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

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

CASE NOS. 23614-23617

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

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

CASE NOS. 24018-24020, 24025

APPLICATION OF GOODNIGHT MIDSTREAM PERMIAN, LLC FOR APPROVAL OF A SALTWATER DISPOSAL WELL, LEA COUNTY, NEW MEXICO.

DIVISION CASE NO. 24123 ORDER NO. R-22869-A

<u>GOODNIGHT MIDSTREAM PERMIAN, LLC'S RENEWED MOTION FOR</u> JUDGMENT ON EXCLUSION OF SAN ANDRES FORMATION WITHIN EMSU

Goodnight Midstream Permian, LLC ("Goodnight") (OGRID No. 372311) moves for

judgment to exclude the San Andres formation from the Eunice Monument South Unit

("EMSU")'s unitized interval and oil pool as a matter of New Mexico law.

I. Introduction

In the following consolidated cases—Case Nos. 24018, 24019, 24020, and 24025—

Empire New Mexico, LLC ("Empire") is asking the New Mexico Oil Conservation Commission

("Commission") to revoke certain existing orders allowing Goodnight to dispose of produced

water within the San Andres aquifer. These cases necessarily assume that the San Andres is part

of the unitized interval within the EMSU and the Eunice Monument Grayburg-San Andres special pool. Yet, as explained in Goodnight's Consolidated Motion for Partial Summary Judgment, which arguments are hereby being renewed now at the close of evidence, the Commission exceeded its authority when it purported, in Order Nos. R-7765 and R-7767, to create a unitized interval and a special pool within the EMSU from the top of the Grayburg to the base of the San Andres.

As a matter of New Mexico statutory authority, the San Andres formation cannot be unitized because the San Andres is not an oil-and-gas pool, and it has never been reasonably defined by oil-and-gas development, now or in the past. This is fatal to unitization of the San Andres within the EMSU. The overwhelming evidence presented at hearing establishes—what was historically understood by the Commission and reflected in the underlying administrative documents—that the San Andres and the Grayburg/Lower Penrose are different geological formations and function as discrete reservoirs. And the San Andres, a non-hydrocarbon-bearing aquifer, was conceived only as a source of water for waterflood operations through secondary recovery within the Grayburg/ Lower Penrose formations. It has never been a source of primary production. Because it is not subject to unitization by the Commission, the San Andres aquifer cannot, and should not, be included within the unitized interval of the EMSU or the Eunice Monument Grayburg-San Andres oil pool.

II. Procedural Background

Earlier in these proceedings, on January 23, 2025, Goodnight moved for summary judgment on this very issue, requesting the Commission to modify the definition of the unitized interval within the EMSU to exclude the San Andres formation. *See* Goodnight Midstream Permian's Consolidated Motion for Partial Summary Judgment. Both Empire and the Division

submitted written responses in opposition. *See* Empire New Mexico, LLC's Response in Opposition to Goodnight Midstream Permian's Consolidated Motion for Partial Summary Judgment and Oil Conservation Division's Response to Goodnight Midstream Permian, LLC's Consolidated Motion for Partial Summary Judgment, both filed February 6, 2025; *see also* Goodnight Midstream Permian, LLC's Reply in Support of Its Consolidated Motion for Partial Summary Judgment, filed February 13, 2025. Goodnight incorporates the foregoing briefing, including the arguments made therein and the evidence attached thereto, as though set forth herein.

By Order entered February 14, 2025, the Commission denied the summary judgment motion, finding that "the Motion is precluded by issues of fact..." Thereafter, this matter proceeded to hearing over the course of nearly four weeks on February 24-28, April 7-11, 21-25, and May 19-21, 2025. Now that the Commission has had an opportunity to hear and evaluate the evidence, Goodnight renews its motion for judgment to exclude the San Andres from the EMSU.

