. FAE shall confirm the total depth of the well by wireline verification. The Operator shall submit this information with either the Form C-103 Subsequent Report or Form C-105 required following the remedial work for conversion to injector; and

b. Any open perforations into the Yates formation shall be sealed by means of squeezed cement or equivalent method as approved by OCD. This remedial action is identified for the following wells: State A A/C 2 No. 67 (API 30-025-28276); State A A/C 2 No. 70 (API 30-025-28279) and State A A/C 2 No. 72 (API 30-025-28281). Failure to seal the Yates formation shall void the injection authority approved for these wells.

8. Any existing well (active or plugged) approved for injection under this order or succeeding administrative expansion order shall complete the following requirements prior to the installation of the tubing and packer set:

a. Conduct a successful pressure test of the production casing following procedures provided in 19.15.16.10(I) NMAC; and

b. Obtain a new cement bond log (“CBL”) from surface to the top of the top perforation of the approved injection interval. A copy of the CBL shall be submitted electronically to the OCD Engineering Bureau email attached to a Form C-103.

If either the pressure test fails or the CBL demonstrates inadequate cement to protect shallow USDW, the operator shall be required to conduct corrective action on the well until the integrity issue is addressed and approved by the OCD.

9. The Operator shall take all steps necessary to ensure that the injected fluid enters only the injection interval and is not permitted to escape to other formations or onto the surface from injection, production, or plugged and abandoned wells.

10. The injection wells shall be equipped with a pressure control device or acceptable substitute that will limit the maximum surface injection pressure (“MSIP”) for produced water listed in Ordering Paragraph (5) with an injection rate not to exceed 1000 BWPD.

11. The Director shall have the authority to administratively authorize an increase in MSIP upon a showing supported by an approved Step-Rate Test that such higher pressure will not result in fracturing of the injection formation or confining strata. This test may also be used to administratively increase the daily injection volumes along with a demonstration that the increase volume shall benefit the waterflood operation.

12. The Operator shall provide written notice on Form C-103 to OCD E-Permitting and notify

the OCD Engineering Bureau by email of the submittal at least 48 hours in advance of the date and time that any mechanical integrity pressure test will be conducted.

13. Injection shall be accomplished through plastic-lined tubing installed in a packer set in the production casing to provide a proper seal while being as close as practical to the uppermost injection perforations. The limit for the upper placement of the packer in the production casing shall be no greater than 100 feet above the true vertical depth of the uppermost perforation.

14. The casing-tubing annulus shall be filled with an inert fluid. Operator shall continuously monitor the annulus including a gauge attached to the annulus in order to detect leakage in the casing, tubing or packer.

15. The injection wells shall pass a mechanical integrity test prior to recommencement of injection under this order and prior to resumption of injection each time either the packer is unseated or tubing is removed. All testing procedures and schedules shall conform to the requirements of Rule 19.15.26.11(A) NMAC. The OCD Director retains the right to require at any time wireline verification of completion and packer setting depths.

16. The Operator shall immediately notify the appropriate OCD Inspection Supervisor and OCD Engineering Bureau by email of the failure of the tubing, casing or packer in either injection well, or the leakage of water, oil, gas or other fluid from or around any producing or abandoned well within one-half mile of an injection well and shall take all steps as may be timely and necessary to correct such failure or leakage. If the monitoring system indicates communication of the tubing with the annulus due to loss of mechanical integrity, the operator shall immediately proceed to shut-in the injection well and notify the appropriate OCD Inspections Supervisor and OCD Engineering Bureau by email.

17. The Operator shall provide written notice using Form C-103 to OCD E-Permitting and notify the OCD Engineering Bureau by email of the submittal no later than two (2) business days following the date on which injection commenced into the wells.

18. The Project shall be governed by Rules 19.15.26.8 through 19.15.26.15 NMAC. The operator shall submit monthly reports of the injection operations on Form C-115, in accordance with Rules 19.15.26.13 and 19.15.7.28 NMAC.

