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

APPLICATION OF EMPIRE NEW MEXICO LLC TO REVOKE THE INJECTION AUTHORITY GRANTED UNDER ORDER NO. R-22026 FOR THE ANDRE DAWSON SWD #001 OPERATED BY GOODNIGHT MIDSTREAM PERMIAN LLC, LEA COUNTY, NEW MEXICO.

CASE NO. 24018

APPLICATION OF EMPIRE NEW MEXICO LLC TO REVOKE THE INJECTION AUTHORITY GRANTED UNDER ORDER NO. R-22027 FOR THE ERNIE BANKS SWD NO. 1 WELL OPERATED BY GOODNIGHT MIDSTREAM PERMIAN LLC, LEA COUNTY, NEW MEXICO.

CASE NO. 24019

APPLICATION OF EMPIRE NEW MEXICO LLC TO REVOKE THE INJECTION AUTHORITY GRANTED BY ADMINISTRATIVE ORDER SWD-2307 FOR THE RYNO SWD #001 F/K/A SNYDER SWD WELL NO. 1 OPERATED BY GOODNIGHT MIDSTREAM PERMIAN LLC, LEA COUNTY, NEW MEXICO.

CASE NO. 24020

APPLICATION OF EMPIRE NEW MEXICO LLC TO REVOKE THE INJECTION AUTHORITY GRANTED UNDER ORDER NO. R-22027 FOR THE ROCKET SWD NO. 1 WELL OPERATED BY GOODNIGHT MIDSTREAM PERMIAN LLC, LEA COUNTY, NEW MEXICO.

CASE NO. 24021

APPLICATION OF EMPIRE NEW MEXICO LLC TO REVOKE THE INJECTION AUTHORITY GRANTED UNDER ADMINISTRATIVE ORDER NO. SWD-2391 FOR THE PEDRO SWD #001 WELL OPERATED BY GOODNIGHT MIDSTREAM PERMIAN LLC, LEA COUNTY, NEW MEXICO.

CASE NO. 24022

APPLICATION OF EMPIRE NEW MEXICO LLC TO REVOKE THE INJECTION AUTHORITY GRANTED UNDER ORDER NO. R-22030 FOR THE VERLANDER SWD WELL NO. 1 OPERATED BY GOODNIGHT MIDSTREAM PERMIAN LLC, LEA COUNTY, NEW MEXICO.

CASE NO. 24023

APPLICATION OF EMPIRE NEW MEXICO LLC TO REVOKE THE INJECTION AUTHORITY GRANTED

UNDER ORDER NO. R-20855 FOR THE NOLAN RYAN SWD #001 OPERATED BY GOODNIGHT MIDSTREAM PERMIAN LLC, LEA COUNTY, NEW MEXICO.

CASE NO. 24024

APPLICATION OF EMPIRE NEW MEXICO LLC TO REVOKE THE INJECTION AUTHORITY GRANTED UNDER ORDER NO. R-21190 FOR THE SOSA SA 17 NO. 2 WELL OPERATED BY GOODNIGHT MIDSTREAM PERMIAN LLC, LEA COUNTY, NEW MEXICO.

CASE NO. 24025

APPLICATION OF EMPIRE NEW MEXICO LLC TO REVOKE THE INJECTION AUTHORITY GRANTED UNDER ADMINISTRATIVE ORDER NO. SWD-2075 FOR THE TED 28 SWD WELL NO. 1 OPERATED BY GOODNIGHT MIDSTREAM PERMIAN LLC, LEA COUNTY, NEW MEXICO.

CASE NO. 24026

APPLICATION OF EMPIRE NEW MEXICO LLC TO REVOKE THE INJECTION AUTHORITY GRANTED UNDER ORDER NO. R-20865 FOR THE YAZ 28 SWD WELL NO. 1 OPERATED BY GOODNIGHT MIDSTREAM PERMIAN LLC, LEA COUNTY, NEW MEXICO.

CASE NO. 24027

GOODNIGHT'S RESPONSE IN OPPOSITION TO EMPIRE'S MOTION TO QUASH

Goodnight Midstream Permian, LLC ("Goodnight") respectfully submits this response to Empire New Mexico, LLC's ("Empire") Motion to Quash Goodnight's Subpoena (the "Motion"). Empire's Motion is a clear effort to frustrate Goodnight's rightful discovery of facts underlying questions lawfully before the Commission and directly at issue in these matters. The subpoena seeks documents and data that are targeted, constrained in scope, and reasonably calculated to lead to the discovery of admissible evidence. Empire fails to meet its burden under Rule 1-045 to justify quashing the subpoena. The Motion should be denied. The Commission should overrule Empire's objections and compel Empire to fully respond to each outstanding request.

INTRODUCTION

Goodnight and Empire are engaged in a dispute over Goodnight's existing and proposed injection of produced water for disposal into the San Andres formation in and around Empire's Eunice Monument South Unit ("EMSU"). The dispute is focused on whether disposal interferes with EMSU waterflood operations in the overlying Grayburg formation and whether the San Andres contains economic residual oil. Empire attacks Goodnight's existing and pending San Andres SWD permits through these administrative challenges and a civil action.[1] As Empire notes in its Motion, Goodnight moved to stay the civil litigation (including discovery in that matter) because the factual claims are being squarely addressed in these matters by the Commission, which has the jurisdiction and particularized expertise to evaluate and decide such issues in the first instance. Indeed, these disputes squarely implicate the Commission's authority over oil and gas and produced water disposal operations under the Oil and Gas Act (NMSA 1978, 70-1-1*, et seq*.), the Statutory Unitization Act (NMSA 1978, Sections 70-7-1 through -21), the Produced Water Act (NMSA 1978, Sections 70-13-1 through -5) and its delegated authority over the UIC Program under the Safe Drinking Water Act.

