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

APPLICATION OF CHEVRON U.S.A. INC. TO APPROVE SALT WATER DISPOSAL WELL IN LEA COUNTY, NEW MEXICO.

Order No. R-23087

CASE NO. 23686

APPLICATION OF CHEVRON U.S.A. INC. TO APPROVE SALT WATER DISPOSAL WELL IN LEA COUNTY, NEW MEXICO.

CASE NO. 23687

ORDER OF THE COMMISSION

THESE MATTERS come before the New Mexico Oil Conservation Commission ("Commission") on Chevron U.S.A. Inc.'s ("Chevron") Applications for Authorization to Inject ("Applications") to inject produced water at Papa Squirrel SWD No. 1 well and Severitas 2 State SWD No. 1 well . The New Mexico Oil Conservation Division's Director referred these cases to the Commission for hearing pursuant to 19.15.4.20(B) NMAC. The Commission having conducted a hearing on November 8 and 9, 2023, and having considered the testimony and the record in these cases, enters the following findings of fact, conclusions of law and Order.

FINDINGS OF FACT

1. On May 18, 2023, Chevron submitted an administrative application to the New Mexico Oil Conservation Division ("OCD") seeking authorization to inject produced water into the proposed Papa Squirrel SWD No. 1 well, located in Section 13, Township 26 South, Range 32 East, NMPM, Lea County, New Mexico.

2. On May 23, 2023, Chevron submitted an administrative application to the Division seeking authorization to inject produced water into the proposed Severitas 2 State SWD No. 1 well, located in Section 2, Township 26 South, Range 27 East, NMPM, Eddy County, New Mexico.

3. Each well is an Underground Injection Control ("UIC") Class II well subject to the requirements of 19.15.26 NMAC. Chevron provided the information required by 19.15.26 NMAC and the Form C-108. Detailed information regarding each Well is included in Attachments 1 and

4. For this Order, the Papa Squirrel SWD No. 1 well and the Severitas 2 State SWD No. 1 are referred to collectively as the "Wells."

5. The Wells' proposed injection zones are the Bell Canyon and Cherry Canyon formations, within the Delaware Mountain Group ("DMG").

6. The administrative applications were protested by Mewbourne Oil Company ("Mewbourne") (Papa Squirrel Well on May 8, 2023 and Severitas Well on May 22, 2023).

7. On July 3, 2023, Chevron submitted two applications for hearing before the OCD for the Wells. The Applications were assigned Case Nos. 23686 (Papa Squirrel Well) and 23687 (Severitas Well).

8. On August 2, 2023, the Director referred Cases 23686 and 23687 for consolidated hearing before the Commission pursuant to 19.15.4.20(B) NMAC.

9. Chevron seeks approval of the two Applications as a Pilot Project to drill and operate Class II UIC disposal wells to inject produced water into the DMG.

10. Chevron gave personal notice of the Applications and hearing via certified mail, return receipt requested to all operators, surface owners, and lessees within a one-half mile radius of the location for the Wells.

11. The Commission gave public notice of the Applications and the Commission's hearing by publication on its website.

12. Mewbourne filed an Entry of Appearance on July 19, 2023, in which it objected to the Cases. Subsequently, Mewbourne filed a withdrawal of its objection on August 21, 2023.

13. COG Operating LLC ("COG") filed an entry of appearance on July 24, 2023, in which it objected to Case No. 23687 only.

14. The Commissioner of Public Lands, New Mexico State Land Office filed an entry of appearance on August 31, 2023.

15. On November 2, 2023, Chevron filed a prehearing statement and exhibits.

16. On November 2, 2023, the OCD filed a prehearing statement and exhibits.

17. On November 2, 2023, COG filed a prehearing statement, testimony, and exhibits, which it withdrew on November 7, 2023.