19. The injection authority granted herein shall terminate one year after the effective date of this order if the operator has not commenced injection operations; provided, however, the OCD, upon written request by the Operator filed prior to the expiration of the one-year time period, may grant an extension for good cause.

20. The injection authority granted herein shall be subject to 19.15.26.12(C)(1) NMAC [Abandonment of injection authority]. If necessary due to operational requirements that all injection wells in the Project are simultaneously not injecting for a continuous one-year period, the Operator shall maintain the injection authority of the order by requesting an extension as provided in 19.15.26.12(C)(2) NMAC.

21. The OCD Director may administratively authorize alternative or additional injection

wells within the project area as provided in 19.15.26.8 NMAC.

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

23. The Operator shall provide written notice to the OCD upon permanent cessation of injection into the Project.

24. The conversion of the following production wells to injection wells shall null and void previously approved administrative orders approving commingling of production in the well:

a. For the State A A/C 2 No. 67 (API 30-025-28276), administrative order DHC-4443, approved on August 19, 2011, is null and void; and

b. For the State A A/C 2 No. 70 (API 30-025-28279), administrative order DHC-4395, approved on May 29, 2011, is null and void.

25. This order does not relieve the operator of responsibility should its operations cause any actual damage or threat of damage to protectable fresh water, human health or the environment; nor does it relieve the operator of responsibility for complying with applicable OCD rules or other state, federal or local laws or regulations.

26. Upon failure of the operator to conduct operations (1) in such manner as will protect fresh water or (2) in a manner consistent with the requirements in this order, the OCD may, after notice and hearing (or without notice and hearing in event of an emergency, subject to the provisions of NMSA 1978 Section 70-2-23), terminate the injection authority granted herein.

27. Jurisdiction of this case is retained for the entry of such further orders as the OCD may deem necessary.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION



ADRIENNE SANDOVAL  
DIRECTOR  
AS/pg

10/28/2022

Date

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

**ORDER**

**GRANTING UIC PERMIT SWD-2370**

Chevron USA Inc., (“Applicant”) filed an Application for Authorization to Inject (Form C-108) (“Application”) with the New Mexico Energy, Minerals and Natural Resources Department, Oil Conservation Division (“OCD”) to inject produced water at the Applicant’s Veritas 12 State SWD No. 1 (“Well”), as more fully described in Appendix A.

**THE OCD FINDS THAT:**

1. Applicant provided the information required by 19.15.26 NMAC and the Form C-108 for an application to inject produced water into a Class II Underground Injection Control (“UIC”) well.
2. Applicant complied with the notice requirements of 19.15.26.8 NMAC.
3. No person filed a protest on the Application.
4. The Well will inject produced water into the Devonian-Silurian formation(s).
5. The produced water injected into the Well will be confined by layers above and below the approved injection interval.
6. No other UIC wells which inject or that are authorized to inject produced water into the same approved injection interval are permitted within 1.42 mile(s) of the Well.
7. Applicant affirmed in a sworn statement by a qualified person that it examined the available geologic and engineering data and found no evidence of open faults or other hydrologic connections between the approved injection interval and any underground sources of drinking water.
8. Applicant affirmed in a sworn statement by a qualified person that the injection of produced water over the predicted service life of the Well will not increase the potential for an induced seismic event.
9. Applicant is in compliance with 19.15.5.9 NMAC.
10. Applicant agrees to the Terms and Conditions in the attached Permit.

**THE DIVISION CONCLUDES THAT:**

1. OCD has authority under the Oil and Gas Act, NMSA 1978, §§70-2-1 *et seq.*, and its implementing regulations, 19.15.1 *et seq.* NMAC, and under the federal Safe Drinking Water Act, 42 U.S.C. 300f *et seq.*, and its implementing regulations, 40 CFR 144 *et seq.*, to issue this permit for an UIC Class II injection well. *See* 40 CFR 147.1600.
2. Based on the information and representations provided in the Application, the proposed injection, if conducted in accordance with the Application and the terms and conditions of the attached Permit, (a) will not result in waste of oil and gas; (b) will not adversely affect correlative rights; (c) will protect underground sources of drinking water; and (d) will protect the public health and environment.
3. Applicant is authorized to inject subject to the terms and conditions of the Permit.