Notwithstanding the Commission's broad authority and expertise over these matters, Empire suggests Goodnight is somehow harassing Empire and abusing the process in its quest for documents and records pertinent to the contested issues now before the Commission. *Contra* NMSA 1978, § 70-2-8 (requiring persons to comply with subpoenas "relative to matters within the jurisdiction" of and "pertinent to some question lawfully before" the Commission). Alarmingly, Empire asserts the Commission lacks authority, or it would be unusual for the Commission, to require production of the documents sought by Goodnight. Contrary to Empire's

[1] *Empire New Mexico, LLC, v. Goodnight Midstream Permian, LLC*, Fifth Judicial District Court, Lea County, No. D-506-CV-2023-01180 (filed 12/11/2023).

suggestion, the "process" expressly provides the Commission "shall afford full opportunity to the parties at an adjudicatory hearing . . . to present evidence and examine witnesses." 19.15.4.17(A) NMAC (emphasis added). While Empire is new to operations at the EMSU, it is the successor-in-interest to previous operators and 40 years of non-public documents, data, analyses, and assessments focused on maximizing hydrocarbon recovery from the unitized interval, which includes the contested San Andres aquifer. The only way to "afford full opportunity" for Goodnight is to ensure the Commission's subpoena power is not undermined. That requires Empire to produce responsive documents, data, records, assessments, and communications that might reasonably lead to discovery of evidence "pertinent" to the contested issues. § 70-2-8.

It is surprising Empire has not rushed to produce responsive documents that would—if they existed—support Empire's claims. For example, Requests Nos. 5 and 6 seek documents and data behind Empire's testimony that "[t]he chemistry and salinity of Goodnight's disposal water is not compatible with the original EMSU water composition."[2] If this testimony is supported by evidence, why object to producing all responsive documents and data? Perhaps they do not exist, are not as supportive as Empire suggests, or directly contradict Empire's allegations.

Accordingly, Empire seeks to quash all but parts of two of the subpoena requests on the basis the requests are (1) irrelevant, (2) unduly burdensome, and (3) might seek privileged communications or work product documents. In fact, each request targets information within the Commission's authority and jurisdiction and is highly relevant to the disputed issues. Empire's contentions lack support and do not merit quashing the subpoena.

[2] *See* Ex. 1 at Exhibit G-8, (excerpt of Testimony of William West related to Exs. G-8 and G-10 in Empire's 10/26/2023 Am. Exs. in Div. Case Nos. 23614-17) (emphasis added).

ARGUMENT

Empire bears the burden to establish a basis to quash the subpoena with something more than mere assertions of counsel. *Blake v. Blake*, 1985-NMCA-009, ¶ 15, 695 P.2d 838. Empire cannot satisfy its burden for the all the reasons stated below. The Motion should be denied.

A. Applicable Law and Standard.

A motion to quash is governed by Rule 1-045.[3] The rule provides a subpoena may be quashed if it "(iii) requires disclosure of privileged or other protected matter and no exception or waiver applies; or (iv) subjects a person to undue burden." NMRA 1-045(C)(3)(a). Although relevance under Rule 1-026 is not listed in Rule 1-045(C)(3), courts have incorporated it as a factor under an undue burden analysis. *Wagner v. Ansari (In re Vaughan Co.)*, No. 12-cv-0817 WJ/SMV, 2014 U.S. Dist. LEXIS 199496, at *6 (D.N.M. Sep. 19, 2014) (discussing federal rule counterparts); *Pope v. Gap, Inc*., 1998-NMCA-103, ¶ 10, 961 P.2d 1283 (holding New Mexico courts may look to federal rules for guidance). Rule 1-026 provides that information sought in discovery "need not be admissible" if it "appears reasonably calculated to lead to the discovery of admissible evidence." NMRA 1-026(B)(1).

In the context of Commission adjudications, the applicable standard is therefore whether information sought through a subpoena appears reasonably calculated to lead to discovery of admissible evidence pertinent to questions lawfully before the Commission. *See* § 70-2-8.

[3] Although this motion to quash is authorized under 19.15.4.16 NMAC, the standards applicable to Rule 1-045 apply. *See* § 70-2-9 ("any district court in this state, or any judge thereof, on application of said commission or division, may issue an attachment for such person and compel him to comply with such subpoena and to attend before the commission or division and produce such documents and give his testimony upon such matters as may be lawfully required, and such court or judge shall have the power to punish for contempt as in case of disobedience of a like subpoena issued by or from such court, or a refusal to testify therein").

B. Controlling Law Authorizes Goodnight's Subpoena for Documents.

Empire would have the Commission believe that "[d]iscovery is an exception in Commission and Division proceedings rather than the rule," but Empire's only support for that claim is misplaced. While it is true that subpoenas for depositions in advance of hearing are authorized "only in extraordinary circumstances for good cause shown," 19.15.4.16(A) NMAC, Empire is incorrect to suggest that "written discovery is not generally contemplated in adjudicatory proceedings before . . . the Commission." Mot. 3. To the contrary, "[t]he director or the director's authorized representative shall, upon a party's request, issue a subpoena for production of books, papers, records, other tangible things or electronic data in advance of the hearing." 19.15.4.16(A) NMAC (emphasis added). This stems directly from the Commission's statutory mandate, which provides, in part:

> The commission . . . is hereby **empowered . . . to require the production of books, papers and records in any proceeding before the commission** . . . .

§ 70-2-8 (emphasis added).

