

**BEFORE THE OIL CONSERVATION DIVISION
EXAMINER HEARING SEPTEMBER 12, 2024**

CASE NO. 24755

*INDEPENDENCE AGI #1 & #2 - AMEND ORDER
R-21455-B/SWD-2464*

LEA COUNTY, NEW MEXICO



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

**APPLICATION OF PINON MIDSTREAM, LLC TO
AMEND COMMISSION ORDER NO.
R-21455-B/SWD-2464 TO INCREASE THE SHARED
MAXIMUM DAILY INJECTION RATE FOR THE
INDEPENDENCE AGI #1 AND #2 WELLS,
LEA COUNTY, NEW MEXICO.**

**CASE NO. 24755
COMMISSION ORDER NO. R-21455-B**

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

**APPLICATION OF PINON MIDSTREAM, LLC TO
AMEND COMMISSION ORDER NO.
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MAXIMUM DAILY INJECTION RATE FOR THE
INDEPENDENCE AGI #1 AND #2 WELLS,
LEA COUNTY, NEW MEXICO.**

**CASE NO. 24755
COMMISSION ORDER NO. R-21455-B**

SELF-AFFIRMED STATEMENT OF STEVEN GREEN

1. My name is Steven Green, and I am employed by Pinon Midstream, LLC (“Piñon”) (OGRID 330718) as the Chief Executive Officer.

2. I have previously testified before the New Mexico Oil Conservation Commission as non-technical fact witness. I am familiar with the application filed by Piñon in this case.

3. Piñon will present a technical witness—David A. White, P.G., with Geolex, Inc.—to review the C-108 Amendment Application that was filed with the Division in support of this application. Piñon has retained Geolex, Inc. to assist with its acid gas injection operations and this application.

4. **Piñon Exhibit A-1** is a copy of the application filed in this case.

5. **Piñon Exhibit A-2** is a copy of Order No. R-21455-B, which we seek to amend to increase the maximum daily injection rate of treated acid gas (“TAG”) for disposal through the Independence AGI #1 and #2 wells from 20 MMSCFD to 28.5 MMSCFD.

6. **Piñon Exhibit A-3** is a copy of the Class II Underground Injection Control Permit SWD-2464, which we also seek to amend for the same purpose.

7. In this case, Piñon seeks to amend Commission Order No. R-21455-B/SWD-2464

**BEFORE THE OIL CONSERVATION DIVISION
Santa Fe, New Mexico
Exhibit No. A
Submitted by: Piñon Midstream, LLC
Hearing Date: September 12, 2024
Case No. 24755**

to increase the maximum daily injection rate of TAG for disposal through its Independence AGI #1 and #2 wells (collectively, the “Independence AGI Wells”) from 20 MMSCFD to 28.5 MMSCFD. This request to increase the maximum daily injection rate of the Independence AGI Wells is consistent with my prior testimony before the Commission in the fall of 2022, that Piñon would seek further injection rate increases for the Independence AGI Wells over time when producer demand required and Piñon had further refined the capabilities of the injection reservoir. All other conditions and requirements of the Independence AGI Well permits are proposed to remain unchanged.

8. Mr. White’s testimony provides the background on the regulatory history and operational background in addition to the technical analyses necessary to support the requested amendment. My testimony will provide an update on Piñon’s operations and the basis for the requested increased injection rate.

9. The Independence AGI Wells serve Piñon’s Dark Horse Treating Facility, which is experiencing increasing demand for sour gas treating and TAG disposal from current and prospective producer customers in Lea County, NM.

10. In planning for this increased demand, Piñon has (i) secured a New Source Review air permit from the New Mexico Environment Department authorizing the construction of up to three (3) additional 900 GPM amine treating units at the Dark Horse Treating Facility (the “NSR Permit”), and (ii) developed and initiated a facility improvement schedule for the Dark Horse Treating Facility that will significantly increase the sour-gas treatment capacity and result in the need for up to 22.5 MMSCFD of TAG disposal as soon as Q2 2025 and 28.5 MMSCFD of TAG disposal as soon as Q2 2026 (based upon current CO2 and H2S compositional assumptions).

11. Currently the Dark Horse Treating Facility has three (3) 450 GPM amine

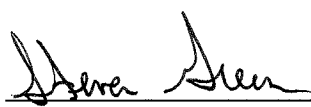
treating units in-service which, at full utilization, are estimated to require approximately 13.5 MMSCFD of TAG disposal capacity based on current CO2 and H2S compositional assumptions. Amine Trains I and II are currently 100% utilized, with Amine Train III currently approximately 80% utilized. Piñon has sufficient compression capacity and received volume forecasts from existing producer customers that substantiate our expectations that Amine Trains I – III will be 100% utilized within the next few months.

12. In response to continued requests from current and prospective producer customers for additional treating capacity, and in accordance with the facility improvement schedule, Piñon has entered into substantial capital commitments for several pieces of long-lead equipment associated with Amine Train IV, a 900 GPM amine treating unit, which will (at full utilization) require the Dark Horse Treating Facility to expand its TAG disposal capacity to approximately 22.5 MMSCFD as soon as Q2 2025 (based on current CO2 and H2S compositional assumptions). Piñon is seeking approval this C-108 Amendment Application for the Independence AGI Wells prior to (i) making further capital commitments associated with additional Amine Train IV equipment, (ii) awarding contracts for the construction and installation of Amine Train IV in accordance with the NSR Permit and (iii) agreeing to provide producer customers with additional treating capacity that would require the construction and installation of Amine Train IV to fulfill.

13. Additionally, conversations with existing and prospective producer customers have indicated that Piñon will need treating capacity beyond Amine Train IV as soon as Q2 2026 and, as such, is requesting approval of this C-108 Amendment Application to provide for up to 28.5 MMSCFD of TAG disposal capacity in order to facilitate Piñon’s long-lead planning for Amine Train V. If approved, 28.5 MMSCFD of TAG disposal capacity would allow for approximately 80% utilization of Amine Train V based on current CO2 and H2S compositional assumptions.

14. Piñon Exhibit A-1 through A-3 were either prepared by me, compiled under my direction and supervision, or comprise company business records or public records of the Division.

15. I affirm under penalty of perjury under the laws of the State of New Mexico that the foregoing statements are true and correct. I understand that this self-affirmed statement will be used as written testimony in this case. This statement is made on the date next to my signature below.



Steven Green

9/5/2024
Date

32700663_v1

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

**APPLICATION OF PINON MIDSTREAM, LLC TO
AMEND COMMISSION ORDER NO.
R-21455-B/SWD-2464 TO INCREASE THE SHARED
MAXIMUM DAILY INJECTION RATE FOR THE
INDEPENDENCE AGI #1 AND #2 WELLS,
LEA COUNTY, NEW MEXICO.**

**CASE NO. 24755
COMMISSION ORDER NO. R-21455-B**

APPLICATION

Pinon Midstream, LLC (“Piñon”) (OGRID 330718) through its undersigned attorneys, hereby makes application to the Oil Conservation Commission pursuant to the provisions of NMSA 1978, Sections 70-2-11 and 70-2-12 and 19.15.4.20.B NMAC, to amend Commission Order No. R-21455-B/SWD-2464 to increase the maximum daily injection rate of treated acid gas (“TAG”) for disposal through its Independence AGI #1 and #2 wells from 20 MMSCFD to 28.5 MMSCFD. In support of this application, Piñon states as follows:

1. The Independence AGI #1 well (API No. 30-025-48081) is an existing vertical well with a surface and bottom hole location approximately 829 feet from the north line and 1,443 feet from the west line (Unit C) of Section 20, Township 25 South, Range 36 East, NMPM, Lea County, New Mexico. It was originally approved by the Commission as an injection well for disposal of TAG under Commission Order No. R-21455-A in Case No. 21381.
2. Commission Order No. R-21455-A authorized a maximum daily injection rate of 12 MMSCFD into the target injection interval within the Devonian and Silurian formations from a depth of approximately 16,230 to 17,900 feet deep with a maximum surface injection pressure

**BEFORE THE OIL CONSERVATION DIVISION
Santa Fe, New Mexico
Exhibit No. A-1
Submitted by: Piñon Midstream, LLC
Hearing Date: September 12, 2024
Case No. 24755**

of 4,779 psig. Independence AGI #1 was commissioned and placed into service in September 2021.

3. Order R-21445-A also required a second acid gas injection (“AGI”) well to be approved and capable of receiving volumes of TAG “equal to or greater than the volumes approved for injection into” the Independence AGI #1. *See* Order No. R-21455-A, ¶ 18.

4. Under the terms of Order No. R-21455-A, Piñon timely filed an administrative C-108 application for a redundant AGI injection well, the Independence AGI #2 well (API No. 30-025-49974). The Division approved the application under Order SWD-2464.

5. The Independence AGI #2 is a deviated well with a surface location approximately 1,110 feet from the north line and 1,443 feet from the west line (Unit C) and a bottom hole location approximately 1,080 feet from the south line and 1,978 feet from the west line (Unit N) in Section 20, Township 25 South, Range 36 East, NMPM, Lea County, New Mexico. It injects into the same target reservoir as the Independence AGI #1 well, from approximately 16,080 to 17,683 feet deep within the Devonian and Silurian formations with a maximum surface injection pressure of 5,005 psig.

6. Order No. R-21455-B authorizes Piñon to inject a shared maximum of 20 MMSCFD of TAG into either or both Independence AGI #1 and Independence AGI #2. *See* Order R-21455-B, decretal ¶ 1.

7. The Independence AGI wells serve Piñon’s Dark Horse Treating Facility, which is experiencing increasing demand for sour gas processing and disposal. In planning for this increased demand, Piñon has (i) secured a New Source Review air permit from the New Mexico Environment Department authorizing the construction of several additional amine treating units at the Dark Horse Treating Facility, and (ii) developed and initiated a facility improvement

schedule for the Dark Horse Treating Facility that will increase the sour-gas treatment capacity and result in the need for up to 22.5 MMSCFD of TAG disposal as soon as Q2 2025 and 28.5 MMSCFD as soon as Q2 2026.

8. Accordingly, Piñon seeks authority to increase the total maximum injection rate of TAG that may be injected into either or both Independence AGI wells from 20 MMSCFD to 28.5 MMSCFD.

9. A complete C-108 Amendment Application providing the information and analyses in support of this request is attached as Exhibit A.

10. Approving this application authorizing an increase in the shared injection rate between the Independence AGI #1 and Independence AGI #2 to 28.5 MMSCFD will allow Piñon to meet increasing demands for sour gas disposal and avoid interruptions to development and production in the area.

11. Approval will prevent waste, protect correlative rights, and protect human health and the environment.

WHEREFORE, Piñon respectfully requests that this application be set for a hearing on the merits before the Oil Conservation Commission at the regularly scheduled Commission meeting on September 19, 2024, or at the earliest available setting and, after notice and hearing as required by law, the Commission amend Order No. R-21455-B and SWD-2464 to increase the maximum daily injection rate of TAG from 20 MMSCFD to 28.5 MMSCFD, and such further relief as may be deemed necessary and appropriate.

Respectfully submitted,

HOLLAND & HART LLP

By:  _____

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**ATTORNEYS FOR PINON MIDSTREAM,
LLC**

CASE NO. _____: Application of Pinon Midstream, LLC to Amend Commission Order No. R-21455-B/SWD-2464 to increase the shared maximum daily injection rate for the Independence AGI #1 and #2 Wells, Lea County, New Mexico. Applicant in the above-styled cause seeks to amend Commission Order No. R-21455-B/SWD-2464 to increase the maximum daily injection rate of treated acid gas for disposal through the Independence AGI #1 and #2 wells from 20 MMSCFD to 28.5 MMSCFD. The **Independence AGI #1** well (API No. 30-025-48081) is an existing vertical well with a surface and bottom hole location approximately 829 feet from the north line and 1,443 feet from the west line (Unit C) of Section 20, Township 25 South, Range 36 East, NMPM, Lea County, New Mexico. It was approved to inject within the Devonian and Silurian formations from a depth of approximately 16,230 to 17,900 feet deep under Commission Order No. R-21455-A with a maximum surface injection pressure of 4,779 psig. The **Independence AGI #2** is a deviated well with a surface location approximately 1,110 feet from the north line and 1,443 feet from the west line (Unit C) and a bottom hole location approximately 1,080 feet from the south line and 1,978 feet from the west line (Unit N) in Section 20, Township 25 South, Range 36 East, NMPM, Lea County, New Mexico. It injects into the same target reservoir as the AGI #1 well, from approximately 16,080 to 17,683 feet deep within the Devonian and Silurian formations with a maximum surface injection pressure of 5,005 psig. Said area is located approximately 6 miles west of Jal, New Mexico.

EXHIBIT A



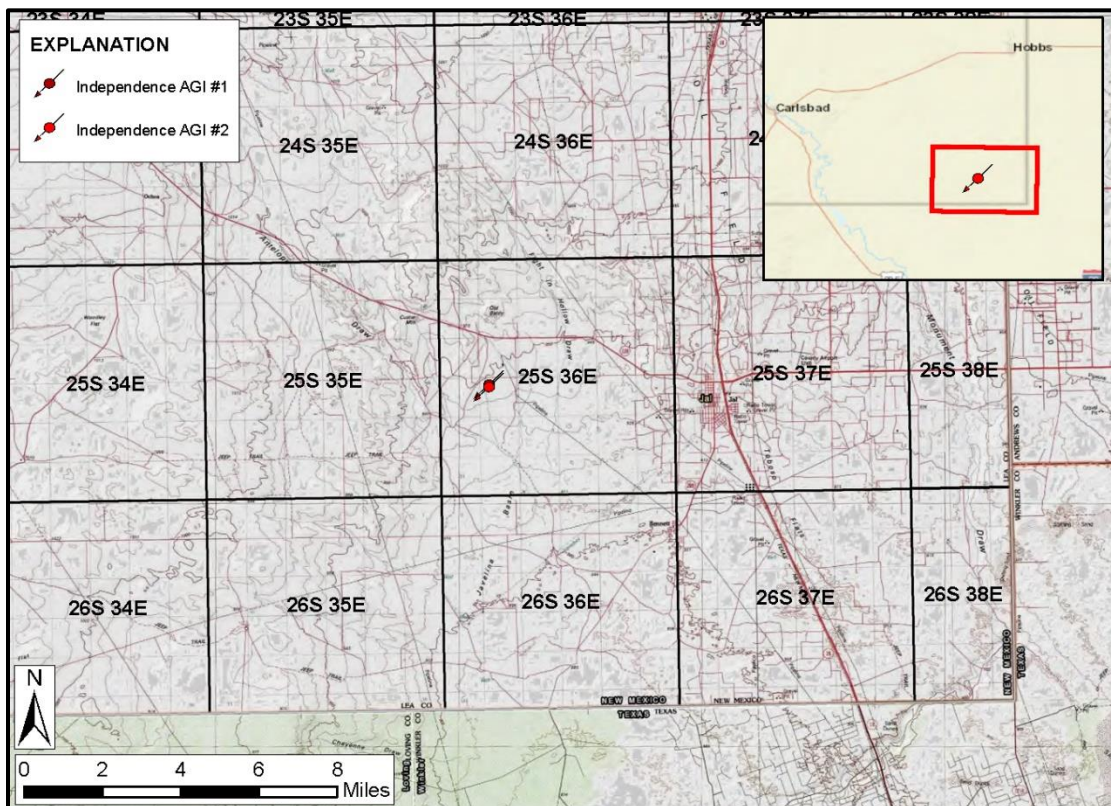
APPLICATION TO AMEND EXISTING UIC CLASS II PERMIT

REQUEST TO INCREASE DAILY ALLOWABLE INJECTION VOLUME
NMOCC ORDER R-21455 & NMOCD ORDER SWD-2464

Pinon Midstream, LLC (OGRID #330718)

Independence AGI #1
API: 30-025-48081
Surface Lat: 32.120835 (NAD83)
Surface Long: -103.291025 (NAD83)

Independence AGI #2
API: 30-025-49974
Surface Lat: 32.120063 (NAD83)
Surface Long: -103.291025 (NAD83)



June 2024

Prepared for:

Pinon Midstream, LLC
757 N. Eldridge Pkwy, Suite 1150
Houston, Texas 77079
(713) 300-9300

Prepared by:

Geolex, Inc.®
500 Marquette Ave NW, Suite 1350
Albuquerque, New Mexico 87102
(505) 842-8000

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL
RESOURCES DEPARTMENT

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

FORM C-108
Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: Secondary Recovery Pressure Maintenance Disposal Storage
Application qualifies for administrative approval? Yes No

II. OPERATOR: Pinon Midstream, LLC [330718]

ADDRESS: 757 N. Eldridge Pkwy, Suite 1150, Houston, TX 77079

CONTACT PARTY: Patrick Westerheide PHONE: (713) 300-9300

III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection.
Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? Yes No
If yes, give the Division order number authorizing the project: NMOCC R-21455 (A-B) & NMOCD SWD-2464

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

Section 5; Appendix A

VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

Sections 1 & 5

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected; **Sections 1, 2, 3, 4**
2. Whether the system is open or closed; **Sections 1, 2, 4**
3. Proposed average and maximum injection pressure; **Sections 1 & 3**
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and, **Sections 1, 3, 4**
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.). **Sections 1, 3, 4**

*VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.

N/A - Amendment

IX. Describe the proposed stimulation program, if any.

N/A

*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).

N/A - Amendment

*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

N/A - Amendment

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.

Section 4

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

Appendix B

XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

NAME: David A. White, P.G. TITLE: Consultant to Piñon Midstream

SIGNATURE:  DATE: 6/24/2024

E-MAIL ADDRESS: dwhite@geolex.com

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted.

Please show the date and circumstances of the earlier submittal: NMOCC R-21455-(A,B) Approved 11/4/2020 & NMOCC SWD-2464 Approved 3/31/2022

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

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1.0 EXECUTIVE SUMMARY

On behalf of Pinon Midstream, LLC (OGRID #330718; “**Piñon**”), Geolex, Inc.® (“**Geolex**”) has prepared and is hereby submitting a complete C-108 Amendment Application seeking authorization to increase the shared daily allowable injection volume for the Independence AGI #1 (API: 30-025-48081; “**Independence AGI #1**”) and Independence AGI #2 (API: 30-025-49974; “**Independence AGI #2**”, and together with Independence AGI #1, the “**Independence AGI Wells**”) wells to 28.5 million standard cubic feet per day (MMSCFD), in order to meet the increasing demand for sour gas disposal in southeast New Mexico. Operation of the Independence AGI Wells is currently authorized by New Mexico Oil Conservation Commission (NMOCC) Order R-21455 and New Mexico Oil Conservation Division (NMOCD) Order SWD-2464. The wells are currently limited to a shared daily allowable injection volume of 20 MMSCFD.

In developing this C-108 amendment application, Piñon has prepared all relevant and typical amendment application components that address the primary issues that are the subject of this request, as well as all additional supporting documents required of this application. These generally include, but are not limited to, a detailed description of additional seismic survey analysis completed, updated reservoir modeling and injection simulation results, re-evaluation of the injection-induced seismicity risk, additional investigation of the Independence AGI #1 and Independence AGI #2 Areas of Review (“**AOR**”), and the review of land records and identification of all interested parties. All remaining typical C-108 application components can be found in the original applications, which were approved on November 4, 2020 (Independence AGI #1) and March 31, 2022 (Independence AGI #2) and are publicly available in NMOCD well records.

The need, and primary motivation, leading to Piñon’s request for additional injection capacity (up to 28.5 MMSCFD) comes in response to an increasing demand from oil and gas operators for sour-gas treatment services in the area of Piñon’s Dark Horse Treating Facility, and following additional geologic investigation and verification that the approved Siluro-Devonian injection reservoir is capable of meeting the additional treated acid gas (“**TAG**”) disposal needs of the area. In planning for this increased demand, Piñon has (i) secured a New Source Review (“**NSR**”) air permit from the New Mexico Environment Department permitting the construction of several additional amine treating units at the Dark Horse Treating Facility, and (ii) developed and initiated a facility improvement schedule for the Dark Horse Treating Facility that will increase the sour-gas treatment capacity of the Dark Horse Treating Facility and result in the need for up to 22.5 MMSCFD of TAG disposal as soon as Q2 2025 and 28.5 MMSCFD as soon as Q2 2026. Concurrent with the expansion of the sour-gas treatment capacity of the Dark Horse Treating Facility, this application has been prepared and submitted seeking approval to increase the daily allowable injection volume of the Independence AGI Wells, so that the TAG disposal capacity of the Independence AGI Wells can safely satisfy the growing sour-gas treatment needs of area oil and gas operators.

As it is critical to verify that the approved Siluro-Devonian injection reservoir can accommodate the requested 28.5 MMSCFD of TAG, within current operating pressure limitations, Piñon has completed additional geologic assessment, reservoir modeling, and injection simulation evaluations, which leverage new three dimensional (“**3D**”) seismic survey data. Detailed analysis of this data has allowed for a better characterization of the subsurface structure in the project area, and through seismic inversion analysis methods, has allowed for the development of a more accurate characterization of the Siluro-Devonian injection reservoir, with respect to porosity development and the interconnectivity of porous strata. Subsequent injection simulations completed to support this request incorporate history-matched operation of the Independence AGI Wells, to ensure modeled reservoir porosity and permeability characteristics accurately reproduce historic operating conditions, and clearly demonstrate that the approved Siluro-Devonian injection reservoir is capable of accommodating TAG injection up to 28.5 MMSCFD.

Injection operations via Independence AGI #1 were initially authorized on November 4, 2020, through the issuance of NMOCC Order R-21455. Independence AGI #1 was approved as an Underground Injection

Control (“UIC”) Class II injection well for the general purpose of permanently sequestering TAG containing hydrogen sulfide (“H₂S”) and carbon dioxide (“CO₂”) into deep geologic strata of the Siluro-Devonian. Independence AGI #1 was drilled as a vertical well at 829 feet from the north line (“FNL”) and 1,443 feet from the west line (“FWL”), in Section 20 of Township 25 South, Range 36 East (“T25S, R36E”). Independence AGI #1 is currently approved to inject up to 20 MMSCFD (shared with the redundant Independence AGI #2) at surface injection pressures not to exceed 4,779 psig. Independence AGI #1 was commissioned and placed in service in September 2021.

Pursuant to the redundant well requirements of NMOCC Order R-21455, an additional application was prepared and submitted for Independence AGI #2, which was approved on March 31, 2022, through the issuance of NMOCD Order SWD-2464. Independence AGI #2 was drilled as a deviated wellbore from a surface location at 1,110 FNL and 1,443 FWL, in Section 20 of T25S, R36E to a bottomhole location at 1,080 feet from the south line (“FSL”) and 1,978 feet FWL, within the same Section 20 of T25S, R36E. Daily allowable injection volume was limited to 20 MMSCFD (shared with Independence AGI #1) at surface injection pressures not to exceed 5,005 psig. Independence AGI #2 was commissioned and placed in service in April 2023.

Since the commissioning of the Independence AGI Wells, Piñon has maintained compliance with all requirements of NMOCC Order R-21455 and NMOCD Order SWD-2464 and operation of the Independence AGI Wells clearly demonstrates the approved Siluro-Devonian reservoir’s suitability for TAG disposal operations. Throughout their operation, Piñon and Geolex have continuously monitored and analyzed operating parameters, and conducted mechanical integrity testing operations, to ensure the integrity of the Independence AGI Wells and confirm normal and safe operating conditions.

In accordance with the results of additional geological analyses, informed by newly acquired 3D seismic survey data, reservoir modeling and injection simulations have been recompleted to better understand and forecast plume characteristics and the migration of the resultant TAG plume after thirty (30) years of injection operations. Following operation of the Independence AGI Wells at the proposed shared daily allowable injection volume of up to 28.5 MMSCFD, the resultant TAG plume would occupy an area of approximately 9.5 square miles and would extend a maximum of approximately two (2) miles from the Dark Horse Treating Facility. Gas saturation values are anticipated to range from 0 to 0.47 with diffuse concentrations (i.e., <10%) characterizing the plume margins.

In support of this amendment application, and in accordance with the results of additional geologic analysis, evaluation of the injection-induced seismicity risk has also been recompleted. Analysis to determine the risk for induced seismicity was completed utilizing the Stanford Center for Induced and Triggered Seismicity’s (SCITS) Fault Slip Potential (FSP) modeling package. While analysis of 3D seismic survey data has allowed for a more detailed characterization of faults within the project area, there are no features that exhibit offset sufficient to compromise the injection reservoir confining strata and there are no features predicted to be at risk for injection-induced slip in response to the proposed injection activities, which include operation of the Independence AGI Wells and additional offset saltwater disposal (“SWD”) wells. These results confirm the findings of prior induced-seismicity risk assessment activities, in that the operations of the Independence AGI Wells, as proposed, will not result in an increased risk for injection-induced fault slip in the area.

As the proposed increase of the maximum allowable daily allowable injection volume (up to 28.5 MMSCFD) reflects a significant change to the Independence AGI Well project, a re-evaluation of the Independence AGI Wells AOR was completed to ensure all oil and gas operators and interested parties (i.e., surface owners) have been identified and will be provided written notification of Piñon’s request and the associated NMOCC hearing to consider this matter.

In total, there are twenty-three (23) wells within the one (1) mile radius of the Independence AGI Wells AOR. Specific information relating to active and plugged wells is summarized in Appendix A and Figures 13 and 14. Of these wells, five (5) are active and four (4) are plugged. Additionally, there are 14 locations permitted, but have not yet been drilled or completed. Active wells commonly target Bone Springs and Wolfcamp formations overlying the approved Siluro-Devonian injection reservoir and vertically isolated by numerous geologic intervals of low porosity and low permeability strata. Within the one (1) mile AOR, two (2) wells penetrate the approved injection interval, including the active West Jal B Deep #1 SWD well (API: 30-025-25046; the “**West Jal B Deep #1**”) and the plugged West Jal Unit #1 well. As part of previously approved C-108 applications for the Independence AGI Wells, it has been demonstrated that the West Jal Unit #1 well has been properly plugged and is not anticipated to be adversely impacted by operation of the Independence AGI Wells.

In re-evaluating the Independence AGI #2 AOR, modified to reflect a one (1) mile buffer zone surrounding the surface and bottom-hole locations and Independence AGI #2’s deviation path, Piñon has completed a detailed review of Lea County, New Mexico land records to identify all operators, oil and gas lessees, and surface owners within a one (1) mile radius of the Independence AGI Wells. Section 5.0 of this application includes the results from that review. These parties will be provided with notice of the application and associated NMOCC hearing, as well as a complete copy of the amendment application, upon receiving a hearing date to consider this matter.

As the proposed modifications to NMOCC Order R-21455 and NMOCD Order SWD-2464 will ensure Piñon is able to meet the anticipated sour-gas disposal needs of local oil and gas operators, and thus, mitigate the potential for waste of natural resources, Piñon requests approval of this Form C-108 injection permit amendment application to increase the daily allowable injection volume, shared by the Independence AGI Wells, to 28.5 MMSCFD. As demonstrated by reservoir modeling and injection simulation case studies, no modification to the current maximum allowable operating pressure limitations is required, and as such, is not requested in this submittal.

2.0 INTRODUCTION AND REQUEST FOR AMENDMENT OF NMOCC ORDER R-21455 AND NMOCD ORDER SWD-2464

The completed NMOCD Form C-108 is included before the Table of Contents of this document and references appropriate sections where the data required to be submitted is included.

In submitting this amendment application, Piñon requests approval to amend the current daily allowable injection volume limitation that is shared by the Independence AGI Wells. As proposed, this would increase the daily allowable injection volume from 20 MMSCFD to 28.5 MMSCFD. No physical modifications or amendment of the currently approved surface injection pressure limitations for the Independence AGI Wells is being proposed. The Independence AGI Wells will continue to operate within their current maximum allowable operating pressures (MAOP) of 4,779 psig (Independence AGI #1) and 5,005 psig (Independence AGI #2).

Piñon's request to increase the daily allowable injection volume limitation for the Independence AGI Wells comes in response to an increasing demand for sour-gas treatment services from area oil and gas operators, which has steadily increased since commissioning of Independence AGI #1, in September 2021. Gas production forecasts indicate that Piñon customers will require approximately 22.5 MMSCFD of sour-gas treatment and disposal capacity as soon as Q2 2025 and 28.5 MMSCFD as soon as Q2 2026. To ensure the sour-gas treatment and disposal needs of local oil and gas operators can be met, and preventing the potential waste of natural resources, Piñon has (i) secured a NSR air permit from the New Mexico Environment Department permitting the construction of several additional amine treating units and (ii) developed and initiated a facility improvement schedule for its Dark Horse Treating Facility that will increase the sour-gas treatment capacity of the Dark Horse Treating Facility and result in the need for up to 22.5 MMSCFD of TAG disposal as soon as Q2 2025 and 28.5 MMSCFD as soon as Q2 2026. Concurrent with the expansion of the sour-gas treatment capacity of the Dark Horse Treating Facility, this application has been prepared and submitted seeking approval to increase the daily allowable injection volume of the Independence AGI Wells, so that the TAG disposal capacity of the Independence AGI Wells can safely satisfy the growing sour-gas treatment needs of area oil and gas operators.