**IT IS THEREFORE ORDERED THAT:**

The Applicant be granted UIC Permit SWD-2370 for Well Veritas 12 State SWD No. 1.



**ADRIENNE SANDOVAL**  
**OCD DIRECTOR**

**Date:** 10/28/2022

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

**UIC CLASS II PERMIT SWD- 2370**

**APPENDIX A – AUTHORIZED INJECTION**

Permittee: Chevron USA INC  
OGRID No.: 4323

Well name: Veritas 12 State SWD No. 1

Surface location: 1983 feet FSL 1000 feet FWL Section 12, Township 26 South, Range 27 East, NMPM, Eddy County, New Mexico (Lat: 32.055152, Long: -104.149165 NAD83)

Bottom hole location (if different): NA

Type of completion: Open Hole

Type of injection: Non-Commercial

Injection fluid: Class II UIC (Produced Water)

Injection interval: 13,978-15300 feet

Injection interval thickness (feet): 1,322 feet

Confining layer(s): Woodford (Upper) Montoya (lower)

Prohibited injection interval(s): Any formation above or below the permitted injection interval including lost circulation intervals.

Liner, tubing, and packer set: Injection shall occur through 5.5-inch (OD) or smaller tubing placed within the 7.625-inch liner (with a weight of 39 pounds per foot) and 7-inch (OD) or smaller tubing placed in the 9.625-inch intermediate casing above the 7.625-inch liner and packer set within 100 ft from the top of the injection interval.

Maximum daily injection rate: 30,000 Barrels per day.

Maximum surface injection pressure: 2,795 psi

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

**UIC CLASS II PERMIT SWD- 2370**

Pursuant to the Oil and Gas Act, NMSA 1978, §§70-2-1 *et seq.*, (“Act”) and its implementing regulations, 19.15.1 *et seq.* NMAC, (“Rules”) and the federal Safe Drinking Water Act, 42 U.S.C. 300f *et seq.*, and its implementing regulations, 40 CFR 144 *et seq.*, the Oil Conservation Division (“OCD”) issues this Permit to Chevron USA INC., (“Permittee”) to authorize the construction and operation of a well to inject produced water at the location and under the terms and conditions specified in this Permit and Appendix A.

**I. GENERAL CONDITIONS**

**A. AUTHORIZATION**

**1. Scope of Permit.** This Permit authorizes the injection of produced water into the well described on Appendix A (“Well”). Any injection not specifically authorized by this Permit is prohibited. Permittee shall be the “operator” of the Well as defined in 19.15.2.7(O)(5) NMAC.

a. Injection is limited to the approved injection interval described in Appendix A. Permittee shall not allow the movement of fluid containing any contaminant into an underground source of drinking water (“USDW”) if the presence of that contaminant may cause a violation of a Primary Drinking Water Regulation adopted pursuant to 40 CFR Part 142 or that may adversely affect the health of any person. [40 CFR 144.12(a)]

b. The wellhead injection pressure for the Well shall not exceed the value identified in Appendix A.

c. Permittee shall not commence to drill, convert, or recomplete the Well until receiving this approval and until OCD approves a Form C-101 Application for Permit to Drill (“APD”) pursuant to 19.15.14 NMAC or receives an approved federal Form 3160-3 APD for the Well. [40 CFR 144.11; 19.15.14.8 and 19.15.26.8 NMAC]

d. Permittee shall not commence injection into the Well until the Permittee complies with the conditions in Section I. C. of this Permit.

e. This Permit authorizes injection of any UIC Class II fluid or oil field waste defined in 19.15.2.7(E)(6) NMAC.

f. This Permit does not authorize injection for an enhanced oil recovery project as defined in 19.15.2.7(E)(2) NMAC.