Empire is bound to respond, even against its own interest, if the subpoena has been issued in proceedings "relative to the matters within the jurisdiction of [the] [C]omission" so long as the subpoena for production of records appears reasonably calculated to lead to discovery of information "pertinent to some question lawfully before" the Commission. *Id.*

As demonstrated below, the subpoena is exactly the sort of discovery both the Oil and Gas Act and the Division's regulations contemplate.

C. The Disputed Issues Targeted by the Subpoena Are Lawfully Before the Commission.

Empire cannot dispute these proceedings, many of which it initiated, fall "within the jurisdiction the [C]omission[.]" § 70-2-8. The "pertinent . . . question[s] lawfully before" the

Commission in these matters span the life of the EMSU, implicate multiple SWD operators, and involve unit-wide issues (and beyond) related to claimed residual hydrocarbons, impairment of corelative rights, communication between formations, and development plans by present and former operators.

Numerous issues lawfully before the Commission arise from these disputes. One example is that Empire asserts Goodnight's[4] disposal of produced water into the San Andres is in communication with the Grayburg through fractures, increasing well failure rates through corrosion, and is prematurely watering out Empire's wells and interfering with its ability to develop the San Andres as a residual oil zone through tertiary recovery. *See* Ex. 2 (Empire's 10/26/23 Prehearing Statement, Div. Case. Nos. 23614-17). By statute, the Commission has authority to make rules and issue orders that regulate "the disposition, handling, transport, storage, recycling, treatment and disposal of produced water." § 70-2-12(B)(15); § 70-2-12.1; § 70-13-3. Similarly, the Commission has delegated authority under the UIC program to authorize injection of produced water. The Commission also has authority to issue orders

> 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.

§ 70-2-12(B)(4). Thus, the Commission has statutory authority to address these exact issues now before it.

[4] Despite multiple other SWDs injecting into the San Andres within and around the EMSU, Empire's attacks have been, to date, focused on Goodnight, which disputes the claims. After Goodnight repeatedly pointed out this inconsistency, Empire recently filed Division Case Nos. 24432-39, attacking other SWD operations in and around the EMSU.

A second example is whether the San Andres was improperly included within the unitized interval under Order No. R-7765 and within the EMSU special pool under Order No. R-7767. *See* Goodnight Case Nos. 24277 and 24278. The Commission retained jurisdiction over those Orders to enter further orders as necessary, and it clearly has general authority over statutory units. Whether inclusion of the San Andres in the unitized interval within the EMSU is proper, or whether its use as a disposal zone for produced water is proper, is a matter subject to the jurisdiction of the Commission and central to the assertions underlying the parties' competing claims.

The subpoena requests all fall within the ambit of these "pertinent" issues facing the Commission. Empire's objections fail a mere straight-face test. As to Empire's claims about communication between the Grayburg and San Andres formations and water chemistry issues, Goodnight is entitled to test what evidence Empire has related to these assertions. Similarly, little core or well log data exists for the San Andres interval within and around the EMSU. Using what little data exists, Empire's experts conducted a petrophysical analysis they contend support the presence of an economic residual oil zone in the San Andres. Thus, Goodnight needs to discover all facts relevant to the presence or absence of oil in the San Andres, including EMSU reserves estimates in Empire's possession that may undermine the assumptions in that analysis or contradict its conclusions to fully and fairly test it.

Discovery aimed at developing these facts is necessary to provide Goodnight a "full opportunity to . . . present evidence and examine witnesses" on Empire's claims. 19.15.4.16(A) NMAC. Such discovery is also necessary to ensure "the Commission['s] findings [will] be based on ultimate facts involving 'foundationary matters,' and 'basic conclusions of fact[.]' *Amoco Prod. Co. v. Heimann*, 904 F.2d 1405, 1416 (10th Cir. 1990) (quoting *Cont'l Oil v. Oil*

Conservation Comm'n, 1962-NMSC-062, ¶ 12, 373 P.2d 809)) (citation omitted). In sum, the dispute presents a broad array of relevant "question[s] lawfully before" the Commission. Thus, Goodnight's Subpoena, which interposes requests pertinent to those issues, discussed below, presents relevant requests. § 70-2-8.

D. Goodnight's Subpoena Is Reasonably Calculated to Lead to the Discovery of Admissible Evidence Pertinent to Questions Lawfully Before the Commission.

Goodnight's requests satisfy the requirement that subpoena requests must be reasonably calculated to lead to discovery of admissible evidence pertinent to questions lawfully before the Commission. Each of Empire's objections on the basis of relevance should be overruled, and the motion should be denied.

Request Nos. 1-3: Request Nos. 1-3 ask for agreements, including operating agreements, between Empire and Rice Operating Company, Parker Energy Support Services, and OWL SWD Operating, LLC, respectively. Each company operates SWDs in and around the EMSU, much like Goodnight. *See* Map of the EMSU, attached as **Exhibit 3**.

On information and belief, Empire has an operating agreement with Rice Operating Company through which it has an economic interest in Rice's SWD operations as part of an ownership committee. Discovery of the facts and parameters of that operating agreement and related injection, including Empire's internal and external communications related to it, is likely to generate highly pertinent evidence. Such evidence may demonstrate the pretextual nature of Empire's allegations as well as undermine the technical basis for Empire's claims. These requests targeting agreements and communications related to other SWD operators in and around the EMSU—who have been disposing produced water into the San Andres for decades—is reasonably calculated to discover information challenging Empire's contention that water

chemistry and corrosion is a new problem introduced by Goodnight's injections.[5] This discovery is also necessary for Goodnight to assess the factual basis for Empire's attack against Goodnight to the exclusion of other similarly positioned SWD operators.

Goodnight is entitled present evidence undercutting the factual bases of Empire's claims, submit evidence in support of its own defenses, and to use such evidence to impeach Empire and its witnesses. In sum, Request Nos. 1-3 are clearly aimed to generate relevant evidence pertinent to the issues lawfully before the Commission.

