District I
1625 N. French Dr., Hobbs, NM 88240
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District II
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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

Form C-101
August 1, 2011

Permit 365010

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

1. Operator Name and Address	2. OGRID Number
CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	4323
	3. API Number 30-015-55313

4. Property Code	5. Property Name	6. Well No.
336204	SEVERITAS 2 STATE SWD	001

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
A	2	26S	27E	A	809	N	960	E	Eddy

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
A	2	26S	27E	A	809	N	960	E	Eddy

9. Pool Information

SWD;DELAWARE	96100

Additional Well Information

11. Work Type	12. Well Type	13. Cable/Rotary	14. Lease Type	15. Ground Level Elevation
New Well	OIL		State	3173
16. Multiple	**17. Proposed Depth**	**18. Formation**	**19. Contractor**	**20. Spud Date**
N	5500	Cherry Canyon		8/1/2024
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

☒ **We will be using a closed-loop system in lieu of lined pits**

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	17.5	13.375	54.5	400	253	0
Int1	12.25	10.75	32.75	2323	165	0
Prod	9.875	7.625	20	5500	402	0

Casing/Cement Program: Additional Comments

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Double Ram	5000	5000	TBD

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. **I further certify I have complied with 19.15.14.9 (A) NMAC ☒ and/or 19.15.14.9 (B) NMAC ☒, if applicable.** Signature:		**OIL CONSERVATION DIVISION**		
Printed Name:	Electronically filed by Cindy Herrera-Murillo	Approved By:	Dean McClure	
Title:	Sr. HES Regulatory Affairs Coordinator	Title:	Petroleum Specialist - A	
Email Address:	eeof@chevron.com	Approved Date:	8/30/2024	Expiration Date: 8/30/2026
Date:	5/23/2024 Phone: 575-263-0431	Conditions of Approval Attached		

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State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-015-55313	96100	SWD; DELAWARE

[4] Property Code	[5] Property Name	[6] Well Number
336204	SEVERITAS 2 STATE SWD	001

[7] OGRID No.	[8] Operator Name	[9] Elevation
4323	CHEVRON U.S.A. INC.	3173'

[10] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	2	26 SOUTH	27 EAST, N.M.P.M.		809'	NORTH	960'	EAST	EDDY

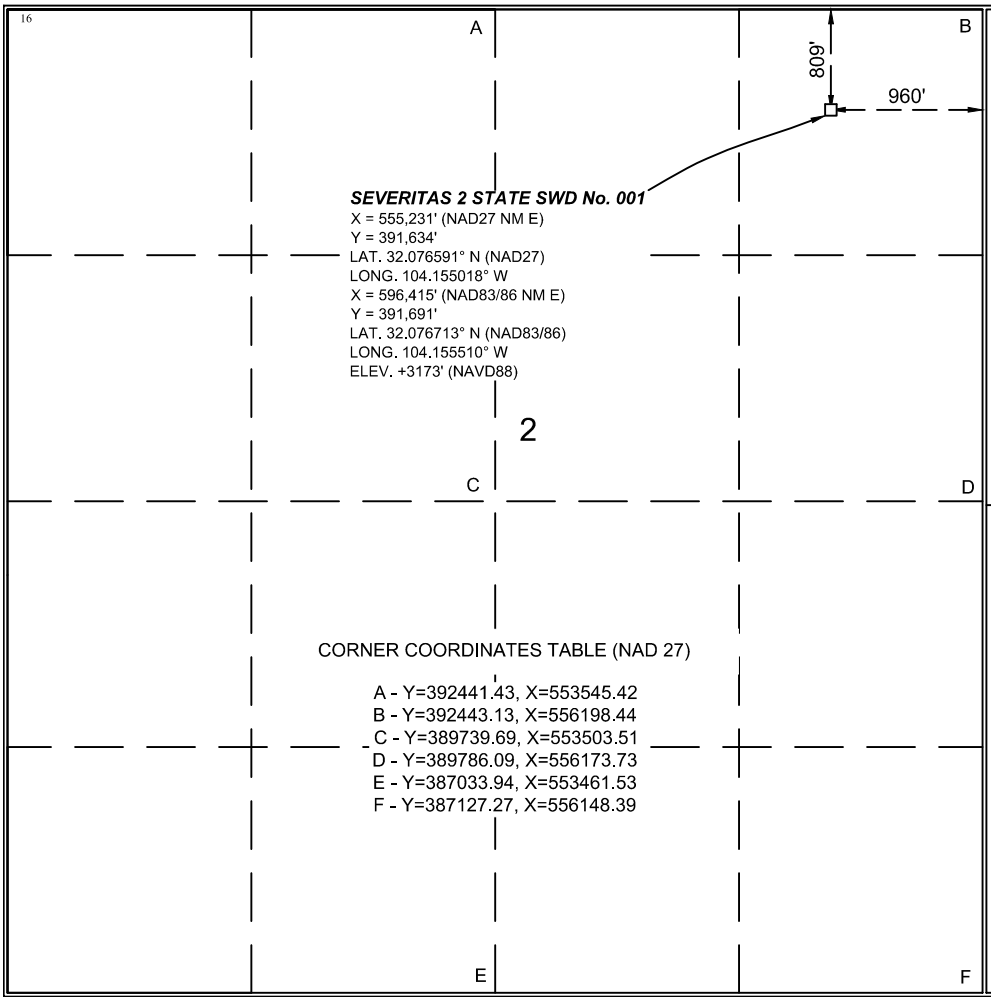
[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	2	26 SOUTH	27 EAST, N.M.P.M.		809'	NORTH	960'	EAST	EDDY