In accordance with prior discussions and guidance provided by NMOCD UIC personnel, regarding amendment applications for currently approved AGI wells, this application has been developed as a request to amend NMOCC Order R-21455 and NMOCD Order SWD-2464, and includes specific application sections that address the issues that are the subject of this request for amendment, as well as select additional critical application components, which relate to interested parties, evaluation of the AOR and identification of potentially interested parties, updates to the geologic simulation model and the completion of additional cases studies, and a re-evaluation of the induced-seismicity risk assessment of the project area. The information is presented in the following sections:

- A detailed summary of the permitting history and approval conditions of the Independence AGI Wells, and a description of the Dark Horse Treating Facility, for which the Independence AGI Wells service (Section 3.0)
- A detailed description of additional geologic analyses completed which confirms the currently approved injection reservoir's (i.e., Siluro-Devonian) ability to accommodate the additional disposal needs of Piñon and local oil and gas operators, up to 28.5 MMSCFD (Section 3.0 and 4.0)
- Updated geologic model, injection simulation, and induced-seismicity risk assessment, in accordance with updated geologic evaluation (Section 4.0)

- Re-evaluation of the Independence AGI Wells AOR, modified to include the surface location and as-built Independence AGI #2 bottomhole location, and the identification of oil and gas wells, active operators, lessees, and surface owners within the AOR (Section 5.0)

In addition, this application includes the following supporting information:

- **Appendix A:** Information on wells within one (1) and two (2) miles of the surface location and bottomhole locations of each Independence AGI Well
- **Appendix B:** Summary of all interested parties identified and to be provided complete copies of the C-108 application and notified of the NMOCC hearing to consider this matter, example notification letters, and an example public notification

3.0 PERMITTING HISTORY OF THE INDEPENDENCE AGI WELLS AND DESCRIPTION OF THE DARK HORSE TREATING FACILITY, AND ADDITIONAL GEOLOGIC ANALYSIS

The Dark Horse Treating Facility, constructed and operated by Piñon, is located in Section 20 of T25S, R36E, approximately six (6) miles west of Jal, New Mexico (Figures 1 and 2). The facility is supported by two (2) TAG injection wells, the Independence AGI #1 and Independence AGI #2, which are utilized to dispose of TAG (containing carbon dioxide and hydrogen sulfide) through injection into deep geologic reservoirs underlying local production intervals and not productive of oil and gas. In the following sections we provide a summary of the permitting history of the Independence AGI Wells, a description of the Dark Horse Treating Facility, and descriptions of additional geologic analysis completed in support of this application.

3.1 PERMITTING HISTORY AND AUTHORIZATION FOR INJECTION (INDEPENDENCE AGI WELLS)

The incorporation of AGI wells, as the primary method for handling TAG at the Dark Horse Treating Facility, began in September 2021 following the commissioning of Independence AGI #1. Authorization to construct and operate Independence AGI #1 was issued on November 4, 2021 (NMOCC Order R-21455), following technical and administrative review by NMOCD personnel and a public hearing before the NMOCC to consider the matter. As approved, Independence AGI #1 was authorized to inject up to a maximum of 12 MMSCFD at a surface injection pressure not to exceed 4,779 psig. Independence AGI #1 was successfully drilled and completed, as a vertical well, between late Q4 2020 and early Q3 2021.

In accordance with the redundant well requirements of NMOCC Order R-21455 (Special Condition 18), Piñon prepared and submitted for consideration a Form C-108 application to construct and operate Independence AGI #2, on November 4, 2021, in partial fulfillment of NMOCC's required project timeline. The primary purpose of Independence AGI #2 is to provide operational redundancy at the Dark Horse Treating Facility, in the event of planned or unplanned downtime of Independence AGI #1, and the secondary purpose to increase the allowable daily injection for the two-well AGI system to 20 MMSCFD. Following technical and administrative review, by NMOCD personnel, the application was approved on March 31, 2022, through the issuance of NMOCD Order SWD-2464, however, NMOCD determined that the requested increase to the daily volume limitation could not be authorized via the administrative process. The two-well AGI system was approved for construction and operation with a shared daily allowable injection volume of up to 12 MMSCFD. Independence AGI #2 was authorized to operate at a maximum allowable operating pressure of 5,005 psig.

In accordance with the approved C-108 redundant well application, Independence AGI #2 was drilled as a deviated well from a surface location at 1,110 FNL and 1,443 FWL, in Section 20, T25S, R36E, to a bottom-hole location at 1,080 FSL and 1,978 FWL, within the same Section 20 (Figure 2). Following construction activities, mechanical integrity testing was performed and witnessed by NMOCD, to confirm the adequacy of construction activities. Independence AGI #2 was commissioned and placed in service in April of 2023.

To consider Piñon's request to increase the shared daily allowable injection volume limitation for the Independence AGI Wells, up to 20 MMSCFD, a public hearing was held before the NMOCC, on September 8, 2022. In hearing, Piñon and their technical witnesses presented the results of geologic assessment of the project area, reservoir modeling and injection simulation studies, and induced-seismicity risk evaluation, which clearly demonstrated the approved Siluro-Devonian injection reservoir's ability to accommodate injection at the rate of 20 MMSCFD. Upon completion of the hearing, NMOCC approved Piñon's request and the associated NMOCC Order was issued on October 13, 2022, providing approval to inject a shared volume of up to 20 MMSCFD for the Independence AGI Wells.

Following approval and the commencement of injection activities via the Independence AGI Wells, the demand for sour-gas treatment services has continued to rise, and the Piñon facility is anticipated to require a TAG disposal capacity of up to 22.5 MMSCFD as soon as Q2 2025 and 28.5 MMSCFD as soon as Q2 2026, in order to meet the forecasted demands of local oil and gas operators, which forms the basis of Piñon's request to amend NMOCC Order R-21455 to allow an increased daily injection volume of 28.5 MMSCFD. In support of this request, and in accordance with related conditions of approval, Piñon has continued to refine geologic characterization models of the project area, completed routine analysis of injection well operating parameters and the Siluro-Devonian reservoir response to injection activities, and completed additional geologic modeling and simulation activities, which confirm the feasibility of the request and are further discussed in Section 4.0.

3.2 LOCATION OF THE DARK HORSE TREATING FACILITY AND INDEPENDENCE AGI WELLS

Figure 1 shows the general location of the Independence AGI Wells, approximately six (6) miles west of Jal, New Mexico. Figure 2 shows the location of the Dark Horse Treating Facility and surface- and bottom-hole locations of the Independence AGI #1 and Independence AGI #2, in Section 20 of T25S, R36E. Sour-gas treatment, compression, and injection process areas are generally located in the northwest areas of the facility property, in order to isolate these processes, avoid significant surface transmission of TAG, and minimize the potential risk to facility personnel. The Dark Horse Treating Facility and the Independence AGI Wells, including the surface and bottom-hole locations of the Independence AGI Wells, have been constructed and/or are located on approximately 320 acres, wholly owned by Piñon.

Specific geographic location coordinates for Independence AGI #1 and Independence AGI #2 are included below:

Independence AGI #1

Surface Location Latitude/Longitude (NAD83):	32.120835, -103.291025
Bottom-Hole Location Latitude/Longitude (NAD83):	32.120269, -103.289948

Independence AGI #2

Surface Location Latitude/Longitude (NAD83):	32.120063, -103.291025
Bottom-hole Location Latitude/Longitude (NAD83):	32.111575, -103.289295

As described previously, Independence AGI #1 was constructed as a vertical well from a surface location on the existing Dark Horse Treating Facility property. Independence AGI #2 was constructed as a deviated well from a surface location on the Dark Horse Treating Facility property to a bottom-hole location approximately 3,100 feet to the south-southeast. The wells were constructed utilizing five (5) telescoping strings of casing to ensure isolation of groundwater resources, oil and gas producing zones, and intervals of potential lost circulation and high-pressure conditions. Figures 3 and 4 include the as-built well schematic for Independence AGI #1 and Independence AGI #2, respectively.

3.3 ADDITIONAL GEOLOGIC ANALYSIS AND RESERVOIR CHARACTERIZATION IN SUPPORT OF THE C-108 APPLICATION

As described previously, Piñon has continued in their efforts to improve the analysis of subsurface geology in the area of the Dark Horse Treating Facility, as the demands of area oil and gas operators for sour-gas treatment and disposal have continued to increase since the commissioning of the Independence AGI Wells. As part of this analysis, Piñon has licensed 3D seismic survey data, and retained Geolex, for the purposes of (1) refining existing geologic interpretations and improving the understanding of porosity development and distribution within the approved Siluro-Devonian injection reservoir, (2) confirming and refining structural interpretations and fault identification, and (3) improving the accuracy of injection operations

forecasting (i.e., geo-modeling and simulation) and induced seismicity risk assessments, and (4) confirming the feasibility of injecting up to 28.5 MMSCFD of TAG through the Independence AGI Wells.

In refining the analysis of subsurface geology, Piñon has licensed approximately sixteen (16) square miles of 3D seismic survey data. Analysis, interpretation, and reprocessing of this data forms the basis in confirming the currently approved Siluro-Devonian injection reservoir's capability of accommodating the proposed additional disposal volume (up to 28.5 MMSCFD). Specifically, derivative information yielded from high-resolution seismic trace inversion methods, have allowed Piñon to more accurately characterize porosity development within the Siluro-Devonian injection reservoir. Being sourced from 3D seismic survey data, the result of this analysis provides critical information regarding not only porosity development, but also the vertical and lateral continuity and interconnectivity of porous strata.

From seismic survey analysis, significant porosity development produced from karst dissolution processes is apparent and is highly interconnected across the greater project. As anticipated, porosity development is most significant in the intervals of upper Devonian and Fusselman formation strata. Based on mapped acoustic impedance attributes, which are directly related to porosity within the injection reservoir, Siluro-Devonian porosity attributes were determined to range from less than 1% to approximately 15%, with an average porosity of 2.5%. Impedance attributes derived from high-resolution seismic trace inversion were transformed to porosity through direct correlation with log porosity, and the transform function was limited to maximum porosity measurements observed in wireline porosity logs.

Siluro-Devonian permeability characteristics were initially identified through review of available published literature inclusive of dolomite permeability core studies (Lucia et al., 1995), drill-stem test (DST) and injection reservoir testing data (collected following the drilling of Independence AGI #1 and Independence AGI #2), and well operating data. As will be discussed further in Section 4.0, history-matched injection simulations, which simulate the past operational periods of Independence AGI #1, Independence AGI #2, and nearby SWD wells, required minor upscaling of permeability values to accurately recreate observed operating data. Based on these observations and simulation results, Siluro-Devonian permeability attributes were identified to generally range from less than 1 mD to approximately 50 mD, with an average reservoir permeability of approximately 5 mD. As operation of the Independence AGI Wells continues, and subsequent history-matched reservoir simulations are completed in accordance with NMOCC Order R-21455, characterization of effective reservoir permeability attributes will continue to be further refined and improved.

In addition to providing a more accurate characterization of reservoir attributes, the analysis of additional seismic survey data yields a better understanding of subsurface faults and reservoir geometry within the project area. Figure 5 includes a map of fault features confirmed and identified through analysis of this data. Generally, patterns of faulting do not significantly differ from prior interpretations supporting the Independence AGI Wells, however, additional features were identified, and mapping of these features has been refined and improved. For all identified features, the magnitude of offset is less than the thickness of the Woodford Shale upper confining strata, and thus, does not compromise the ability to contain TAG within the permitting injection reservoir.

From our review and analysis of additional seismic survey data, an updated reservoir characterization model was developed to be utilized for injection simulation investigations to evaluate the feasibility of increasing the shared daily allowable injection volume of up to 28.5 MMSCFD, for the Independence AGI Wells. The results of these case simulations are discussed further in Section 4.0 and confirm the capability of the approved Siluro-Devonian injection reservoir in accommodating TAG injection volumes, as proposed and requested by Piñon.

4.0 UPDATED GEOLOGIC MODELING, SIMULATION, AND INDUCED SEISMICITY RISK ASSESSMENT

In preparing this application, which requests approval to increase the daily allowable injection volume shared by the Independence Wells, Piñon has recompleted reservoir characterization modeling, injection simulation, and induced seismicity risk evaluations in accordance with the updated and on-going assessment of local geology. These updates are described in the following pages and confirm the approved Siluro-Devonian reservoir's suitability for TAG disposal operations, at the volumes proposed by Piñon.

4.1 ACID GAS INJECTION MODELING

To simulate the proposed injection scenario and characterize the resultant TAG injection plume, after thirty (30) years of operation at the maximum daily injection rate (28.5 MMSCFD), Geolex collaborated with Sproule to develop a new reservoir characterization model and complete updated injection simulation, informed and incorporating the recently acquired seismic survey data and resultant mapped porosity attributes. This modeling evaluation was completed utilizing Schlumberger Petrel to construct a geologic simulation grid informed by available well log data and mapped seismic impedance attributes, which are directly related to porosity within the injection reservoir. Schlumberger's Eclipse platform was then utilized to complete simulations representative of the injection scenario proposed for the Independence AGI Wells (up to 28.5 MMSCFD).

The reservoir characterization model utilized to simulate operation of the Independence AGI Wells, at the proposed rate of 28.5 MMSCFD, is comprised of 292 simulation layers characterizing seven (7) discrete depth intervals identified within the Siluro-Devonian reservoir. In total, the model simulation grid is comprised of 3,497,576 cells. The simulation model includes nearby subsurface fault features, the existing Independence AGI #1 and Independence AGI #2 wells, and one active SWD well, the West Jal B Deep #1. West Jal B Deep #1 is located approximately one (1) mile northeast of Independence AGI #1 and is authorized for produced water disposal within the Siluro-Devonian injection reservoir (i.e., Devonian, Wristen, and Fusselman formations).

Porosity attributes within the reservoir characterization model are based on mapped acoustic impedance attributes, which directly relate to porosity within carbonate and dolomitic strata of the Siluro-Devonian injection reservoir. Impedance attributes derived from high-resolution seismic trace inversion were transformed to porosity through direct correlation with geophysical log porosity. While the distribution of model porosity was driven by mapped impedance attributes, the range of porosity values was limited to porosity measurements observed in wireline porosity logs. Utilizing this method, Siluro-Devonian reservoir porosity was determined to range from less than 1% to approximately 15%, with an average porosity of 2.5%. The distribution of porosity, by zone, is shown in Figure 6.

In defining permeability attributes within the reservoir characterization model, multiple data sources were utilized to identify baseline relationships between porosity and permeability, including injection reservoir test data (i.e., step-rate and fall-off testing activities), DST, injection well operating data, and published core-analysis data (e.g., Lucia et al., 1995). From this baseline, injection well history matching methods were utilized to further refine reservoir model permeability characteristics. Specifically, injection simulations were completed to replicate historic injection activities of Independence AGI #1, Independence AGI #2, and West Jal B Deep #1, the results of which, were utilized to calibrate permeability attributes of the reservoir model. For all case simulations and forecasts presented in support of this C-108 application, history matching of injection well operating data was completed, and simulations accurately and successfully replicate observed and documented operating conditions of Independence AGI #1 and Independence AGI #2 (from 2021 to Present). Permeability distribution, by zone, and the total model

permeability distribution is shown in Figure 7. Total model average permeability and porosity distributions are shown in Figure 8.

Table 1 below summarizes geologic model zones defined, zone thickness, and average model porosity and permeability, by zone.

Table 1. Summary of geologic model zone thickness and model porosity and permeability attributes

Zone #	Zone Top (ft. below Devonian)	Thickness (ft)	Avg. Porosity (%)	Avg. Permeability (mD)
1	0	93	3	14.4
2	93	204	3	1.2
3	296	87	3	1.5
4	384	584	2	2.1
5	968	183	1	4.6
6	1151	159	3	14.9
7	1310	131	2	4.9
All Zones	-	-	2.5	5

With the constructed geologic model, injection operations for the Independence AGI Wells and the nearby West Jal B Deep #1 were simulated (i.e., dynamic modeling) utilizing the Schlumberger Eclipse platform. Dynamic modeling was utilized to simulate injection of a mixed acid gas stream containing approximately H₂S (30%) and CO₂ (70%) at a constant rate of 28.5 MMSCFD into the currently approved Siluro-Devonian injection reservoir. Reservoir pressure conditions initially reflect a normally pressured system (based on observations while drilling Independence AGI #1), however, the evolution of reservoir pressure is considered as all simulation cases include history matching of currently active injection wells in the area. To ensure a conservative estimate of plume size, the injection simulations do not consider acid gas dissolution into existing formation fluids.

In support of this C-108 application and Piñon's request to increase the daily allowable injection volume for the Independence AGI Wells, two dynamic model simulations are presented, which estimate the size and characteristics of the resultant TAG injection plume, following operation of the Independence AGI Wells, at a shared daily injection volume of up to 28.5 MMSCFD, and the nearby West Jal B Deep #1. Case 1 reflects injection well operations in a subsurface environment in which faults are fully transmissive of fluids, while Case 2 considers faults to be non-transmissive of fluids. From these simulation end members, conservative estimates of plume size and plume migration directions are identified.

The results of Case 1 and Case 2 injection simulations are illustrated in Figures 9 and 10, for transmissive and non-transmissive faults, respectively. In both cases, Piñon's anticipated facility improvement schedule was considered, and injection volumes were incrementally increased over a two (2) year period. Specifically, dynamic modeling (Case 1 and Case 2) commences with a history match period (from 2021 to present, and based on actual operating data), followed by one (1) year of injection at 13.5 MMSCFD, one (1) year of injection at 22.5 MMSCFD, and twenty-eight (28) years of injection at 28.5 MMSCFD. Following the thirty (30) year injection period, the resultant TAG plume is anticipated to occupy an area of approximately 9.5 square miles generally extending up to two (2) miles from the Dark Horse Treating Facility. For all case simulations, results indicate that injection operations, incrementally up to 28.5 MMSCFD over two (2) years, can be maintained for the complete simulation period. Furthermore, injection activities at the proposed daily rates are sustained with no modification or exceedance of currently approved MAOP limitations.

4.2 INDUCED SEISMICITY RISK ASSESSMENT UPDATES

In support of this request to amend NMOCC Order R-21455 and NMOCD Order SWD-2464, and in accordance with recent and on-going geologic analysis, we present updates to the evaluation of injection-induced seismicity risk. This evaluation now incorporates additional subsurface characterization resulting from the detailed analysis of 3D seismic survey data acquired by Piñon.

To evaluate the potential for seismic events in response to injected fluids, an induced seismicity risk assessment was conducted in the area of the active Independence AGI Wells. This assessment models the impact of five (5) proximal and distal injection wells, which have been identified within the greater project area (Table 3), over a thirty (30) year period and estimates the combined fault slip probability associated with the simulated FSP injection scenario. The analysis was completed utilizing the Stanford Center for Induced and Triggered Seismicity's (SCITS) Fault Slip Potential (FSP) modeling platform. While the results of reservoir modeling and simulation provide useful comparison data, the FSP assessment is fully independent of reservoir modeling and simulation activities discussed in Section 4.1.

Based on the detailed review of seismic survey data, Geolex identified 11 faults, located within approximately three (3) miles of the Independence AGI Wells and generally striking north to south and southwest to northeast (Figure 5). These features are generally located a significant distance from injection wells, with the exception of the Independence AGI Wells and the West Jal B Deep #1. Due to the low number of wells in relatively close proximity to these features and considering the relatively small injection volumes proposed for the Independence AGI Wells (approximately equivalent to 5,500 barrels per day), the Independence AGI Wells are not anticipated to contribute significantly to the risk for injection-induced fault slip. To verify these structures would not be adversely affected by operation of the Independence AGI Wells, as proposed, a model simulation was performed.

To calculate the fault slip probability in response to the activities of nearby injection wells, input parameters characterizing the local stress field, reservoir characteristics, subsurface features, and injected fluids are required. Updated parameters and their sources for this study are included in Table 1. Additionally, Table 2 details the injection volume characteristics and locations of the disposal wells modeled in the FSP injection scenario.

For this study, limitations of the FSP model required a conservative approach be taken in determining the probability of fault injection-induced fault slip. Specifically, the FSP model is only capable of considering a single set of fluid characteristics and this study aims to model injection operations that include SWD and TAG injection systems. To ensure a conservative estimate of risk, the Independence AGI Wells were simulated utilizing the fluid characteristics of an SWD well. This approach yields a more conservative model prediction as water displays greater density, dynamic viscosity, and is significantly less compressible than TAG.

Faults considered in this assessment are predicted by the FSP model to have very low potential for injection-induced slip and operation of the Independence AGI Wells, as proposed, does not contribute significantly to the estimate of risk. Figure 11 includes the results of FSP hydrologic modeling displaying the predicted pressure impacts of the FSP injection simulation, and Figure 12 includes the model-predicted probability of slip throughout the thirty (30) year injection period. Table 5 summarizes the predicted pressure change along each fault and includes the model-derived pressure conditions necessary to induce slip for each fault feature. Modeled pressure increases along faults, after thirty (30) years, fall sufficiently short of the required pressure to induce slip.

Table 2. Input parameters and source material for 2024 revised FSP simulations

Modeled Parameter	Input Value	Variability (+/-)	UOM	Source
<i>Stress</i>				
Vertical Stress Gradient	1.05	0.105	psi ft ⁻¹	Nearby well estimate
Max Horizontal Stress Direction	N75E	5	Deg.	Lund Snee & Zoback, 2018
Reference Depth	16,900		ft	Nearby well evaluation
Initial Res. Pressure Gradient	0.43	0.043	psi ft ⁻¹	Lund Snee & Zoback, 2018
A _φ Parameter	0.6	0.06	-	Lund Snee & Zoback, 2018
Reference Friction Coefficient (μ)	0.6	0.06	-	Standard Value
<i>Hydrologic</i>				
Aquifer Thickness	1,441	100	ft	Nearby well evaluation
Porosity	2.5	0.25	%	Nearby well evaluation
Permeability	5	0.50	mD	Nearby well evaluation
<i>Material properties</i>				
Density (Water)	1040	40	kg m ⁻³	Standard Value
Dynamic Viscosity (Water)	0.0008	0.0001	Pa.s	Standard Value
Fluid Compressibility (water)	3.6 x 10 ⁻¹⁰	0	Pa ⁻¹	Standard Value
Rock Compressibility	1.08 x 10 ⁻⁹	0	Pa ⁻¹	Standard Value
<i>Acid gas @ 236 °F, 7,837 psi</i>				
Density	818.18	-	kg m ⁻³	AQUALibrium™
Dynamic Viscosity	0.0000806	-	Pa.s	AQUALibrium™

Table 3. Location and characteristics of injection wells identified in greater project area and modeled in FSP assessment

#	API	Well Name	Latitude	Longitude	Volume (bbls/day)	Start (year)	End (year)
1	30-025-48081	Independence AGI #1	32.120855	-103.291021	5,500	2021	2055
2	30-025-49974	Independence Fee AGI #2	32.111454	-103.288812	5,500	2023	2055
3	30-025-25046	West Jal B Deep #1	32.132091	-103.280708	30,000	2015	2055
4	30-025-27085	Jal N. Ranch SWD #1	32.139347	-103.203911	10,000	2017	2055
5	30-025-43360	Kimberly SWD #1	32.083537	-103.194274	20,000	2019	2055

Daily maximum injection volumes utilized in the FSP model range from 5,500 to 30,000 barrels (bbls) per day (Table 4). The existing Independence AGI Wells and additional SWD wells within the greater project area were simulated for a thirty (30) year operating period, as well as history matched for a period of nine (9) additional years to ensure the simulated results also considered the historical impact of injection wells that have been operating prior to time of this application. Figure 11 illustrates the model-predicted pressure

front, single well radial solutions, and the predicted pressure change at fault midpoints and Figure 12 shows the model-predicted fault slip potential throughout the simulation period. All wells included in the simulation are assumed to inject at their maximum daily capacity, in order to yield a more conservative model prediction that ensures the impact of the Independence AGI Wells, at the proposed shared daily allowable injection volume of up to 28.5 MMSCFD, will not pose an increased risk of induced seismicity. The predicted pressure change along each fault segment, model-derived pressure change required to induce slip, and the model-predicted fault slip probability are included in Table 4 below.

Table 4. Summary of model-simulation results showing the required pressure change to induce fault slip, actual pressure change as predicted by the FSP model, and probability of slip at the end of the thirty (30) year injection scenario.

Fault #	Δ Pressure necessary to induce fault slip	Actual Δ Pressure at fault midpoint at year 2055	Fault Slip Potential at year 2055
1	1,090	306	0.0
2	1429	327	0.0
3	1081	344	0.0
4	1090	429	0.0
5	1238	473	0.06
6	1098	508	0.04
7	1237	446	0.0
8	1282	402	0.02
9	1352	364	0.01
10	1784	334	0.0
11	2658	276	0.0
12	1260	240	0.0
13	1545	215	0.0
14	1124	192	0.0
15	1500	208	0.0
16	1204	227	0.0
17	1401	247	0.0
18	1160	268	0.0
19	3919	365	0.0
20	1358	353	0.01
21	6498	335	0.0
22	5195	355	0.0
23	1742	433	0.0
24	3283	387	0.0
25	6063	700	0.0
26	2429	744	0.0
27	4097	647	0.0
28	1508	440	0.03
29	1733	404	0.0
30	4348	350	0.0
31	6939	290	0.0

In summary, no structures included in the FSP evaluation are expected to experience any significant risk for injection-induced slip, as a result of the proposed operation of the Independence AGI Wells at a maximum daily injection rate of 28.5 MMSCFD. Modeled pressure increases along faults fall adequately short of the required pressure increase to induce slip and radial pressure solutions calculated for each simulated injection well illustrates that the operation of Independence AGI Wells, as proposed, will have little impact on conditions near faults in the area.

5.0 RE-EVALUATION OF THE INDEPENDENCE AGI # 1 AND #2 AREAS OF REVIEW

As Piñon's request to increase the daily allowable injection volume for the Independence AGI Wells, up to 28.5 MMSCFD, reflects a substantial change in operating conditions at the Dark Horse Treating Facility, re-evaluation of the Independence AGI #1 and Independence AGI #2 AORs was completed. This review is necessary to ensure all oil and gas operators and all interested parties have been identified, such that they can be provided notice of the NMOCC hearing to consider this matter and be provided complete copies of the C-108 application and request. Furthermore, re-evaluation of the Independence AGI Well's AORs is necessary to confirm that no new wells penetrating the injection reservoir have been drilled.

For the purposes of evaluating and identifying oil and gas activities, operators, and other interested parties within the project area of the Independence AGI Wells, the one (1) mile AOR is displayed as a one (1) mile buffer area around the surface and bottom-hole locations of each Independence AGI Well, and along the deviated wellbore path of Independence AGI #2.

5.1 OIL AND GAS WELLS ACTIVITIES IN THE ONE (1) MILE AREA OF REVIEW

Appendix A summarizes all NMOCD recorded wells within a one- and two-mile radius of the Independence AGI Wells. The location of these wells is illustrated in Figures 13 and 14, and include active, plugged, and permitted well locations.

In total, there are twenty-three (23) wells within the one (1) mile radius of the Independence AGI #1 and Independence AGI #2 AORs. Specific information relating to active and plugged wells is summarized in Appendix A and their locations are shown in Figure 13. Of these wells, five (5) are active and four (4) are plugged. Additionally, there are fourteen (14) locations permitted, but have not yet been drilled or completed. All wells within the one (1) mile area of review are summarized in Table A-1 (Appendix A). Active wells commonly target Bone Springs and Wolfcamp formations overlying the approved Siluro-Devonian injection reservoir.

Within two (2) miles of the Independence AGI Wells AORs, there are seventy-seven (77) wells (Appendix A, Figure 14, Table A-1). Of these, there are twenty-one (21) active wells, thirty-seven (37) permitted wells, and eleven (11) wells that have been plugged and abandoned.

There are two (2) wells within two (2) miles of the Independence AGI Wells AORs that penetrated the approved Siluro-Devonian injection reservoir (Table 5). These include the West Jal B Deep #1, an active SWD located approximately one (1) mile from Independence AGI #1. The well was drilled to a total depth of 18,945 feet and is permitted to inject through perforated intervals of Strawn through Fusselman geologic strata. Despite being granted approval for injection into the Devonian and Fusselman formations (approved June 2024), NMOCD records do not include documentation that perforation of these zones was completed. For the purposes of this application, and all supporting materials (i.e., reservoir modeling and simulation, fault-slip probability assessment, etc.), it was assumed that all injection from the West Jal B Deep #1 has and will occur in the Siluro-Devonian interval, to ensure conservative simulation results and estimates of risk. The remaining well penetrating the Siluro-Devonian injection reservoir is the West Jal Unit #1 well, which has been plugged and abandoned and is located approximately 0.67 mile from the surface location of Independence AGI #2. As part of previously approved C-108 applications for the Independence AGI Wells, it has been demonstrated that the West Jal Unit #1 well has been properly plugged and is not anticipated to be adversely impacted by operation of the Independence AGI Wells.