Request No. 18: A similar analysis supports Goodnight's request regarding DASCO Cattle Company, LLC ("DASCO"). Empire asserts that "[t]his request has no bearing on anything at issue in the cases currently before the Commission" and "seek[s] irrelevant information to circumvent the discovery process in ongoing litigation and harass Empire." Mot. 5-6.

Goodnight is in litigation with DASCO on a separate matter. But that fact is not pertinent to whether Goodnight's request for communications and agreements with DASCO is reasonably calculated to lead to the discovery of admissible evidence in these proceedings.[6] What is pertinent is that DASCO is a surface owner of lands on or near the EMSU where some of Goodnight's SWDs that Empire is challenging are located. Ironically, Empire requested copies of surface-use agreements between Goodnight and a surface owner, such as DASCO, in its own subpoena in these cases. *See* Ex. 4, ¶ 5. How Empire could conclude a request for agreements between third parties is "relevant" for Empire's subpoena but not for Goodnight eludes reason.

[5] *See* Ex. 1 at Exhibit G-9.

[6] Empire wrongly asserts that Goodnight also issued a third-party subpoena to Empire in the DASCO litigation "which is currently the subject of a motion to quash." Mot. 15. That is incorrect—Empire responded to that subpoena and no motion to quash was ever filed. Thus, Empire's reliance on *Wallis v. Smith*, 2001-NMCA-017, and *Keplinger v. Virginia Elec. and Power Co*., 208 W.Va. 11, 24, 537 S.E2d 632 (W.Va. 2000) is completely unfounded. Goodnight's subpoena request to Empire in these proceedings is in no way a "mechanism to obtain information regarding a pending litigation" other than to obtain information in this pending proceeding. Mot. 15.

Agreements and communications between Empire and DASCO may lead to highly pertinent evidence. As with Request Nos. 1-3, such evidence—especially related internal communications—may demonstrate the pretextual nature of Empire's allegations that there is a residual oil zone in the San Andres and contradict its technical assertions. If Empire has had communications with DASCO (a surface owner) over a potential agreement to inject carbon dioxide for purposes of sequestration, such communications would severely undermine its representations that there is a San Andres residual oil zone and that it is economic.[7] Request No. 18 is relevant.

Request Nos. 4, 5 and 6. Although Empire addresses only Request No. 5 in its Motion, Empire raises similar relevance objections to Request Nos. 4 and 6 (Mot. 10). But again, Empire actually requested the same type of information from Goodnight in its own subpoena: "All water analyses of injected water into the San Andres formation by Goodnight Midstream Permian, LLC SWD wells in Lea County, New Mexico." Ex. 4, ¶ 4. The idea that these requests are not reasonably aimed at potentially admissible documents, given Empire's claims, has no merit.

These requests seek documents related to (1) water production volume discrepancies between Empires' representations to the Division in these matters and its own reported volumes (No. 4);[8] (2) water chemistry (No. 5); and (3) water compatibility (No. 6), as well as related communications from before creation of the Unit to the present. Though that is a long period,

[7] Empire's witness William West testimony demonstrates Empire is actively evaluating the prospect that the EMSU can provide geologic sequestration of anthropogenic CO2. *See* Ex. 5, (Testimony of William West, Case Nos. 23614-23617, ¶ 14 ("With 45-Q tax credits paying $60/tonne ($3.19/MCF) of CO2 sequestered, parties interested in obtaining this tax credit for 12 years will have a location to inject the anthropogenic CO2 they capture."); *see also id* at Ex. G-1, asserting the disposal "damages future carbon credits").

[8] *Compare* Ex. 1 at Exhibit G-8 (showing William West testimony as to API 30-025-29826 producing average of 12,772 BWPD in 2023) *with* NM OCD Production/Injection Records for API 30-025-29826 showing inconsistent BBLS volume for 2023 (https://wwwapps.emnrd.nm.gov/OCD/OCDPermitting/Data/WellDetails.aspx?api=30-025-29826).

water chemistry and corrosion over the life of the EMSU is central to Empire's claims about Goodnight's injection activities in these proceedings.

Empire has already presented testimony that relies on or references water chemistry data and documents that Goodnight is targeting in Request Nos. 5 and 6. *See* Ex. 6, at Fig. B-14 (excerpt of Testimony of Robert Lindsay related to Fig. B-14 in Empire's 10/26/2023 Am. Exhs. in Div. Case Nos. 23614-17). Despite relying on the targeted data for its own expert's testimony and opinions, Empire refuses to produce the underlying documents and data because Empire apparently does not have it and/or it is considered to be confidential by a third party. Empire's argument is that while the data may be relevant to Empire's testimony and analyses, it should not be required to produce the information to Goodnight. If Empire is unable to provide the data its experts rely on, however, all related opinions should be excluded from testimony because they cannot be independently tested and Goodnight will be unable to effectively examine Empire's witnesses.