III. Argument

The Oil Conservation Commission is "a creature of statute, expressly defined, limited and empowered by the laws creating it." *Cont'l Oil Co. v. Oil Conservation Comm'n*, 1962-NMSC-062, ¶ 11, 373 P.2d 809; *see also* NMSA 1978, § 70-2-4; *id.* § 70-2-11(B) (granting concurrent jurisdiction between Commission and Oil Conservation Division). It is well settled that an agency may not exceed its statutory authority. *See, e.g., Marbob Energy Corp. v. N.M. Oil Conservation Comm'n*, 2009-NMSC-013, ¶ 4, 206 P.3d 135.

The New Mexico Statutory Unitization Act (the "Act"), NMSA 1978, §§ 70-7-1 through 70-7-21, provides for the "unitized management, operation and further development" of oil and gas properties. *Id.* § 70-7-1; *see also id.* § 70-7-3. The Act allows for unitization <u>only</u> of a

"pool," or any part thereof, *id.* § 70-7-7, defined as "an underground reservoir containing a common accumulation of crude petroleum oil or natural gas or both." *Id.* § 70-7-4(A) (defining "pool"). Conversely, this means that the Act does not authorize unitization of non-hydrocarbon-bearing formations, such as aquifers.

Further, to seek and obtain unitization, any application must include, among other requirements, a statement that the subject pool has been "reasonably defined by development." *Id.* § 70-7-5(B). To be considered "reasonably defined by development," the proposed pool must have a history of primary recovery of oil and/or gas. NMSA 1978, §§ 70-7-1 & 70-7-5(B); *see also* 6 Williams & Meyers, Oil and Gas Law, § 913.8 ("Only so much of a common source of supply as has been defined and determined to be productive of oil and gas by actual drilling operations may be so included within the unit area."). This is consistent with the purpose of the Act, which is for it to "apply to any type of operation that will substantially increase the recovery of oil above the amount that would be recovered by primary recovery alone and not to what the industry understands as exploratory units." NMSA 1978, §§ 70-7-1; *see also Santa Fe Exploration Co. v. Oil Conservation Comm 'n*, 1992-NMSC-044, ¶ 31, 114 N.M. 103 (interpreting this statutory language to mean the "Statutory Unitization Act is not applicable to fields in their primary production phase.").

Here, the San Andres formation is, and has always been, ineligible for unitization under the Act because it is a saltwater aquifer (not a pool), and it has never been a source of primary recovery for oil and/or gas. The evidence presented at hearing confirms this. All parties agree that the San Andres has experienced no primary production, and the evidence establishes that the San Andres and Grayburg are separate and distinct formations.

A. The Evidence Is that the San Andres Is a Saltwater Aquifer that Is Not Reasonably Defined by Oil-and-Gas Development.

By Order Nos. R-7765 and R-7767, the Commission approved the EMSU as a waterflood unit within a special pool, purporting to establish a unitized interval from the top of the Grayburg (and Lower Penrose) to the base of the San Andres formation. Importantly, the evidence and testimony presented to the Commission, and the language of the Orders themselves, make plain that the San Andres formation was included in the EMSU for the sole purpose of supplying water for waterflood operations in the hydrocarbon-bearing formations of the Grayburg and the Lower Penrose. While the application in the underling administrative case recites the statutory language that the pool was "reasonably defined by development," no evidence was presented (because there is none) that the San Andres formation in the EMSU has a history of oil and gas production. In addition to the documentary evidence from 1984, both the administrative filings and the testimony and other evidence presented to the Commission, the testimony and evidence presented at hearing before the Commission in this pending matter confirm the same.

The testimony was undisputed at hearing that there has been no oil-and-gas production from the San Andres. Goodnight's witness Larry W. Lake, Ph.D., a professor with the University of Texas at Austin and a consulting petroleum engineer with Austin Consulting Petroleum Engineers, Inc., testified unequivocally in his direct testimony that "[t]here is no oil production from the San Andres aquifer in the EMSU." Lake Direct Testimony, **Goodnight Exhibit G** at ¶ 10; *see also id.* at **Goodnight Exhibit G-5** (wellbore diagram).