Table 5. Summary of wells penetrating the approved Siluro-Devonian injection reservoir within two (2) miles of the Independence AGI #1 and #2 wells.

API #	Well Name	Status/Type	Pool	Lat 83	Long 83	TVD
30-025-21172	WEST JAL UNIT #1	Plugged Oil	Strawn	32.1176	-103.2807	17,086
30-025-25046	WEST JAL B DEEP #1	Active SWD	Miss-Fuss.	32.1321	-103.2807	18,945

5.2 IDENTIFICATION AND REQUIRED NOTIFICATION OF OPERATORS, LESSEES, AND SURFACE OWNERS WITHIN THE AREA OF REVIEW

As part of this amendment application, a detailed review of land records was completed to obtain a list of all operators, oil and gas lessees, and surface owners within a one (1) mile radius of the existing Independence AGI Wells surface locations, bottom-hole locations, and the Independence AGI #2 deviated wellbore path. The results of this review are included summarized in Table B-1 (Appendix B) and location maps identifying surface ownership, active operators, and lessees are included in Figures 15 and 16.

Upon issuance of an NMOCC hearing date to consider the matter of Piñon's request to amend Order R-21455 and SWD-2464, all interested parties will be provided written notice of the associated NMOCC hearing and will be provided complete copies of the Form C-108 Amendment Application. Appendix B includes an example notification letter that will be provided to interested parties, as well as an example public notice that may be utilized by Commission staff or published in local newspapers, as necessary.

6.0 PIÑON'S REQUEST OF THE NMOCC

In submitting this C-108 application, Piñon seeks and requests approval to increase the daily allowable injection volume, shared by the Independence AGI #1 and Independence AGI #2, to 28.5 MMSCFD, through the amendment of NMOCC Order R-21455 and NMOCD Order SWD-2464. Currently, the Independence AGI Wells are authorized to inject a shared daily allowable injection volume of up to 20 MMSCFD.

As previously described, Piñon's request to increase the daily allowable injection volume for the Independence AGI Wells comes in response to an increasing demand for sour-gas treatment and disposal services from area oil and gas operators, which has steadily increased since commissioning of Independence AGI #1 at the Dark Horse Treating Facility in 2021. Gas production forecasts from area oil and gas operators indicate that Piñon customers will require approximately 22.5 MMSCFD of sour-gas treatment and disposal capacity as soon as Q2 2025 and 28.5 MMSCFD as soon as Q2 2026. To ensure the sour-gas treatment and disposal needs of local oil and gas operators can be met, Piñon has (i) secured a NSR air permit from the New Mexico Environment Department permitting the construction of additional amine treating units at the Dark Horse Treating Facility; (ii) developed and initiated a facility improvement schedule for the Dark Horse Treating Facility that will increase the sour-gas treatment capacity of the Dark Horse Treating Facility and result in the need for up to 22.5 MMSCFD of TAG disposal as soon as Q2 2025 and 28.5 MMSCFD as soon as Q2 2026; and (iii) prepared this application seeking additional TAG injection capacity. Approval of Piñon's request will ensure the needs of local oil and gas operators are met, reduce the potential for waste of natural resources, and ensure TAG disposal capacity is approved and available coincident with on-going facility improvements to increase sour-gas treatment capacity.

Through the results of geologic analysis leveraging 3D seismic survey data, reservoir modeling, and injection simulation activities, it is clear that the currently approved Siluro-Devonian injection reservoir is adequately capable of accommodating operation of the Independence AGI Wells at the increased rate of 28.5 MMSCFD. Furthermore, operation of the Independence AGI Wells, as proposed, is not predicted to produce an elevated risk for injection-induced seismicity in the project area. As such, Piñon respectfully requests approval of this application and authorization to operate the Independence AGI Wells at a shared daily allowable injection volume of up to 28.5 MMSCFD.

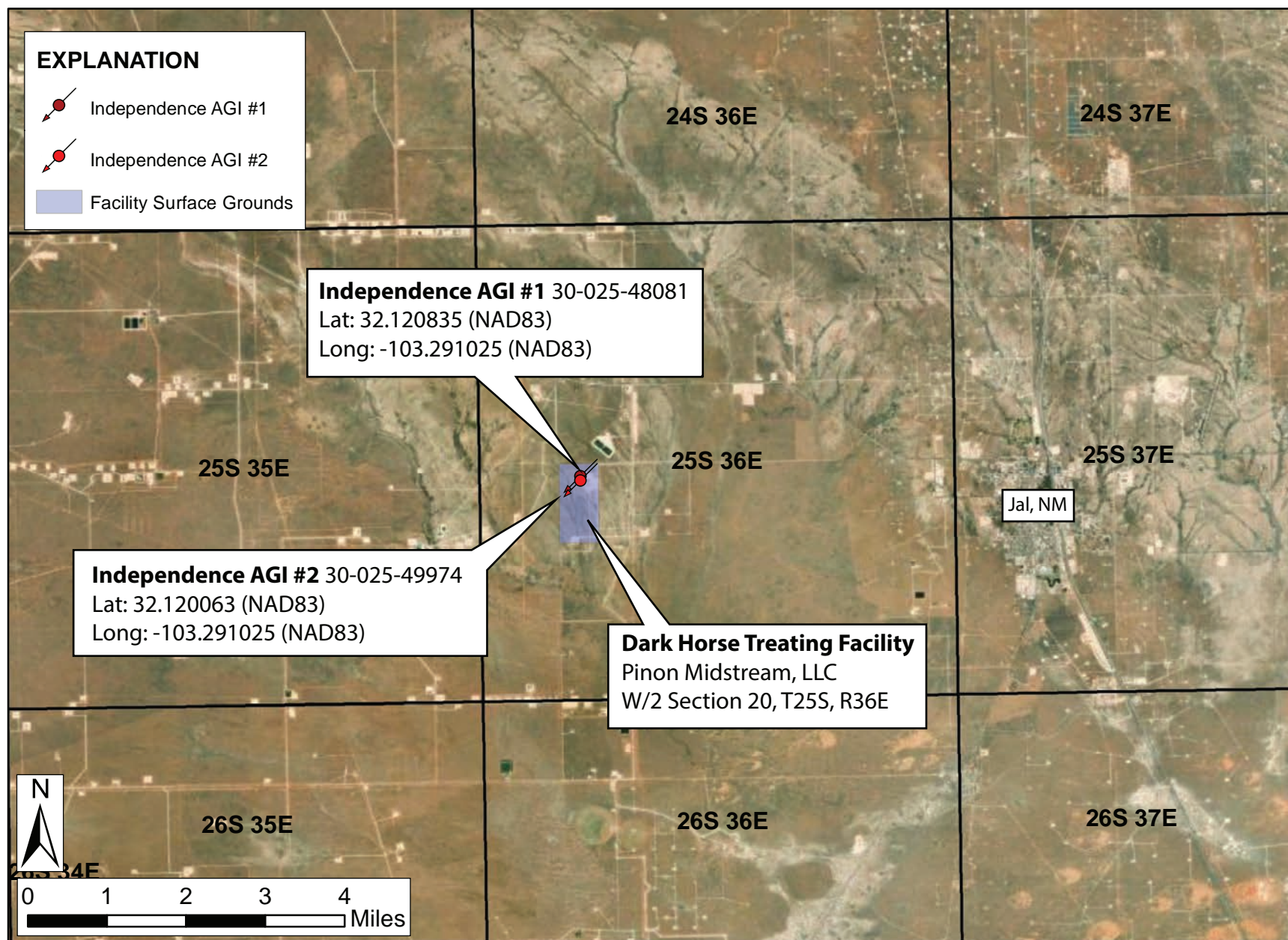


Figure 1. General location map for the Independence AGI #1 and Independence AGI #2 in Section 20, (T25S, R36E), approximately six (6) miles west of Jal, New Mexico.

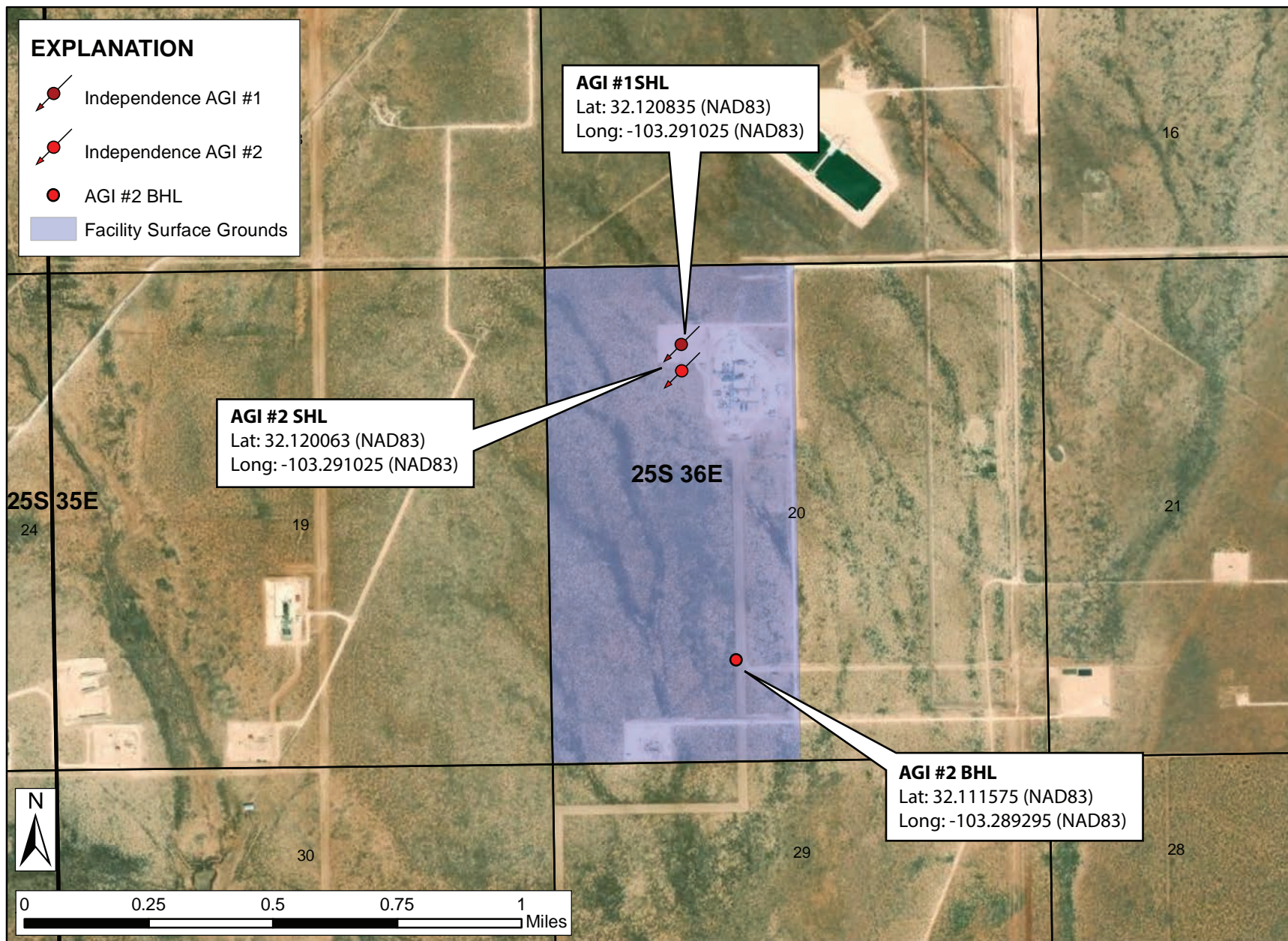


Figure 2. Aerial photographic location map showing the Pinon Dark Horse Treating Facility, surface locations of the Independence AGI Wells, and the bottom-hole location of Independence AGI #2.



INDEPENDENCE AGI #1
 API: 30-025-48081
 Lat/Long NAD83: 32.1208351, -103.2910252

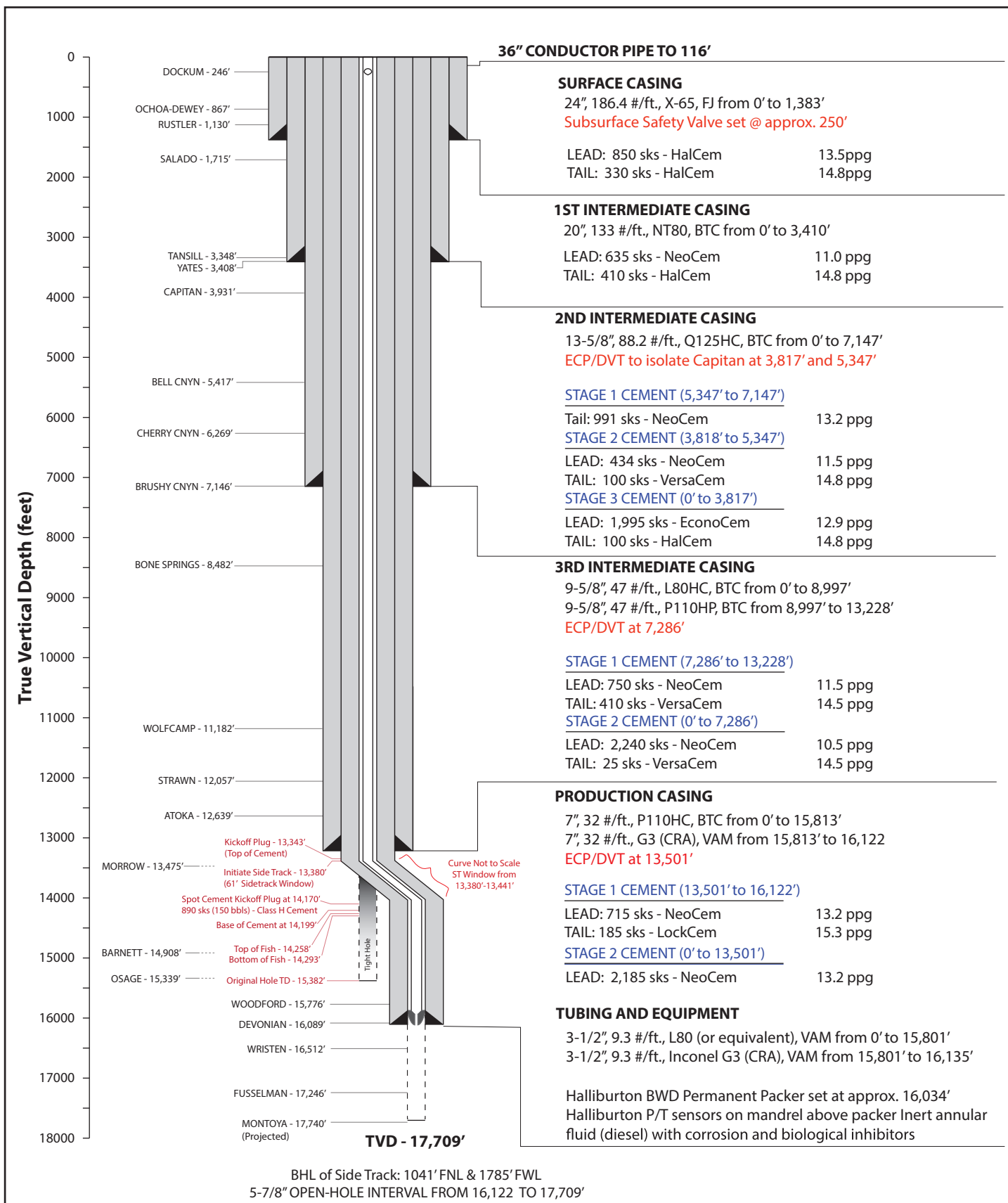


Figure 3. As-built Independence AGI #1 schematic.



INDEPENDENCE AGI #2

API: 30-025-49974

Lat/Long NAD83: 32.1200628, -103.2910251

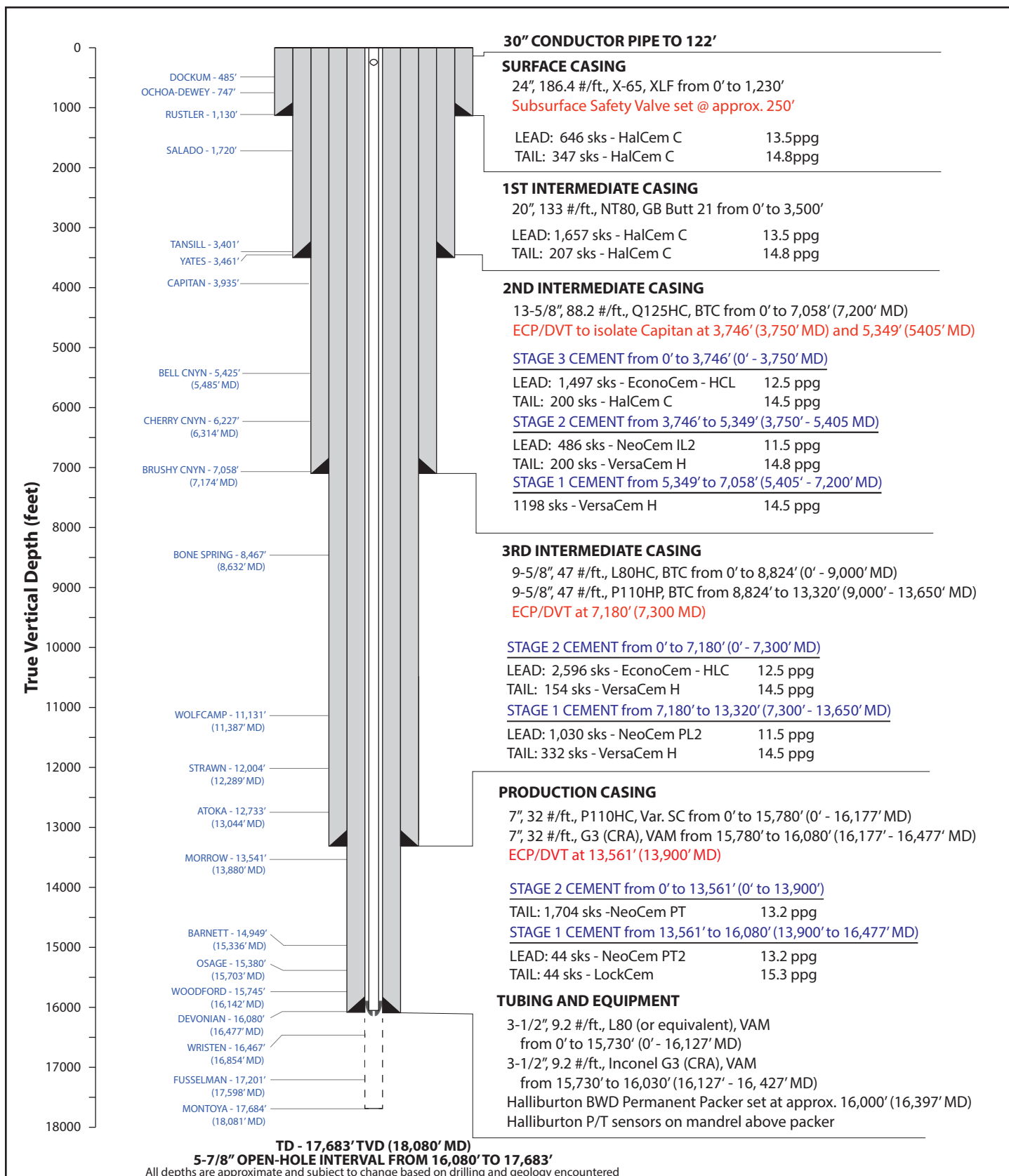


Figure 4. As-built Independence AGI #2 schematic.

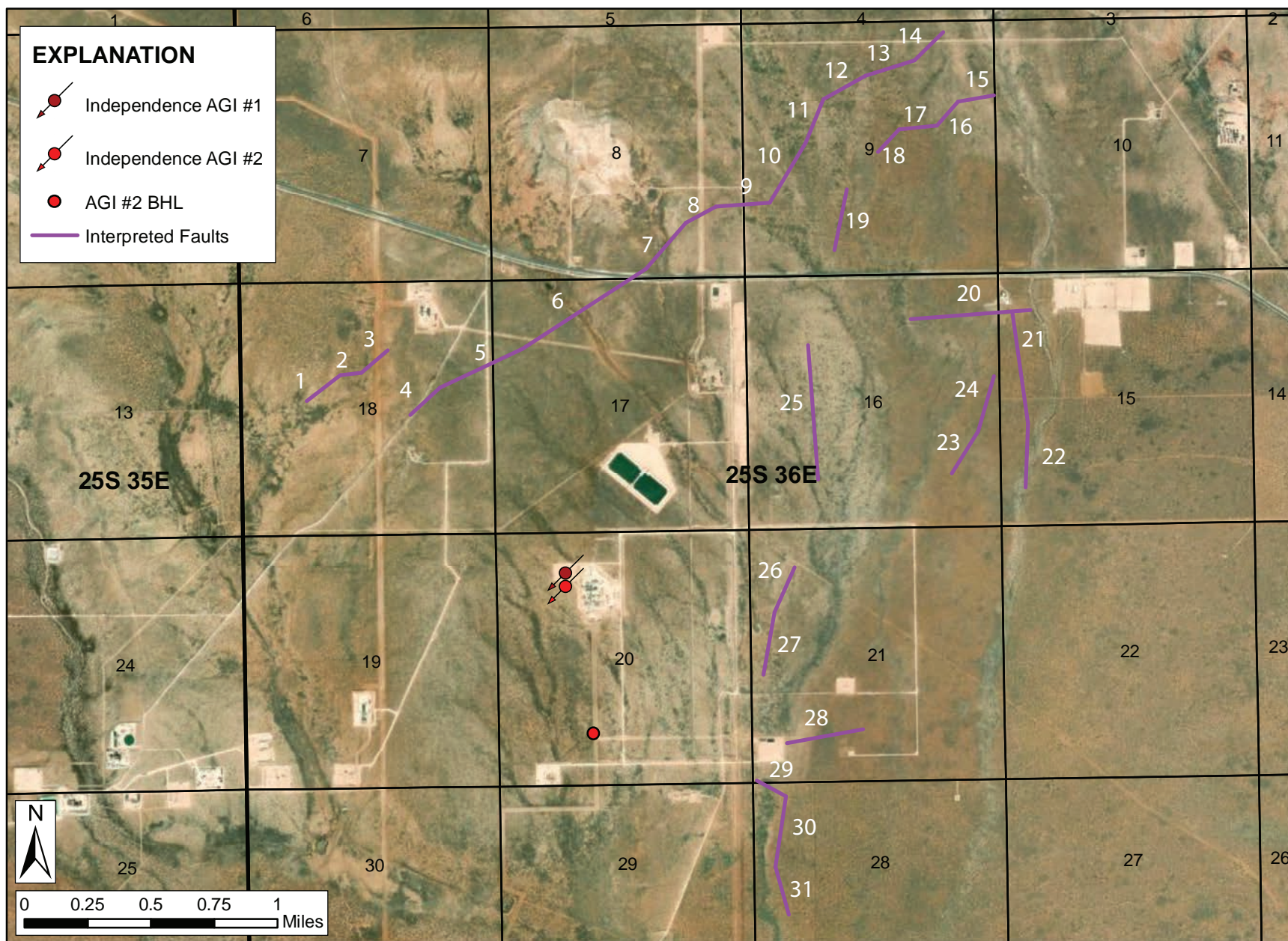


Figure 5. Subsurface fault features interpreted from 3D seismic survey data in the area of the Independence AGI Wells.

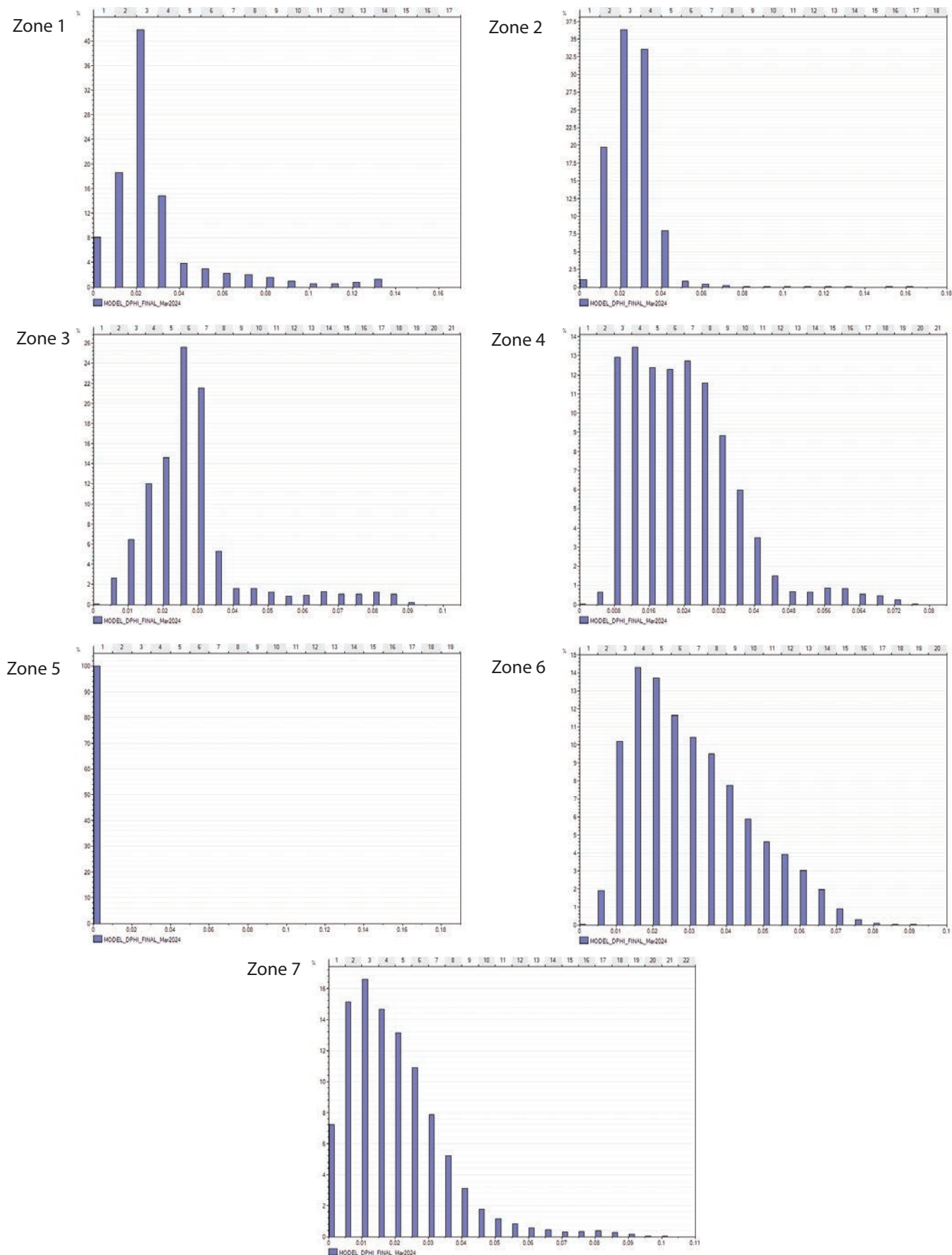


Figure 6. Porosity distribution within each of the seven (7) Petrel geomodel layers.