**2. Notice of Commencement.** Permittee shall provide written notice on Form C-103 to OCD E-Permitting and notify OCD Engineering Bureau by email of the submittal no later than two (2) business days following the date on which injection commenced into the Well. [19.15.26.12(B) NMAC]

**3. Termination.** Unless terminated sooner, this Permit shall remain in effect for a term of twenty (20) years beginning on the date of issuance. Permittee may submit an application for a new permit prior to the expiration of this Permit. If Permittee submits an application for a new permit, then the terms and conditions of this Permit shall remain in effect until OCD denies the application or grants a new permit.

a. This Permit shall terminate one (1) year after the date of issuance if Permittee has not commenced injection into the Well, provided, however, that OCD may grant a single extension of no longer than one (1) year for good cause shown. Permittee shall submit a written request for an extension to OCD Engineering Bureau no later than thirty (30) days prior to the deadline for commencing injection.

b. One (1) year after the last date of reported injection into the Well, OCD shall consider the Well abandoned, the authority to inject pursuant to this Permit shall terminate automatically, and Permittee shall plug and abandon the Well as provided in Section I. E. of this Permit. Upon receipt of a written request by the Permittee no later than one year after the last date of reported injection into the Well, OCD may grant an extension for good cause. [19.15.26.12(C) NMAC]

## **B. DUTIES AND REQUIREMENTS**

**1. Duty to Comply with Permit.** Permittee shall comply with the terms and conditions of this Permit. Any noncompliance with the terms and conditions of this Permit, or of any provision of the Act, Rules or an Order issued by OCD or the Oil Conservation Commission, shall constitute a violation of law and is grounds for an enforcement action, including revocation of this Permit and civil and criminal penalties. Compliance with this Permit does not relieve Permittee of the obligation to comply with any other applicable law, or to exercise due care for the protection of fresh water, public health and safety and the environment. The contents of the Application and Appendix A shall be enforceable terms and conditions of this Permit. [40 CFR 144.51(a); 19.15.5 NMAC]

**2. Duty to Halt or Reduce Activity to Avoid Permit Violations.** Permittee shall halt or reduce injection to avoid a violation of this Permit or other applicable law. It shall not be a defense in an enforcement action for Permittee to assert that it would have been necessary to halt or reduce injection in order to maintain compliance with this Permit. [40 CFR 144.51(c)]

**3. Duty to Mitigate Adverse Effects.** Permittee shall take all reasonable steps to minimize, mitigate and correct any waste or effect on correlative rights, public health, or the

environment resulting from noncompliance with the terms and conditions of this Permit. [40 CFR 144.51(d)]

**4. Duty to Operate and Maintain Well and Facilities.** Permittee shall operate and maintain the Well and associated facilities in compliance with the terms and conditions of this Permit. [40 CFR 144.51(e)]

**5. Duty to Provide Information.** In addition to any other applicable requirement, Permittee shall provide to OCD by the date and on the terms specified by OCD any information which OCD requests for the purpose of determining whether Permittee is complying with the terms and conditions of this Permit. [40 CFR 144.51(h)]

**6. Private Property.** This Permit does not convey a property right or authorize an injury to any person or property, an invasion of private rights, or an infringement of state or local law or regulations. [40 CFR 144.51(g)]

**7. Inspection and Entry.** Permittee shall allow OCD's authorized representative(s) to enter upon the Permittee's premises where the Well is located and where records are kept for the purposes of this Permit at reasonable times and upon the presentation of credentials to:

- a. Inspect the Well and associated facilities;
- b. Have access to and copy any record required by this Permit;
- c. Observe any action, test, practice, sampling, measurement or operation of the Well and associated facilities; and
- d. Obtain a sample, measure, and monitor any fluid, material or parameter as necessary to determine compliance with the terms and conditions of this Permit. [40 CFR 144.51(i)]