Likewise, Preston McGuire, a petroleum geologist and Reservoir Engineering Manager with Goodnight, confirmed that the Commission's records evidence no production from Goodnight's San Andres disposal zone at the EMSU. McGuire Direct Testimony, **Goodnight Exhibit B** at ¶ 25; *see generally id.* at ¶¶ 26-37 ("Overview of SADR as a Water Management Zone and Formation of EMSU"). As explained by Mr. McGuire, the San Andres was "known as a saltwater bearing aquifer at the time of the unitization of the EMSU," and that it was included in the EMSU "not because it is hydrocarbon productive, but because it was to be used as a source of water supply for the planned waterflood." *Id.* at ¶ 32; *see also* **Goodnight Exhibit B-7**; Tr. May 20, 2025 at 156:7-15 (San Andres erroneously included in EMSU because no production). Historically, "[t]he San Andres was first used as a disposal zone in the area of the EMSU when Rice Engineering drilled the first SWD in April of 1960 with the EME #33 SWD, more than two decades before the EMSU was unitized," and "[t]he EMSU was unitized in 1984 with millions of barrels having already been disposed into the San Andres by the two Rice wells." McGuire Direct Testimony, **Goodnight Exhibit B** at ¶ 26. In short, per Mr. McGuire, "[t]he San Andres at the EMSU has never been prospective for hydrocarbons and has been the defined water management zone for the area, both for disposal and water supply, since as early as the 1960s." *Id.* at ¶ 25.

Empire's own witnesses testified consistent with Goodnight's witnesses. For example, Joseph McShane, a petroleum geologist with Empire, agreed that the EMSU water-supply wells have produced more than 340 million barrels of water from the San Andres in and around the structural high, <u>without reporting a single barrel of oil</u>. Tr. April 8, 2025, 25:14-18; 26:1-5. Further, William West, a petroleum engineer with Empire, testified that when the EMSU was created, "[n]o wells have produced [oil or gas] from the San Andres at EMSU." West Direct Testimony, **Empire Exhibit I**, ¶ 6; *see also* **Empire Exhibit I-4** (graph showing pressure depletion prior to water injection); *see also* Tr. April 9, 2025, 166:2-3 ("And at this time, no production had come from the San Andres."); Tr. April 11, 2025, 31:6-8. Mr. West further confirmed that, to date, there have been two tests for oil in the San Andres—in intervals that

were immediately abandoned—but no primary production. Tr. April 9, 2025, 218:7-12; 219:12-23. Mr. West also testified that there are no accumulations of conventional oil within what Empire defines as the San Andres formation in the EMSU. Tr. April 9, 2025, 218:13-18. In other words, even Empire's own witnesses agree that there has been no oil and gas production from the San Andres formation in the EMSU, either before or after it was unitized, and therefore it cannot be said that the San Andres formation is, or was, "reasonably defined by development."

Based on the foregoing evidence at hearing, the San Andres is a salt-water aquifer, and it has never generated primary production. As an aquifer, the San Andres is not subject to unitization by the Commission for any purpose. Under the New Mexico Constitution, unappropriated groundwater within the state belongs to the public.¹ *See* N.M. Const. Art. XVI, § 2; *see also McBee v. Reynolds*, 1965-NMSC-007, ¶ 14, 399 P.2d 110 (confirming that "waters of underground streams, channels, artesian basins, reservoirs and lakes, the boundaries of which may be reasonably ascertained, are public" and "included within the term 'water' as used in Art. XVI, §§ 1-3, of our Constitution."). Because the San Andres does not satisfy the necessary requirements of the Act, namely being a pool or being reasonably defined by development, it cannot, and should not, be included in the unitized interval of the EMSU. The Commission erred when it so included the San Andres in the EMSU in 1984, and it should amend the definition now of the unitized interval within the EMSU to exclude the San Andres.