Moreover, concerns over confidentiality do not equate to a privilege against disclosure. *Pincheira v. Allstate Ins. Co*., 2008-NMSC-049, ¶¶ 38-39, 190 P.3d 322; *Santa Fe Pac. Gold Corp. v. United Nuclear Corp*., 2007-NMCA-133, ¶ 51, 175 P.3d 309. Even if the data is determined to be confidential, Goodnight is still entitled to it through discovery.[9] *Pincheira*, 2008-NMSC-049, ¶¶ 38-39; *see* Rule 1-045(C)(3)(b)(iii) NMRA ("if the party in whose behalf the subpoena is issued shows a substantial need for the . . . material that cannot be otherwise met without undue hardship . . . the court may order . . . production only upon specified conditions"). Here, the water chemistry analysis is centrally relevant to the issues before the Commission (evidenced by Empire's testimony) and Goodnight cannot access that data elsewhere. In other

[9] This applies to all responsive documents Empire has withheld on claims that the documents include confidential or trade secret information.

words, if Empire refuses to produce the data, Goodnight faces an undue hardship in these proceedings. For this reason,[10] confidentiality concerns raised for Requests Nos. 5-6 do not merit quashing the subpoena. There is no need to prevent discovery altogether when a protective order is sufficient. *See* Rule 1-045(C)(3)(b)(i) NMRA; *Santa Fe Pac. Gold Corp.*, 2007-NMCA-133, ¶ 51.

Request Nos. 7-9 seek reports and estimates of proved, probable, and possible reserves of oil, gas, and hydrocarbons within the EMSU, including reserves estimates used to underwrite Empire's acquisition of the unit, and related documents and communications. Empire asserts these requests are not relevant because "these Commission cases. . . only involve whether Goodnight's proposed injection into Empire's unitized interval will impair correlative rights and/or result in waste." Mot. 11. It is confounding that Empire asserts Goodnight's SWDs impair Empire's ability to recover hydrocarbons from the San Andres, and then objects to discovery seeking evidence that would reflect whether Empire has reported recoverable hydrocarbons exist in the San Andres. Similarly, documents related to communications about those reserves are also directly relevant for impeachment and to test Empire's claims. If Empire is telling its funders and financial institutions one thing about recoverable hydrocarbon reserves but the Commission something different, such inconsistencies must be brought to light. *See Amoco Prod. Co.*, 904 F.2d at 1416.

Request No. 10: Similar to Request Nos. 7-9, Request No. 10 seeks oil and gas development plans during the life of the EMSU, and related communications and documents. Empire has already produced its 2024 plan and a summary of 2023 operations, thereby conceding that such plans and summaries are relevant and discoverable. Its objection on the basis

[10] For these same reasons, Empire's objection to Requests Nos. 7-9 on the basis of confidentiality fail to provide a basis meriting quashing the subpoena.

of relevance, thus, fails to explain why earlier plans are not also relevant. Development plans from prior operators, and communications related to those plans, are imperative to Goodnight's understanding about the history of operations in the EMSU, including the existence of well issues, corrosion, water chemistry issues, and other operational considerations at issue in this dispute lawfully before this Commission. Such plans and summaries are also likely to shed significant light on whether prior operators considered the San Andres prospective for residual oil and the extent to which it served merely as an aquifer or disposal zone. Empire's relevance objection is baseless.

Request No. 12: This request seeks documents and communications related to EMSU well failures and alleged increased well costs referenced by Empire in its pleadings before the Division. Empire argues Request No. 12 "is not calculated to lead to the discovery of admissible evidence because well costs are not at issue[.]" Mot. 12. This contention is specious.

Empire's witness has already testified that Goodnight's "disposal will increase Empire's capital and operating costs." *See* Ex. 5, Testimony of William West, Case Nos. 23614-23617, Ex. G at ¶ 28.[11] Empire's claim that Goodnight's SWD permits should be revoked turns on a claim that Goodnight's water injection activities are affecting correlative rights by impairing hydrocarbon recovery and harming Empire's wells by increasing costs. Goodnight is entitled to discovery on those claims and issues.

Request Nos. 13-15: Empire asserts these requests are not reasonably calculated to lead to the discovery of admissible evidence because "[t]he wells referenced in the request are not at issue in these proceedings, which only involve Goodnight's applications[.]" Mot. 13. In fact,

[11] *See also* Ex. 5, Exhibit G-1 ("Excess water increases lease operating costs. Excess water causes direct plugging & abandonment liabilities that must be assumed by those authorizing this destructive activity and the parties injecting the water.")

Empire's claims necessarily implicate whether injection activities in and around the EMSU in general—not just Goodnight's injection—impair Empire's recovery of hydrocarbons. Some of the subject wells have been injecting in and around the EMSU since 1960 and have injected more than 110 million barrels of produced water in aggregate. Thus, discovery of information about other similarly situated SWDs injecting into the same zone at relatively the same distance from the EMSU or within the EMSU is a relevant inquiry. In addition, Empire provides no explanation for why information requested for Goodnight's SWDs is not relevant. Quite frankly, Goodnight's requests for these documents and communications go to the heart of the dispute described above.

Requests Nos. 16 and 17: Here, Goodnight seeks documents and communications related to the potential for CO2 flooding in the San Andres and the basis for Empire's estimate that "270 million barrels or more of residual oil can be recovered, in addition to an estimated million barrels of tertiary oil recovered from the Grayburg" by conducting a CO2 flood in the San Andres formation within the EMSU. Mot. at Exh. A. Again, Empire perplexingly objects based on relevance despite having asked for similar information in its own subpoena. *See* Exh. 2, ¶ 1 ("All documents, communications, [etc.] . . . that address, reflect on, or concern the existence or non-existence of hydrocarbons in the San Andres formation within the Eunice Monument South Unit . . . ."). Goodnight's request is clearly aimed at discovery relevant to issues at the heart of the dispute.

In sum, each of Goodnight's requests seeks documents and data relevant to issues pertinent to the Commission's jurisdiction and the issues in dispute. Empire fails to show that any one of those requests has no possibility of discovering admissible evidence. The motion should be denied.

E. Empire Fails to Show That Goodnight's Subpoena Imposes An Undue Burden.

Empire makes conclusory assertions, without any specific factual showing, that the subpoena will impose an undue burden. Empire fails to meet its burden to show how complying with the subpoena would impose such an undue burden. This objection has no basis.

