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

APPLICATIONS OF GOODNIGHT MIDSTREAM PERMIAN, LLC FOR APPROVAL OF SALTWATER DISPOSAL WELLS LEA COUNTY, NEW MEXICO

CASE NOS. 23614-23617

APPLICATIONS OF EMPIRE NEW MEXICO LLC TO REVOKE INJECTION AUTHORITY, LEA COUNTY, NEW MEXICO

CASE NOS. 24018-24027

APPLICATION OF GOODNIGHT MIDSTREAM
PERMIAN LLC TO AMEND ORDER NO. R-22026/SWD-2403
TO INCREASE THE APPROVED INJECTION RATE
IN ITS ANDRE DAWSON SWD #1,
LEA COUNTY, NEW MEXICO.

**CASE NO. 23775** 

## EMPIRE NEW MEXICO LLC'S MOTION TO REFER CASES TO NEW MEXICO OIL CONSERVATION COMMISSION

In accordance with the Hearing Examiner's request at the December 21, 2023 status conference, Empire New Mexico LLC ("Empire") submits this motion in response to Goodnight Midstream Permian, LLC's ("Goodnight") oral request that the Director of the New Mexico Oil Conservation Division ("Division") refer a select portion of the above-captioned cases (referred to collectively as the "Cases") to the New Mexico Oil Conservation Commission ("Commission") pursuant to 19.15.4.20(B) NMAC while seeking to stay others. Empire opposes any request to refer only some of the Cases to the Commission, while staying others, because the Cases involve the same common issues and nearly identical evidence, and a stay would cause unnecessary and unreasonable delay that would only serve to further damage the correlative rights in the reservoir that are owned by Empire, the State of New Mexico and the United States. In support of this motion, Empire states the following.

1. These applications arise from Goodnight's proposed and existing injection of

produced water into the San Andres formation within and surrounding the 14,189.84-acre Eunice Monument South Unit ("EMSU") operated by Empire. The EMSU has existed since 1984, when it was approved by the Commission via Order Nos. R-7765, R-7766, and R-7767. Empire also operates the Arrowhead Grayburg Unit ("AGU"), which is located approximately 1 mile to the southeast of the EMSU, under Order No. R-9482. *See* Self-Affirmed Statement of Jack E. Wheeler at 1, ¶ 2, attached hereto as Exhibit A.

- 2. Order No. R-7765 established the EMSU with the vertical limits including the San Andres formation, see Order No. R-7765 at Ordering ¶ 3, and Commission Order No. R-7766 also included the San Andres formation as part of the Unitized Interval. Commission Order No. R-7767 realigned the vertical limits for the shallower Eumont Gas Pool and the deeper Eunice Monument Oil pool [Eunice Monument Grayburg-San Andres pool; pool code 23000]. See Order No. R-7767 at Ordering ¶¶ 1 and 2. This order also reaffirmed the lower limit of the Eunice Monument Oil pool as the base of the San Andres formation.
- 3. Empire currently operates the EMSU as a water flood project recovering hydrocarbons from the Grayburg San Andres formation. The EMSU waterflood currently produces approximately 830 BOPD; 67,600 BWPD; 540 MCFPD and injects approximately 67,600 BWPD into the unitized Grayburg / San Andres Reservoir. Empire plans to further develop the EMSU through CO<sub>2</sub> injection to enhance recovery in the Grayburg and San Andres formation and to recover oil within residual oil zones ("ROZ") in the San Andres formation. By CO<sub>2</sub> flooding this San Andres ROZ interval, Empire estimates that 270 million barrels or more of this residual oil can be recovered, in addition to an estimated 300 million barrels of tertiary oil recovered from the Grayburg. Exhibit A at 1-2, ¶ 3.
  - 4. In Division Case Nos. 23614-23617, Goodnight seeks orders authorizing injection

of produced water for disposal into the San Andres formation between approximately 4,100 and 5,300 feet. Goodnight proposes to drill all four wells<sup>1</sup> within the EMSU, which would impair Empire's ability to produce hydrocarbons from its unitized interval. *Id.* at 2,  $\P$  5.