**8. Certification Requirement.** Permittee shall sign and certify the truth and accuracy of all reports, records, and documents required by this Permit or requested by OCD. [40 CFR 144.51(k)]

**9. Financial Assurance.** Permittee shall provide and maintain financial assurance for the Well in the amount specified by OCD until the Well has been plugged and abandoned and the financial assurance has been released by OCD. [40 CFR 144.52; 19.15.8.12 NMAC]

## **C. PRIOR TO COMMENCING INJECTION**

### **1. Construction Requirements.**

- a. Permittee shall construct the Well as described in the Application,

Appendix A and as required by the Special Conditions.

b. Permittee shall construct and operate the Well in a manner that ensures the injected fluid enters only the approved injection interval and is not permitted to escape to other formations or onto the surface.

**2. Tests and Reports.** Permittee shall complete the following actions prior to commencing injection in the Well.

a. Permittee shall obtain and comply with the terms and conditions of an approved APD prior to commencing drilling of the Well, or other OCD approval, as applicable, prior to converting or recompleting the Well. If the APD is approved by the OCD, the Well shall be subject to the construction, testing, and reporting requirements of 19.15.16 NMAC.

b. Permittee shall circulate to surface the cement for the surface and intermediate casings. If cement does not circulate on any casing string, Permittee shall run a cement bond log ("CBL") to determine the top of cement, then notify the OCD Engineering Bureau and the appropriate OCD Inspection Supervisor and submit the CBL prior to continuing with any further cementing on the Well. If the cement did not tie back into next higher casing shoe, Permittee shall perform remedial cement action to bring the cement to a minimum of two hundred (200) feet above the next higher casing shoe.

c. If a liner is approved for the construction of the Well, Permittee shall run and submit to OCD E-Permitting and notify the OCD Engineering Bureau by email, a CBL for the liner to demonstrate placement cement and the cement bond with the tie-in for the casing string.

d. Permittee shall submit the mudlog, geophysical logs, and a summary of depths (picks) for the contacts of the formations demonstrating that only the permitted formation is open for injection. OCD may amend this Permit to specify the depth of the approved injection interval within the stratigraphic interval requested in the application. If Permittee detects a hydrocarbon show during the drilling of the Well, it shall notify OCD Engineering Bureau by email and obtain written approval prior to commencing injection into the Well.

e. Permittee shall obtain and submit on a Form C-103 a calculated or measured static bottom-hole pressure measurement representative of the completion in the approved injection interval.

f. Permittee shall conduct an initial mechanical integrity test ("MIT") on the Well in compliance with the terms and conditions of this Permit and 19.15.26 NMAC, and shall not commence injection into the Well until the results of the initial MIT have been approved by the appropriate OCD Inspection Supervisor. [19.15.26.11(A) NMAC]

g. OCD retains authority to require a wireline verification of the completion and packer setting depths in this Well. [19.15.26.11(A) NMAC]

## **D. OPERATION**

### **1. Operation and Maintenance.**

a. Permittee shall equip, operate, monitor and maintain the Well to facilitate periodic testing, assure mechanical integrity, and prevent significant leaks in the tubular goods and packing materials used and significant fluid movements through vertical channels adjacent to the well bore. [19.15.26.10(A) NMAC]

b. Permittee shall operate and maintain the Well and associated facilities in a manner that confines the injected fluid to the approved injection interval and prevents surface damage and pollution by leaks, breaks and spills. [19.15.26.10(B) NMAC]

c. OCD may authorize an increase in the maximum surface injection pressure upon a showing by the Permittee that such higher pressure will not result in the migration of the disposed fluid from the approved injection interval or induced seismicity. Such proper showing shall be demonstrated by sufficient evidence, including an acceptable step-rate test.

d. If OCD has reason to believe that operation of the Well may have caused or determined to be contributing to seismic activity, Permittee shall, upon OCD's written request:

i. Take immediate corrective action, which could include testing and evaluating of the injection interval and confining layers; suspending or reducing of the rate of injection or maximum surface injection pressure, or both; and providing increased monitoring of the Well's operation; and

ii. Submit a remedial work plan or an application to modify the Permit to implement the corrective action, plug back the injection interval, or incorporate another modification required by OCD.