18. On November 2, 2023, Mewbourne filed a prehearing statement.

19. No other person filed an objection to the Applications or an entry of appearance.

20. The Commission held a hearing on the Applications on November 8 and 9, 2023.

21. In support of the Applications, Chevron presented the testimony of four witnesses: Mr. Cody Comiskey Earth Science Advisor, Chevron; Tom Merrifield, DRP Earth Scientist, Chevron; Jason Parizek, Senior Earth Scientist, Chevron; and Bryce Taylor, Senior PE Advisor, Chevron.

22. Mr. Comiskey provided background information on the Pilot Project, including the need for additional disposal options due to the increase in produced water related to oil and gas production in the Bone Spring and Wolfcamp formations. Mr. Comiskey also testified regarding the rationale behind the choice of the Pilot Project's two wells, namely that Chevron chose the location for the Pilot Project wells due to variation in injection thickness, the presence of confining layers above and below the injection intervals, the favorable porosity of the injection interval, and the low potential for adverse impacts to offset production. Mr. Comiskey testified that Chevron chose a two-well pilot project because it would provide Chevron, the Commission, the OCD, and other operators with evidence to evaluate the DMG for future shallow produced water injection.

23. Mr. Comiskey testified that Chevron had received letters of support for the Pilot Project from Coterra Energy, XTO Energy, and Oxy USA Inc.

24. Mr. Comiskey testified regarding the low likelihood of induced seismicity from operation of the Wells.

25. Mr. Comiskey testified regarding the data gathering and sharing Chevron intends to undertake as part of the Pilot Project as well as the monitoring and reporting protocol Chevron developed with input from other operators. Chevron proposes to undertake quad combo logs, XRMI logs, install downhole pressure gauges, DFIT, downhole gauges in offset producers and production monitoring, among other data gathering methods. Chevron's data collection program will provide Chevron with data on injection interval depth and thickness, natural fractures and stress orientation, pore pressure, fracture closure stress in the DMG, measure and/or monitor potential communication between injectors and producers, among other data. Mr. Comiskey testified that one benefit of the Pilot Project is that Chevron will be the operator of both the producers and the injectors and will be able to manage and monitor potential communication between injectors and producers.

26. Mr. Comiskey testified that Chevron agreed to the Conditions of Approval proposed by the OCD as part of their Exhibit 11 offered at hearing.

27. Mr. Merrifield testified regarding the Wells' casing design, the geology and groundwater in the area around each Well and the technical data set in Chevron's C-108 applications forms. He testified that, in his opinion and based on studies he undertook, the Bell Canyon and Cherry Canyon formations in the areas where the Wells are proposed have favorable porosity for injection. He also testified regarding the lack of nearby DMG producers and the geologic study he undertook showing that there is a low probability of future DMG production within the two-mile radius around the Wells.

28. Mr. Merrifield testified that Chevron seeks authority to conduct diagnostic fracture injection tests ("DFIT") in the Upper Brushy Canyon formation. Chevron testified that it would not use the Brushy Canyon formation for injection of produced water.

29. Mr. Merrifield also testified that there are upper and lower confining layers to prevent migration of fluids into other zones and that the Wells would not impact underground sources of drinking water.

30. Mr. Merrifield testified that he 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.

31. Mr. Parizek presented testimony regarding his study of potential causes of increased water cuts observed following previous injection of produced water in the DMG. Mr. Parizek testified regarding case studies he had undertaken that indicate potential alternative explanations for observed increases in water cut, including impacts from Wolfcamp completions and potential faulting or lineaments creating migration pathways.

32. Mr. Parizek further testified that the Bone Spring Limestone will provide a lower confining layer for both Wells. He testified that, based on modeling he had undertaken and his analysis, the operation of the Wells is unlikely to breach the Bone Spring Lime because the Bone Spring Lime is 42 feet thick in the area of the Papa Squirrel Well and 87 feet thick in the area of the Severitas Well, the Wells will be operated at a lower pressure gradient, and there is greater vertical offset as compared to Avalon operations.

33. Mr. Taylor testified regarding the three active DMG producers within two miles of the Severitas Well. He prepared a decline analysis of those wells and the nearest DMG field, the El Mar field, and concluded that the field is substantially depleted with very limited remaining reserves such that the correlative rights of owners of mineral resources the in the DMG zones will not be adversely affected by the granting of Chevron's applications or cause waste.