To establish a basis to quash the subpoena as unduly burdensome, Empire must show that responding will result in "a clearly defined and serious injury" if it were to comply. *Krahling v. Exec. Life Ins. Co.*, 1998-NMCA-071, ¶ 15, 959 P.2d 562 (internal quotation marks and citations omitted). "The injury must be shown with specificity." *Id.* (emphasis added). And the showing "must be based on a factual determination" of harm, "not on conclusory statements." *Id.* ¶ 10 (internal quotations and citations omitted) (emphasis added).

Empire argues Goodnight's subpoena presents an undue burden for two reasons: (1) the requests "demand production of internal and external communications and memoranda that reflect on, discuss, reference, or concern a wide variety of matters [i.e., the specific subject matter of each applicable request]," and (2) the requests are "unlimited with respect to time and even expressly seek documents, data, reports, and analyses . . . from before creation of the Unit to present." Mot. 4 (quotation marks omitted) (emphasis added).

These complaints are merely generalized and conclusory objections. Neither contention establishes any particular demonstration of a "clearly defined and serious injury" to Empire. *See Whiteside v. State Farm Fire & Cas. Co.,* No. 1:20-cv-01210-JAP-LF, 2021 U.S. Dist. LEXIS 72177, at *7 (D.N.M. Apr. 13, 2021); *see also Kutilek v. Gannon*, 132 F.R.D. 296, 300 (D. Kan. 1990) (party objecting as unduly burdensome "cannot rely on some generalized objections but must show specifically how [the requested discovery] is burdensome and/or overly broad by submitting affidavits or some detailed explanation as to the nature of the claimed burden.") (emphasis added). For this reason alone, the motion should be denied.

First, while these requests do seek an array of documents related to each subject, they are not overbroad on their face because each request targets highly relevant matters pertinent to Empire's claims, Goodnight's defenses, or possible bases for impeachment. Thus, contrary to Empire's suggestion neither of the authorities it relies on support its position. In both cases cited, the contested subpoenas did not limit the scope of the requests to relevant issues in dispute. As explained above, Goodnight's requests are narrowly tailored to target documents related to specific topics in dispute. *Cf. Archuleta v. Santa Fe Police Dep't ex rel. City of Santa F*e, 2005-NMSC-006, ¶ 23, 108 P.3d 1019 (finding request overbroad because, as written, it requested a significant amount of non-relevant material); *United States v. Wilson*, No. 1:22-mc-20 JCH, 2022 U.S. Dist. LEXIS 210318, at *18 (D.N.M. Nov. 21, 2022) ("[a] request may be over broad when it is not limited to materials that may be relevant or lead to the production of admissible evidence nor is it restricted to the relevant time period." (quotations omitted)). While the requests are broad in the types of documents and communications requested, they are narrow in the subject matter each request seeks.

Second, as to the applicable period responsive to the requests, the history of the EMSU is directly relevant to the claims Empire and Goodnight have each asserted. For example, Goodnight contends the San Andres has never been prospective for hydrocarbons, was included in the EMSU solely as a source of water supply and was designated as a produced water disposal zone long before the EMSU was created. For its part, Empire witnesses have testified that the "chemistry and salinity of Goodnight's disposal water is not compatible with the original EMSU water composition." *See* Ex. 1, Exhibit G-8. Goodnight has a right to understand the entire factual basis for this contention, which requires understanding the water chemistry of the EMSU

from its inception. In sum, the subject matter of the requests is not overly broad and is highly relevant; thus, there is no basis to determine that Empire will be unduly burdened by responding.

While Empire has not met its burden, Goodnight has demonstrated each of the document requests seeks materials relevant to a hearing in these matters. Goodnight needs those documents to test Empire's claims, develop evidentiary bases for its defenses, and impeach Empire's witnesses. *See Krahling*, 1998-NMCA-071, ¶ 15 (courts balance the requesting "party's need for information against the injury that might result if uncontrolled disclosure is compelled"). Even if Empire could properly demonstrate burden, Goodnight's need for the documents substantially outweighs any alleged injury to Empire. *Id.* As operator of the EMSU, Empire is now the steward of these records, many of which are not public. The only way for Goodnight to obtain the requested information is via Empire through discovery.

Empire initiated the above-captioned actions to revoke Goodnight's injection authority. Goodnight is entitled to seek relevant discovery from Empire in these proceedings to refute Empire's claims. *See supra,* Sections B & C. As a matter of fairness, Empire should not be permitted to bring actions to revoke Goodnight's injection authority and then hide behind "undue burden" to prevent Goodnight from defending against Empire's claims. *United Nuclear Corp. v. Gen. Atomic Co*., 1980-NMSC-094, ¶ 54, 629 P.2d 231 ("discovery is designed to 'make a trial less a game of blindman's buff and more a fair contest with the basic issues and facts disclosed to the fullest practicable extent'") (quoting *United States v. Procter & Gamble*, 356 U.S. 677, 682 (1958)).

Empire's assertion that discovery related to the claims and defenses before the Commission ought to occur in district court is non-sensical and contrary to New Mexico law. The Oil and Gas Act authorizes Goodnight to seek discovery in this proceeding. Goodnight has

done so. That is no "abus[e of] the Division's subpoena authority." Mot. 2. By suggesting it is, Empire is engaged in the very same "heavy-handed discovery tactics" it asserts against Goodnight. Mot. 2. The Commission should disregard Empire's conclusory (and legally incorrect) accusations because they provide no support for the Motion.