OCD may approve the remedial work plan, modify the Permit or issue an emergency order or temporary cessation order as it deems necessary.

### **2. Pressure Limiting Device.**

a. The Well shall be equipped with a pressure limiting device, which is in workable condition and can be tested for proper calibration at the well site,

that shall limit surface tubing pressure to the maximum surface injection pressure specified in Appendix A.

b. Permittee shall test the pressure limiting device and all gauges and other metering requirement to ensure their accuracy and proper function no less than every five (5) years.

**3. Mechanical Integrity.** Permittee shall conduct a MIT prior to commencing injection, at least every five (5) years after the date of the previous MIT, and whenever the tubing is removed or replaced, the packer is reset, mechanical integrity is lost, Permittee proposes to transfer the Well, or requested by OCD.

a. MITs shall be conducted in accordance with 19.15.26 NMAC.

b. Permittee shall submit a sundry notice on Form C-103 of intent to install or replace injection equipment or conduct a MIT no later than three (3) business days prior to the event.

c. Permittee shall report the result of a MIT no later than two (2) business days after the test.

d. Permittee shall cease injection and shut-in the Well no later than twenty-four (24) hours after discovery if:

i. The Well fails a MIT; or

ii. Permittee observes conditions at the Well that indicate the mechanical failure of tubing, casing, or packer.

e. Permittee shall take all necessary actions to address the effects resulting from the loss of mechanical integrity in accordance with 19.15.26.10 NMAC.

f. Permittee shall conduct a successful MIT pursuant to 19.15.26.11 NMAC, including written approval from OCD prior to recommencing injection and the requirements contained in Section I G.3.

**4. Additional Tests.** Permittee shall conduct any additional test requested by OCD, including but not limited to step-rate tests, tracer surveys, injection surveys, noise logs, temperature logs, and casing integrity logs [19.15.26.11(A)(3) NMAC]

**5. Records.**

a. Permittee shall retain a copy of each record required by this Permit for a period of at least five (5) years and shall furnish a copy to OCD upon request. [40 CFR 144.51(h)]

b. Permittee shall retain a record of each test, sample, measurement, and certification of accuracy and function collected for the Well, including:

i. Date, location, and time of sample, measurement or calibration;

ii. Person who conducted the sample event, -measurement or calibration;

iii. Calibration of gauge or other equipment in accordance with the manufacturer's specifications;

iv. Description of method and procedures;

v. Description of handling and custody procedures; and

vi. Result of the analysis.

**E. PLUGGING AND ABANDONMENT**

1. Upon the termination of this Permit, Permittee shall plug and abandon the Well and restore and remediate the location in accordance with 19.15.25 NMAC.

2. If Permittee has received an extension pursuant to Section I. A. 2. b., Permittee shall apply for approved temporary abandonment pursuant to 19.15.25 NMAC.

3. If this Permit expires pursuant to 19.15.26.12 NMAC and OCD has not issued a new permit, then Permittee shall plug and abandon the Well and restore and remediate the location in accordance with 19.15.25 NMAC.

4. Permittee's temporary abandonment of the Well shall not toll the abandonment of injection in accordance with 19.15.26.12(C) NMAC.

**F. REPORTING**

1. **Monthly Reports.** Permittee shall submit a report using Form C-115 using the OCD's web-based online application on or before the 15th day of the second month following the month of injection, or if such day falls on a weekend or holiday, the first workday following the 15<sup>th</sup>, with . the number of days of operation, injection volume, and injection pressure. [19.15.26.13 NMAC; 19.15.7.24 NMAC]

**2. Corrections.** Permittee shall promptly disclose to OCD any incorrect information in the Application or any record required by this Permit and submit corrected information. [40 CFR 144.51(h)(8)]

## **G. CORRECTIVE ACTION**

**1. Releases.** Permittee shall report any unauthorized release of injection fluid at the Well or associated facilities in accordance with 19.15.29 and 19.15.30 NMAC.