- 5. In Division Case Nos. 24018-24027, Empire seeks orders revoking Goodnight's existing permits to inject produced water into the San Andres formation for the same reasons it opposes Goodnight's applications in Case Nos. 23614-23617. Case Nos. 24018, 24019, 24020, and 24025 involve Goodnight's four active wells that are located within the EMSU the Andre Dawson SWD #1 (30-025-50634), the Ernie Banks SWD #1 (30-025-50633), the Sosa SWD #1(30-025-47947), and the Ryno SWD#1 (30-025-43901), respectively. Case Nos. 24022, 24024, 24026, and 24027 involve Goodnight's four active disposal wells that are located within approximately one mile of the EMSU the Pedro SWD #1 (30-025-50079), the Nolan Ryan SWD #1 (30-025-45349), the Ted SWD #1(30-025-44386), and the Yaz SWD #1 (30-025-46382), respectively. The Yaz SWD #1 is located approximately 200 feet from the EMSU boundary. Case Nos. 24023 and 24021 involve Goodnight's permitted Verlander SWD #1 (30-025-50632) and Rocket SWD #1 (30-025-pending), respectively, which are also located within approximately one mile of the EMSU. In Division Case No. 23775, Goodnight seeks authorization to increase the rate of injection into the Andre Dawson SWD #1 within the EMSU. *Id.* at 2-3, ¶ 6.
- 6. All of the Cases are related to Commission Case No. 24123, in which Goodnight has sought a de novo hearing on Division Order No. R-22869-A. Exhibit A at 2,¶4. In that order, the Division denied Goodnight's application for authorization to inject into its proposed Piazza

<sup>&</sup>lt;sup>1</sup> In Case No. 23614, Goodnight proposes to drill the Doc Gooden SWD #1, located in Unit J, Section 3, T21S, R36E. In Case No. 23615, Goodnight proposes to drill the Hernandez SWD #1, located in Unit P, Section 10, T21S, R36E. In Case No. 23616, Goodnight proposes to drill the Seaver SWD #1, located in Unit K, Section 10, T21S, R36E. In Case No. 23617, Goodnight proposes to drill the Hodges SWD #1, located in Lot 11, Section 4, T21S, R36E.

SWD #1, which is located within the EMSU, because the proposed injection would impair production of hydrocarbons. *See* Order No. R-22869-A. Specifically, the Division found that Goodnight's proposed well "would expand the use of the San Andres formation as a disposal interval" and "encroach towards the northeast and the interior of the EMSU and the use of the San Andres formation as a compatible source of make-up water for waterflood operations." *Id.* at ¶ 10. The Division concluded:

Empire has provided sufficient evidence for continued assessment of the Unitized Interval for potential recovery of any additional hydrocarbon resources remaining in place. Approval of the Proposed Well would contradict the responsibility of the OCD 'to prevent the drowning by water of any stratum or part thereof capable of producing oil or gas or both oil and gas in paying quantities and to prevent the premature and irregular encroachment of water or any other kind of water encroachment that reduces or tends to reduce the total ultimate recovery of crude petroleum oil or gas or both oil and gas from any pool."

*Id.* at ¶ 11.

7. At hearing, Empire will demonstrate that Goodnight's current and proposed injection of millions of barrels of produced water into the San Andres formation, both within and in proximity to the EMSU, will impair Empire's production within the EMSU and result in the waste of hydrocarbons for at least five reasons: (1) the proposed injection will impair Empire's ability to recover hydrocarbons from the ROZ in the San Andres formation through CO<sub>2</sub> injection and from the Grayburg formation; (2) vertical fractures allow communication between the San Andres and Grayburg formations; (3) injection of large volumes of water into the San Andres formation will prematurely water out Empire's wells, resulting in the loss of oil and gas, vastly increase operating costs, and increase plugging and abandonment liabilities decades earlier than would otherwise be necessary<sup>2</sup>; (4) injection of such volumes preclude use and potential storage

<sup>&</sup>lt;sup>2</sup> Significant recent increases in well failure and well costs lead Empire to believe this is already occurring from the massive amounts of water being injected into the formations.

of CO<sub>2</sub> for recovery of hydrocarbons in both the San Andres and the Grayburg formations; and (5) injection of large water volumes will cause higher pressures in the ROZ, and higher potential for hydraulic fracturing and vertical communication, thereby impairing Empire's ability to produce hydrocarbons. In Division Case Nos. 23614-23617, Empire has submitted affidavits and exhibits of seven witnesses, including reservoir engineers and geologists, to substantiate its position. Exhibit A at 3-4, ¶ 8.