34. Mr. Taylor testified that the Lamar Limestone will provide an upper confining layer for both Wells. He testified regarding modeling he had undertaken demonstrating that downhole pressures associated with Well operations do not approach fracture closure, leak off, or breakdown pressures of the Lamar Limestone.

35. Mr. Taylor testified regarding each Well's cumulative injection volume and injection radius. He testified that the likely boundary radius for injected fluids is approximately 1.7 miles, assuming injection rates between 4000 and 12500 barrels of water per day for the Severitas Well and approximately 9000 and approximately 20000 barrels of water per day for the Papa Squirrel Well, following 13 years of operation for the Severitas Well and 11 years of operation for the Papa Squirrel Well.

36. The OCD presented testimony of Brandon Powell, Deputy Director; Phillip Goetze, UIC Program Manager; and Million Gebremichael, Engineer, UIC Group.

37. Mr. Powell testified that the Division neither supported nor opposed the Applications.

38. Mr. Powell testified regarding DMG production history including the New Mexico Oil and Gas Association ("NMOGA") DMG Risk Area ("DMGRA") map. He testified that the NMOGA DMGRA is not an area where DMG disposal is precluded but does identify areas where additional review is required due to the lack of data on how DMG disposal could impact current and future production.

39. Mr. Goetze provided an overview of disposal activities in the DMG including prior disposal operations that impacted correlative rights in the DMG and Avalon Shale (upper Bone Springs) and general susceptibility of the DMG to low formation parting pressures.

40. Mr. Goetze also outlined the OCD's concerns for limited subsurface information regarding faulting and fracture systems within the DMG and the potential for induced seismicity events to increase with the use of the DMG for disposal.

41. Mr. Goetze stated that there is a need for additional produced water disposal options due to the increase in horizontal completions in Wolfcamp and Bone Spring production zones.

42. Mr. Goetze testified that additional data is necessary to evaluate the impacts of DMG production on current and future production within the DMGRA and to analyze formation parting pressure. Mr. Goetze acknowledged that the Pilot Project would provide such data.

43. Mr. Goetze testified that the Applications and supporting materials, including the testimony and exhibits presented at the hearing, met or exceeded the OCD's proposed conditions of approval.

44. Mr. Goetze identified a need to contract the injection intervals for the Wells since the inclusion of the Brushy Canyon formation in the approved injection interval could impact correlative rights and stated that such contraction could be done administratively.

45. Mr. Goetze commented favorably on the use of DFIT in addition to other subsurface information being proposed by Chevron as part of their assessment of the DMG.

46. Mr. Gebremichael presented additional conditions of approval regarding OCD guidance for proper SRT, which the OCD proposed to be included as a condition of approval of the Application.

47. Mewbourne appeared through counsel at the hearing and stated it does not oppose the Applications. However, Mewbourne's questions to both Chevron and OCD witnesses highlighted -issues regarding DMG injection. Mewbourne indicated that any DMG injection wells must be operated in a manner that ensures injection fluids are confined to the approved intervals and protective of potential hydrocarbon resources.

48. Prior to hearing, the OCD reviewed the content of the Applications for each of the Wells for technical completeness. The findings showed each Application documented the proper abandonment for plugged wells and proper cementing of active well that penetrate the DMG within the ½-mile Area of Review. The Applications also presented well designs that are protective of underground sources of drinking water and identified the hydrocarbon production and corresponding lessees for the two-mile radius surrounding the individual Well locations. The review also showed the Papa Squirrel Well being located within ten miles of the County Line Seismic Response Area identified in OCD's November 23, 2021 Notice to Operators. To the extent required, OCD conducted additional review required by the Notice and assessed, based on the current information regarding seismic activity and geology, that the use of the proposed DMG injection interval will not contribute to increased seismicity in the SRA.