**2. Failures and Noncompliance.** Permittee shall report the following incidents to appropriate OCD Inspection Supervisor and OCD Engineering Bureau verbally and by e-mail no later than 24 hours after such incident:

a. Any mechanical integrity failures identified in Section I. D. 3. d;

b. The migration of injection fluid from the injection interval [19.15.26.10 NMAC]; or

c. A malfunction of the Well or associated facilities that may cause waste or affect the public health or environment, including: (a) monitoring or other information which indicates that a contaminant may affect a USDW; or (b) noncompliance or malfunction which may cause the migration of injection fluid into or between USDWs. [40 CFR 144.51(l)(6)]

**3. Corrective Action.** Permittee shall submit a written report describing the incident in Sections I.G.1 or I.G.2, including a corrective active plan, no later than five (5) calendar days after discovery of the incident. [40 CFR 144.51(l)(6)] For an unauthorized release, Permittee also shall comply with the site assessment, characterization and remediation requirements of 19.15.29 and 19.15.30 NMAC.

**4. Restriction or Shut-In.** OCD may restrict the injected volume and pressure or shut-in the Well if OCD determines that the Well has failed or may fail to confine the injected fluid to the approved injection interval or has caused induced seismicity until OCD determines that Permittee has identified and corrected the failure. [19.15.26.10(E) NMAC]

## **H. PERMIT CHANGES**

**1. Transfer.** This Permit shall not be transferred without the prior written approval of OCD. Permittee shall file Form C-145 for a proposed transfer of the Well. OCD may require, as a condition of approving the transfer, that this Permit be amended to ensure compliance and consistency with applicable law. If the Well has not been spud prior to the transfer, the OCD may require that the new operator reapply and submit to the OCD a new Form C-108 prior to constructing and injecting into the well. [19.15.26.15 NMAC; 19.15.9.9 NMAC]

**2. Insolvency.** Permittee shall notify OCD Engineering Bureau of the commencement of a voluntary or involuntary proceeding in bankruptcy which names Permittee or an entity which operates the Well on behalf of Permittee as a debtor no later than ten (10) business days after the commencement of the proceeding.

**3. OCD Authority to Modify Permit and Issue Orders**

a. The OCD may amend, suspend, or revoke this Permit after notice and an opportunity for hearing if it determines that:

i. The Permit contains a material mistake;

ii. Permittee made an incorrect statement on which OCD relied to establish a term or condition of the Permit or grant this Permit;

iii. this Permit must be amended to ensure compliance and consistency with applicable law, including a change to the financial assurance requirements;

iv. The Well's operation may affect the water quality of fresh water;

v. Injected fluid is escaping from the approved injection interval;

vi. Injection may be caused or contributed to seismic activity:  
or

vii. Injection may cause or contribute to the waste of oil, gas or potash resources or affect correlative rights, public health, or the environment.

b. OCD retains jurisdiction to enter such orders as it deems necessary to prevent waste and to protect correlative rights, protect public health, and the environment.

c. OCD retains jurisdiction to review this Permit as necessary and no less than once every five (5) years, and may determine whether this Permit should be modified, revoked and reissued, or terminated. [40 CFR 144.36(a)]

**4. Permittee Request to Modify Permit.** Permittee may apply to modify the terms of this Permit.

a. **Minor Modifications.** OCD may make a minor modification to this Permit without notice and an opportunity for hearing for:

- i. Non-substantive changes such as correction of typographical errors;
- ii. Requirements for more frequent monitoring or reporting;
- iii. Changes to the Well construction requirements provided that any alteration shall comply with the conditions of the Permit and does not change the Area of Review considered in the application for the Permit;
- iv. Amendments to the plugging and abandonment plan;
- v. Changes in the types of fluids injected which are consistent with sources listed in the application for the Permit and do not change the classification of the Well;
- vi. Corrections of the actual injection interval if within the approved formation; or
- vii. Transfer of a Permit for a Well that has been spud. [40 CFR 144.41]

b. **Major Modifications.** OCD shall require notice and an opportunity for hearing for any modification that is not minor. For such modifications, Permittee shall submit Form C-108 and comply with the notice requirements of 19.15.26 NMAC.