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

[16]



[17] OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Carol Adler 5/23/2024
Signature Date

Carol Adler
Printed Name

caroladler@chevron.com
E-mail Address

[18] SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

08/01//2022
Date of Survey

Signature and Seal of Professional Surveyor:

ROBERT L. LASTRAPES NEW MEXICO 23006 PROFESSIONAL SURVEYOR 08/09/2022

Certificate Number

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

Form APD Comments

Permit 365010

PERMIT COMMENTS

Operator Name and Address:	API Number:
CHEVRON U S A INC [4323] 6301 Deauville Blvd Midland, TX 79706	30-015-55313
	Well: SEVERITAS 2 STATE SWD #001

Created By	Comment	Comment Date
carol adler	THIS IS A SWD WELL - THE OPTIONS WOULD NOT ALLOW FOR SWD AS A CHOICE - PLEASE ADVISE -	5/23/2024
dmcclure	Associated with R-23087 and SWD-2540	8/9/2024

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Form APD Conditions

Permit 365010

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address:	API Number:
CHEVRON U S A INC [4323] 6301 Deauville Blvd Midland, TX 79706	30-015-55313
	Well: SEVERITAS 2 STATE SWD #001

OCD Reviewer	Condition
dmcclure	Notify OCD 24 hours prior to casing & cement
dmcclure	Will require a Deviation Survey with the Form C-105.
dmcclure	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
dmcclure	Cement is required to circulate on All strings of casing.
dmcclure	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system
dmcclure	The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud
dmcclure	If cement does not circulate on any string, a CBL is required for that string of casing
dmcclure	The intermediate casing string shall be set into the Lamar Limestone.
dmcclure	All stipulations within R-23087 and SWD-2540 shall be complied with.

ONSHORE ORDER NO. 1
Chevron
SEVERERITAS SWD #1
Eddy County

CONFIDENTIAL -- TIGHT HOLE
DRILLING PLAN
PAGE: 1

Pad Summary: SINGLE WELL PAD

The table below lists all the wells for the given pad and their respective name and TVD's (ft) for their production target intervals:

Well Name(s)	Target TVD	Formation Desc.
SEVERERITAS SWD #1	5,500	BRUSHY CANYON

1. **GEOLOGICAL TOPS**

Elevation: As seen in C-102

The estimated tops of important geologic markers are as follows:

FORMATION	LITHOLOGIES	TVD	MD	Producing Formation?
Los Medanos	Siltstone	29	29	No
Saldo (SLDO)	Halite	311	311	No
Castile (CSTL)	Anhydrite	515	515	No
Lamar (LMAR)	Carbonates	2,343	2,343	No
Bell Canyon (BLCN)	Sandstone	2,377	2,377	No
Cherry Canyon (CRCN)	Sandstone	3,194	3,194	No
Brushy Canyon (BRSC)	Sandstone	4,406	4,406	Yes: Oil & Natural Gas

WELLBORE LOCATIONS	MD	TVD
SHL	-	-
KOP	-	-
FTP	-	-
LTP	-	-
BHL	5,500	5,500

2. **BOP EQUIPMENT AND TESTING**

Rating Depth 5,500 TVD

Equipment

Chevron will have a minimum of a 5,000 psi rig stack for drill out below surface casing

Request Variance: Yes
Variance Request(s)
Chevron respectfully request to vary from the Onshore Order 2 where it states: "(A full BOP Test) shall be performed: when initially installed and whenever any seal subject to test pressure is broken." We propose to break test if able to finish the next hole section within 21 days of the previous full BOP test. No BOP components nor any break will ever surpass 21 days between testing. A break test will consist of a 250 psi low / ≥ 5,000 psi high for 10 min each test against the connection that was broken when skidding the rig. Upon the first nipple up of the pad a full BOP test will be performed. A full BOP test will be completed prior to drilling the production lateral sections unless the BOP connection was not broken prior to drilling that hole section (example: drilling straight from production into production liner hole section). A break test will only be performed on operations where BLM documentation states a 5M or less BOP can be utilized.

Chevron respectfully requests a variance to use a FMC Technologies UH-S Multibowl wellhead, which will be run through the rig floor on surface casing. BOPE will be nippled up and tested after cementing surface casing. Subsequent tests will be performed as needed, not to exceed 30 days. The field report from FMC Technologies and BOP test information will be provided in a subsequent report at the end of the well. Please see the attached wellhead schematic. An installation manual has been placed on file with the BLM office and remains unchanged from previous submittal. All tests performed by third party.

Testing Procedure
The stack will be tested as specified in the attached testing requirements. Batch drilling of the surface, production, and production liner will take place. A full BOP test will be performed per hole section, unless approval from BLM is received otherwise (see variance request). Flex choke hose will be used for all wells on the pad (see attached specs and variance). BOP test pressures and other documented tests may be recorded and documented via utilization of the IPT 'Suretec' Digital BOP Test Method in lieu of the standard test chart. In the event the IPT system is unavailable, the standard test chart will be used.

3. **CASING PROGRAM**

a. The proposed PRIMARY casing program will be as follows:

Purpose	Top (MD)	Top (TVD)	Bot (MD)	Bot (TVD)	Hole Size	Csg Size	Weight	Grade	Thread
Surface	0'	0'	400'	400'	17.5" / 16"	13.375"	54.5 #	L-80	BTC/STC
Intermediate 1	0'	0'	2,323'	2,323'	12.25"	10-3/4"	40.0 #	L-80	BTC/LTC
Production	0'	0'	5,500'	5,500'	9-7/8"	7-5/8"	29.7 #	L-80	TSH W513

† 5" casing from TOL to 45 degrees (max OD at connection is 5.00")

b. **All casing strings will be new pipe.**
c. **Casing design depths subject to revision based on directional drilling and geologic conditions encountered.**
d. **Chevon will keep casing fluid filled at all times and while RIH. Chevron will check casing at a minimum of every 20 jts (~840'), and never to surpass ⅓ of casing, while running intermediate and production casing in order to maintain collapse SF.**

Casing String	Min SF Collapse	Min SF Burst	Min SF Axial (Joint)	Min SF Axial (Body)
Surface	6.17	3.92	41.70	39.13
Intermediate 1	2.92	4.22	10.19	9.86
Production	1.86	4.21	5.82	5.82