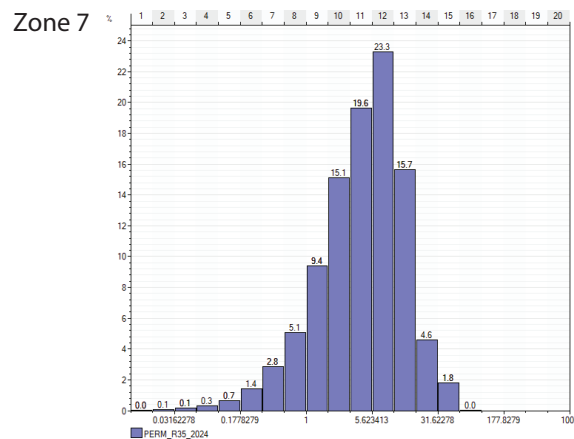
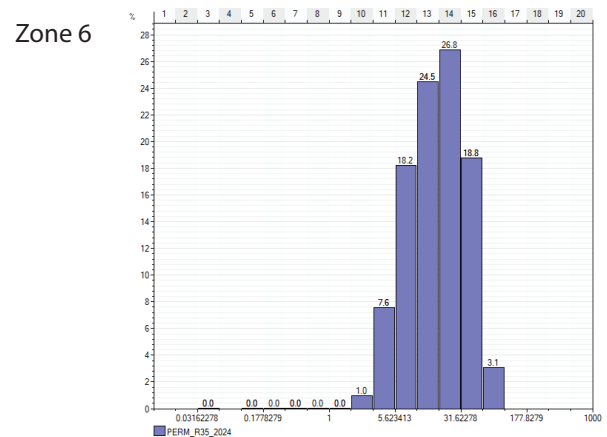
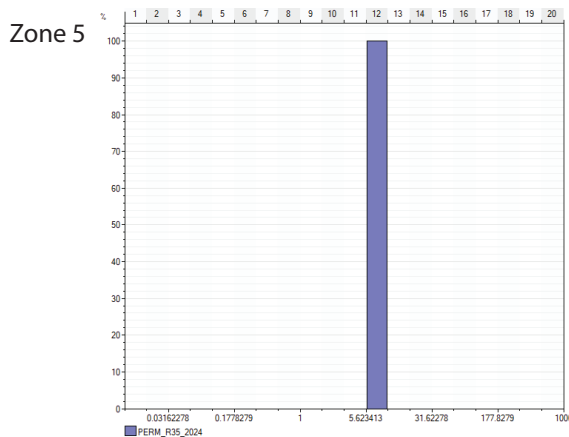
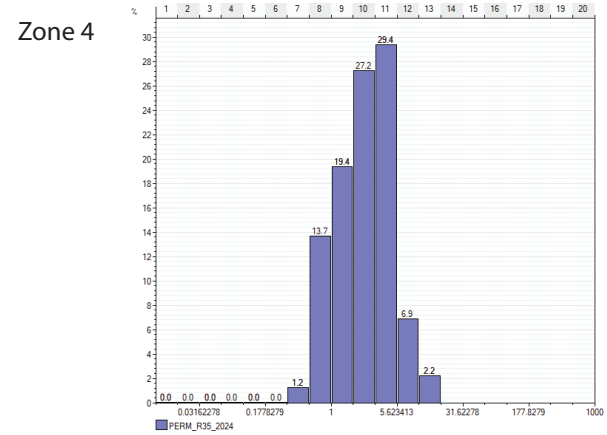
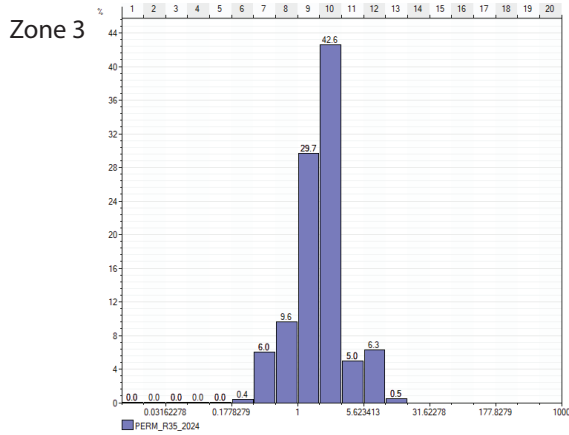
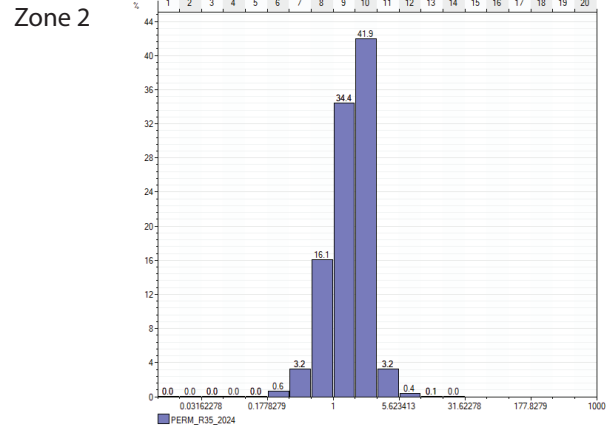
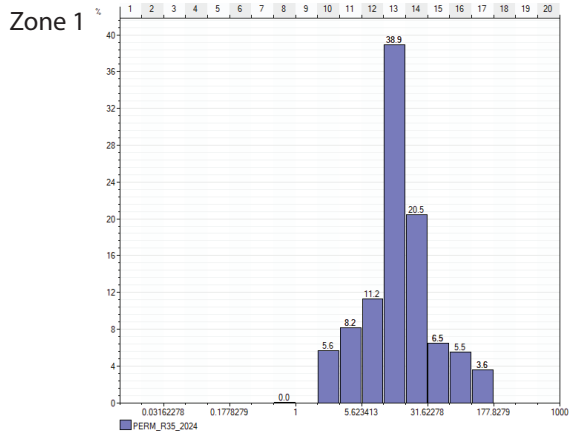


Figure 7. Permeability distribution within each of the seven (7) Petrel geomodel layers.

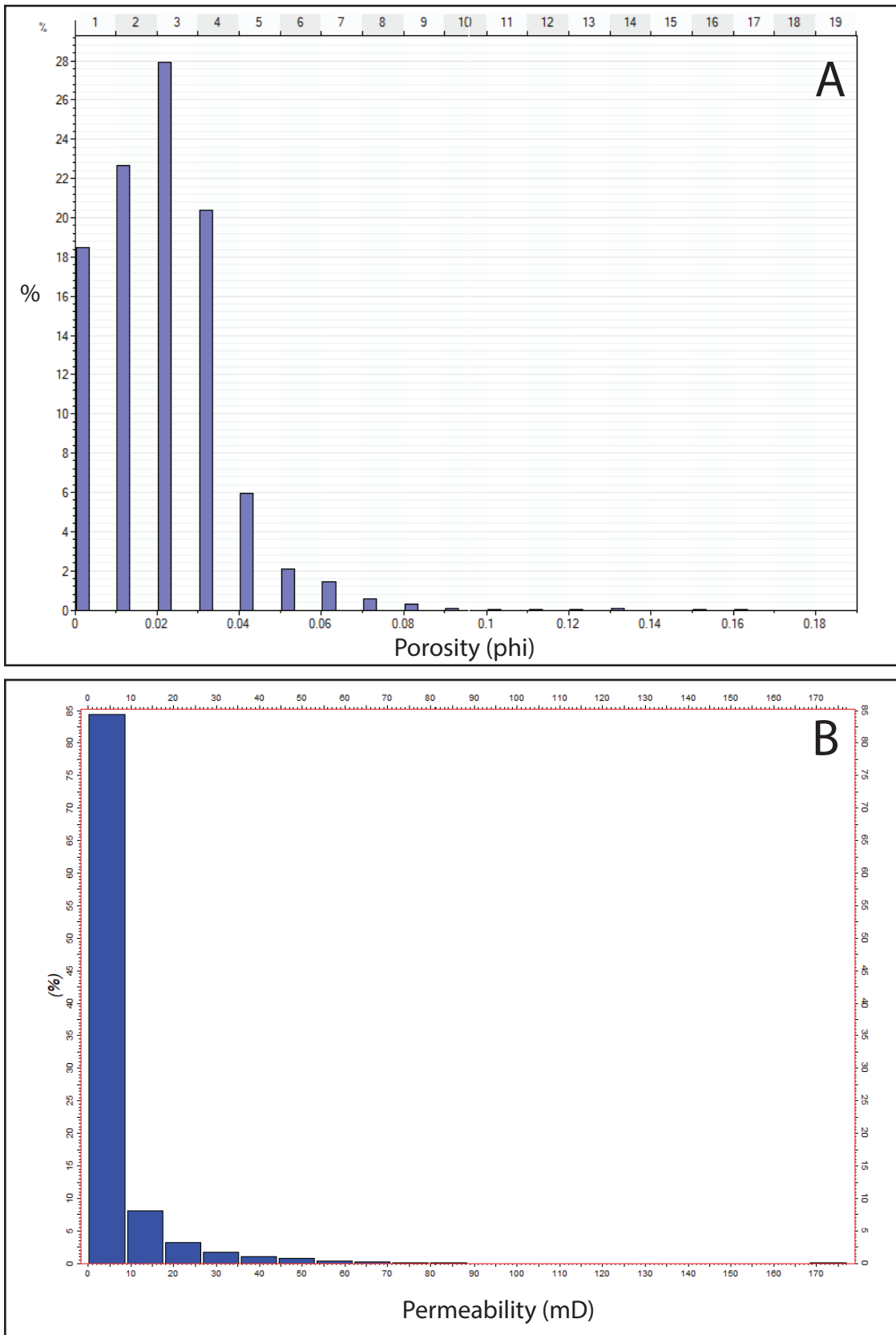


Figure 8. Distribution of porosity (panel A) and permeability (panel B) for all geo-model layers.

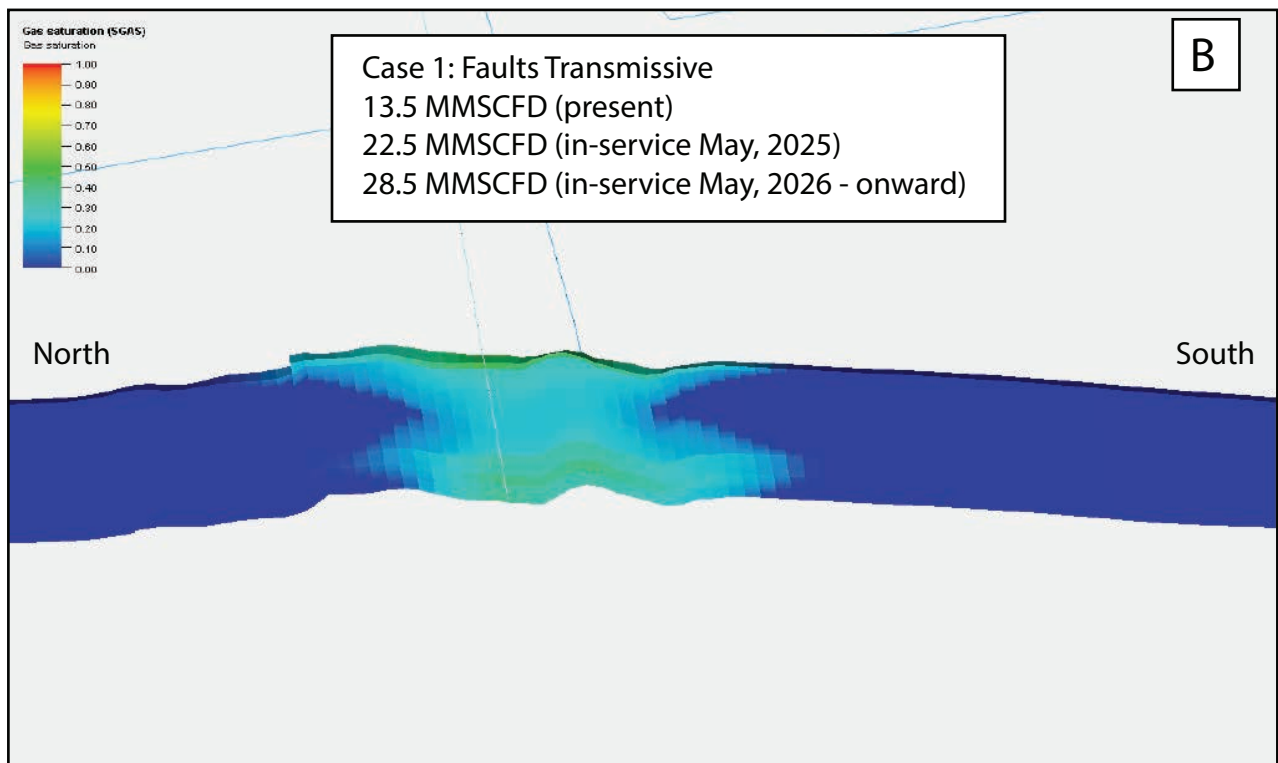
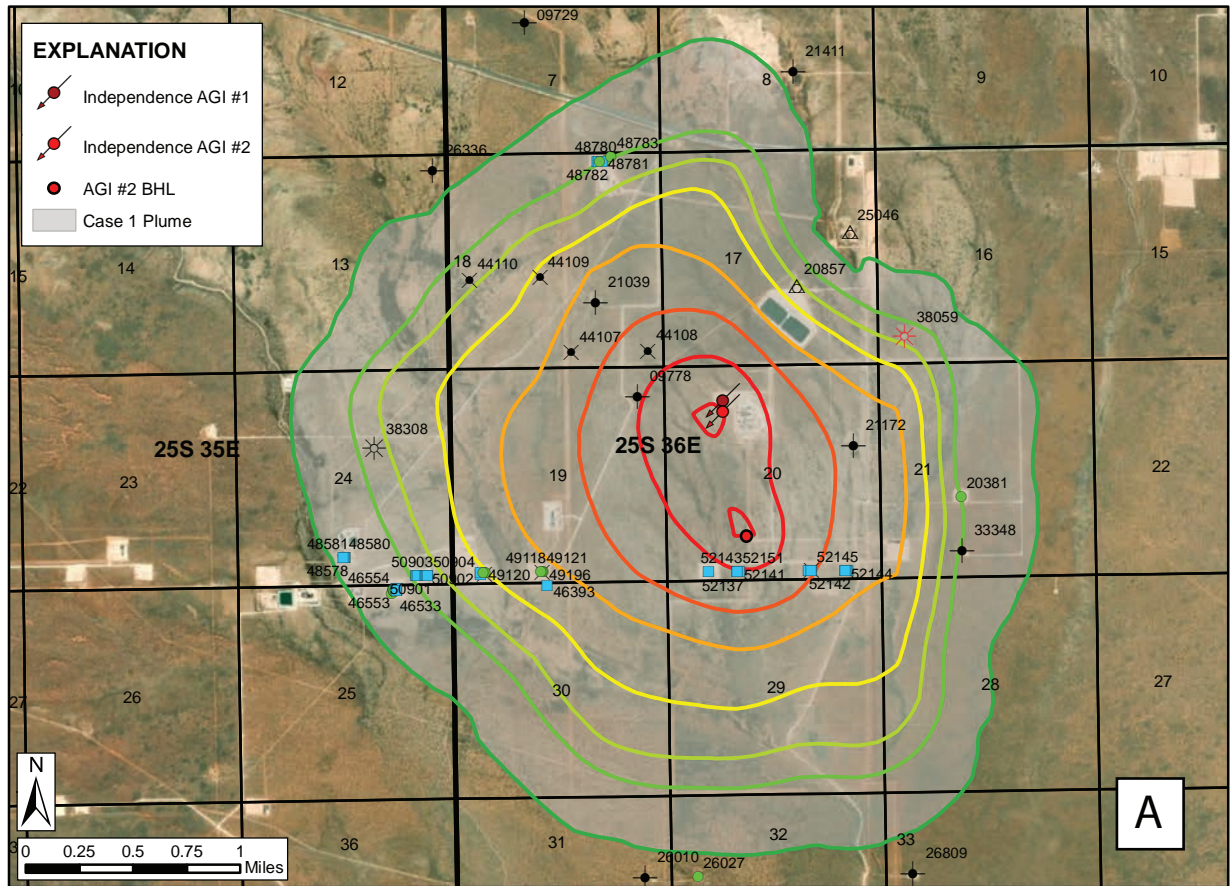


Figure 9. Summary of Eclipse simulation results for Case 1 (faults transmissive of fluids), showing gas saturation contours after 30 years of injection (panel A). Panel B shows the cross-sectional view of the resultant injection plume in the immediate vicinity of the Independence AGI Wells.

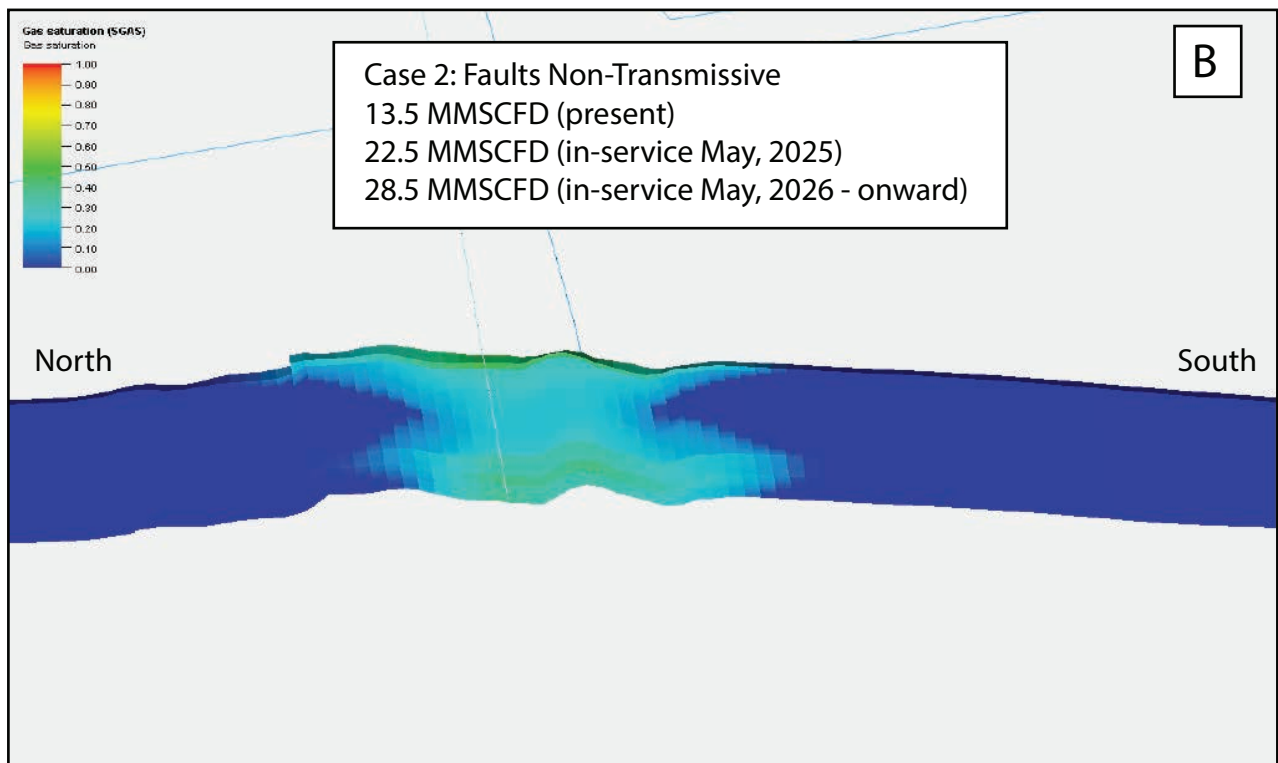
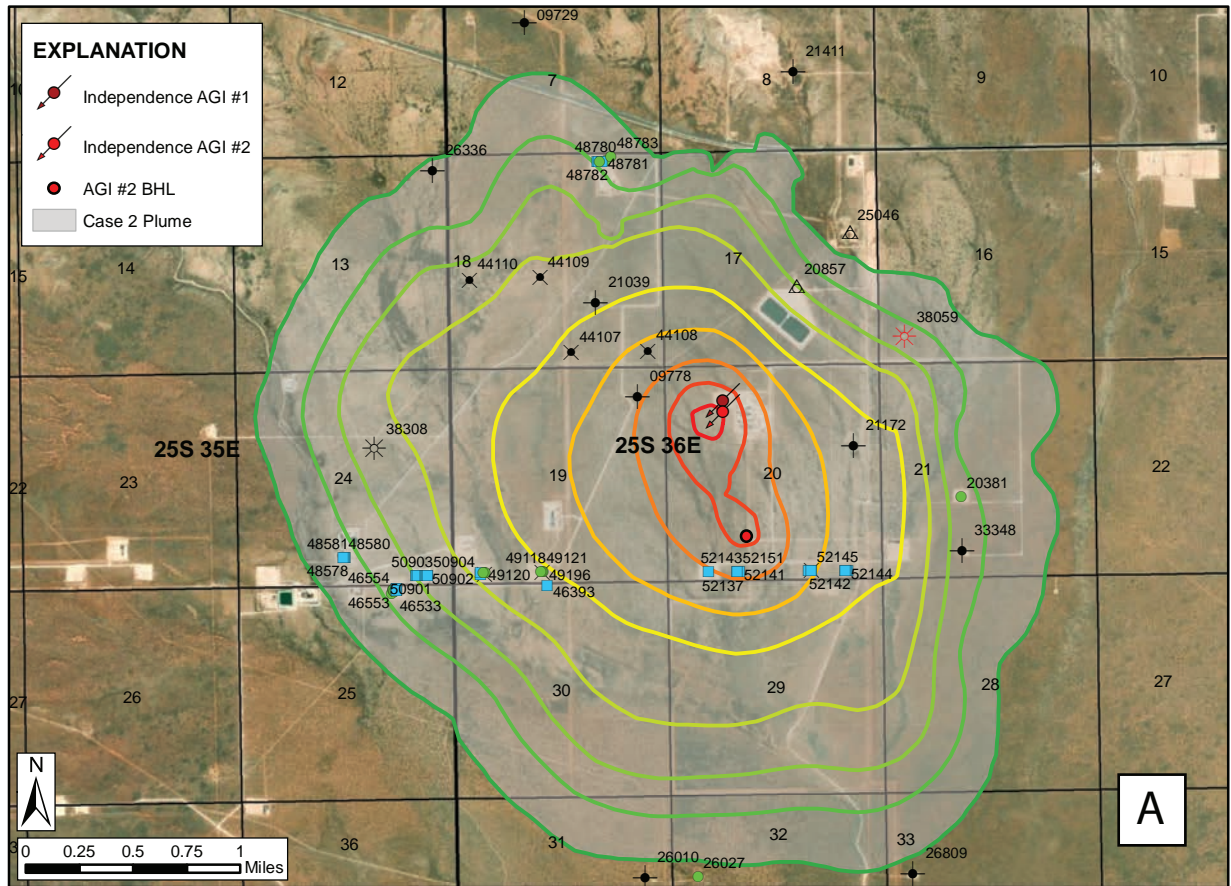


Figure 10. Summary of Eclipse simulation results for Case 2 (faults non-transmissive of fluids), showing gas saturation contours after 30 years of injection (panel A). Panel B shows the cross-sectional view of the resultant injection plume in the immediate vicinity of the Independence AGI Wells.

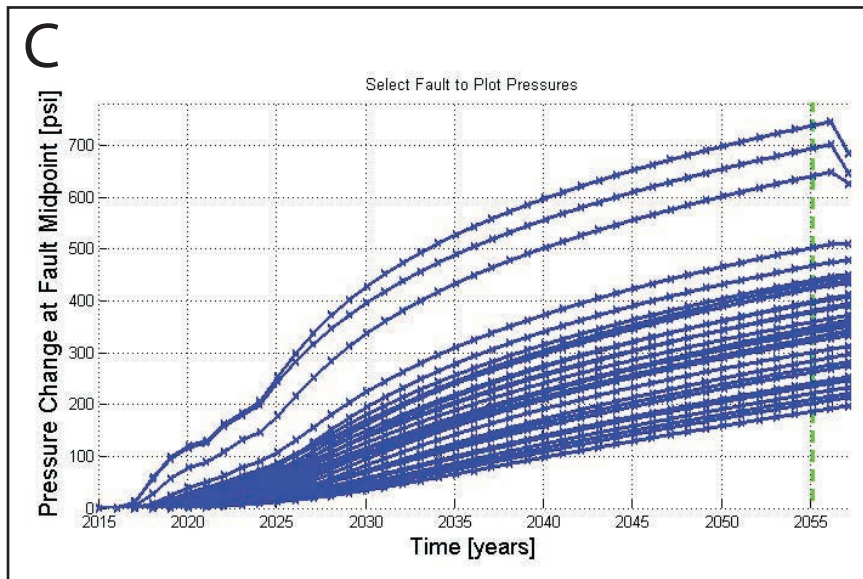
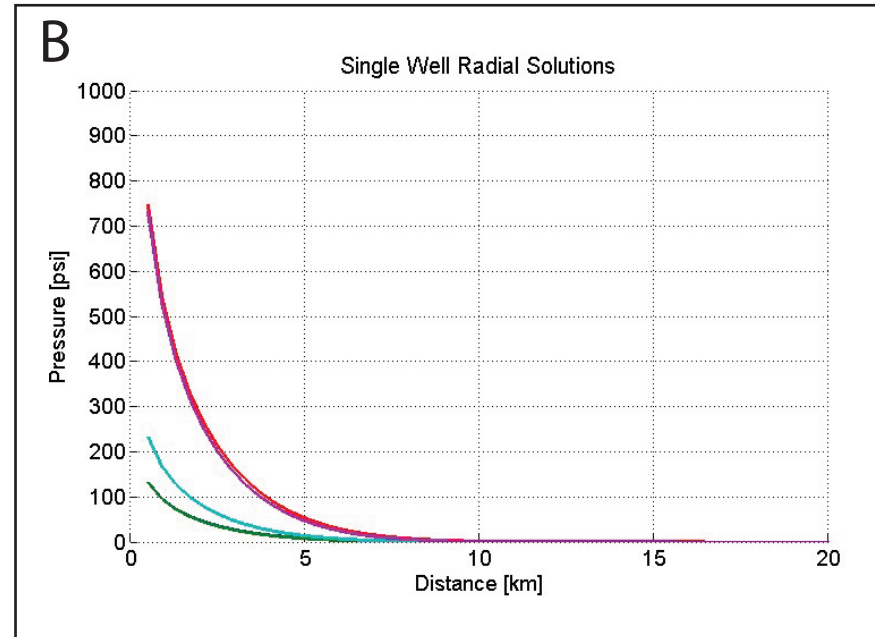
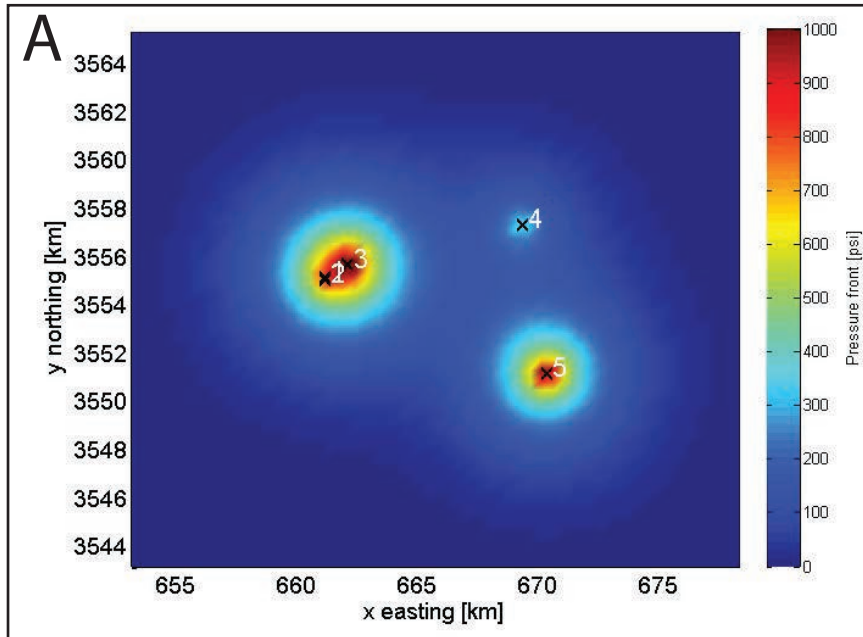


Figure 11. Summary of FSP model-predicted pressure front effects in the year 2055, resulting from injection activities of nearby wells (Panel A) that are actively injecting within the Siluro-Devonian formations. As shown in Panels B and C, the pressure increase along all faults in the area will not be affected by the proposed injection rate of 28.5 MMSCFD from the Independence AGI Wells.