¹ The San Andres within the EMSU was declared to be a groundwater source within the Captain Ground Water Basin on September 28, 1965. *See* 19.27.26.8 NMAC (including all of T21S, R36E); *see also* **Goodnight Exhibit B-8** (confirming the EMSU is in T21S, R36E). By declaring the Capitan Basin, the New Mexico Office of the State Engineer has expressly identified the San Andres as a water source subject to appropriation and beneficial use, and asserted jurisdiction over all waters within the Basin, including those within the San Andres. *See* NMSA 1978, § 72-12-1.

B. The Evidence Is that the San Andres and the Grayburg/Lower Penrose Are Different Geological Formations.

Relatedly, the overwhelming evidence presented at hearing establishes that the San Andres and the Grayburg/Lower Penrose are different geological formations. Historically, at the hearing before the Commission to unitize the EMSU, the applicant's evidence and testimony expressly excluded the San Andres from its proposed waterflood operations. McGuire Direct Testimony, **Goodnight Exhibit B** at ¶ 29 ("At the hearing in Case Nos. 8397-8399, Gulf presented evidence and testimony that the proposed waterflood operations within the EMSU target the oil column, which is limited to the Grayburg and Lower Penrose formations, and expressly excluded the San Andres from its proposed waterflood operations."). After conducting a geologic study of the land in and around the EMSU, Goodnight's rebuttal witness, William J. Knights, a petroleum geologist, concluded that, from -700 feet subsea down, the San Andres formation is "a complete, separate, isolated reservoir that has unique characteristics." Tr. April 22, 2025, 64:1-7; *see also id.*, 131:7-24; 157:20-24; Tr. April 23, 2025, 18:17-19:1; 109:7-112:4; 115:8-12.

In addition to the testimony from Goodnight's witnesses on the subject, Empire's witness, Ryan Bailey, a petroleum geologist and the Vice President of Ops Geologic, LLC, testified that the San Andres and Grayburg are separate geologic intervals. Tr. Feb. 25, 2025, 311:8-12; 424:8-14; *id.* at 311:22-312:1 (agreeing that separate geologic intervals "generally" function as separate reservoirs.); *see also* Bailey Rebuttal Testimony, **Empire Exhibit K** at p. 4 ("I agree that the Grayburg and San Andres are separate geologic intervals."). As Mr. Bailey explained:

We have an unconformity at the top of the Upper San Andres that is a period of non-deposition, a period where we have an erosional unconformity, right? That's how we define it. That's a timeseparation boundary. That's what a sequence boundary is. And so the Grayburg is separate from the San Andres.

Tr. Feb. 25, 2025, 311:16-21. Ultimately, Mr. Bailey concluded: "[T]hey are different reservoirs from a geologic standpoint..." *Id.* at 328:3-4; *see also* Bailey Rebuttal Testimony, **Empire Exhibit K** at p. 4.

Because the San Andres and the Grayburg/Lower Penrose are geologically separate formations and function separately, the San Andres cannot be considered part of "a pool or part of a pool." NMSA 1978, § 70-7-7. As the evidence proved at hearing shows, the San Andres formation is deeper than the lower limit of oil production in the Grayburg. It was only included within the EMSU to permit the use of water from the San Andres for waterflood operations in the Grayburg/Lower Penrose. The San Andres has generated no production and serves only as a zone for water supply and produced water disposal. It cannot be considered a pool as defined by the Act. Accordingly, the Act does not allow for its unitization, and therefore, the Commission exceeded its authority when it included the San Andres in the unitized interval and special pool of the EMSU.

IV. Conclusion

Based on the evidence presented at hearing, and the arguments made in the earlier partial motion for summary judgment and the documentary evidence attached thereto, Goodnight respectfully requests the Commission to enter an Order excluding the San Andres from the unitized interval of the EMSU and the EMSU special Eunice-Monument pool.

Respectfully submitted,

By:

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CERTIFICATE OF SERVICE

I hereby certify that on July 3, 2025, I served a copy of the foregoing document to the following counsel of record via Electronic Mail to:

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