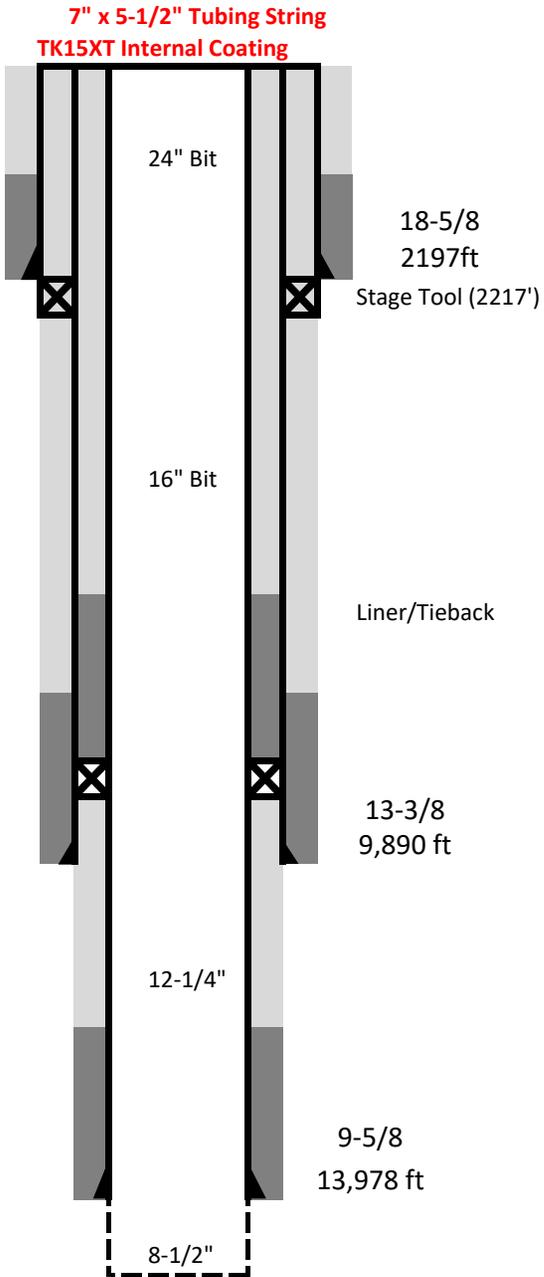
## **II. SPECIAL CONDITIONS**

Permittee shall comply with the following special conditions:

The operator shall circulate to surface the cement for the surface and intermediate casings.

## **III. ATTACHMENT**

Well Completion Diagram as Provided in the Application



Hole Size	Casing	Mud Program	Casing Point
24"	18-5/8" 117.5# K55 BTC	FW 8.3 - 8.6 ppg Brine 10 - 10.5 ppg	Lamar Limestone for competent shoe. Isolate water table and salt section. <b>FIT = 13.5ppg</b>
16"	13-3/8" 72# C110 563 Alt Drift 12.25"	OBM 8.7 - 10.5 ppg	Carbonate stringer in top of the Wolfcamp C. Need to isolate the Delaware Mountain Group and Bonespring Sands. <b>FIT = 14.1ppg</b>
12-1/4"	9-5/8" 53.5# TN-80HS Blue Alt Drift 8.5"  Liner/Tieback	OBM 9.5 - 14.0ppg Manage Pressure Drilling	Top of the Silurian. Isolate the permitted injection interval/formations below, for high pressure <b>FIT = 9.4ppg</b>
8-1/2"	N/A	WBM/Cut Brine 8.3 - 9.2 ppg	Base of Fusselman