49. OCD records show that Chevron U.S.A. Inc. (OGRID No. 4323) is in compliance with 19.15.5.9 NMAC.

50. Chevron's Applications meet all the requirements set forth in 19.15.26.8 NMAC. Injection of produced water in the proposed Wells, if conducted in accordance with the terms and conditions of the Permits attached to this Order, will not cause waste, will not adversely affect correlative rights and will not affect underground sources of drinking water or harm the public health and environment.

51. The information that will be generated by the Pilot Project will provide valuable information to the OCD, operators and the public to evaluate the DMG as a viable option for the disposal of produced water. Chevron and the OCD agreed to work collaboratively to develop a protocol for the submission of reporting data that is accessible to other operators and the public.

52. Proposed Permits for the Papa Squirrel SWD 1 well and for the Severitas 2 State SWD 1 well are attached to this Order.

53. Chevron agrees to the Terms and Conditions in the attached Permits.

54. Chevron shall be required to obtain any necessary approvals from the State Land Office prior to drilling the Severitas 2 State SWD No. 1 or disposing of any water into that well.

CONCLUSIONS OF LAW

1. The Commission has jurisdiction over the Parties and the subject matter of this case.

2. Proper public notices of the Application and the Commission's hearing were given including personal notices to all operators, surface owners, and affected persons within a one-half mile radius of the Wells.

3. The Applications are complete.

4. The Commission and the Division have the 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 permits for an UIC Class II injection well. *See* 40 CFR 147.1600.

5. 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 Permits, (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.

ORDER

1. The Applications for the authority for disposal of produced water in the Delaware Mountain Group are hereby granted for the Wells.

2. The OCD is directed to issue UIC Class II disposal permits for the Wells, subject to the terms and conditions contained within the Permits – included as Attachments to this Order. For these Attachments, OCD submits UIC Class II Permit SWD- 2538 for the Papa Squirrel Federal SWD No. 1 and UIC Class II Permit SWD- 2540 for the Severitas 2 State SWD No. 1 for the Commission's review and approval.

3. Jurisdiction is retained by the Commission 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) be consistent with the requirements in this Order.

DONE at Santa Fe, New Mexico on the 4th day of March, 2024.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

Dylan Fuge, Acting Chair

William Ampomah
Dr. William Ampomah, Member

Gregory B. Bloom
Greg Bloom, Member

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

UIC CLASS II PERMIT SWD-2538

APPENDIX A – AUTHORIZED INJECTION

Permittee: Chevron U.S.A. Inc.

OGRID No.: 4323

Well name: Papa Squirrel Federal SWD No. 1

Surface location: 1928 feet from the South line and 870 feet from the West line (Unit Letter L), Section 13, Township 26 South, Range 32 East, NMPM, Lea County, New Mexico
Latitude/Longitude: 32.040937° N and 103.634196° W NAD83

Bottom hole location (if different): NA

Type of completion: Perforations

Type of injection: Produced water from Permittee production wells

Injection fluid: UIC Class II fluids (produced water)

Injection interval: Bell Canyon and Cherry Canyon formations of the Delaware Mountain Group

Injection interval thickness (feet): 4654 to 7285 (total interval: approximately 2631)

Confining layer(s): upper confining layer: base of the Lamar Limestone; lower confining layer: upper contact with the Brushy Canyon formation

Prohibited injection interval(s): All formations or intervals not permitted including loss circulation zones.

Liner, tubing, and packer set: plastic-lined, 5.5-inch tubing with a packer set within 100 feet of the uppermost perforation; no liner used for well completion.

Maximum daily injection rate: 20,000 barrels of water

Maximum surface injection pressure: 930 psi

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

UIC CLASS II PERMIT SWD-2538

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 U.S.A. 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 all 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. 3. 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 15th, 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 for UIC Class II disposal wells approved with injection intervals in the Delaware Mountain Group ("DMG"):

1. **Restrictions on Well Construction and Well Stimulation:** The Well shall be constructed for the purpose of disposal. No permit shall be approved for conversion of existing wells previously plugged and abandoned or used for production to UIC Class II disposal wells. Any stimulation of the Well shall not use proppants or other materials during completion or subsequent workovers.