ONSHORE ORDER NO. 1
Chevron
SEVERERITAS SWD #1
Eddy County

CONFIDENTIAL -- TIGHT HOLE
DRILLING PLAN
PAGE: 3

4. **CEMENTING PROGRAM**

Slurry	Type	Top	Bottom	*Quantity*	Yield	Density	%Excess	Volume	Additives
Surface Casing 13-3/8"				(sks)	(cuft/sk)	(ppg)		(cuft)	
Tail	Class C	0'	400'	213	1.63	13.6	25	347	Extender, Antifoam, Retarder, Viscosifier
Intermediate 1 Casing 10-3/4"									
Planned single stage cement job									
Lead	Class C	0'	1,323'	237	2.29	11.5	25	543	Extender, Antifoam, Retarder, Viscosifier
Tail	Class C	1,323'	2,323'	263	1.63	12.6	25	429	Extender, Antifoam, Retarder, Viscosifier
Contingency: Top Job									
1st Tail	Class C	0'	1,323'	384	1.35	14.8	25	518	Extender, Antifoam, Retarder, Viscosifier
Production Casing 7-5/8"									
Planned single stage cement job									
Lead	Class C	0'	4,500'	312	2.49	11.9	25	777	Extender, Antifoam, Retarder, Viscosifier
Tail	Class C	4,500'	5,500'	139	1.35	14.8	25	188	Extender, Antifoam, Retarder, Viscosifier
Contingency: Top Job									
1st Tail	Class C	0'	2,500'	348	1.35	14.8	25	470	Extender, Antifoam, Retarder, Viscosifier

Surface casing shall have at least one centralizer installed on each of the bottom three joints starting with the shoe joint.

5. MUD PROGRAM

Top	Bottom	Type	Min MW	Max MW at TD	Additional Charactistics
0'	400'	Freshwater	8.4	8.8	
400'	2,323'	Brine/Water Based mud	8.7	10.0	-Use brine based mud and use inhibiting productions such as gel as needed for salt section
2,323'	5,500'	Freshwater	8.4	9.0	

A weighting agent and lost circulating material (LCM) will be onsite to mitigate pressure or lost circulation as hole conditions dictate.

If an open reserve pit is not approved by OCD, a closed system will be used consisting of above ground steel tanks and all wastes accumulated during drilling operations will be contained in a portable trash cage and removed from location and deposited in an approved sanitary landfill. If an open reserve pit is in place, pit construction, operation, and closure will follow all applicable rules and regulation. Sanitary wastes will be contained in a chemical porta-toilet and then hauled to an approved sanitary landfill.

All fluids and cuttings will be disposed of in accordance with New Mexico Oil Conservation Division rules and regulations. And transportating of E&P waste will follow EPA regulations and accompanying manifests.

A mud test shall be performed every 24 hours after mudding up to determine, as applicable: density, viscosity, gel strength, filtration, and pH.

Visual mud monitoring equipment shall be in place to detect volume changes indicating loss or gain of circulating fluid volume. When abnormal pressures are anticipated -- a pit volume totalizer (PVT), stroke counter, and flow sensor will be used to detect volume changes indicating loss or gain of circulating fluid volume.

6. TESTING, LOGGING, AND CORING

a. **Production tests are not planned.**
b. Logs run include: **Gamma Ray Log, Directional Survey, Resistivity, Neutron-Density, Sonic & Image logs.**
c. **Coring Operations are not planned.**

7. ABNORMAL PRESSURES AND HYDROGEN SULFIDE

Anticipated BHP	**2,574**	psi
Anticipated BHT	**96**	°F
Anticipated abnormal pressures?	**No**	
Describe abnormal pressures	N/A - Pressure ramp begins in the bottom of the Third Bone Spring formation	
Contingency plan(s) description:	- Casing design accounts for pressure ramp - Mud weighting agents available on location to increase drilling fluid density - BOP, choke, and well control drills - BOP functioned and pressure tested	

Hydrogen sulfide gas is not anticipated: However the H2S Contingency plan is attached with this APD in the event that H2S is encountered