- 8. Division Rule 19.15.4.20 NMAC authorizes the Division Director to direct the Commission to hear certain matters. In the past, the Director has referred cases to the Commission when they involve issues of substantial public importance and/or the referral will conserve resources of the parties and the Division. *See, e.g.*, Order No. R-21831 (referring application that involved an interstate well to the Commission).
- 9. These Cases are of substantial public importance because they involve the injection of millions of barrels of produced water that will significantly impair hydrocarbon production within a Commission-approved, 14,189.84-acre unit in which the United States, State of New Mexico, working interest owners, and royalty owners hold an interest. Exhibit A at 4,¶9.
- 10. In addition, referring all of the Cases directly to the Commission would promote administrative economy by avoiding the need for multiple hearings. If the Division is required to hold an initial hearing on any of these cases, the party that does not prevail will certainly seek a *de novo* hearing before the Commission due to the importance of the issues at stake, as demonstrated by Goodnight's application for a *de novo* hearing of the order in Division Order No. R-22869-A. In this regard, referral to the Commission would conserve resources of the Division and the parties.
- 11. Referral of all cases is also appropriate because all of the cases pending before the Division involve similar facts and circumstances to those at issue in Goodnight's application for

*de novo* hearing regarding Order No. R-22869-A in Case No. 24123, which is already pending before the Commission. Exhibit A at 3, ¶ 4. Thus, again, referral of all Cases would conserve resources of the parties.

- 12. Moreover, referral of the Cases is appropriate because they are related and arise from similar facts and circumstances. As discussed above, Empire's evidence will demonstrate that all of Goodnight's current and proposed injection both within and adjacent to the EMSU will impair production within Empire's unitized San Andres formation. In fact, one of the wells outside the EMSU, the Yaz SWD #1, is located approximately 200 feet from the unit boundary and will certainly impact production within the unit. As a result, there is no basis to refer some of the cases to the Commission and not others. *Id.* at 2-3, ¶ 6.
- 13. It is Empire's understanding that Goodnight agrees that the cases involving wells within the EMSU should be referred to the Commission but is taking the untenable position that the cases involving wells outside of the EMSU should remain before the Division, and should be stayed, until the Commission issues a ruling on the EMSU cases. Goodnight's position must be rejected for several reasons. First, as discussed above, Empire will present similar geological and engineering evidence in all of the Cases, and all of the Cases involve injection that is impairing, or will impair, the production of hydrocarbons within the unit. *Id.* at 3, ¶ 7. In this regard, there is no basis to distinguish between wells located within the EMSU and wells located within one mile of the EMSU, one of which is approximately 200 feet away. Second, Goodnight's proposal would allow it to continue injecting massive amounts of produced water into the area immediately adjacent to the unit, and thereby damage Empire's unitized interval, to the economic detriment of the United States, the State of New Mexico, working interest owners, and royalty owners. Third, Goodnight's proposal is nonsensical because if there were any basis to distinguish the wells within

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the EMSU from the wells outside the EMSU, then Goodnight's proposed stay of the non-EMSU cases serves no purpose because the Commission's order on the EMSU wells would have no bearing on the non-EMSU wells. This fact demonstrates that the true purpose of Goodnight's proposal is to allow it to continue injection that is damaging Empire's unitized interval.

14. For the reasons discussed above, all of the Cases should be referred to the Commission. Referral is appropriate and necessary to address the public interest issues at stake, conserve resources of the parties and the Division, and facilitate an expedient decision. Since the Division requested that Empire file its brief responding to Goodnight's oral proposal to remove cases to the Commission in advance of Goodnight's motion and given the significant interests involved in these matters, Empire also requests authorization to file a reply to any response submitted by Goodnight.

Respectfully submitted,

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### **CERTIFICATE OF SERVICE**

I hereby certify that a true and correct copy of the foregoing was served on the following counsel by electronic mail on January 3, 2024:

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**CASE NO. 23775** 

# SELF-AFFIRMED STATEMENT OF JACK E. WHEELER IN SUPPORT OF EMPIRE'S MOTION TO REFER CASES TO NEW MEXICO OIL CONSERVATION COMMISSION

#### I, Jack E. Wheeler state as follows:

- 1. I am over the age of 18. I am employed by Empire Petroleum Corporation as Vice President-Land & Legal and have personal knowledge of the above-referenced cases ("Cases") and the facts contained in Empire New Mexico LLC's ("Empire") Motion to Refer Cases to New Mexico Oil Conservation Commission.
- 2. These applications arise from Goodnight's proposed and existing injection of produced water into the San Andres formation within and surrounding the 14,189.84-acre Eunice Monument South Unit ("EMSU") operated by Empire. The EMSU has existed since 1984, when it was approved by the Commission via Order Nos. R-7765, R-7766, and R-7767. Empire also operates the Arrowhead Grayburg Unit ("AGU"), which is located approximately 1 mile to the southeast of the EMSU, under Order No. 9482.