2. **Restrictions on Surface Location to Adjacent Well Types:** Once injection has commenced, the OCD shall only administratively approve permits for UIC Class II disposal wells for injection of produced water in the DMG that are greater than two (2) miles from the Well. Additionally, this Well is greater than three (3) miles from any adjacent UIC Class II disposal wells classified by OCD as acid gas injection wells that are permitted to inject treated acid gas.

3. **Restriction on Approved Sources for Disposal in the Well:** Permittee shall be limited to the disposal of produced water from production wells for which it is the operator of record.

4. **Additional Testing: Requirement for Initial Step-Rate Test**: Permittee shall prepare and submit a separate Form C-103 Notice of Intent for a step-rate test ("SRT") to be completed prior to commencing injection. OCD shall require separate testing for each formation of the DMG approved as the injection interval approved in Appendix A and determined using the data obtained in Special Condition 5. Injection shall commence only with the approval of a Form C-103 Subsequent Report that contains the results of the SRT.

5. **Additional Testing: CBL for Surface Casing and Geophysical Logging:** Permittee shall complete a CBL for the surface casing and provide the complete log to the OCD prior to commencing injection. Permittee shall complete a geophysical log suite described as a "triple combo" and submit the logs to the OCD.

6. **Additional Reporting: Annual Injection Data Review:** In addition to the requirements under I. General Conditions, F. Reporting, 1. Monthly Reporting; Permittee shall compile, from the parameters continuously monitored by the operator, sufficient data for a twelve (12) month period to construct a Hall's plot for the Well. This assessment shall be completed annually and submitted to the OCD using Form C-103 Subsequent Report. With the plot, Permittee shall note any result which may indicate anomalies in injection operation and permit restrictions.

7. **Additional Reporting: Bottomhole Pressure:** In addition to paragraph (e) of I. General Conditions, B. Duties and Responsibilities, 2. Test and Reports, Permittee shall obtain a static bottomhole pressure every two years after commencement of injection. This information shall be provided using a Form C-103 Subsequent Report no later than January 31 of the calendar year following the year in which the data was collected.

8. **Additional Reporting: Project Report to the Oil Conservation Commission:** Permittee shall submit a report to the Oil Conservation Commission ("OCC") following the second year after the date injection commenced. The report shall include a summary of a well performance based on injection volumes, injection pressure, and any additional data collected from the Well during this period. Permittee shall submit this report to the OCC within months (3) months of the anniversary date. The OCC shall make a recommendation on the permit status of the project and any modifications to the requirements of the Permit, if necessary.

9. **Additional Reporting: Five-Year Well Performance Report:** Permittee shall submit a report to OCD every fifth year following the date injection commenced. The report shall include a summary of a well performance based on injection volumes, injection pressure, and any additional data collected from the Well. This evaluation shall include a delineation of the injection pressure front and include the use of Hall's plot for each year of operation as detailed in Special Condition 6. Permittee and OCD shall coordinate regarding the information to be included in the five-year reports should there be changes in operation or

injection performance. Permittee shall submit these reports to the OCD within sixty (60) days of the end date for the reporting period.

10. **Additional Reporting: Data Collection from Brushy Canyon formation:** Permittee shall be authorized to conduct diagnostic fracture injection tests ("DFIT") in the Upper Brushy Canyon formation. Permittee shall submit a Form C-103 Notice of Intent to the OCD prior to conducting the DFIT with details on methodology and the proposed schedule for the test. With the completion of the DFIT, the Well shall be plugged back so as to not allow injection into the Brushy Canyon formation. OCD shall retain the authority to require the Permittee to conduct injection surveys should this be required.