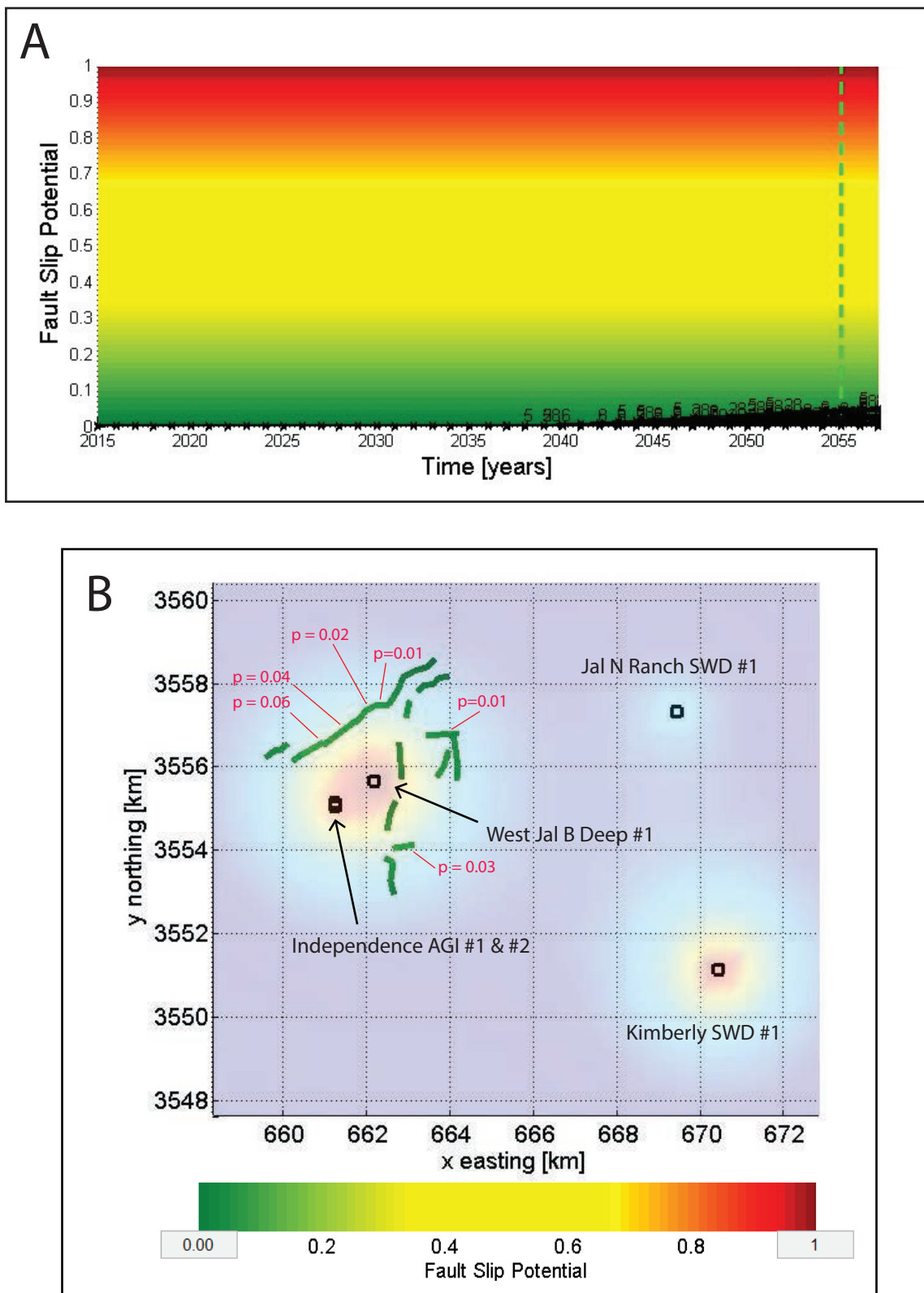


Figure 12. Model-predicted fault slip potential after 30 years of injection operations at maximum daily volume conditions for all wells.

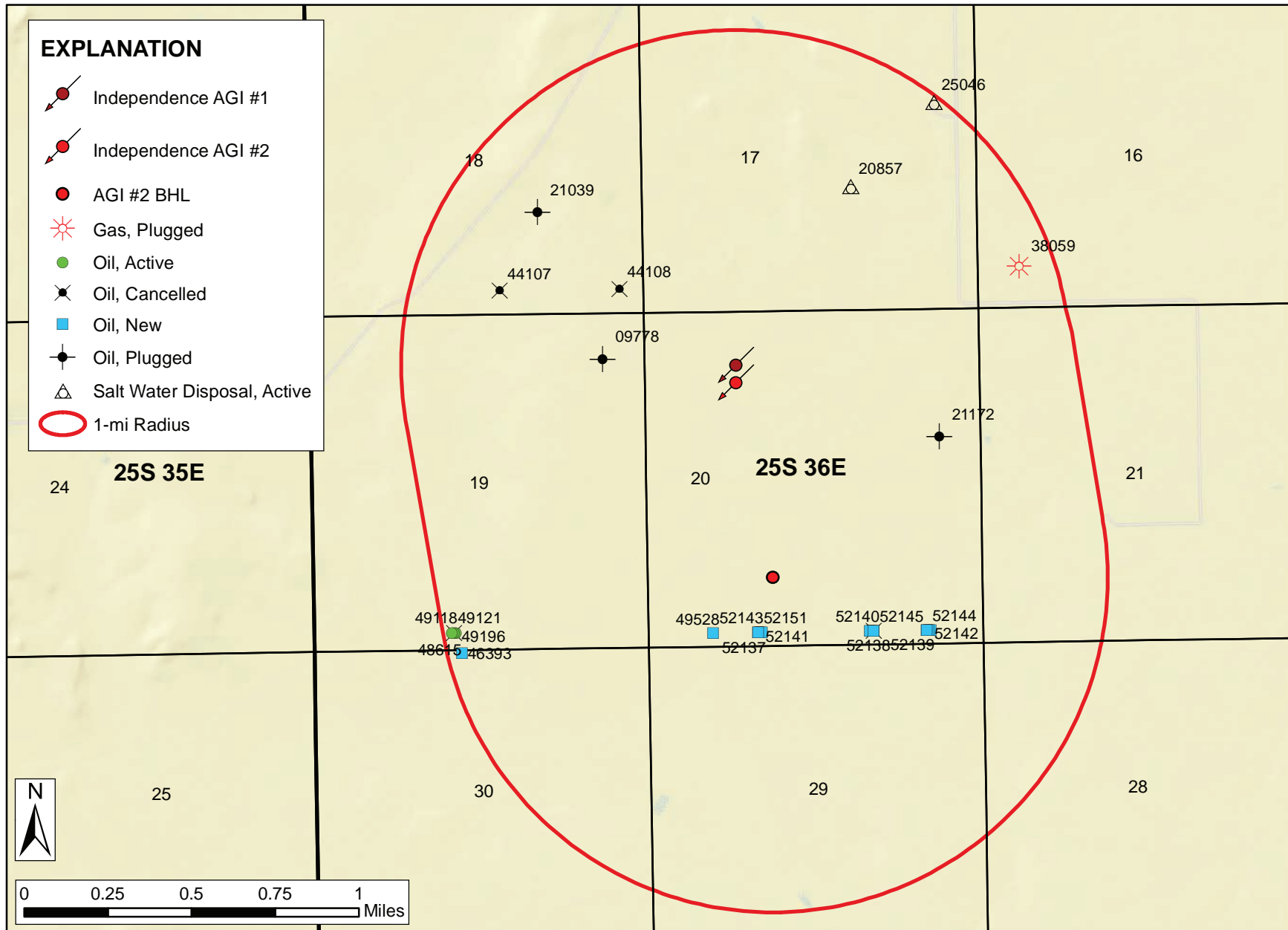


Figure 13. All wells located within one mile of the Independence AGI Wells.

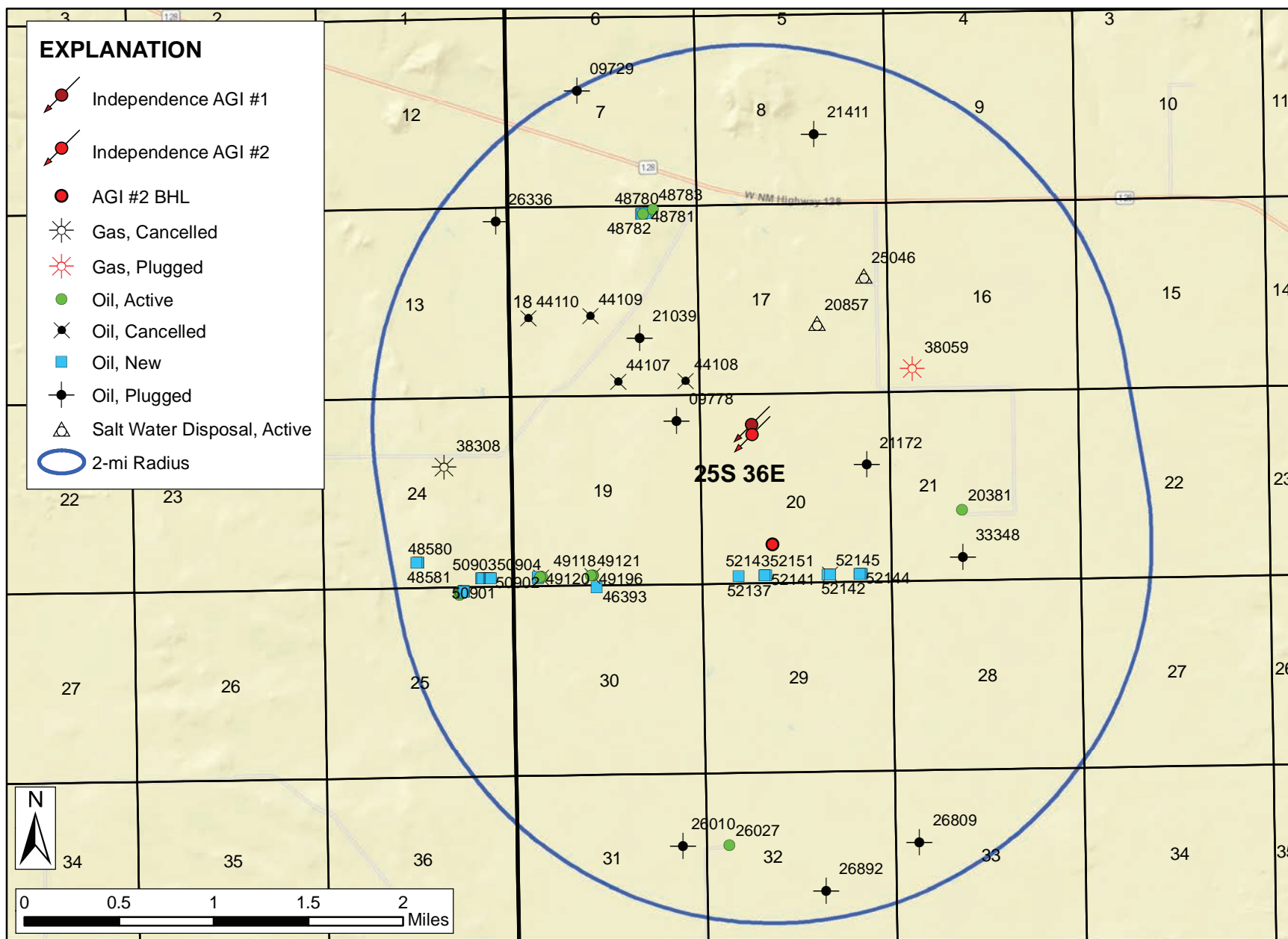


Figure 14. All wells located within two miles of the Independence AGI Wells.

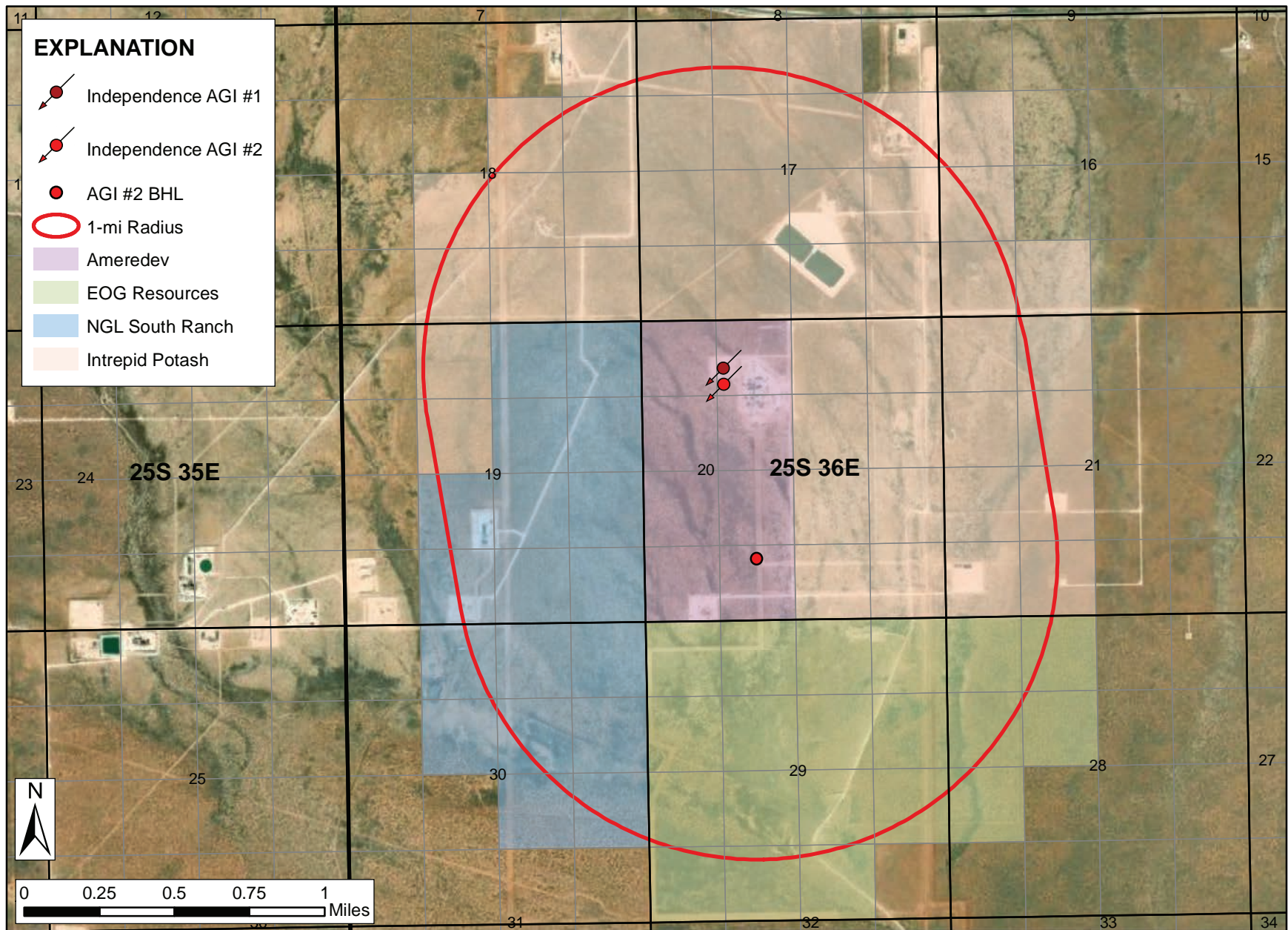


Figure 15. Surface ownership within one mile of the Independence AGI Wells.

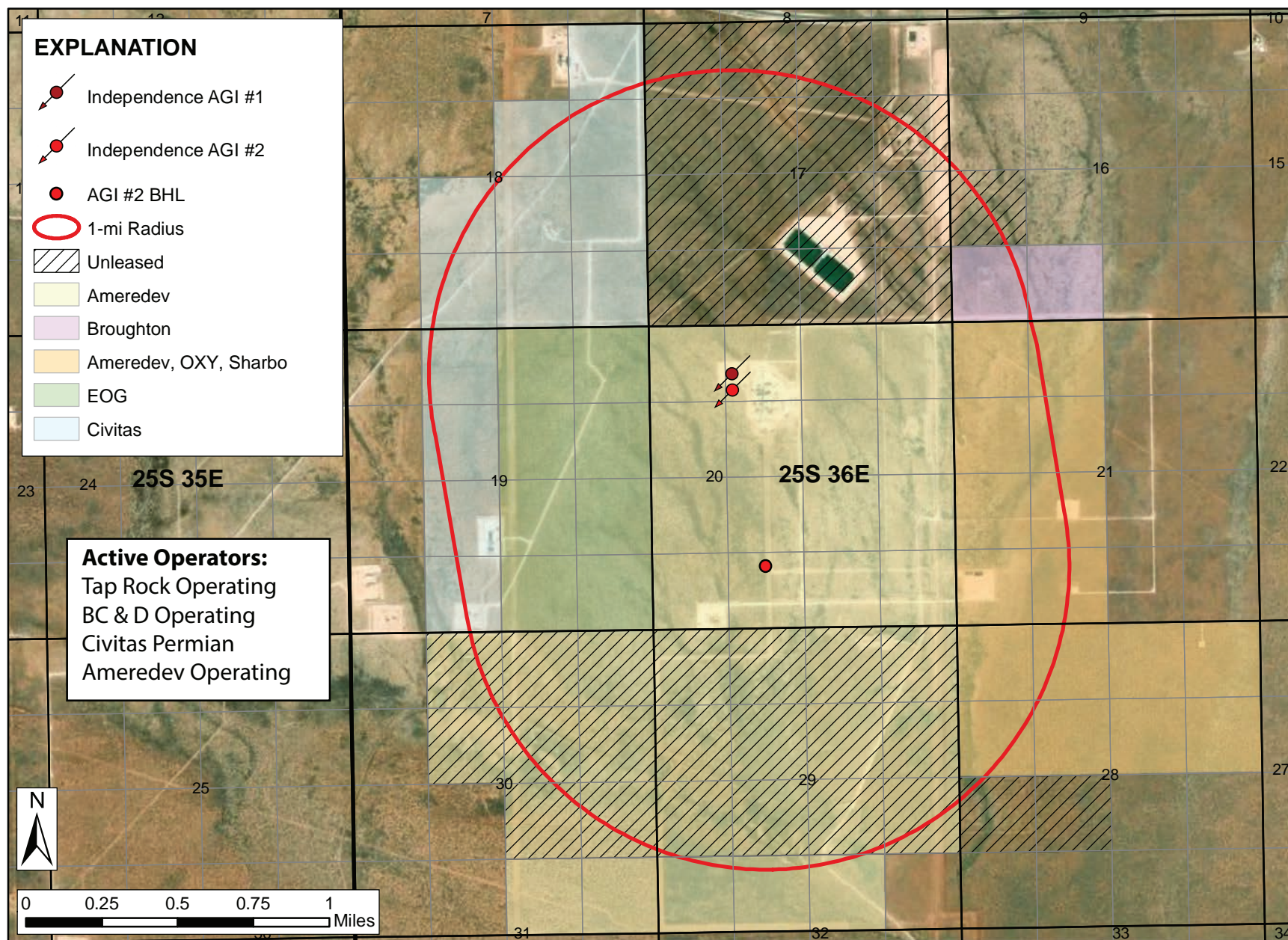


Figure 16. Active operators, lessees, and mineral ownership within a one-mile area of review for the Independence AGI Wells.

APPENDIX A

INFORMATION ON OIL AND GAS WELLS WITHIN TWO MILES AND ONE MILE OF THE INDEPENDENCE AGI WELLS

Table A-1: Table of wells located within two miles of Independence AGI Wells. Wells completed in the Siluro-Devonian formations are highlighted and have been previously identified with all relevant plugging documents within the original C-108 application for Independence AGI #2.

Table A-1. All wells within one and two miles of the Independence AGI #1 and #2 wells

API	Well Name	Well Type	Well Status	Plug Date	OGRID Name	Latitude (NAD83)	Longitude (NAD83)	TVD (ft)	Associated Pools
30-025-48081	INDEPENDENCE AGI #001	Injection	New	-	Pinon Midstream LLC	32.1208	-103.291	17,709	AGI, DEVONIAN-FUSSELMAN
30-025-49974	INDEPENDENCE FEE AGI #002	Salt Water Disposal	Active	-	Pinon Midstream LLC	32.1201	-103.291	17,683	AGI, DEVONIAN-FUSSELMAN
30-025-38308	DINWIDDIE 24 #001G	Gas	Cancelled	-	CHESAPEAKE OPERATING, INC.	32.1179	-103.3188	0	BOOTLEG RIDGE, MORROW (GAS)
30-025-44110	PINCH FEE WCB #001C	Oil	Cancelled	-	ONEENERGY PARTNERS OPERATING, LLC	32.1292	-103.311	0	JAL, WOLFCAMP, WEST
30-025-26336	PRE-ONGARD WELL #001	Oil	Plugged	-	N/A	32.1367	-103.3138	3,686	No Data
30-025-46393	NANDINA 25 36 31 FEDERAL COM #124H	Oil	New	-	AMEREDEV OPERATING, LLC	32.1085	-103.3052	0	JAL, WOLFCAMP, WEST
30-025-46552	SIOUX 25 36 STATE FEDERAL COM #011H	Oil	Active	-	CAZA OPERATING, LLC	32.1084	-103.3174	12,077	WC-025 G-09 S253536D, UPR WOLFCAMP
30-025-46561	SIOUX 25 36 STATE FEDERAL COM #010H	Oil	Active	-	CAZA OPERATING, LLC	32.1081	-103.3176	12,107	WC-025 G-09 S253536D, UPR WOLFCAMP
30-025-46533	SIOUX 25 36 STATE FEDERAL COM #008H	Oil	Active	-	CAZA OPERATING, LLC	32.1082	-103.3174	12,149	WC-025 G-09 S253536D, UPR WOLFCAMP
30-025-46551	SIOUX 25 36 STATE FEDERAL COM #009H	Oil	Active	-	CAZA OPERATING, LLC	32.1084	-103.3175	11,894	WC-025 G-08 S253534O, BONE SPRING
30-025-48615	BLUE MARLIN STATE #212H	Oil	Cancelled	-	TAP ROCK OPERATING, LLC	32.1094	-103.3056	0	JAL, WOLFCAMP, WEST
30-025-48614	BLUE MARLIN STATE #211H	Oil	Cancelled	-	TAP ROCK OPERATING, LLC	32.1093	-103.3102	0	JAL, WOLFCAMP, WEST
30-025-46976	BLACK MARLIN FEDERAL COM #204H	Oil	Active	-	Civitas Permian Operating, LLC	32.1371	-103.3002	11,640	JAL, WOLFCAMP, WEST
30-025-48778	BLACK MARLIN FEDERAL COM #113H	Oil	New	-	Civitas Permian Operating, LLC	32.1371	-103.3007	0	WC-025 G-08 S253534O, BONE SPRING
30-025-48578	SANTA FE FEDERAL COM #704H	Oil	New	-	Franklin Mountain Energy LLC	32.1106	-103.3212	0	JAL, WOLFCAMP, WEST

30-025-48579	SANTA FE FEDERAL COM #705H	Oil	New	-	Franklin Mountain Energy LLC	32.1093	-103.3152	0	JAL, WOLFCAMP, WEST
30-025-49115	BLUE MARLIN FEDERAL COM #111H	Oil	New	-	Civitas Permian Operating, LLC	32.1093	-103.3105	0	WC-025 G-08 S2535340, BONE SPRING
30-025-49116	BLUE MARLIN FEDERAL COM #112H	Oil	New	-	Civitas Permian Operating, LLC	32.1094	-103.3105	0	WC-025 G-08 S2535340, BONE SPRING
30-025-46977	BLACK MARLIN FEDERAL COM #214H	Oil	Active	-	Civitas Permian Operating, LLC	32.1371	-103.3	11,741	JAL, WOLFCAMP, WEST
30-025-49196	BLUE MARLIN FEDERAL COM #212H	Oil	Active	-	Civitas Permian Operating, LLC	32.1094	-103.3055	12,003	JAL, WOLFCAMP, WEST
30-025-49117	BLUE MARLIN FEDERAL COM #201H	Oil	Active	-	Civitas Permian Operating, LLC	32.1094	-103.3102	11,613	JAL, WOLFCAMP, WEST
30-025-48779	BLACK MARLIN FEDERAL COM #114H	Oil	New	-	Civitas Permian Operating, LLC	32.1371	-103.3006	0	WC-025 G-08 S2535340, BONE SPRING
30-025-48577	SANTA FE FEDERAL COM #603H	Oil	New	-	Franklin Mountain Energy LLC	32.1093	-103.3154	0	WC-025 G-08 S2535340, BONE SPRING
30-025-48782	BLACK MARLIN FEDERAL COM #213H	Oil	Active	-	Civitas Permian Operating, LLC	32.1371	-103.3004	12,005	JAL, WOLFCAMP, WEST
30-025-48781	BLACK MARLIN FEDERAL COM #206H	Oil	New	-	Civitas Permian Operating, LLC	32.1371	-103.3003	0	JAL, WOLFCAMP, WEST
30-025-46553	SIoux 25 36 STATE FEDERAL COM #012H	Oil	Active	-	CAZA OPERATING, LLC	32.1084	-103.3174	11,994	WC-025 G-08 S2535340, BONE SPRING; WC-025 G-09 S253536D, UPR WOLFCAMP
30-025-48582	ZIA FEDERAL COM #604H	Oil	New	-	Franklin Mountain Energy LLC	32.1093	-103.3151	0	WC-025 G-08 S2535340, BONE SPRING
30-025-48780	BLACK MARLIN FEDERAL COM #203H	Oil	Active	-	Civitas Permian Operating, LLC	32.1371	-103.3005	11,786	JAL, WOLFCAMP, WEST
30-025-48581	TRINITY FEDERAL #703H	Oil	New	-	Franklin Mountain Energy LLC	32.1106	-103.3213	0	JAL, WOLFCAMP, WEST

30-025-48580	TRINITY FEDERAL #602H	Oil	New	-	Franklin Mountain Energy LLC	32.1106	-103.3214	0	WC-025 G-08 S2535340, BONE SPRING
30-025-48583	ZIA FEDERAL COM #706H	Oil	New	-	Franklin Mountain Energy LLC	32.1093	-103.315	0	JAL, WOLFCAMP, WEST
30-025-48783	BLACK MARLIN FEDERAL COM #216H	Oil	Active	-	Civitas Permian Operating, LLC	32.1374	-103.2996	12,280	JAL, WOLFCAMP, WEST
30-025-46554	SIOUX 25 36 STATE FEDERAL COM #013H	Oil	Active	-	CAZA OPERATING, LLC	32.1082	-103.3174	11,725	WC-025 G-08 S2535340, BONE SPRING; WC-025 G-09 S253536D, UPR WOLFCAMP
30-025-49119	BLUE MARLIN FEDERAL COM #205H	Oil	Active	-	Civitas Permian Operating, LLC	32.1094	-103.3101	11,533	JAL, WOLFCAMP, WEST
30-025-49120	BLUE MARLIN FEDERAL COM #211H	Oil	Active	-	Civitas Permian Operating, LLC	32.1094	-103.3103	12,148	JAL, WOLFCAMP, WEST
30-025-49118	BLUE MARLIN FEDERAL COM #202H	Oil	Active	-	Civitas Permian Operating, LLC	32.1094	-103.3056	11,539	JAL, WOLFCAMP, WEST
30-025-49121	BLUE MARLIN FEDERAL COM #215H	Oil	Active	-	Civitas Permian Operating, LLC	32.1094	-103.3057	11,720	JAL, WOLFCAMP, WEST
30-025-49528	DOGWOOD 25 36 20 FEDERAL COM #112H	Oil	New	-	AMEREDEV OPERATING, LLC	32.1092	-103.2924	0	JAL, WOLFCAMP, WEST
30-025-49626	DOGWOOD 25 36 20 FEDERAL COM #116H	Oil	Cancelled	-	AMEREDEV OPERATING, LLC	32.1092	-103.2842	0	JAL, WOLFCAMP, WEST
30-025-44107	BRANDY FEE WCB #001C	Oil	Cancelled	-	ONEENERGY PARTNERS OPERATING, LLC	32.1242	-103.303	0	JAL, WOLFCAMP, WEST
30-025-44109	CONVERT FEE WCB #001C	Oil	Cancelled	-	ONEENERGY PARTNERS OPERATING, LLC	32.1293	-103.3054	0	WC-025 G-09 S253402N, WOLFCAMP
30-025-09729	PRE-ONGARD WELL #002	Oil	Plugged	-	PRE-ONGARD WELL OPERATOR	32.1466	-103.3063	3,540	CUSTER, TANSILL
30-025-21039	PRE-ONGARD WELL #001	Oil	Plugged	-	PRE-ONGARD WELL OPERATOR	32.1276	-103.301	12,950	No Data
30-025-09778	PRE-ONGARD WELL #001	Oil	Plugged	-	PRE-ONGARD WELL OPERATOR	32.1212	-103.2978	3,891	No Data
30-025-44108	SHIFT FEE WCB #001C	Oil	Cancelled	-	ONEENERGY PARTNERS OPERATING, LLC	32.1242	-103.2969	0	JAL, WOLFCAMP, WEST
30-025-21411	C ELLIOTT FEDERAL #001	Oil	Plugged	6/26/1993	TEXACO EXPLORATION & PRODUCTION INC	32.143	-103.285	12,276	JAL, STRAWN, WEST (ASSOC)