Empire's claim that Goodnight's subpoena is an undue burden finds no support in the factual, procedural, or legal context of these proceedings. Empire asserts the subpoena is nothing more than a 'fishing expedition,' relying on *Blake*, 1985-NMCA-009, ¶ 15. But the holding in *Blake* undermines Empire's contention. In *Blake*, a non-party sought to quash a subpoena with ten separate requests, including requests such as: "All audited and unaudited financial statements prepared for Taos Ski Valley, Inc. for the period beginning January 1, 1977, and ending June 8, 1983" and "All documents pertaining to any profit sharing for pension plan and relating to Michael Herbert Blake for the period beginning January 1, 1977, and ending June 8, 1983, including statements of account for Michael Herbert Blake." *Id.* ¶ 20 n.2. The trial court quashed the subpoena but was overruled for two reasons: (1) it quashed the subpoena without any showing that the subpoena was unreasonable or oppressive, and (2) it quashed the subpoena even though a protective order could have resolved the issues without foreclosing discovery. *Id.* ¶¶ 21-25. If the Commission were to quash this Subpoena on Empire's counsel's argument alone, it would make the same errors here as in *Blake*.

F. Empire's Claims of Privilege Are Overblown and Do Not Merit Quashing the Subpoena.

Empire focuses an additional argument on the possibility that some responsive documents might be protected from disclosure by attorney-client privilege and the work product immunity. Mot. 7-8. Again, Empire makes no actual showing and relies instead on the argument of counsel. Empire's concerns are without merit.

Empire must actually "demonstrate . . . privilege to be protected." *Abila v. Funk*, No. CIV 14-1002 JB/SV, 2016 U.S. Dist. LEXIS 131121, at *16 (D.N.M. Sep. 20, 2016); *Santa Fe Pac. Gold Corp*., 2007-NMCA-133, ¶ 21 ("[A] privilege log and supplemental affidavits must demonstrate with detail an objectively reasonable basis for asserting privilege as to each withheld communication.") (citing *Pina v. Espinoza*, 2001-NMCA-055, ¶ 24, 29 P.3d 1062).

The only requests to which Empire actually raises a privilege objection or work product claim are Requests Nos. 1-3, which seek agreements between Empire and Rice Operating Company, Parker Energy Support Services, OWL SWD Operating, LLC, respectively. These requests seek related "internal and external communications, emails, memoranda, and summaries that reflect on, discuss, reference or concern such agreements." Mot., Exh. A ¶ 1 (emphasis added).

With regard to privilege, only "internal . . . communications" could be privileged—and even then only some internal communications might be privileged. *Albuquerque Journal v. Bd. of Educ. of Albuquerque Pub. Sch*., 2019-NMCA-012, ¶ 19, 436 P.3d 1; *Tawater v. Bd. of Comm'rs for Cty. of Sandoval*, 2023-NMCA-052, ¶ 10, 534 P.3d 272, 275 ("Attorney-client privilege requires that a communication be made for the purpose of facilitating or providing professional legal services to that client.") (internal quotation marks omitted). To the extent Empire intends to object to similar "internal . . . communication" language in other requests, privilege is equally narrow.

With regard to work product, Empire does not even identify what sort of documents it believes would be subject to work product immunity. Thus, the claim is deficient and should be overruled. *See Hartman v. Texaco Inc*., 1997-NMCA-032, ¶ 20, 937 P.2d 979 ("[t]he party asserting the work product immunity . . . bears the burden of establishing for each document that

the rule applies . . . . This burden may be met by submitting detailed affidavits sufficient to show that precise facts exist to support the immunity claim." (emphasis added)).

Raising broad claims of privilege and work product without identifying specific communications or documents does not justify quashing the entire subpoena. If Empire has a concern that one or another responsive document is subject to a claim of privilege or work product, Empire should "expressly" make the claim and provide a "description of the nature of the documents, communications, or things not produced that is sufficient to enable [Goodnight] to contest the claim." NMRA 1-045(D)(2)(a).

Empire's motion is based on nothing more than an unsupported claim by counsel. These unsubstantiated claims do not merit consideration by the Commission. *Pina v. Espinoza*, 2001-NMCA-055, ¶ 24, 29 P.3d 1062. ("Failure to adequately support a claim of privilege thwarts both the adversarial process and meaningful independent judicial review and justifies denial of the claim of privilege.") (quotations omitted).

CONCLUSION

For the reasons stated, Empire's motion should be denied, and Empire should be compelled to respond to all outstanding document requests under the subpoena to ensure Goodnight is afforded a full opportunity to present evidence and examine witnesses.

Respectfully submitted,

HOLLAND & HART LLP

By: _____

Michael H. Feldewert
Adam G. Rankin
Paula M. Vance
Post Office Box 2208
Santa Fe, NM 87504
505-988-4421
505-983-6043 Facsimile
mfeldewert@hollandhart.com
agrankin@hollandhart.com
pmvance@hollandhart.com

ATTORNEYS FOR GOODNIGHT MIDSTREAM PERMIAN, LLC

CERTIFICATE OF SERVICE

I hereby certify that on April 29, 2024, I served a copy of the foregoing document to the following counsel of record via Electronic Mail to:

Ernest L. Padilla
Padilla Law Firm, P.A.
Post Office Box 2523
Santa Fe, New Mexico 87504
(505) 988-7577
padillalawnm@outlook.com

Dana S. Hardy
Jaclyn M. McLean
HINKLE SHANOR LLP
P.O. Box 2068
Santa Fe, NM 87504-2068
(505) 982-4554
dhardy@hinklelawfirm.com
jmclean@hinklelawfirm.com

Sharon T. Shaheen
Daniel B. Goldberg
Montgomery & Andrews, P.A.
Post Office Box 2307
Santa Fe, NM 87504-2307
(505) 986-2678
sshaheen@montand.com
dgoldberg@montand.com
cc: *wmcginnis@montand.com*