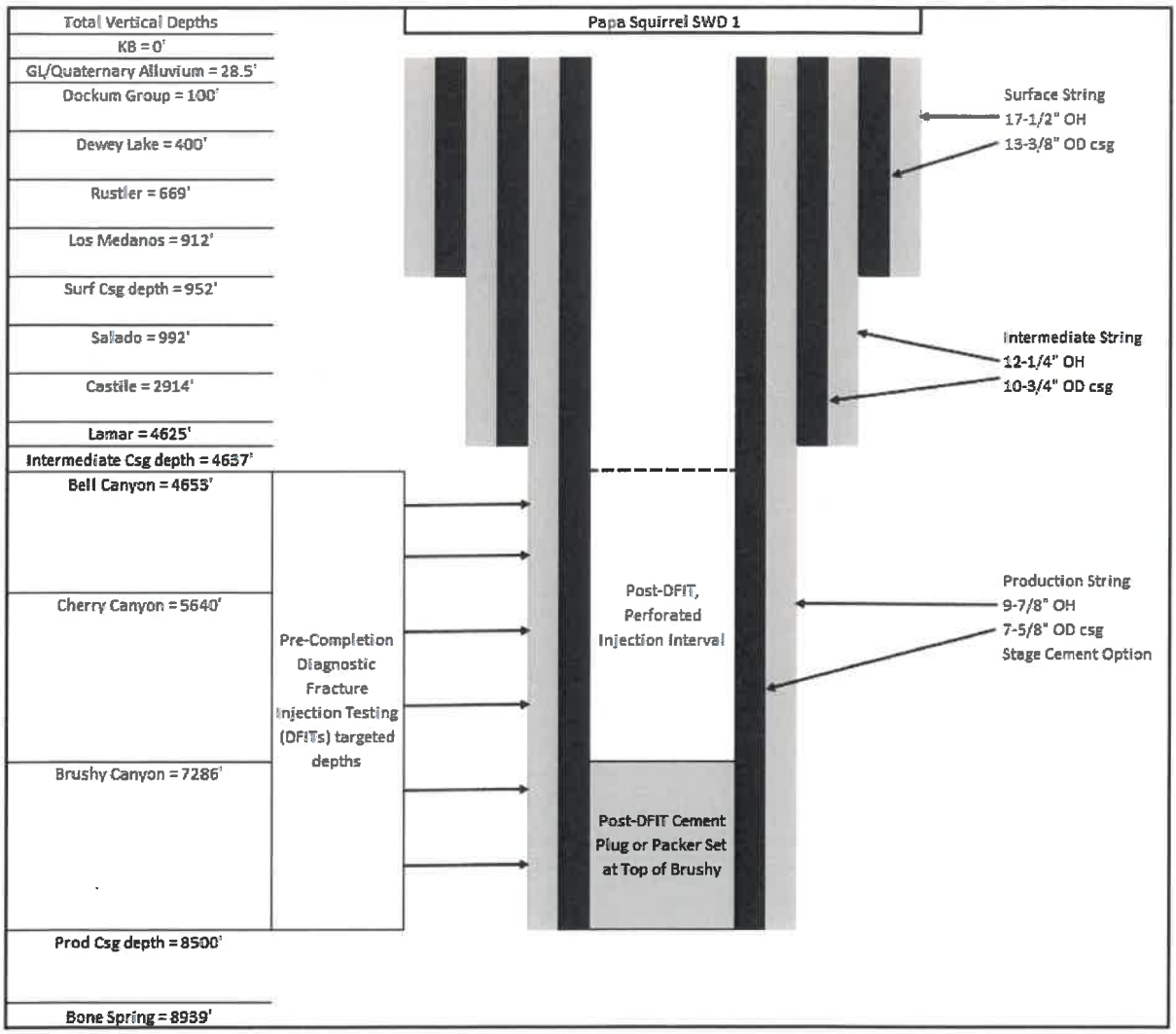
11. **Additional Monitoring: Seismic Monitoring Station:** Within the submittal of the Project Report to the Commission, Permittee and OCD shall make a recommendation to the Commission any requirement to establish a seismic monitoring station in proximity to the Well to be included in the public seismic monitoring array. Permittee shall contact the New Mexico Tech Seismological Observatory to obtain technical specifications of equipment to be installed and shall periodically transfer all unprocessed data to the public repository.