30-025-20857	WEST JAL B #001	Salt Water Disposal	Active	-	BC & D OPERATING INC.	32.1285	-103.285	12,275	JAL, WOLFCAMP, WEST; SWD, DELAWARE
30-025-21172	WEST JAL UNIT #001	Oil	Plugged	4/5/1984	TEXACO EXPLORATION & PRODUCTION INC	32.1176	-103.2807	17,086	JAL, DELAWARE, WEST; JAL, STRAWN, WEST (GAS)
30-025-25046	WEST JAL B DEEP #001	Salt Water Disposal	Active	-	BC & D OPERATING INC.	32.1321	-103.2807	18,945	JAL, STRAWN, WEST (ASSOC); JAL, WOLFCAMP, WEST; JAL, FUSSELMAN, WEST (GAS); SWD, ST-AT-MISS-DEV-FUS
30-025-38059	DINWIDDIE STATE COM #001	Gas	Plugged	12/12/2008	COG OPERATING LLC	32.1249	-103.2765	12,192	JAL, STRAWN, WEST (ASSOC)
30-025-33348	TEXACO WEST JAL 21 #001	Oil	Plugged	4/25/1996	ENSERCH EXPLORATION INC.	32.1104	-103.2722	7,700	[96838] DRY AND ABANDONED
30-025-20381	HERKIMER BQF FEDERAL #001H	Oil	Active	-	AMEREDEV OPERATING, LLC	32.114	-103.2722	8,515	JAL, DELAWARE, WEST
30-025-50391	SIOUX 25 36 STATE FEDERAL COM #020H	Oil	New	-	CAZA OPERATING, LLC	32.1084	-103.3172	0	WC-025 G-09 S253536D, UPR WOLFCAMP
30-025-50392	SIOUX 25 36 STATE FEDERAL COM #021H	Oil	New	-	CAZA OPERATING, LLC	32.1084	-103.3172	0	WC-025 G-08 S2535340, BONE SPRING
30-025-50393	SIOUX 25 36 STATE FEDERAL COM #022H	Oil	New	-	CAZA OPERATING, LLC	32.1083	-103.3172	0	WC-025 G-09 S253536D, UPR WOLFCAMP
30-025-50394	SIOUX 25 36 STATE FEDERAL COM #023H	Oil	New	-	CAZA OPERATING, LLC	32.1083	-103.3172	0	WC-025 G-08 S2535340, BONE SPRING
30-025-50842	LOE FEDERAL COM #804H	Oil	New	-	Franklin Mountain Energy LLC	32.1093	-103.3156	0	JAL, WOLFCAMP, WEST
30-025-50843	LOE FEDERAL COM #805H	Oil	New	-	Franklin Mountain Energy LLC	32.1093	-103.3156	0	JAL, WOLFCAMP, WEST
30-025-50844	LOE FEDERAL COM #806H	Oil	New	-	Franklin Mountain Energy LLC	32.1093	-103.3155	0	JAL, WOLFCAMP, WEST
30-025-50901	LOE FEDERAL COM #103H	Oil	New	-	Franklin Mountain Energy LLC	32.1093	-103.3149	0	DOGIE DRAW, DELAWARE

30-025-50902	LOE FEDERAL COM #104H	Oil	New	-	Franklin Mountain Energy LLC	32.1093	-103.3148	0	DOGIE DRAW, DELAWARE
30-025-50903	LOE FEDERAL COM #503H	Oil	New	-	Franklin Mountain Energy LLC	32.1093	-103.3147	0	WC-025 G-08 S2535340, BONE SPRING
30-025-50904	LOE FEDERAL COM #504H	Oil	New	-	Franklin Mountain Energy LLC	32.1093	-103.3147	0	WC-025 G-08 S2535340, BONE SPRING
30-025-52016	DOGWOOD 25 36 20 FEDERAL COM #106H	Oil	New	-	AMEREDEV OPERATING, LLC	32.1092	-103.2842	0	JAL, WOLFCAMP, WEST
30-025-52017	DOGWOOD 25 36 20 FEDERAL COM #108H	Oil	New	-	AMEREDEV OPERATING, LLC	32.1092	-103.2813	0	JAL, WOLFCAMP, WEST
30-025-52137	DOGWOOD 25 36 20 FEDERAL COM #093H	Oil	New	-	AMEREDEV OPERATING, LLC	32.1092	-103.2901	0	No Data
30-025-52138	DOGWOOD 25 36 20 FEDERAL COM #095H	Oil	New	-	AMEREDEV OPERATING, LLC	32.1092	-103.2843	0	WC-025 G-08 S2535340, BONE SPRING
30-025-52139	DOGWOOD 25 36 20 FEDERAL COM #097H	Oil	New	-	AMEREDEV OPERATING, LLC	32.1092	-103.2815	0	WC-025 G-08 S2535340, BONE SPRING
30-025-52140	DOGWOOD 25 36 20 FEDERAL COM #115H	Oil	New	-	AMEREDEV OPERATING, LLC	32.1092	-103.2844	0	JAL, WOLFCAMP, WEST
30-025-52141	DOGWOOD 25 36 20 FEDERAL COM #124H	Oil	New	-	AMEREDEV OPERATING, LLC	32.1092	-103.29	0	JAL, WOLFCAMP, WEST
30-025-52142	DOGWOOD 25 36 20 FEDERAL COM #128H	Oil	New	-	AMEREDEV OPERATING, LLC	32.1092	-103.2814	0	JAL, WOLFCAMP, WEST
30-025-52143	DOGWOOD 25 36 20 FEDERAL COM #104H	Oil	New	-	AMEREDEV OPERATING, LLC	32.1092	-103.2899	0	JAL, WOLFCAMP, WEST
30-025-52151	DOGWOOD 25 36 20 FEDERAL COM #113H	Oil	New	-	AMEREDEV OPERATING, LLC	32.1092	-103.2901	0	JAL, WOLFCAMP, WEST
30-025-52144	DOGWOOD 25 36 20 FEDERAL COM #117H	Oil	New	-	AMEREDEV OPERATING, LLC	32.1092	-103.2815	0	JAL, WOLFCAMP, WEST
30-025-52145	DOGWOOD 25 36 20 FEDERAL COM #126H	Oil	New	-	AMEREDEV OPERATING, LLC	32.1092	-103.2842	0	JAL, WOLFCAMP, WEST
30-025-26010	PRE-ONGARD WELL #001	Oil	Plugged	-	PRE-ONGARD WELL OPERATOR	32.0886	-103.2978	3,336	SIOUX, TANSILL-YATES-SEVEN RIVERS
30-025-26027	SITTING BULL A #001	Oil	Active	-	FULFER OIL & CATTLE LLC	32.0886	-103.2936	3,368	SIOUX, TANSILL-YATES-SEVEN RIVERS

30-025-26892	PRE-ONGARD WELL #002	Oil	Plugged	-	PRE-ONGARD WELL OPERATOR	32.085	-103.285	3,746	No Data
30-025-26809	PRE-ONGARD WELL #001	Oil	Plugged	-	PRE-ONGARD WELL OPERATOR	32.0886	-103.2765	3,690	No Data

APPENDIX B

IDENTIFICATION OF OPERATORS, LESSEES, SURFACE OWNERS, AND OTHER INTERESTED PARTIES WITHIN ONE MILE OF INDEPENDENCE AGI WELLS; EXAMPLE NOTIFICATION LETTERS

TABLE B-1. PARTIES TO BE INDIVIDUALLY NOTIFIED**Surface Owners:**

EOG Resources, Inc.
5509 Champions Drive
Midland, TX 79706
(432) 686-3600

NGL Water Solutions Permian, LLC
865 North Albion Street, Suite 500
Denver, CO 80220
(303) 968-0887

Intrepid Potash – New Mexico, LLC
1996 Potash Mines Rd.
Carlsbad, NM 88221
(575) 887-5591

Ameredev II, LLC
2901 Via Fortuna, Suite 600
Austin, TX 78746

Active Operators:

Ameredev II, LLC
2901 Via Fortuna, Suite 600
Austin, TX 78746

Tap Rock Operating
523 Park Point Drive, Suite 200
Golden, CO 80401

BC & D Operating, Inc.
1008 West Broadway
Hobbs, NM 88240
(575) 393-2727

Lessees:

Ameredev II, LLC
2901 Via Fortuna, Suite 600
Austin, TX 78746

EOG Resources, Inc.
5509 Champions Drive
Midland, TX 79706

Broughton Petroleum, Inc.
1225 N. Loop West, Suite 1055
Houston, TX 77008

Oxy Y-1 Co.
5 Greenway Plaza, Suite 110
Houston, TX 77046

Sharbo Energy LLC
P.O. Box 840
Artesia, NM 88211

Civitas Permian Operating, LLC
555 17th Street, Suite 3700
Denver, CO 80202

Mineral Rights Owners:

Bureau of Land Management
301 Dinosaur Trail
Santa Fe, NM 87508
(505) 954-2000

Allison Marks
New Mexico State Land Office
310 Old Santa Fe Trail
Santa Fe, NM 87504-1148

ATTACHMENT A – SAMPLE NOTICE LETTER

June XX, 2024

Example Notice Letter
Party to be notified
Address

VIA FEDERAL EXPRESS
RETURN RECEIPT REQUESTED

RE: PINON MIDSTREAM LLC, INDEPENDENCE AGI #1 & INDEPENDENCE AGI #2
VOLUME INCREASE AMENDMENT

This letter is to advise you that Pinon Midstream, LLC (Pinon) filed the enclosed C-108 amendment application on XX/XX/XXXX with the New Mexico Oil Conservation Commission seeking approval to increase the allowable injection volume shared between the existing Independence AGI #1 and Independence AGI #2 wells from 20 million standard cubic feet per day (MMSCFD), to 28.5 MMSCFD.

The Independence AGI #1 well has a surface location of 826 feet from the north line (FNL) and 1,443 feet from the west line (FWL) in Section 20, Township 25 South, Range 36 East. The Independence AGI #2 well was drilled to provide a redundant well option and increase the total sour gas treatment capacity for Pinon's Dark Horse Treatment Facility. The surface location of Independence AGI #2 is 1,110 FNL and 1,443 FWL, with a bottom-hole location southeast of the surface location at 1,080 feet from the south line (FSL) and 1,978 FWL in Section 20.

This application (Case Number XXXXX) has been set for hearing before the New Mexico Oil Conservation Commission at 9:00 a.m. on XX/XX/XXXX, in the Wendell Chino Building at the New Mexico Oil Conservation Division's Santa Fe office located at 1220 South St. Francis Drive; Santa Fe, New Mexico, 87505. You are not required to attend this hearing, but as an interested party that may be affected by Pinon's application, you may appear and present testimony. Failure to appear at that time and become a party of record will preclude you from challenging the application at a later date.

A party appearing at the hearing is required by Division Rule 19.15.4.13 NMAC to file a Pre-Hearing Statement at least four days in advance of the scheduled hearing, but in no event not later than 5:00 p.m. Mountain Time on the Thursday preceding the scheduled hearing date. This statement must be filed at the Division's Santa Fe office at the above-specified address and should include the names of the parties and their attorneys; a concise statement of the case; the names of all witnesses the party will call to testify at the hearing; the approximate time the party will need to present its case; and an identification of any procedural matters that need to be resolved prior to the hearing.

If you have any questions concerning this application, you may contact David White, P.G. at Geolex, Inc.; 500 Marquette Avenue NW, Suite 1350; Albuquerque, New Mexico 87102; (505) 842-8000.

Sincerely,
Geolex, Inc.®

David A. White, P.G.
Vice President, Consultant to Pinon

Enclosure: C-108 Application for Authority to Inject

ATTACHMENT B -- SAMPLE PUBLIC NOTICE OF HEARING

Pinon Midstream, LLC, INSERT ADDRESS, filed Form C-108 (Application for Authorization to Inject) on XX/XX/2024, with the New Mexico Oil Conservation Division (NMOCD) seeking authorization amend New Mexico Oil Conservation Commission Order R-21455 (A-B) and NMOCD Administrative Order SWD-2464. Pinon seeks authorization to increase the combined allowable injection volume for the Independence AGI #1 (API: 30-025-48081) and Independence AGI #2 (API: 30-025-49974) Wells to 28.5 million standard cubic feet per day. The Independence AGI Wells are located in Section 20, Township 25S, Range 36E in Lea County, New Mexico, approximately six miles west of Jal, New Mexico. The Independence AGI #1 Well has a surface location in Section 20 approximately 829 feet from the north line (FNL) and 1,443 feet from the west line (FWL) and Independence AGI #2 has a surface location of 1,110 feet FNL and 1,443 feet FWL in Section 20.

This application (Case Number XXXXX) has been set for hearing before the New Mexico Oil Conservation Commission at XX:XX a.m. on XX/XX/2024, in the Wendell Chino Building at the New Mexico Oil Conservation Division's Santa Fe office located at 1220 South Saint Francis Drive, Santa Fe, New Mexico 87505. Interested parties that may be affected by Pinon's application may appear and present testimony by filing a Pre-Hearing Statement with the Divisions Santa Fe office at the above specified address at least four days in advance of the scheduled hearing date. Additional information can be obtained from the applicant's agent, Geolex, Inc.[®]; 500 Marquette Ave NW, Suite 1350; Albuquerque, New Mexico 87102.

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

**APPLICATION OF AMEREDEV
OPERATING, LLC FOR
AUTHORIZATION TO INJECT, LEA
COUNTY, NEW MEXICO.**

**CASE No. 21381
ORDER No. R-21455-B**

ORDER OF THE COMMISSION

THIS MATTER comes before the New Mexico Oil Conservation Commission (“Commission”) on Ameredev Operating, LLC’s (“Ameredev”) *Application for Authorization to Inject, Lea County, New Mexico* (“Application”) and Piñon Midstream, LLC’s (“Piñon”) Application to revise Order No. R-21455-A, filed on July 5, 2022 in Case No. 22977. The Commission, having conducted a hearing the hearing on the original application on October 8, 2020, the hearing on Piñon’s Application September 8, 2022, and having considered the testimony and the record in this case and Case No. 22977, enters the following findings of fact, conclusions of law, and order.

FINDINGS OF FACT

1. On July 10, 2020, Ameredev filed its Application seeking authorization to inject treated acid gas (“TAG”) into the proposed Independence AGI No. 1 well (“Well”).
2. The Well is an Underground Injection Control (“UIC”) Class II well subject to the requirements of 19.15.26 NMAC.
3. The Well is vertical with an approximate surface and bottom hole location approximately 829 feet from the North line and 1,443 feet from the West line (Unit C) of Section 20, Township 25 South, Range 36 East in Lea County.
4. The target injection zone will be from approximately 16,230 to 17,900 feet deep in the Devonian Thirty-One and Upper Silurian Wristen and Fusselman formations.
5. The Well’s maximum daily injection rate is twelve million standard cubic feet per day (“MMSCFD”).
6. The Well’s maximum surface injection pressure is approximately 4,779 pounds per square inch gauge (“psig”).
7. Ameredev gave personal notice of the Application and the Commission’s hearing via certified mail, return receipt requested to the State Land Office and all operators, surface owners, and lessees within a one-mile radius of the location for the Well, but did not give notice to the Oil Conservation Division or the City of Jal, which is located approximately six miles from the Well.

**BEFORE THE OIL CONSERVATION DIVISION
Santa Fe, New Mexico
Exhibit No. A-2
Submitted by: Piñon Midstream, LLC
Hearing Date: September 12, 2024
Case No. 24755**

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8. The Commission gave public notice of the Application and the Commission's hearing by publication in a newspaper of general circulation in Lea County.

9. Tap Rock Operating, LLC ("Tap Rock") filed an Entry of Appearance on September 10, 2020.

10. The OCD filed an Entry of Appearance and Notice of Intervention on September 22, 2020.

11. The Commissioner of Public Lands of the State of New Mexico, Stephanie Garcia Richard, and the New Mexico State Land Office ("SLO") filed an Entry of Appearance on October 1, 2020.

12. OCD filed a Pre-Hearing Statement on October 1, 2020, stating that OCD's witness would testify that OCD does not oppose Ameredev's Application provided that the Order includes the specific and general conditions stated in OCD Exhibits 2 and 3 (collectively, "Conditions"), and contingent on OCD's review of Ameredev's revised plume dispersion modeling which was not completed at the time of filing the Pre-Hearing Statement.

13. SLO filed a Pre-Hearing Statement on October 1, 2020, stating that SLO's witnesses would testify that SLO concurred with the OCD's Conditions, and also would testify regarding the potential effect of injection into the proposed well on state trust resources.

14. No other person filed an objection to the Application or an entry of appearance.

15. The Commission held a hearing on the Application on October 8, 2020.

16. In support of the Application, Ameredev presented the testimony of three witnesses: Mr. Floyd Hammond, Chief Operating Officer, Ameredev; Mr. Alberto Gutierrez, President, Geolex, Inc.; and Mr. David White, Geologist, Geolex, Inc.

17. Mr. Hammond provided background regarding Ameredev, including its future H₂S treating investment plans and proposal for TAG disposal. Mr. Hammond also testified regarding the benefits of disposing of TAG through an acid gas injection ("AGI") well. Specifically, Mr. Hammond testified that authorization for the Well will allow Ameredev to design and construct a gas treating facility and will provide necessary capacity for needed TAG disposal in the area of the proposed injection. Mr. Hammond testified that the proposed treating facility and Well are needed to resume production in at least nine horizontal wells operated by Ameredev that have been shut-in or curtailed due to a lack of TAG disposal capacity in the area and will allow Ameredev to complete six additional horizontal wells and to drill and develop 89 additional horizontal wells, and to provide services to other operators. Mr. Hammond testified that, in his opinion, Ameredev's proposal to dispose of TAG through the Well will increase reliability of production operations in the area, help prevent shut-ins, and prevent waste and protect correlative rights.

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18. Mr. Hammond testified that Ameredev agrees to the Conditions. With respect to the redundant well, Mr. Hammond testified that Ameredev would shut in wells to deal with operational or maintenance issues that might arise after the Well begins to operate and before the redundant well begins to operate; that Ameredev factored the cost of the redundant well into its economic analysis for the Well and the proposed natural gas processing plant; and that if Ameredev does not build the redundant well or tries to back out of the agreement to build the redundant well, it must shut down the Well. Mr. Hammond also testified that Ameredev understands that the Conditions give OCD the discretion to decide whether the final design for the Well is acceptable, and that the redundant well must be built in essentially the same manner as approved for the Well.

19. Mr. Gutierrez testified regarding the information contained in the Application and regarding the site geology and hydrogeology and stated that, in his opinion, the proposed injection zone provides a sufficient capacity and geologic seal to contain the injected TAG and prevent its migration into other zones; the injection zone is sufficiently isolated from any protectable groundwater sources; and there is no evidence that injection will impair existing or potential hydrocarbon production in the area.

20. Mr. Gutierrez testified regarding the design and operation of the Well and observed that Ameredev had made significant changes to the well design as a result of concerns raised by OCD and SLO after the agencies learned about the Application.

21. Mr. Gutierrez testified that Ameredev will submit its H₂S Contingency Plan for OCD approval prior to commencement of injection, and that Ameredev will certify that it coordinated the plan with the State Emergency Response Commission and the local emergency planning committee, including representatives of the City of Jal, and will provide them with regular updates during operation of the Well.

22. Mr. Gutierrez testified that, in his opinion, the Well will not pose health and safety risks, and the Well will not cause waste or damage correlative rights in any formations in the area.

23. Mr. White testified regarding Geolex's evaluation of the potential for induced seismicity, including seismic review of the area and the preparation of fault-slip modeling. Based on this evaluation, Mr. White testified that the Well can be operated under the proposed operating conditions without contributing significantly to the total risk of injection-induced fault slip.

24. Mr. White further testified the injected TAG is not anticipated to present any risk for vertical migration out of the injection zone based on Geolex's evaluation of local subsurface pressure conditions to assess reservoir containment, including the over-pressure conditions overlying the injection interval, drilling-fluid characteristics, and drilling-fluid programs for the Well. Mr. White confirmed that the injected TAG is not expected to migrate vertically out of the injection zone due to the presence of a dense caprock and because the target injection zone is expected to be under-pressured relative to the overlying strata.

25. Mr. White also testified on plume dispersion modeling over a 30-year period of injection, which included the influence of offsetting injection from saltwater disposal wells. Mr.

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White testified that the maximum lateral dispersion of TAG from the Well is predicted to be from approximately 1.6 miles to 1.8 miles, with TAG dispersion at 20% saturation extending to approximately one mile to 1.3 miles from the Well. He testified that, based on the data analyzed, the proposed injection zone is a good candidate for the injection of TAG; the TAG plume and pressure front will not reach producing intervals; the TAG plume will be contained within the injection interval; and TAG can safely be injected into the Well. Mr. White concluded that, in his opinion, the Well will not result in waste, impair correlative rights, or have a negative impact on public health or the environment.

26. OCD presented the testimony of one witness, Baylen Lamkin, along with six exhibits in support of his testimony. Mr. Lamkin testified that OCD worked closely with SLO to develop the Conditions, and that Ameredev had told OCD and SLO that it would accept and comply with the Conditions.

27. Mr. Lamkin testified that the condition requiring a redundant well is important to prevent waste associated with flaring as a result of mechanical issues or maintenance on the Well, and that the condition concerning well construction is important to protect hydrologic flows in the Salado formation and the protectable water source in the Capitan Reef given historic problems with cement returns for long intermediate casing strings. Mr. Lamkin also testified that the remaining conditions were the same conditions adopted in orders granting applications for AGI wells in two prior cases, except for the addition of the certification requirement for the H₂S Contingency Plan.

28. Mr. Lamkin testified that OCD does not oppose the Application, provided that the Commission adopt the Conditions, because they would ensure that the Well prevents waste and does not harm correlative rights, public health, or the environment. Mr. Lamkin testified that OCD has residual concerns about certain assumptions used in Ameredev's fault-slip and plume dispersion modeling, such as porosity, permeability, water saturation, zone definitions, and fault sealing, but that these concerns would be somewhat ameliorated by the condition requiring Ameredev to recalculate its models using observed data five years after commencing injection into the Well.

29. The Commission accepted Ameredev's late-filed Exhibit 3-Updated 2. The Commission also adopted the Conditions with certain modifications reflected below.

30. On July 5, 2022, Piñon filed an Application with the Commission to have the Commission revise Order No. R-21455-A, resulting in the creation of Case No. 22977. Piñon sought to have the permitted MMSCFD for the relevant sites increased from a total of twelve (12) to (20) MMSCFD between the two wells.

31. At the September 8, 2022 hearing on Piñon's application, Piñon advised the Commission that Ameridev, the original petitioning party for Order No. R-21455-A, secured Piñon's services in managing the Independence AGI No. 1 well that was subject to Order No. R-21455-A, which is why Piñon is the applicant in Case No. 22977, not Ameridev.

32. The operator shall every two (2) years, once injection begins, provide the Division with a report that compares the reservoir pressures, volumes injected and projected TAG plume extent to those estimated in the C-108 application, together with summarizing the AGI wells' performance (including, but not limited to, injected volumes by fluid type and

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reservoir pressures) and potential calibration of models due to information collected during the prior five year period. Pinon will use data collected and analyses conducted pursuant to Paragraph 23, above, to prepare this analysis. The report shall include an updated model of current and projected plume migration and shall use the modeling technology in standard use at the time of the report and any available information about plume migration. At the request of the Commission, the operator shall provide in-person presentations of its data and analysis regarding the AGI wells' performance.

CONCLUSIONS OF LAW

1. The Commission has jurisdiction over the Parties and the subject matter of this case. The Commission shall retain jurisdiction over this matter for any and all further proceedings and likewise retains jurisdiction over any future matters that are related to 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 lessees within a one-mile radius of the Well.

3. The Application is complete.

4. OCD records show that Ameredev Operating, LLC (OGRID No. 372224) is in compliance with Subsection A of 19.15.5.9 NMAC.

5. The Well, if constructed and operated in accordance with the Conditions, as modified by the Commission, will comply with the requirements of 19.15.26 NMAC.

6. Ameredev's injection of TAG, if conducted in accordance with the Conditions, as modified by the Commission, will not cause waste, impair correlative rights, or harm public health or the environment.

ORDER

1. The Application is approved, and Ameredev is authorized to drill and operate the Well with an approximate surface and bottom hole location at approximately 829 feet from the North line and 1,443 feet from the West line (Unit C) of Section 20, Township 25 South, Range 36 East, N.M.P.M., Lea County, New Mexico, to dispose of TAG at a maximum daily injection rate of 20 MMSCFD between both the Independence AGI Well No.1 and the redundant well to be drilled into the Devonian Thirty-One and Wristen Fusselman formations at depths of approximately 16,230 to 17,900 feet deep and a maximum surface injection pressure not to exceed 4,779 psig, subject to these Conditions.

2. Ameredev shall construct the Independence AGI Well No. 1 in accordance with the design and plan of construction approved by OCD, including the use of corrosion-resistant casing, cement, tubing, and packer, and shall isolate and protect the Salado and Capitan intervals, by (1) installing and cementing an intermediate casing string through the Salado interval before drilling into the Capitan interval; and (2) cementing the subsequent intermediate casing to protect the Capitan interval from the Delaware Mountain Group.

3. Ameredev shall circulate cement for all casing to the surface.

4. Ameredev shall use a corrosion-inhibiting diesel with a biocide component as the

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annular fluid of the well.

5. Ameredev shall equip the Well with a pressure-limiting device and a one-way safety valve (with the appropriate interior drift diameter) on the tubing approximately 250 feet below the surface.

6. No later than forty-five (45) days after drilling the Well, Ameredev shall submit to OCD's Engineering Bureau the well drilling logs including mudlogs, electric logs, daily reports, static bottom-hole pressure measured at completion of drilling the well, and a written evaluation of the hydrocarbon resource potential for the approved injection interval. If a significant hydrocarbon show occurs during drilling the Well, Ameredev shall submit a Form C-103 and obtain OCD's written approval prior to commencing injection.

7. No later than forty-five (45) days after completing the Well, Ameredev shall submit to OCD the final reservoir evaluation and confirm that the open-hole portion of the Well does not intersect the fault plane of any identified fault that occurs within the approved injection interval.

8. No later than thirty (30) days prior to commencing injection into the Well, Ameredev shall:

a. Obtain OCD's approval of a hydrogen-sulfide contingency plan that complies with Rule 19.15.11.9 NMAC, and that (i) includes a contingency plan for and a GIS mapping layer showing the gathering lines associated with the natural gas processing plant(s) served by the Well; and (ii) certifies that Ameredev has contacted and coordinated with appropriate representatives of the city of Jal, Lea County, the State Emergency Response Commission, and the local emergency preparedness committee and will provide regular updates to the same at least annually;

b. Determine the salinity of the formation fluid from the approved injection interval and submit to OCD either a calculation of the estimated salinity based on open-hole logs or the actual salinity based on a laboratory analysis. If OCD determines that the salinity of the formation fluid from the approved injection interval contains a total dissolved solids (TDS) concentration of 10,000 milligrams or less, the injection authority under this Order shall be suspended and Ameredev shall not commence injection until Ameredev complies with 19.15.26.8(E) NMAC;

c. Conduct step-rate and fall-off tests. Ameredev may adjust the maximum surface injection pressure for the Well after these tests with OCD's written approval; and

d. Obtain OCD's approval of immediate notification parameters for annulus pressure and tubing and casing differential pressure at a set injection temperature.

9. No later than ninety (90) days after commencing injection into the Well, and no less frequently than annually thereafter, Ameredev shall consult with OCD regarding the immediate notification parameters. If OCD determines that the immediate notification parameters should be modified, Ameredev shall provide modified parameters within thirty (30) days of notification for review by OCD.

10. Ameredev shall conduct an annual mechanical integrity test (MIT) on the Well.

11. Ameredev shall conduct continuous monitoring of surface TAG injection

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pressure, temperature, rate, surface annular pressure, and bottom-hole (or "end of tubing") temperatures and pressures in the tubing and annulus.

12. Ameredev shall maintain a maintenance log, including the volume of annular fluid (diesel) replaced in the annulus of the Well.

13. Ameredev shall establish and submit for OCD approval the temperature parameters for injected fluid, install and maintain temperature-activated controls to govern the temperature of injected fluid, and install and maintain an alarm system for the controls to indicate exceedance of the parameters.

14. Ameredev shall report to OCD on a quarterly basis (unless changed to a biannual basis upon approval of the OCD Director) the summary data for injection parameters monitored pursuant to this Order, and upon request by OCD, shall submit annual reports after each year of operation, which shall include composition and volume of acid gas injected into the Well.

15. No later than thirty (30) days after the fifth (5th) year of injection into the Well, Ameredev shall submit to OCD a report summarizing the Well's performance, including injected volumes by fluid type, change in reservoir pressures, the model originally used in the Application recalibrated using that information, and seismic modeling. Ameredev shall provide an in-person presentation of the report to the Commission at its request.

16. Ameredev shall install, operate, and monitor for the life of this Order a seismic monitoring station or stations. OCD shall be responsible for coordinating with the Manager of the New Mexico Tech Seismological Observatory at the New Mexico Bureau of Geology and Mineral Resources for appropriate specifications for the equipment and the required reporting procedure for the monitoring data.