8. OTHER ITEMS

a. **Batch drilling** will be employed whereby the drilling rig may drill a specific hole section on all wells prior to moving to the next hole section.
b. **Shallow rig** may be utilized to drill surface or intermediate sections. The production section will not be drilled by the shallow rig.
c. **Wait on cement** duration for surface and intermediate string(s) will be based on time for tail slurry to develop 500 psi compressive strength and will follow rules as laid out in Onshore Order 2

VI. Separation Equipment:
Separation equipment installed at each Chevron facility is designed for maximum anticipated throughput and pressure to minimize waste. Separation equipment is designed and built according to ASME Sec VIII Div I to ensure gas is separated from liquid streams according to projected production.

VII./VIII. Operational & Best Management Practices:
1. General Requirements for Venting and Flaring of Natural Gas:
- In all circumstances, Chevron will flare rather than vent unless flaring is technically infeasible and venting of natural gas will avoid a risk of an immediate and substantial adverse impact on safety, public health, or the environment.
- Chevron installs and operates vapor recovery units (VRUs) in new facilities to minimize venting and flaring. If a VRU experiences operating issues, it is quickly assessed so that action can be taken to return the VRU to operation or, if necessary, facilities are shut-in to reduce the venting or flaring of natural gas.

2. During Drilling Operations:
- Flare stacks will be located a minimum of 110 feet from the nearest surface hole location.
- If an emergency or malfunction occurs, gas will be flared or vented to avoid a risk of an immediate and substantial adverse impact on public health, safety or the environment and be properly reported to the NMOCD pursuant to 19.15.27.8.G.
- Natural gas is captured or combusted if technically feasible using best industry practices and control technologies, such as the use of separators (e.g., Sand Commanders) during normal drilling and completions operations.

3. During Completions:
- Chevron typically does not complete traditional flowback, instead Chevron will flow produced oil, water, and gas to a centralized tank battery and continuously recover salable quality gas. If Chevron completes traditional flowback, Chevron conducts reduced emission completions as required by 40 CFR 60.5375a by routing gas to a gas flow line as soon as practicable once there is enough gas to operate a separator. Venting does not occur once there is enough gas to operate a separator
- Normally, during completions a flare is not on-site. A Snubbing Unit will have a flare on-site, and the flare volume will be estimated.
- If natural gas does not meet pipeline quality specification, the gas is sampled twice per week until the gas meets the specifications.

4. During Production:
- An audio, visual and olfactory (AVO) inspection will be performed daily (at minimum) for active wells and facilities to confirm that all production equipment is operating properly and there are no leaks or releases except as allowed in Subsection D of 19.15.27.8 NMAC. Inactive, temporarily abandoned, or shut-in wells and facilities will be inspected weekly. Inspection records will be kept for a minimum of five years and will be available upon request by the division.
- Monitor manual liquid unloading for wells on-site, takes all reasonable actions to achieve a stabilized rate and pressure at the earliest practical time and takes reasonable actions to minimize venting to the maximum extent practicable.
- In all circumstances, Chevron will flare rather than vent unless flaring is technically infeasible and venting of natural gas will avoid a risk of an immediate and substantial adverse impact on safety, public health, or the environment.
- Chevron's design for new facilities utilizes air-activated pneumatic controllers and pumps.
- If natural gas does not meet pipeline quality specification, the gas is sampled twice per week until the gas meets the specifications.
- Chevron does not produce oil or gas until all flowlines, tank batteries, and oil/gas takeaway are installed, tested, and determined operational.

5. Performance Standards

- Equipment installed at each facility is designed for maximum anticipated throughput and pressure to minimize waste. Tank pressure relief systems utilize a soft seated or metal seated PSVs, as appropriate, which are both designed to not leak.
- Flare stack has been designed for proper size and combustion efficiency. New flares will have a continuous pilot and will be located at least 100 feet from the well and storage tanks and will be securely anchored.
- New tanks will be equipped with an automatic gauging system.
- An audio, visual and olfactory (AVO) inspection will be performed daily (at minimum) for active wells and facilities to confirm that all production equipment is operating properly and there are no leaks or releases except as allowed in Subsection D of 19.15.27.8 NMAC. Inactive, temporarily abandoned, or shut-in wells and facilities will be inspected weekly. Inspection records will be kept for a minimum of five years and will be available upon request by the division.