12. **I. General Conditions, A. Authorization, 3. Termination:** This Permit shall be approved as a pilot project subject to final authorization as a permanent operation by the OCC. If the OCC finds the project acceptable based on the information provided by the Permittee and the Well is compliant with the conditions of the Permit, then the Well shall be subject to the twenty (20) year term of the Permit.

13. **Resolution of General Permit Conditions with Special Conditions:** If any conditions contained in the general Permit conflict with the conditions set by the OCC under II. Special Conditions, then the requirements of the Special Conditions shall supersede the condition found in the sections of the general Permit.

III. ATTACHMENT

Well Completion Diagram as Provided in the C-108 Application for Case No. 23686.


Total Vertical Depths
KB = 0'
GL/Quaternary Alluvium = 28.5'
Dockum Group = 100'
Dewey Lake = 400'
Rustler = 669'
Los Medanos = 912'
Surf Csg depth = 952'
Salado = 992'
Castile = 2914'
Lamar = 4625'
Intermediate Csg depth = 4637'
Bell Canyon = 4655'
Cherry Canyon = 5640'
Brushy Canyon = 7286'
Prod Csg depth = 8500'
Bone Spring = 8939'
Papa Squirrel SWD 1
Surface String
17-1/2" OH
13-3/8" OD csg
Intermediate String
12-1/4" OH
10-3/4" OD csg
Production String
9-7/8" OH
7-5/8" OD csg
Stage Cement Option
Pre-Completion Diagnostic Fracture Injection Testing (DFITs) targeted depths
Post-DFIT, Perforated Injection Interval
Post-DFIT Cement Plug or Packer Set at Top of Brushy

Page 5

Side 1

INJECTION WELL DATA SHEET

OPERATOR: Chevron U.S.A. Inc.

WELL NAME & NUMBER: Papa Squirrel SWD 1

WELL LOCATION: 1928' from South, 870' from West, L 13, 26 South, 32 East, N.M.P.M.

FOOTAGE LOCATION | UNIT LETTER | SECTION | TOWNSHIP | RANGE

WELLBORE SCHEMATIC

See next page

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 17-1/2" Casing Size: 13-3/8"

Cemented with: 380 sx. *or* 497 ft³

Top of Cement: Surface Method Determined: Volumetric

Intermediate Casing

Hole Size: 12-1/4" Casing Size: 10-3/4"

Cemented with: 320 sx. *or* 758 ft³

Top of Cement: Surface Method Determined: Volumetric

Production Casing

Hole Size: 9-7/8" Casing Size: 7-5/8"

Cemented with: 650 sx. *or* 1529 ft³

Top of Cement: Surface Method Determined: Volumetric

Total Depth: 8500' (plugged back casing depth is 7285')*

Injection Interval

4654' feet to 7285' *

* The Papa Squirrel SWD will drill through the Bell Canyon and Cherry Canyon Formations and will drill approximately 1214 feet into the upper Brushy Canyon Formation (the lower ~500 feet of the Brushy Canyon will not be drilled). This will allow open hole logs (Quad Combo and XRMI/image logs) to be run. The production (injection) casing will be run to TD. Diagnostic Fracture Injection Tests (DFITs) will be gathered in all three formations. The well will then be plugged back with cement to a depth of 7285 feet. Once the well is plugged back, only the Cherry Canyon and Bell Canyon Formations will be open for injection. The injection interval will be perforated from the top of the Ramsey Sandstone of the Bell Canyon Formation, which is below the Lamar Limestone, and will extend to the base of the Cherry Canyon Formation.

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 323722

CONDITIONS

Operator: NEW MEXICO ENERGY MINERALS & NATURAL RESOURCE 1220 S St Francis Dr Santa Fe , NM 87504	OGRID: 264235
	Action Number: 323722
	Action Type: [IM-SD] Admin Order Support Doc (ENG) (IM-AAO)

CONDITIONS

Created By	Condition	Condition Date
pgoetze	None	3/15/2024