17. In the event Ameredev transfers ownership of the Well, Ameredev shall seek approval of such change in ownership from OCD pursuant to 19.15.9.9 NMAC.

18. No later than twelve (12) months after issuance of this Order, Ameredev shall file a C-108 with OCD for approval to construct a redundant AGI well ("Redundant Well") in Devonian-Silurian formations that is capable of receiving volumes of TAG that is equal to or greater than the volumes approved for injection into the Independence AGI Well No. 1. No later than twenty (24) months after issuance of this Order, Ameredev will complete the Redundant Well subject to the Conditions this Order. OCD is authorized to review and approve the Redundant Well.

19. If Ameredev fails to timely submit or to diligently prosecute the application for the Redundant Well, fails to construct the Redundant Well by the specified deadline after receiving OCD's approval, or requests an exemption or rescission of the above condition, this Order shall terminate automatically and Ameredev shall plug and abandon the Independence AGI Well No. 1 pursuant to an OCD-approved plan; provided, however, that OCD in its sole discretion may grant an extension of time not to exceed six (6) months to the completion deadline in Paragraph 18 for good cause shown.

20. The injection authority herein granted shall terminate two years after the effective date of this Order if Ameredev has not commenced injection operation. The OCD Director, upon written request of Ameredev submitted prior to the expiration of this Order may extend this time for good cause shown.

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Page 8

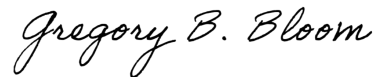
21. After 30 years from the date of the Commission's Order in this case, the authority granted by this Order shall terminate unless Ameredev or its successor-in-interest shall make application before the Commission for an extension to inject.

DONE at Santa Fe, New Mexico on the 13th day of October 2022.

**STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION**

A handwritten signature in black ink, appearing to read 'AS', written in a cursive style.

ADRIENNE SANDOVAL, M.E., CHAIR

A handwritten signature in black ink, reading 'Gregory B. Bloom', written in a cursive style.

GREG BLOOM, MEMBER

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

ORDER

GRANTING UIC PERMIT SWD-2464

Pinon Midstream, LLC (“Applicant”) filed an Application for Authorization to Inject (Form C-108) (“Application”) with the New Mexico Energy, Minerals and Natural Resources Department, Oil Conservation Division (“OCD”) to inject treated acid gas (“TAG”) at the Applicant’s Independence AGI Well No. 2 (“Well”), as more fully described in Appendix A.

THE OCD FINDS THAT:

1. Applicant provided the information required by 19.15.26 NMAC and the Form C-108 for an application to inject TAG into a Class II Underground Injection Control (“UIC”) well.
2. Applicant submitted the Application for administrative approval as outlined in Ordering Paragraph 18 of Commission Order No. R-21455-A.
3. Applicant complied with the notice requirements of 19.15.26.8 NMAC.
4. One affected party, NGL Water Solutions Permian, LLC, filed a protest on the Application but subsequently withdrew the protest of the Well.
5. The Well will inject TAG into the Devonian and Silurian formations.
6. The TAG injected into the Well will be confined by layers above and below the approved injection interval.
7. One UIC well is permitted and a second UIC well is subject of a hearing to inject produced water into the same approved injection interval within 1.75 miles of the Well.
8. Applicant affirmed in a sworn statement by a qualified person that it examined the available geologic and engineering data and found no evidence of open faults or other hydrologic connections between the approved injection interval and any underground sources of drinking water.
9. Applicant affirmed in a sworn statement by a qualified person that the injection of TAG over the predicted service life of the Well will not increase the potential for an induced seismic event.
10. Applicant is in compliance with 19.15.5.9 NMAC.

BEFORE THE OIL CONSERVATION DIVISION
Santa Fe, New Mexico
Exhibit No. A-3
Submitted by: Piñon Midstream, LLC
Hearing Date: September 12, 2024
Case No. 24755
Page 1 of 13

- 11. Applicant agrees to the Terms and Conditions in the attached Permit.

THE DIVISION CONCLUDES THAT:

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

IT IS THEREFORE ORDERED THAT:

The Applicant be granted UIC Permit SWD-2464 for the Independence AGI Well No. 2.



ADRIENNE E. SANDOVAL
DIVISION DIRECTOR

Date: 3/31/2022

AES/prg

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

UIC CLASS II PERMIT SWD-2464

APPENDIX A – AUTHORIZED INJECTION

Permittee: Pinon Midstream, LLC

OGRID No.: 330718

Well name: Independence AGI Well No. 2

Surface location: 1,180 feet FNL and 1,578 feet FWL, Sec. 20, T25S, R36E, NMPM
Latitude and Longitude (NAD83): 32.120020 and -103.291015

Bottom hole location: 1,033 feet FSL and 2,132 feet FWL, Sec. 20, T25S, R36E, NMPM
Latitude and Longitude (NAD83): 32.111581 and -103.289273

Type of completion: Deviated open hole

Type of injection: Gas processing waste from the Dark Horse Gas Treatment Facility

Injection fluid: Treated acid gas

Injection interval: 16,080 to 17,683 feet TVD; Devonian and Silurian formations.

Injection interval thickness (feet): approximately 1,603

Confining layer(s): Woodford Shale (upper) and Montoya formation (lower)

Prohibited injection interval(s): Woodford Shale and shallower formations including the Capitan Reef aquifer; Montoya formation and deeper Ordovician formations.

Liner, tubing, and packer set: 3.5-inch tubing (both L80 and CRA) with permanent packer (CR) set within 100 feet of the top of open hole.

Maximum daily injection rate: Under Order No. R-21455-A, a combined total of 12 MMSCFD for both Independence AGI wells injecting concurrently. If the Independence AGI No. 1 is not injecting, the Independence AGI No. 2 can receive total of 12 MMSCFD.

Maximum surface injection pressure: 5,005 PSIG

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

UIC CLASS II PERMIT SWD-2464

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 Pinon Midstream, LLC (“Permittee”) to authorize the construction and operation of a well to inject treated acid gas (“TAG”) 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 treated acid gas 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 a single UIC Class II fluid, TAG, as defined in 19.15.2.7(E)(6) NMAC.

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

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

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

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

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

B. DUTIES AND REQUIREMENTS

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

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

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

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

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

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

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

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

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

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

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

C. PRIOR TO COMMENCING INJECTION

1. Construction Requirements.

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

Appendix A and as required by the Special Conditions.

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

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

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

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

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

d. Permittee shall submit to the appropriate OCD district office 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 to the appropriate OCD district office 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, annually after the date of the previous MIT, and whenever the tubing is removed or replaced, the packer is reset, mechanical integrity is lost, Permittee proposes to transfer the Well, or requested by OCD.

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

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

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

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

i. The Well fails a MIT; or

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

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

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

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

5. Records.

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

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

- i. Date, location, and time of sample, measurement or calibration;
- ii. Person who conducted the sample event, -measurement or calibration;
- iii. Calibration of gauge or other equipment in accordance with the manufacturer's specifications;
- iv. Description of method and procedures;
- v. Description of handling and custody procedures; and
- vi. Result of the analysis.

E. PLUGGING AND ABANDONMENT

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

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

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

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

F. REPORTING

1. **Monthly Reports.** Permittee shall submit a report using Form C-115 using the OCD's web-based online application on or before the 15th day of the second month following the month of injection, or if such day falls on a weekend or holiday, the first workday following the 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

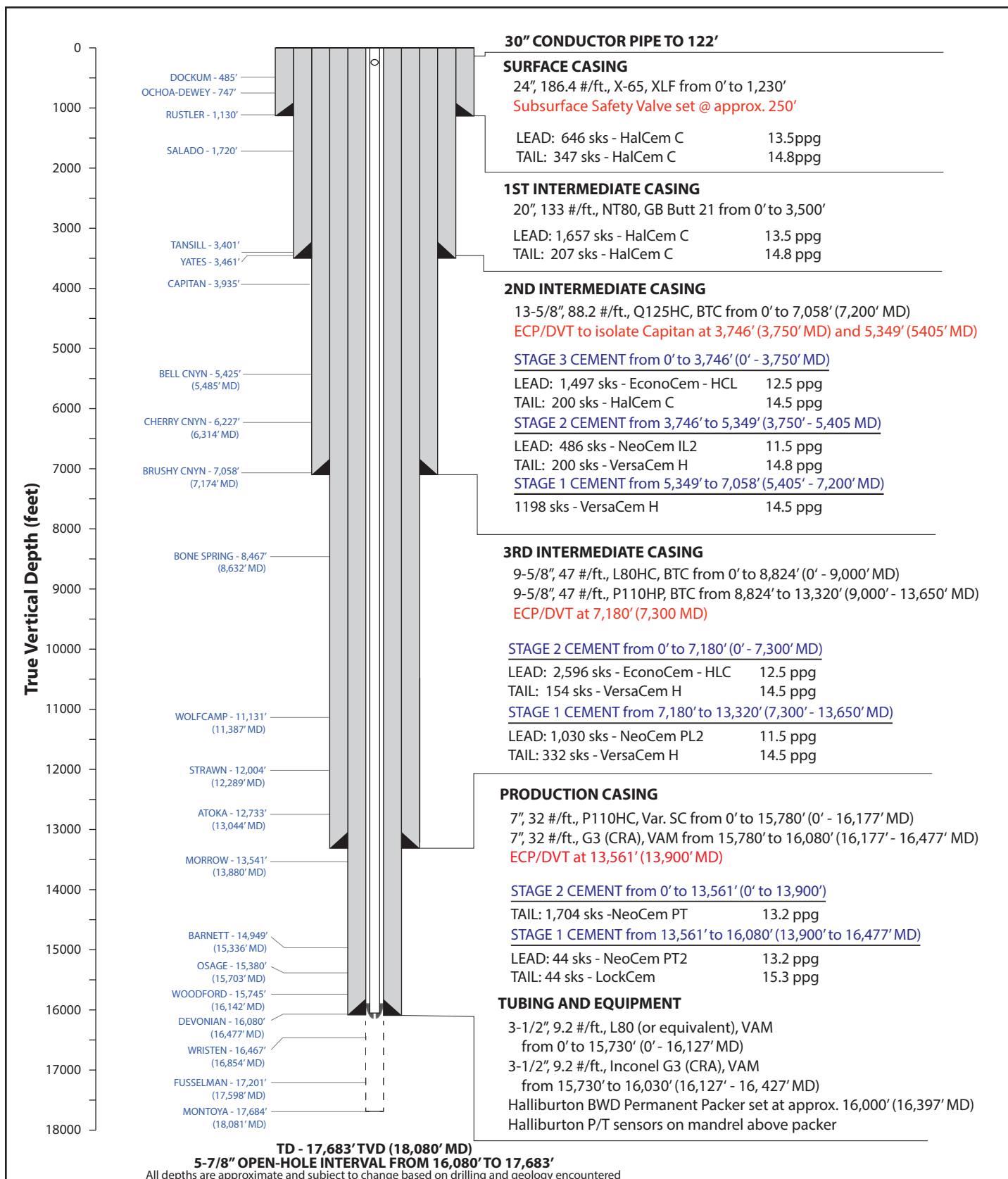
Permittee shall comply, as is applicable to the redundant Well, with the conditions listed in Ordering Paragraph 2 through Ordering Paragraph 21 of Order No. R-21455-A. If any conditions contained in this Permit conflicts with the conditions of Order No. R-21455-A, the requirements of the Order shall supersede the condition found in this Permit.

III. ATTACHMENTS

- A. Well Completion Diagram as Provided in the Form C-108 Application dated November 1, 2021
- B. Commission Order No. R-21455-A



WELL SCHEMATIC INDEPENDENCE AGI #2 S20 - T25S - R36E



10/12/2020

Figure 4. Well design consisting of a surface string of casing, three intermediate strings, and a production string with associating tubing/equipment and cement types

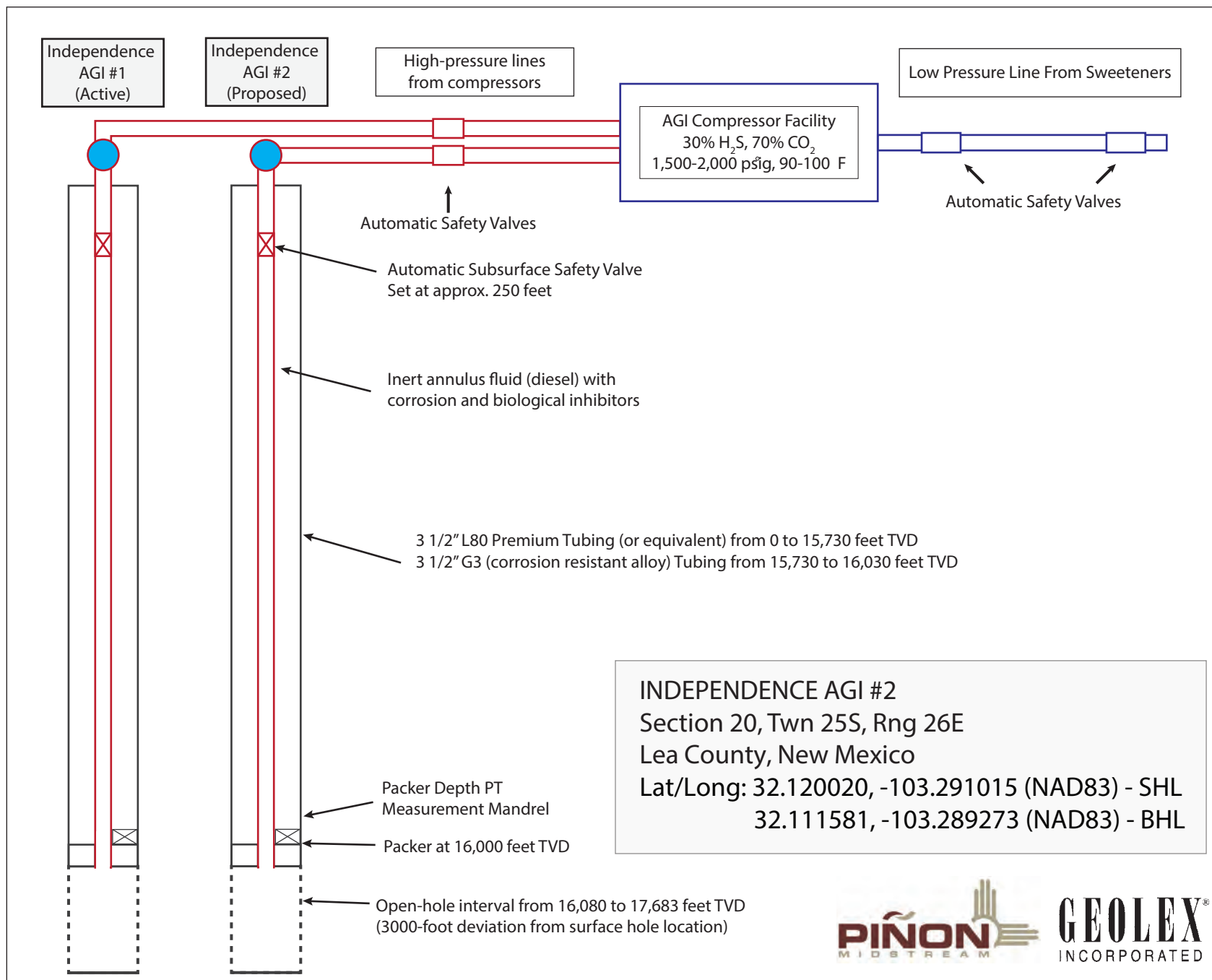


Figure 3. Schematic of surface facilities, proposed Independence AGI #2 and existing Independence AGI # 1

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

**APPLICATION OF AMEREDEV
OPERATING, LLC FOR
AUTHORIZATION TO INJECT, LEA
COUNTY, NEW MEXICO.**

**CASE No. 21381
ORDER No. R-21455-A**

ORDER OF THE COMMISSION

THIS MATTER comes before the New Mexico Oil Conservation Commission (“Commission”) on Ameredev Operating, LLC’s (“Ameredev”) *Application for Authorization to Inject, Lea County, New Mexico* (“Application”). The Commission, having conducted a hearing on October 8, 2020, and having considered the testimony and the record in this case, enters the following findings of fact, conclusions of law, and order.

FINDINGS OF FACT

1. On July 10, 2020, Ameredev filed its Application seeking authorization to inject treated acid gas (“TAG”) into the proposed Independence AGI No. 1 well (“Well”).
2. The Well is an Underground Injection Control (“UIC”) Class II well subject to the requirements of 19.15.26 NMAC.
3. The Well is vertical with an approximate surface and bottom hole location approximately 829 feet from the north line and 1,443 feet from the west line (Unit C) of Section 20, Township 25 South, Range 36 East in Lea County.
4. The target injection zone will be from approximately 16,230 to 17,900 feet deep in the Devonian Thirty-One and Upper Silurian Wristen and Fusselman formations.
5. The Well’s maximum daily injection rate is twelve million standard cubic feet per day (“MMSCFD”).
6. The Well’s maximum surface injection pressure is approximately 4,779 pounds per square inch gauge (“psig”).
7. Ameredev gave personal notice of the Application and the Commission’s hearing via certified mail, return receipt requested to the State Land Office and all operators, surface owners, and lessees within a one-mile radius of the location for the Well, but did not give notice to the Oil Conservation Division or the City of Jal, which is located approximately six miles from the Well.

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Order No. R-21455-A
Page 2

8. The Commission gave public notice of the Application and the Commission's hearing by publication in a newspaper of general circulation in Lea County.

9. Tap Rock Operating, LLC ("Tap Rock") filed an Entry of Appearance on September 10, 2020.

10. The OCD filed an Entry of Appearance and Notice of Intervention on September 22, 2020.

11. The Commissioner of Public Lands of the State of New Mexico, Stephanie Garcia Richard, and the New Mexico State Land Office ("SLO") filed an Entry of Appearance on October 1, 2020.

12. OCD filed a Pre-Hearing Statement on October 1, 2020, stating that OCD's witness would testify that OCD does not oppose Ameredev's Application provided that the Order includes the specific and general conditions stated in OCD Exhibits 2 and 3 (collectively, "Conditions"), and contingent on OCD's review of Ameredev's revised plume dispersion modeling which was not completed at the time of filing the Pre-Hearing Statement.

13. SLO filed a Pre-Hearing Statement on October 1, 2020, stating that SLO's witnesses would testify that SLO concurred with the OCD's Conditions, and also would testify regarding the potential effect of injection into the proposed well on state trust resources.

14. No other person filed an objection to the Application or an entry of appearance.

15. The Commission held a hearing on the Application on October 8, 2020.

16. In support of the Application, Ameredev presented the testimony of three witnesses: Mr. Floyd Hammond, Chief Operating Officer, Ameredev; Mr. Alberto Gutierrez, President, Geolex, Inc.; and Mr. David White, Geologist, Geolex, Inc.

17. Mr. Hammond provided background regarding Ameredev, including its future H₂S treating investment plans and proposal for TAG disposal. Mr. Hammond also testified regarding the benefits of disposing of TAG through an acid gas injection ("AGI") well. Specifically, Mr. Hammond testified that authorization for the Well will allow Ameredev to design and construct a gas treating facility and will provide necessary capacity for needed TAG disposal in the area of the proposed injection. Mr. Hammond testified that the proposed treating facility and Well are needed to resume production in at least nine horizontal wells operated by Ameredev that have been shut-in or curtailed due to a lack of TAG disposal capacity in the area and will allow Ameredev to complete six additional horizontal wells and to drill and develop 89 additional horizontal wells, and to provide services to other operators. Mr. Hammond testified that, in his opinion, Ameredev's proposal to dispose of TAG through the Well will increase reliability of production operations in the area, help prevent shut-ins, and prevent waste and protect correlative rights.

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18. Mr. Hammond testified that Ameredev agrees to the Conditions. With respect to the redundant well, Mr. Hammond testified that Ameredev would shut in wells to deal with operational or maintenance issues that might arise after the Well begins to operate and before the redundant well begins to operate; that Ameredev factored the cost of the redundant well into its economic analysis for the Well and the proposed natural gas processing plant; and that if Ameredev does not build the redundant well or tries to back out of the agreement to build the redundant well, it must shut down the Well. Mr. Hammond also testified that Ameredev understands that the Conditions give OCD the discretion to decide whether the final design for the Well is acceptable, and that the redundant well must be built in essentially the same manner as approved for the Well.

19. Mr. Gutierrez testified regarding the information contained in the Application and regarding the site geology and hydrogeology and stated that, in his opinion, the proposed injection zone provides a sufficient capacity and geologic seal to contain the injected TAG and prevent its migration into other zones; the injection zone is sufficiently isolated from any protectable groundwater sources; and there is no evidence that injection will impair existing or potential hydrocarbon production in the area.

20. Mr. Gutierrez testified regarding the design and operation of the Well, and observed that Ameredev had made significant changes to the well design as a result of concerns raised by OCD and SLO after the agencies learned about the Application.

21. Mr. Gutierrez testified that Ameredev will submit its H₂S Contingency Plan for OCD approval prior to commencement of injection, and that Ameredev will certify that it coordinated the plan with the State Emergency Response Commission and the local emergency planning committee, including representatives of the City of Jal, and will provide them with regular updates during operation of the Well.

22. Mr. Gutierrez testified that, in his opinion, the Well will not pose health and safety risks, and the Well will not cause waste or damage correlative rights in any formations in the area.

23. Mr. White testified regarding Geolex's evaluation of the potential for induced seismicity, including seismic review of the area and the preparation of fault-slip modeling. Based on this evaluation, Mr. White testified that the Well can be operated under the proposed operating conditions without contributing significantly to the total risk of injection-induced fault slip.

24. Mr. White further testified the injected TAG is not anticipated to present any risk for vertical migration out of the injection zone based on Geolex's evaluation of local subsurface pressure conditions to assess reservoir containment, including the over-pressure conditions overlying the injection interval, drilling-fluid characteristics, and drilling-fluid programs for the Well. Mr. White confirmed that the injected TAG is not expected to migrate vertically out of the injection zone due to the presence of a dense caprock and because the target injection zone is expected to be under-pressured relative to the overlying strata.

25. Mr. White also testified on plume dispersion modeling over a 30-year period of injection, which included the influence of offsetting injection from saltwater disposal wells. Mr.

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White testified that the maximum lateral dispersion of TAG from the Well is predicted to be from approximately 1.6 miles to 1.8 miles, with TAG dispersion at 20% saturation extending to approximately one mile to 1.3 miles from the Well. He testified that, based on the data analyzed, the proposed injection zone is a good candidate for the injection of TAG; the TAG plume and pressure front will not reach producing intervals; the TAG plume will be contained within the injection interval; and TAG can safely be injected into the Well. Mr. White concluded that, in his opinion, the Well will not result in waste, impair correlative rights, or have a negative impact on public health or the environment.

26. OCD presented the testimony of one witness, Baylen Lamkin, along with six exhibits in support of his testimony. Mr. Lamkin testified that OCD worked closely with SLO to develop the Conditions, and that Ameredev had told OCD and SLO that it would accept and comply with the Conditions.

27. Mr. Lamkin testified that the condition requiring a redundant well is important to prevent waste associated with flaring as a result of mechanical issues or maintenance on the Well, and that the condition concerning well construction is important to protect hydrologic flows in the Salado formation and the protectable water source in the Capitan Reef given historic problems with cement returns for long intermediate casing strings. Mr. Lamkin also testified that the remaining conditions were the same conditions adopted in orders granting applications for AGI wells in two prior cases, except for the addition of the certification requirement for the H₂S Contingency Plan.

28. Mr. Lamkin testified that OCD does not oppose the Application, provided that the Commission adopt the Conditions, because they would ensure that the Well prevents waste and does not harm correlative rights, public health, or the environment. Mr. Lamkin testified that OCD has residual concerns about certain assumptions used in Ameredev's fault-slip and plume dispersion modeling, such as porosity, permeability, water saturation, zone definitions, and fault sealing, but that these concerns would be somewhat ameliorated by the condition requiring Ameredev to recalculate its models using observed data five years after commencing injection into the Well.

29. The Commission accepted Ameredev's late-filed Exhibit 3-Updated 2. The Commission also adopted the Conditions with certain modifications reflected below.

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 lessees within a one-mile radius of the Well.
3. The Application is complete.

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4. OCD records show that Ameredev Operating, LLC (OGRID No. 372224) is in compliance with Subsection A of 19.15.5.9 NMAC.

5. The Well, if constructed and operated in accordance with the Conditions, as modified by the Commission, will comply with the requirements of 19.15.26 NMAC.

6. Ameredev's injection of TAG, if conducted in accordance with the Conditions, as modified by the Commission, will not cause waste, impair correlative rights, or harm public health or the environment.

ORDER

1. The Application is approved, and Ameredev is authorized to drill and operate the Well with an approximate surface and bottom hole location at approximately 829 feet from the north line and 1,443 feet from the west line (Unit C) of Section 20, Township 25 South, Range 36 East, N.M.P.M., Lea County, New Mexico, to dispose of TAG at a maximum daily injection rate of 12 MMSCFD into the Devonian Thirty-One and Wristen Fusselman formations at depths of approximately 16,230 to 17,900 feet deep and a maximum surface injection pressure not to exceed 4,779 psig, subject to these Conditions.

2. Ameredev shall construct the Independence AGI Well No. 1 in accordance with the design and plan of construction approved by OCD, including the use of corrosion-resistant casing, cement, tubing, and packer, and shall isolate and protect the Salado and Capitan intervals, by (1) installing and cementing an intermediate casing string through the Salado interval before drilling into the Capitan interval; and (2) cementing the subsequent intermediate casing to protect the Capitan interval from the Delaware Mountain Group.

3. Ameredev shall circulate cement for all casing to the surface.

4. Ameredev shall use a corrosion-inhibiting diesel with a biocide component as the annular fluid of the well.

5. Ameredev shall equip the Well with a pressure-limiting device and a one-way safety valve (with the appropriate interior drift diameter) on the tubing approximately 250 feet below the surface.

6. No later than forty-five (45) days after drilling the Well, Ameredev shall submit to OCD's district office the well drilling logs including mudlogs, electric logs, daily reports, static bottom-hole pressure measured at completion of drilling the well, and a written evaluation of the hydrocarbon resource potential for the approved injection interval. If a significant hydrocarbon show occurs during drilling the Well, Ameredev shall submit a Form C-103 and obtain OCD's written approval prior to commencing injection.

7. No later than forty-five (45) days after completing the Well, Ameredev shall submit to OCD the final reservoir evaluation and confirm that the open-hole portion of the Well does not intersect the fault plane of any identified fault that occurs within the approved injection interval.

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8. No later than thirty (30) days prior to commencing injection into the Well, Ameredev shall:

a. Obtain OCD's approval of a hydrogen-sulfide contingency plan that complies with Rule 19.15.11.9 NMAC, and that (i) includes a contingency plan for and a GIS mapping layer showing the gathering lines associated with the natural gas processing plant(s) served by the Well; and (ii) certifies that Ameredev has contacted and coordinated with appropriate representatives of the city of Jal, Lea County, the State Emergency Response Commission, and the local emergency preparedness committee and will provide regular updates to the same at least annually;

b. Determine the salinity of the formation fluid from the approved injection interval and submit to OCD either a calculation of the estimated salinity based on open-hole logs or the actual salinity based on a laboratory analysis. If OCD determines that the salinity of the formation fluid from the approved injection interval contains a total dissolved solids (TDS) concentration of 10,000 milligrams or less, the injection authority under this Order shall be suspended and Ameredev shall not commence injection until Ameredev complies with 19.15.26.8(E) NMAC;

c. Conduct step-rate and fall-off tests. Ameredev may adjust the maximum surface injection pressure for the Well after these tests with OCD's written approval; and

d. Obtain OCD's approval of immediate notification parameters for annulus pressure and tubing and casing differential pressure at a set injection temperature.

9. No later than ninety (90) days after commencing injection into the Well, and no less frequently than annually thereafter, Ameredev shall consult with OCD regarding the immediate notification parameters. If OCD determines that the immediate notification parameters should be modified, Ameredev shall provide modified parameters within thirty (30) days of notification for review by OCD.

10. Ameredev shall conduct an annual mechanical integrity test (MIT) on the Well.

11. Ameredev shall conduct continuous monitoring of surface TAG injection pressure, temperature, rate, surface annular pressure, and bottom-hole (or "end of tubing") temperatures and pressures in the tubing and annulus.

12. Ameredev shall maintain a maintenance log, including the volume of annular fluid (diesel) replaced in the annulus of the Well.

13. Ameredev shall establish and submit for OCD approval the temperature parameters for injected fluid, install and maintain temperature-activated controls to govern the temperature of injected fluid, and install and maintain an alarm system for the controls to indicate exceedance of the parameters.