6. Measurement or Estimation of Vented and Flared Natural Gas

- Chevron estimates or measures the volume of natural gas that is vented, flared, or beneficially used during drilling, operations, regardless of the reason or authorization for such venting or flaring.
- Where technically practicable, Chevron will install meters on flares installed after May 25, 2021. Meters will conform to industry standards. Bypassing the meter will only occur for inspecting and servicing of the meter.

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.

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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.

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

UIC CLASS II PERMIT SWD-2540

APPENDIX A – AUTHORIZED INJECTION

Permittee: Chevron U.S.A. Inc.

OGRID No.: 4323

Well name: Severitas 2 State SWD No. 1

Surface location: 809 feet from the North line and 960 feet from the East line (Unit Letter A), Section 2, Township 26 South, Range 27 East, NMPM, Lea County, New Mexico
Latitude/Longitude: 32.076713° N and 103.155510° 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): 2377 to 4405 (total interval: approximately 2028)

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: 15,000 barrels of water

Maximum surface injection pressure: 475 psi

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

UIC CLASS II PERMIT SWD-2540

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. 23687.

From: Adler, Carol
To: McClure, Dean, EMNRD
Cc: Malhotra, Sahil; Herrera-Murillo, Cindy; Taylor, Nicole [West Coast Logistics LLC]
Subject: RE: [EXTERNAL] ACTION ID 365010 / SEVERITAS 2 STATE SWD 1 / PERMIT TO DRILL
Date: Monday, August 12, 2024 6:07:53 AM
Attachments: image001.png
Importance: High

Good Morning Dean –

I hope you had a wonderful weekend. Thank you so much for your assistance. Please remove the NGMP from the application and do not hesitate to contact me should you need anything further or have any questions.

Have a great day ~

Carol Adler
Sr. HSE Regulatory Affairs Coordinator
caroladler@chevron.com
(432) 687-7148

From: McClure, Dean, EMNRD <Dean.McClure@emnrd.nm.gov>
Sent: Friday, August 9, 2024 2:33 PM
To: Adler, Carol <caroladler@chevron.com>
Cc: Malhotra, Sahil <Sahil.Malhotra@chevron.com>; Herrera-Murillo, Cindy <CHerreraMurillo@chevron.com>; Taylor, Nicole [West Coast Logistics LLC] <Nicole.Taylor@chevron.com>
Subject: [**EXTERNAL**] RE: [EXTERNAL] ACTION ID 365010 / SEVERITAS 2 STATE SWD 1 / PERMIT TO DRILL

Hello Carol,

Please note that the EP submission process is to only be used for production wells and all injection wells should be submitted using the OCD Permitting submission options (the ones that do not include “EP” within the form type). On the submission, you added a comment that the system will not let you select SWD; this is a function of the system and due to the incorrect submission of this APD. If you have any questions, please reach out.

Additionally, please note that a NGMP is not required for injection wells. The currently

submitted NGMP seems to indicate that Chevron believes that the well will produce 1500 oil bbl/day, 2124 MCF/day, and 2000 water bbl/day. I'm assuming this may be a typo, which may be addressed if you would like me to remove the NGMP from Chevon's submission. Please confirm for me if this is the case.

I've added the provided supplemental documentation to the file. This does address my original concern regarding the discrepancy in intermediate casing setting depth. Please note that I will be including a COA that the intermediate casing be set into the Lamar Limestone.