#### **EXHIBIT A**

- 3. Empire currently operates the Eunice Monument South Unit ("EMSU" or "Unit") as a water flood project recovering hydrocarbons from the Grayburg San Andres formation. The EMSU waterflood currently produces approximately 830 BOPD; 67,600 BWPD; and 540 MCFPD and injects approximately 67,600 BWPD into the unitized Grayburg / San Andres Reservoir. Empire plans to further develop the EMSU through CO<sub>2</sub> injection to enhance recovery in the Grayburg San Andres formation and to recover oil within residual oil zones ("ROZ") in the San Andres formation. By CO<sub>2</sub> flooding this San Andres ROZ interval, Empire estimates that 270 million barrels or more of this residual oil can be recovered, in addition to an estimated 300 million barrels of tertiary oil recovered from the Grayburg.
- 4. All of the Cases pending before the Division involve similar facts and circumstances to those at issue in Goodnight's application for *de novo* hearing regarding Order No. R-22869-A in Case No. 24123, currently pending before the Commission.
- 5. In Division Case Nos. 23614-23617, Goodnight seeks orders authorizing injection of produced water for disposal into the San Andres formation between approximately 4,100 and 5,300 feet. Goodnight proposes to drill all four wells<sup>1</sup> within the EMSU, which would impair Empire's ability to produce hydrocarbons from its unitized interval.
- 6. In Division Case Nos. 24018-24027, Empire seeks orders revoking Goodnight's existing permits to inject produced water into the San Andres formation for the same reasons it opposes Goodnight's applications in Case Nos. 23614-23617. Case Nos. 24018, 24019, 24020, and 24025 involve Goodnight's four active wells that are located within the EMSU the Andre

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Dawson SWD #1 (30-025-50634), the Ernie Banks SWD #1 (30-025-50633), the Sosa SWD #1(30-025-47947), and the Ryno SWD #1 (30-025-43901), respectively. Case Nos. 24022, 24024, 24026, and 24027 involve Goodnight's four active disposal wells that are located within approximately one mile of the EMSU – the Pedro SWD #1 (30-025-50079), the Nolan Ryan SWD #1 (30-025-45349), the Ted SWD #1(30-025-44386), and the Yaz SWD #1 (30-025-46382), respectively. The Yaz SWD #1 is located approximately 200 feet from the EMSU boundary. Case Nos. 24023 and 24021 involve Goodnight's permitted Verlander SWD #1 (30-025-50632) and Rocket SWD #1 (30-025-pending), respectively, which are also located within approximately one mile of the EMSU. In Division Case No. 23775, Goodnight seeks authorization to increase the rate of injection into the Andre Dawson SWD #1 within the EMSU.

- 7. Empire will present similar geological and engineering evidence in all of the Cases, and all of the Cases involve injection that is impairing, or will impair, the production of hydrocarbons within the unit.
- 8. At hearing, Empire will demonstrate that Goodnight's current and proposed injection of millions of barrels of produced water into the San Andres formation, both within and in proximity to the EMSU, will impair Empire's production within the EMSU and/or AGU and result in the waste of hydrocarbons for at least five reasons: (1) the proposed injection will impair Empire's ability to recover hydrocarbons from the ROZ in the San Andres formation through CO<sub>2</sub> injection and from the Grayburg formation; (2) vertical fractures allow communication between the San Andres and Grayburg formations; (3) injection of large volumes of water into the San Andres formation will prematurely water out Empire's wells, resulting in the loss of oil and gas, vastly increase operating costs, and increase plugging and abandonment liabilities decades earlier

than would otherwise be necessary<sup>2</sup>; (4) injection of such volumes preclude use and potential storage of CO<sub>2</sub> for recovery of hydrocarbons in both the San Andres and the Grayburg formations; and (5) injection of large water volumes will cause higher pressures in the ROZ, and higher potential for hydraulic fracturing and vertical communication, thereby impairing Empire's ability to produce hydrocarbons. In Division Case Nos. 23614-23617, Empire has already submitted affidavits and exhibits of seven witnesses, including reservoir engineers and geologists, to substantiate its position.

9. The Cases involve the injection of millions of barrels of produced water that will significantly impair hydrocarbon production within a Commission-approved, 14,189.84-acre unit in which the United States, State of New Mexico, working interest owners, and royalty owners hold an interest.

<sup>&</sup>lt;sup>2</sup> Significant recent increases in well failure and well costs lead Empire to believe this is already occurring from the massive amounts of water being injected into the formations.

I understand that this Self-Affirmed Statement will be used as written testimony in these cases. I affirm that my testimony above is true and correct and is made under penalty of perjury under the laws of the State of New Mexico. My testimony is made as of the date identified next to my signature below.

Jack E Wheeler

Vice President Land and Legal Empire Petroleum Corporation January 3, 2024

Date