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14. Ameredev shall report to OCD on a quarterly basis (unless changed to a biannual basis upon approval of the OCD Director) the summary data for injection parameters monitored pursuant to this Order, and upon request by OCD, shall submit annual reports after each year of operation, which shall include composition and volume of acid gas injected into the Well.

15. No later than thirty (30) days after the fifth (5th) year of injection into the Well, Ameredev shall submit to OCD a report summarizing the Well's performance, including injected volumes by fluid type, change in reservoir pressures, the model originally used in the Application recalibrated using that information, and seismic modeling. Ameredev shall provide an in-person presentation of the report to the Commission at its request.

16. Ameredev shall install, operate, and monitor for the life of this Order a seismic monitoring station or stations. OCD shall be responsible for coordinating with the Manager of the New Mexico Tech Seismological Observatory at the New Mexico Bureau of Geology and Mineral Resources for appropriate specifications for the equipment and the required reporting procedure for the monitoring data.

17. In the event Ameredev transfers ownership of the Well, Ameredev shall seek approval of such change in ownership from OCD pursuant to 19.15.9.9 NMAC.

18. No later than twelve (12) months after issuance of this Order, Ameredev shall file a C-108 with OCD for approval to construct a redundant AGI well ("Redundant Well") in Devonian-Silurian formations that is capable of receiving volumes of TAG that is equal to or greater than the volumes approved for injection into the Independence AGI Well No. 1. No later than twenty (24) months after issuance of this Order, Ameredev will complete the Redundant Well subject to the Conditions this Order. OCD is authorized to review and approve the Redundant Well.

19. If Ameredev fails to timely submit or to diligently prosecute the application for the Redundant Well, fails to construct the Redundant Well by the specified deadline after receiving OCD's approval, or requests an exemption or rescission of the above condition, this Order shall terminate automatically and Ameredev shall plug and abandon the Independence AGI Well No. 1 pursuant to an OCD-approved plan; provided, however, that OCD in its sole discretion may grant an extension of time not to exceed six (6) months to the completion deadline in Paragraph 18 for good cause shown.

20. The injection authority herein granted shall terminate two years after the effective date of this Order if Ameredev has not commenced injection operation. The OCD Director, upon written request of Ameredev submitted prior to the expiration of this Order may extend this time for good cause shown.

21. After 30 years from the date of the Commission's Order in this case, the authority granted by this Order shall terminate unless Ameredev or its successor-in-interest shall make application before the Commission for an extension to inject.

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DONE at Santa Fe, New Mexico on the 4th day of November, 2020.

**STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION**



Adrienne Sandoval, M.E., Chair



Dr. Thomas Engler, P.E., Member



Jordan Kessler, Esq., Member

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

**APPLICATION OF PINON MIDSTREAM, LLC TO
AMEND COMMISSION ORDER NO.
R-21455-B/SWD-2464 TO INCREASE THE SHARED
MAXIMUM DAILY INJECTION RATE FOR THE
INDEPENDENCE AGI #1 AND #2 WELLS,
LEA COUNTY, NEW MEXICO.**

**CASE NO. 24755
COMMISSION ORDER NO. R-21455-B**

SELF-AFFIRMED STATEMENT OF DAVID A. WHITE

1. My name is David A. White, P.G., and I am employed by Geolex, Inc., as Vice President and Senior Geologist. Geolex has been retained by Pinon Midstream, LLC (“Piñon”) (OGRID 330718) to prepare this application.

2. I have previously testified before the New Mexico Oil Conservation Commission as an expert witness in acid gas injection (“AGI”) permitting and operations, petroleum geology, seismic interpretation, and fault-slip probability modeling. My credentials have been accepted and made a matter of record.

3. I am familiar with the application filed by Piñon in this case and the status of the lands in the subject area. I have conducted a geologic study of the area and have prepared an analysis in support of this application and the requested rate increase.

4. None of the affected parties have indicated opposition to presenting this case by affidavit.

Background

5. In this case, Piñon seeks to amend Commission Order No. R-21455-B/SWD-2464 to increase the maximum daily injection rate of treated acid gas (“TAG”) for disposal through its

Independence AGI #1 and #2 wells from 20 MMSCFD to 28.5 MMSCFD.

6. **Piñon Exhibit A-1** is a copy of the C-108 Amendment Application that was filed with the Division. It includes the information and analyses in support of this request.

7. The Independence AGI #1 well (API No. 30-025-48081) is an existing vertical well with a surface and bottom hole location approximately 829 feet from the north line and 1,443 feet from the west line (Unit C) of Section 20, Township 25 South, Range 36 East, NMPM, Lea County, New Mexico. It was originally approved by the Commission as an injection well for disposal of TAG under Commission Order No. R-21455-A in Case No. 21381.

8. Commission Order No. R-21455-A authorized a maximum daily injection rate of 12 MMSCFD into the target injection interval within the Devonian and Silurian formations from a depth of approximately 16,230 to 17,900 feet deep with a maximum surface injection pressure of 4,779 psig. Independence AGI #1 was commissioned and placed into service in September 2021.

9. Order R-21445-A also required a second AGI well to be approved and capable of receiving volumes of TAG “equal to or greater than the volumes approved for injection into” the Independence AGI #1. *See* Order No. R-21455-A, ¶ 18.

10. Under the terms of Order No. R-21455-A, Piñon timely filed an administrative C-108 application for a redundant AGI injection well, the Independence AGI #2 well (API No. 30-025-49974). The Division approved the application under Order SWD-2464.

11. The Independence AGI #2 is a deviated well with a surface location approximately 1,110 feet from the north line and 1,443 feet from the west line (Unit C)

and a bottom hole location approximately 1,080 feet from the south line and 1,978 feet from the west line (Unit N) in Section 20, Township 25 South, Range 36 East, NMPM, Lea County, New Mexico. It injects into the same target reservoir as the Independence AGI #1 well, from approximately 16,080 to 17,683 feet deep within the Devonian and Silurian formations with a maximum surface injection pressure of 5,005 psig.

12. Order No. R-21455-B authorizes Piñon to inject a shared maximum of 20 MMSCFD of TAG into either or both Independence AGI #1 and Independence AGI #2. See Order R-21455-B, decretal ¶ 1.

13. The Independence AGI wells serve Piñon's Dark Horse Treating Facility, which is experiencing increasing demand for sour gas treatment and disposal. In planning for this increased demand, Piñon has (i) secured a New Source Review air permit from the New Mexico Environment Department authorizing the construction of several additional amine treating units at the Dark Horse Treating Facility, and (ii) developed and initiated a facility improvement schedule for the Dark Horse Treating Facility that will increase the sour-gas treatment capacity and result in the need for up to 22.5 MMSCFD of TAG disposal as soon as Q2 2025 and 28.5 MMSCFD as soon as Q2 2026.

Geologic Analysis & Reservoir Characterization

14. In support of this application, Geolex has completed additional geological analysis of the project area to further refine geologic characterization models and interpretations, verify subsurface structural relationships within the project area, and to confirm the capability of the Siluro-Devonian injection reservoir to accommodate acid gas injection, as proposed and requested by Piñon (i.e., up to a maximum of 28.5 MMSCFD). Since commissioning of the Independence AGI wells, geologic

interpretations have been refined and improved through the acquisition and detailed analysis of 3D seismic survey data and through routine analysis of AGI well operating parameters for the Independence AGI #1 and Independence AGI #2, all of which, have been incorporated and utilized to improve geologic characterization models and injection forecast simulations supporting this application.

15. Through the detailed analysis of newly acquired 3D seismic data, characterization of the subsurface structure and reservoir properties has been significantly refined. As described in Section 3.3 of the C-108 application (PDF page 16 of Exhibit A-1), and shown in Figure 5 of the application (PDF page 31), general patterns of faulting do not significantly differ from prior interpretations, however, the analysis of 3D seismic data provides greater resolution in mapping the extent and continuity of features, and most critically, verifies that the upper confining strata (i.e., the Woodford Shale and overlying tight carbonate strata) are not compromised, as the magnitude of offset along faults is less than the thickness of Woodford Shale. As such, injected TAG will be adequately confined within the permitted Siluro-Devonian injection reservoir and operation of the AGI wells will not result in waste of overlying natural resources, nor impact correlative rights.

16. Geologic characterization of the project area, specifically reservoir porosity characteristics and distribution, have also been improved through the analysis of newly acquired 3D seismic survey data. As described in Section 3.3 of the C-108 application (PDF page 16 of Exhibit A-1), high-resolution seismic trace inversion analysis methods have been utilized to more accurately characterize porosity development and the degree to which porous zones are interconnected, vertically and laterally, within the approved

Siluro-Devonian injection reservoir. These methods (i.e., high-resolution seismic trace inversion) are effective for transforming seismic data to quantitative rock properties, such as acoustic impedance (which directly relates to porosity), and through direct correlation with wireline log data, are well-demonstrated methods for the mapping porosity development within carbonate injection reservoirs. Furthermore, these methods are critical in confirming long-term sustainability of injection activities in areas where offset well data are limited and within carbonate reservoirs where porosity development is spatially variable. In refining the geologic model supporting this application, and to ensure a conservative representation of porosity, transformation of acoustic impedance attributes (derived from 3D seismic data) to porosity was completed through direct correlation to wireline porosity logs and transform functions were limited to maximum porosity values observed in those logs.

17. Results of seismic survey analysis and derivative acoustic impedance mapping indicate that significant porosity development is present within the area of the Independence AGI wells. Additionally, porosity development appears highly interconnected across the greater project area, and as anticipated, is most significantly developed within the intervals of the Devonian and Fusselman Formation strata (C-108 Section 3.3, Figure 6 (PDF page 31 of Exhibit A-1)). Generally, Siluro-Devonian reservoir porosity is interpreted to range from less than 1% to approximately 15%, with an average porosity of 2.5%. The results of these analyses form the basis for updated reservoir modeling and injection simulations completed in support of this application.

Updated Geologic Modeling, Simulation, and Seismicity Assessment

18. Following refinement of the geologic characterization model, through the

incorporation of seismic survey data and derivative products, new injection simulation forecasts and induced-seismicity risk assessments have been completed to consider operation of the AGI wells, as proposed and requested by Piñon (i.e., up to 28.5 MMSCFD). The methods and results of these analyses are described in Section 4.0 of the C-108 amendment application (PDF page 18 of Exhibit A-1).

19. Geologic modeling and simulation activities were completed utilizing Petrel and Eclipse software platforms and the resultant geologic model is comprised of 292 simulation layers characterizing seven discrete depth intervals within the Siluro-Devonian reservoir. In total, the geologic model is comprised of 3,497,576 grid cells for which porosity attributes have been informed by the results of 3D seismic survey analysis. The geologic model in which injection activities were simulated includes nearby subsurface fault features, the existing Independence AGI wells, and the West Jal B Deep #1 well (API: 30-025-25046), an active Siluro-Devonian saltwater disposal (SWD) well.

20. Through recompletion of geologic modeling and simulation activities, further refinement and improvement of reservoir permeability interpretations has also been achieved, as extensive history matching has been completed to ensure simulation forecasts accurately replicate conditions observed during the operation of the Independence AGI #1 and AGI #2 wells, which have been in service since September 2021 and April 2023, respectively. While prior assumptions regarding reservoir permeability attributes were based on reservoir test data, DST data, and published core analyses, history matching allows geologic model attributes to be more accurately calibrated to match conditions observed by the existing AGI wells. For all case simulations and injection plume forecasts presented in this application, history matching

has been completed and simulations successfully replicate the observed operating conditions of Independence AGI #1 and #2.

21. In support of this application, two additional case simulations are presented which consider end-member conditions in which faults are transmissive of fluids (Case 1) and non-transmissive of fluids (Case 2), the results of which are described in Section 4.0 (PDF page 18 of Exhibit A-1) and illustrated in Figures 9 and 10 of the C-108 application (PDF pages 35-36 of Exhibit A-1). For each case, simulation commences with a history matching period based on actual AGI operating data, followed by incremental injection volume increase, up to 28.5 MMSCFD and in accordance with Piñon's anticipated facility improvement schedule. Following the period of history match simulation, incremental injection volume increase occurs via a one-year period of injection at 13.5 MMSCFD, a one-year period of injection at 22.5 MMSCFD, and a 28-year period of injection at 28.5 MMSCFD.

22. The results of injection simulation forecasts, which consider operation of the Independence AGI wells up to 28.5 MMSCFD, demonstrate that TAG injection activities, as proposed, can be successfully maintained for the complete 30-year simulation period. Furthermore, injection activities are sustainable with no modification or exceedance of the currently approved maximum allowable operating pressures of each AGI well. From these results, the resultant TAG plume is anticipated to occupy an area of approximately 9.5 square miles extending approximately two miles from the Piñon Dark Horse Treating Facility (as illustrated in Figures 9 and 10 of the C-108 application).

23. In preparing the C-108 amendment application, a re-evaluation of the risk for injection-induced seismicity has been completed, which now incorporates improved

subsurface characterization resulting from the acquisition and analysis of 3D seismic survey data. This evaluation, which is independent of previously described reservoir modeling and injection forecasts, was completed utilizing the Stanford Center for Induced and Triggered Seismicity's Fault Slip Potential Model (FSP) simulation and considers the historic and anticipated impact of five injection wells identified within the greater project area. The results of Fault Slip Potential modeling and relevant input parameters are described in Section 4.2 (PDF page 20 of Exhibit A-1) and illustrated in Figures 11 and 12 of the C-108 amendment application (PDF pages 37-38 of Exhibit A-1).

24. As illustrated in Figure 5 of the C-108 amendment application (PDF page 31 of Exhibit A-1), 11 faults are interpreted within the area of the Independence AGI wells, which have been incorporated and considered in our assessment of induced-seismicity risk. To ensure a conservative estimate of risk, injection wells considered in the FSP simulation are assumed to operate at their maximum allowable injection volume for a 30-year forecast period.

25. FSP simulation results demonstrate that faults in the area of the Independence AGI wells are anticipated to have very low or no potential for injection-induced slip in response to historic and proposed injection activities, as model-predicted pressure increase along faults falls adequately short of pressures required to induce fault slip. Based on these results, operation of the Independence AGI wells, as proposed and requested, will not result in an elevated risk for induced seismicity.

Re-Evaluation of the Independence AGI #1 & #2 Areas of Review

26. As Piñon's request to increase the allowable injection volume for the Independence AGI wells reflects a substantial change in operating conditions, re-

evaluation of the AGI well Areas of Review was completed to ensure all oil and gas operators and interested parties were identified and provided notice of the NMOCD hearing to consider this matter. Furthermore, re-evaluation of the Areas of Review was necessary to confirm that no new wells penetrating the injection reservoir have been constructed.

27. Analysis of the Independence AGI #1 and AGI #2 Areas of Review (Section 5.0 of the C-108 amendment application) confirms that no new wells have been drilled that penetrate the Siluro-Devonian injection reservoir. As described in previously approved C-108 applications for the Independence AGI wells, two wells within two miles are present that penetrate Siluro-Devonian geologic formations, including the West Jal B Deep #1 (API: 30-025-25046), an active SWD well, and the West Jal Unit #1 well (API: 30-025-21172), which has been previously demonstrated to be properly plugged and not anticipated to be adversely affected by operation of the Independence AGI wells.

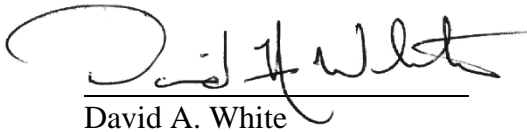
28. Detailed information on all oil and gas wells within two miles of the Independence AGI wells has been reviewed and reported in Appendix A of the C-108 amendment application, and all operators and other interested parties, identified through review of NMOCD operator records and land records, are summarized in Appendix B of the C-108 application (PDF pages 50-53 of Exhibit A-1). All relevant parties have been provided with written notice of the NMOCD hearing to consider this matter and have been provided complete copies of the Form C-108 amendment application.

29. Approving this application authorizing an increase in the shared injection rate between the Independence AGI #1 and Independence AGI #2 to 28.5 MMSCFD will allow Piñon to meet increasing demands for sour gas disposal and avoid interruptions to

development and production in the area. Approval will therefore prevent waste, protect correlative rights, and protect human health and the environment.

30. **Piñon Exhibit A-1** was either prepared by me or compiled under my direction and supervision.

31. I affirm under penalty of perjury under the laws of the State of New Mexico that the foregoing statements are true and correct. I understand that this self-affirmed statement will be used as written testimony in this case. This statement is made on the date next to my signature below.



Handwritten signature of David A. White in black ink, written over a horizontal line.

David A. White

September 5, 2024

Date

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

**APPLICATION OF PINON MIDSTREAM, LLC TO
AMEND COMMISSION ORDER NO.
R-21455-B/SWD-2464 TO INCREASE THE SHARED
MAXIMUM DAILY INJECTION RATE FOR THE
INDEPENDENCE AGI #1 AND #2 WELLS,
LEA COUNTY, NEW MEXICO.**

**CASE NO. 24755
COMMISSION ORDER NO. R-21455-B**

**SELF-AFFIRMED STATEMENT OF
ADAM G. RANKIN**

1. I am attorney in fact and authorized representative of Pinon Midstream, LLC (“Pinon”), the Applicant herein. I have personal knowledge of the matter addressed herein and am competent to provide this self-affirmed statement.
2. The above-referenced application and notice of the hearing on this application was sent by certified mail to the locatable affected parties on the date set forth in the letter attached hereto.
3. The spreadsheet attached hereto contains the names of the parties to whom notice was provided.
4. The spreadsheet attached hereto contains the information provided by the United States Postal Service on the status of the delivery of this notice as of August 29, 2024.
5. I caused a notice to be published to all parties subject to this proceeding. An affidavit of publication from the publication’s legal clerk with a copy of the notice publication is attached herein.

**BEFORE THE OIL CONSERVATION DIVISION
Santa Fe, New Mexico
Exhibit No. C
Submitted by: Piñon Midstream, LLC
Hearing Date: September 12, 2024
Case No. 24755**

6. I affirm under penalty of perjury under the laws of the State of New Mexico that the foregoing statements are true and correct. I understand that this self-affirmed statement will be used as written testimony in this case. This statement is made on the date next to my signature below.



Adam G. Rankin

September 4, 2024

Date



Adam G. Rankin
Partner
Phone (505) 988-4421
agrarkin@hollandhart.com

August 23, 2024

VIA CERTIFIED MAIL
CERTIFIED RECEIPT REQUESTED

TO: AFFECTED PARTIES

Re: Application of Pinon Midstream, LLC to Amend Commission Order No. R-21455-B/SWD-2464 to increase the shared maximum daily injection rate for the Independence AGI #1 and #2 Wells, Lea County, New Mexico. Case No. 24755

Ladies & Gentlemen:

This letter is to advise you that Pinon Midstream, LLC has filed the enclosed application with the New Mexico Oil Conservation Division. A hearing has been requested before a Division Hearing Examiner on September 12, 2024, and the status of the hearing can be monitored through the Division’s website at <https://www.emnrd.nm.gov/ocd/hearing-info/>.

It is anticipated that hearing will be held in a hybrid format with both in-person and virtual participation options. The meeting will be held in the Pecos Hall Hearing Room at the Wendall Chino Building, 1st Floor, 1220 South St. Francis Dr., Santa Fe, New Mexico. To participate virtually in the hearing, see the instructions posted on the OCD Hearings website: <https://www.emnrd.nm.gov/ocd/hearing-info/>.

You are not required to attend this hearing, but as an owner of an interest that may be affected by this application, you may appear and present testimony. Failure to appear at that time and become a party of record will preclude you from challenging the matter at a later date. Parties appearing in cases are required by Division Rule 19.15.4.13.B to file a Pre-hearing Statement four business days in advance of a scheduled hearing. This statement must be filed at the Division’s Santa Fe office at the above specified address and should include the names of the parties and their attorneys; a concise statement of the case; the names of all witnesses the party will call to testify at the hearing; the approximate time the party will need to present its case; and identification of any procedural matters that are to be resolved prior to the hearing.

If you have any questions about this matter, please contact David White at Geolex, Incorporated at DWhite@geolex.com or (505) 842-8000.

Sincerely,

Adam G. Rankin
ATTORNEYS FOR PINON MIDSTREAM, LLC

Location
110 North Guadalupe, Suite 1
Santa Fe, NM 87501-1849

Mailing Address
P.O. Box 2208
Santa Fe, NM 87504-2208

Contact
p: 505.988.4421
www.hollandhart.com

Pinon Midstream - Independence AGI #1, #2 - Amend Order R-21466-B - Case no. 24755
Postal Delivery Report

9414811898765482550443	Tap Rock Operating	523 Park Point Dr Ste 200	Golden	CO	80401-9387	Your item was delivered to the front desk, reception area, or mail room at 12:41 pm on August 26, 2024 in GOLDEN, CO 80401.
9414811898765482550481	Sharbo Energy LLC	PO Box 840	Artesia	NM	88211-0840	Your item was picked up at the post office at 10:55 am on August 26, 2024 in ARTESIA, NM 88210.
9414811898765482550436	Oxy Y-1 Co.	5 Greenway Plz Ste 110	Houston	TX	77046-0521	Your item arrived at our SOUTH HOUSTON PROCESSING CENTER destination facility on August 28, 2024 at 3:30 am. The item is currently in transit to the destination.
9414811898765482550511	NGL Water Solutions Permian, LLC	865 Albion St Ste 500	Denver	CO	80220-4809	Your item was delivered to an individual at the address at 1:23 pm on August 26, 2024 in DENVER, CO 80220.
9414811898765482550559	Intrepid Potash New Mexico, LLC	1996 Potash Mines Rd	Carlsbad	NM	88220-8965	Your item is being held at the CARLSBAD, NM 88220 post office at 8:02 am on August 26, 2024. This is at the request of the customer.
9414811898765482550566	EOG Resources, Inc.	5509 Champions Dr	Midland	TX	79706-2843	Your item was picked up at a postal facility at 8:52 am on August 26, 2024 in MIDLAND, TX 79701.
9414811898765482550528	Civitas Permian Operating, LLC	555 17th St Ste 3700	Denver	CO	80202-3906	Your item was delivered to the front desk, reception area, or mail room at 1:34 pm on August 26, 2024 in DENVER, CO 80202.

Pinon Mldstream - Independence AGI #1, #2 - Amend Order R-21466-B - Case no. 24755
Postal Delivery Report

9414811898765482550504	Bureau of Land Management	301 Dinosaur Trl	Santa Fe	NM	87508-1560	Your item was delivered to the front desk, reception area, or mail room at 12:43 pm on August 26, 2024 in SANTA FE, NM 87508.
9414811898765482550597	Broughton Petroleum, Inc.	1225 North Loop W Ste 1055	Houston	TX	77008-1756	Your item was delivered to an individual at the address at 3:06 pm on August 27, 2024 in HOUSTON, TX 77008.
9414811898765482550542	BC & D Operating, Inc.	1008 W Broadway St	Hobbs	NM	88240-5531	Your item arrived at our USPS facility in OKLAHOMA CITY OK DISTRIBUTION CENTER on August 28, 2024 at 8:31 am. The item is currently in transit to the destination.
9414811898765482550580	Ameredev II, LLC	2901 Via Fortuna Ste 600	Austin	TX	78746-7710	Your item was delivered to an individual at the address at 3:23 pm on August 26, 2024 in AUSTIN, TX 78746.
9414811898765482550535	New Mexico State Land Office, Attn Allison Marks	310 Old Santa Fe Trl	Santa Fe	NM	87501-2708	Your item was picked up at a postal facility at 7:42 am on August 27, 2024 in SANTA FE, NM 87501.

Affidavit of Publication

STATE OF NEW MEXICO
COUNTY OF LEA


I, Daniel Russell, Publisher of the Hobbs News-Sun, a newspaper published at Hobbs, New Mexico, solemnly swear that the clipping attached hereto was published in the regular and entire issue of said newspaper, and not a supplement thereof for a period of 1 issue(s).

Beginning with the issue dated
August 11, 2024
and ending with the issue dated
August 11, 2024.



Publisher

Sworn and subscribed to before me this
11th day of August 2024.



Business Manager

My commission expires
January 29, 2027
(Seal)

STATE OF NEW MEXICO
NOTARY PUBLIC
GUSSIE RUTH BLACK
COMMISSION # 1087526
COMMISSION EXPIRES 01/29/2027

This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937 and payment of fees for said publication has been made.

LEGAL NOTICE
August 11, 2024

Case No. 24755: Application of Pinon Midstream LLC to Amend Commission Order No. R- 21455-B/SWD-2464 to increase the shared maximum daily injection rate for the Independence AGI #1 and #2 Wells, Lea County, New Mexico. Notice to all affected interest owners, including all heirs, devisees and successors of: Tap Rock Operating; Sharbo Energy LLC; Oxy Y-1 Co.; NGL Water Solutions Permian, LLC; Intrepid Potash - New Mexico, LLC; EOG Resources, Inc.; Civitas Permian Operating, LLC; Bureau of Land Management; Broughton Petroleum, Inc.; BC & D Operating, Inc.; Ameredev II, LLC; New Mexico State Land Office, Attn: Allison Marks.

The State of New Mexico Oil Conservation Commission ("Commission") hereby gives notice that the Commission will hold public hearing 9:00 a.m. on **September 19, 2024**, to consider this application. The hearing will be conducted in a hybrid fashion, both in-person at the Energy, Minerals, Natural Resources Department, Wendell Chino Building, Pecos Hall, 1220 South St. Francis Drive, 1st Floor, Santa Fe, NM 87505 and via the WebEx virtual meeting platform. To participate in the hearings electronically, see the instructions posted on the docket for the hearing date: <https://www.emnrd.nm.gov/ocd/occ-info/> or contact OCG.Hearings@emnrd.nm.gov. Applicant in the above-styled cause seeks to amend Commission Order No. R-21455-B/SWD-2464 to increase the maximum daily injection rate of treated acid gas for disposal through the Independence AGI #1 and #2 wells from 20 MMSCFD to 28.5 MMSCFD. The **Independence AGI #1** well (API No. 30-025-48081) is an existing vertical well with a surface and bottom hole location approximately 829 feet from the north line and 1,443 feet from the west line (Unit C) of Section 20, Township 25 South, Range 36 East, NMPM, Lea County, New Mexico. It was approved to inject within the Devonian and Silurian formations from a depth of approximately 16,230 to 17,900 feet deep under Commission Order No. R-21455-A with a maximum surface injection pressure of 4,779 psig. The **Independence AGI #2** is a deviated well with a surface location approximately 1,110 feet from the north line and 1,443 feet from the west line (Unit C) and a bottom hole location approximately 1,080 feet from the south line and 1,978 feet from the west line (Unit N) in Section 20, Township 25 South, Range 36 East, NMPM, Lea County, New Mexico. It injects into the same target reservoir as the AGI #1 well, from approximately 16,080 to 17,683 feet deep within the Devonian and Silurian formations with a maximum surface injection pressure of 5,005 psig. Said area is located approximately 6 miles west of Jal, New Mexico.

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HOLLAND & HART LLC
110 N GUADALUPE ST., STE. 1
SANTA FE, NM 87501

BEFORE THE OIL CONSERVATION DIVISION
Santa Fe, New Mexico
Exhibit No. D
Submitted by: Piñon Midstream, LLC
Hearing Date: September 12, 2024
Case No. 24755

Affidavit of Publication

STATE OF NEW MEXICO
COUNTY OF LEA

I, Daniel Russell, Publisher of the Hobbs News-Sun, a newspaper published at Hobbs, New Mexico, solemnly swear that the clipping attached hereto was published in the regular and entire issue of said newspaper, and not a supplement thereof for a period of 1 issue(s).

Beginning with the issue dated
August 27, 2024
and ending with the issue dated
August 27, 2024.



Publisher

Sworn and subscribed to before me this
27th day of August 2024.



Business Manager

My commission expires
January 29, 2027

(Seal)
STATE OF NEW MEXICO
NOTARY PUBLIC
GUSSIE RUTH BLACK
COMMISSION # 1087528
COMMISSION EXPIRES 01/29/2027

This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937 and payment of fees for said publication has been made.

LEGAL **LEGAL**

LEGAL NOTICE
August 27, 2024

Case No. 24755: Application of Pinon Midstream LLC to Amend Commission Order No. R-21455-B/SWD-2464 to increase the shared maximum daily injection rate for the Independence AGI #1 and #2 Wells, Lea County, New Mexico. Notice to all affected interest owners, including all heirs, devisees and successors of: Tap Rock Operating; Sharbo Energy LLC; Oxy Y-1 Co.; NGL Water Solutions Permian, LLC; Intrepid Potash - New Mexico, LLC; EOG Resources, Inc.; Civitas Permian Operating, LLC; Bureau of Land Management; Broughton Petroleum, Inc.; BC & D Operating, Inc.; Ameredev II, LLC; New Mexico State Land Office, Attn: Allison Marks.

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HOLLAND & HART LLC
110 N GUADALUPE ST., STE. 1
SANTA FE, NM 87501