Dean McClure
Petroleum Engineer, Oil Conservation Division
New Mexico Energy, Minerals and Natural Resources Department
(505) 469-8211

From: Adler, Carol <caroladler@chevron.com>
Sent: Monday, July 29, 2024 3:26 PM
To: McClure, Dean, EMNRD <Dean.McClure@emnrd.nm.gov>
Cc: Malhotra, Sahil <Sahil.Malhotra@chevron.com>; Herrera-Murillo, Cindy <CHerreraMurillo@chevron.com>; Taylor, Nicole [West Coast Logistics LLC] <Nicole.Taylor@chevron.com>
Subject: [EXTERNAL] ACTION ID 365010 / SEVERITAS 2 STATE SWD 1 / PERMIT TO DRILL
Importance: High

Good Afternoon Dean –

I hope you had a wonderful weekend. The permit to drill for the Severitas 2 State SWD 1 was submitted 5/23/2024. We are needing the approval to forward to the State Land Office. I know you are extremely busy and any assistance you are able to render is greatly appreciated. Please do not hesitate to contact me should you need anything further. Thank you so much for your assistance.

SEVERITAS 2 STATE SWD	1	5/23/2024	365010	SEVERITAS SWD PERMIT TO DRILL

Have a great day ~

Carol Adler
Sr. HSE Regulatory Affairs Coordinator

caroladler@chevron.com
(432) 687-7148

LABORATORY SERVICES Natural Gas Analysis
www.permianls.com
575.397.3713 2609 W Marland Hobbs NM 88240

C6+ Gas Analysis Report

Sample Point Code	Sample Point Name	Sample Point Location
18204G	ART84013	Margaret CTB Check

Source Laboratory	Lab File No	Container Identity	Sampler
Laboratory Services	2024089052	0422	JT - Spot

District	Area Name	Field Name	Facility Name
USA	USA	USA	New Mexico

Date Sampled	Date Effective	Date Received	Date Reported
Apr 22, 2024 12:30	Apr 22, 2024 12:30	Apr 23, 2024 08:02	Apr 23, 2024

Ambient Temp (°F)	Flow Rate (Mcf)	Analyst	Press PSI @ Temp °F Source Conditions
79.00		System Administrator	104 @ 87

Operator	Lab Source Description
Silverback Exploration	NG

Component	Normalized Mol %	Un-Normalized Mol %	GPM
H2S (H2S)	0.9000	0.9	
Nitrogen (N2)	2.1520	2.171	
CO2 (CO2)	1.4510	1.464	
Methane (C1)	69.3690	70.003	
Ethane (C2)	13.7300	13.854	3.6710
Propane (C3)	7.3510	7.417	2.0250
I-Butane (IC4)	0.9400	0.948	0.3080
N-Butane (NC4)	2.2140	2.234	0.6980
I-Pentane (IC5)	0.5230	0.528	0.1910
N-Pentane (NC5)	0.4870	0.491	0.1760
Hexanes Plus (C6+)	0.8830	0.891	0.3830
TOTAL	100.0000	100.9010	7.4520

Method(s): Gas C6+ - GPA 2261, Extended Gas - GPA 2286, Calculations - GPA 2172

Analyzer Information

Device Type:	Gas Chromatograph	Device Make:	Shimadzu
Device Model:	GC-2014	Last Cal Date:	Apr 22, 2024

Gross Heating Values (Real, BTU/ft³)

14.696 PSI @ 60.00 Â°F		14.73 PSI @ 60.00 Â°F	
Dry	Saturated	Dry	Saturated
1,327.4	1,305.8	1,330.5	1,308.8

Calculated Total Sample Properties

GPA2145-16 *Calculated at Contract Conditions

Relative Density Real	Relative Density Ideal
0.8120	0.8088

Molecular Weight: 23.4314

C6+ Group Properties

Assumed Composition

C6 - 60.000% C7 - 30.000% C8 - 10.000%

Field H2S: 9000 PPM

PROTREND STATUS:
Passed By Validator on Apr 23, 2024

DATA SOURCE:
Imported

PASSED BY VALIDATOR REASON:
Close enough to be considered reasonable.

VALIDATOR:
Ashley Russell

VALIDATOR COMMENTS:
OK

Operator	Well	Date	Gas Flared (MCF)	Method of Measurement
Silverback Operating II, LLC	Margaret Facility	07/06/2024	164	Orifice Meter-Electronic Flow Computer