Attorneys for Empire New Mexico, LLC

Jesse Tremaine
Chris Moander
Assistant General Counsels
New Mexico Energy, Minerals, and
Natural Resources Department
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
(505) 741-1231
(505) 231-9312
jessek.tremaine@emnrd.nm.gov
chris.moander@emnrd.nm.gov

Attorneys for New Mexico Oil Conservation Division

Adam G. Rankin

EXHIBIT 1

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**

EMPIRE
PETROLEUM CORPORATION EST. 1983

(Amended Exhibits to include revised Exhibit E-2 and Exhibits F-1 – F-6)

November 2, 2023

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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** **23615** **23616** **23617**

SELF-AFFIRMED STATEMENT OF WILLIAM WEST

1. I am over the age of 18. I am a Petroleum Engineer working as Senior Vice President of Operations for Empire Petroleum Corporation and have personal knowledge of the matters stated herein. I have not previously testified before the Oil Conservation Division ("Division"). My credentials as an expert Petroleum Engineer may be found in the attached resume. In short, I graduated from Marietta College with a Bachelor of Science Degree in Petroleum Engineering in May 1999. I began my career with Marathon Oil Company and have been employed in the oil and gas industry since graduation. I have been the Senior Vice President of Operations for Empire Petroleum Corporation since May 2023. I am a Certified Professional Engineer in the State of Wyoming - WY ID # 12599. I have over 25 years of oil and gas experience and have worked in most of the major oil and gas producing basins and States including New Mexico in my career.

2. My area of responsibility for Empire Petroleum Corporation includes the area of Lea County, New Mexico. I am responsible for the secondary waterflood operations in the Eunice Monument South Unit ("EMSU") and am working on developing the tertiary recovery CO2 Project there. I submit the following information in support of Empire's opposition in the Goodnight saltwater disposal application.

3. In regard to Goodnight Midstream Permian, LLC's applications to drill four new SWD wells[1] the following facts were considered:

- **The Eunice Monument South Unit (EMSU) waterflood currently produces approximately 830 BOPD; 67,600 BWPD; 540 MCFPD and injects approximately 67,600**

[1] Goodnight also has a pending application for authorization to inject produced water into the Piazza SWD #1 and to increase the rate of water disposal into the Andre Dawson SWD #1 (API 30-025-50634) from 25,000 barrels water per day (BWPD) to 40,000 BWPD. As I will explain below, Goodnight proposes to inject all of this water into the same formation within Empire's unitized interval, and the impact of the injection is cumulative.

occurred prior to the injection of San Andres water into the Grayburg interval during the waterflood.

11. **Exhibit G-8** shows Goodnight's proposed five SWD wells in relation to Empire's two active San Andres water supply wells EMSU-278 and EMSU-459. Empire produces San Andres water to assist with the waterflood of the Grayburg interval. The EMSU-278 WSW is approximately 3511 feet from the proposed Piazza SWD #1 and approximately 3529 feet from the proposed Seaver SWD #1. The EMSU-278 well has produced an average of 5,567 BWPD during 2023. The EMSU-459 is approximately 3822 feet from the Hodges SWD #1 proposed well and has produced an average of 12,772 BWPD during 2023. The disposal of high salinity corrosive fluids into the SWD wells proposed by Goodnight will result in damage to these water supply wells and the high salinity water will then be re-injected into the EMSU injection wells causing further damage to Grayburg oil producers. These SWD wells should not be drilled and the existing SWD wells within the boundaries of the unitized interval must be shut-in to prevent further damage.

12. **Exhibit G-9** shows the relative magnitude of the saltwater chlorides that Goodnight is disposing into the EMSU versus the chlorides of the EMSU water. The disposal water chlorides average 86,147 mg/L based on water analysis provided from Goodnight's Wrigley facility over the period of November, 2022 to August, 2023. As shown by **Exhibit G-10**, Goodnight is gathering water with chlorides as high as 224,384 mg/L. **Exhibits G-11 and G-12** show historical water analyses for produced water from EMSU, with average chlorides content of 7,814 mg/L.

13. **Exhibit G-13** is the 2005-2006 XTO well completion report for EMSU-660, which demonstrates that the San Andres made water during swabbing operations but made 3 BO and 1057 BW when it was produced using ESP (Electric Submersible Pump). This shows that oil can be produced from the San Andres but requires CO_2 flooding to mobilize the residual oil.

14. **Exhibit G-14** shows the location of a CO_2 pipeline that runs south from Hobbs and within 7.5 miles east of EMSU. This pipeline can be used to transport natural (subsurface CO_2 resources) or anthropogenic (industrial emissions) CO_2 supplies to be used for the CO_2 flood. With 45-Q tax credits paying $60/tonne ($3.19/MCF) of CO_2 sequestered, parties interested in obtaining this tax credit for 12 years will have a location to inject the anthropogenic CO_2 they capture.

15. **Exhibit G-15** shows the 15 Goodnight SWD wells that are disposing of water in the San Andres interval and the calculated areas affected by disposal for current (July-1-2023) and 1, 5, 10, and 20 additional years of disposal. The San Andres has a net-to-gross interval of approximately 50% (portion of interval which can accept water) so we use half of the perforated interval in the calculation of impacted area. The San Andres has an estimated average porosity of 10%, initial connate water saturation of 30%, and residual oil saturation of 30%. The disposal water goes through the San Andres interval and pushes the San Andres water through the openings in the rock, but does not move the oil because it is residual to water. This residual oil reduces the volume of rock which can be filled up with disposal water, and therefore the saltwater disposal impacts a larger area with each barrel pumped. The area impacted is based upon the water disposal volume plus an equivalent volume of water which is displaced by the disposal.

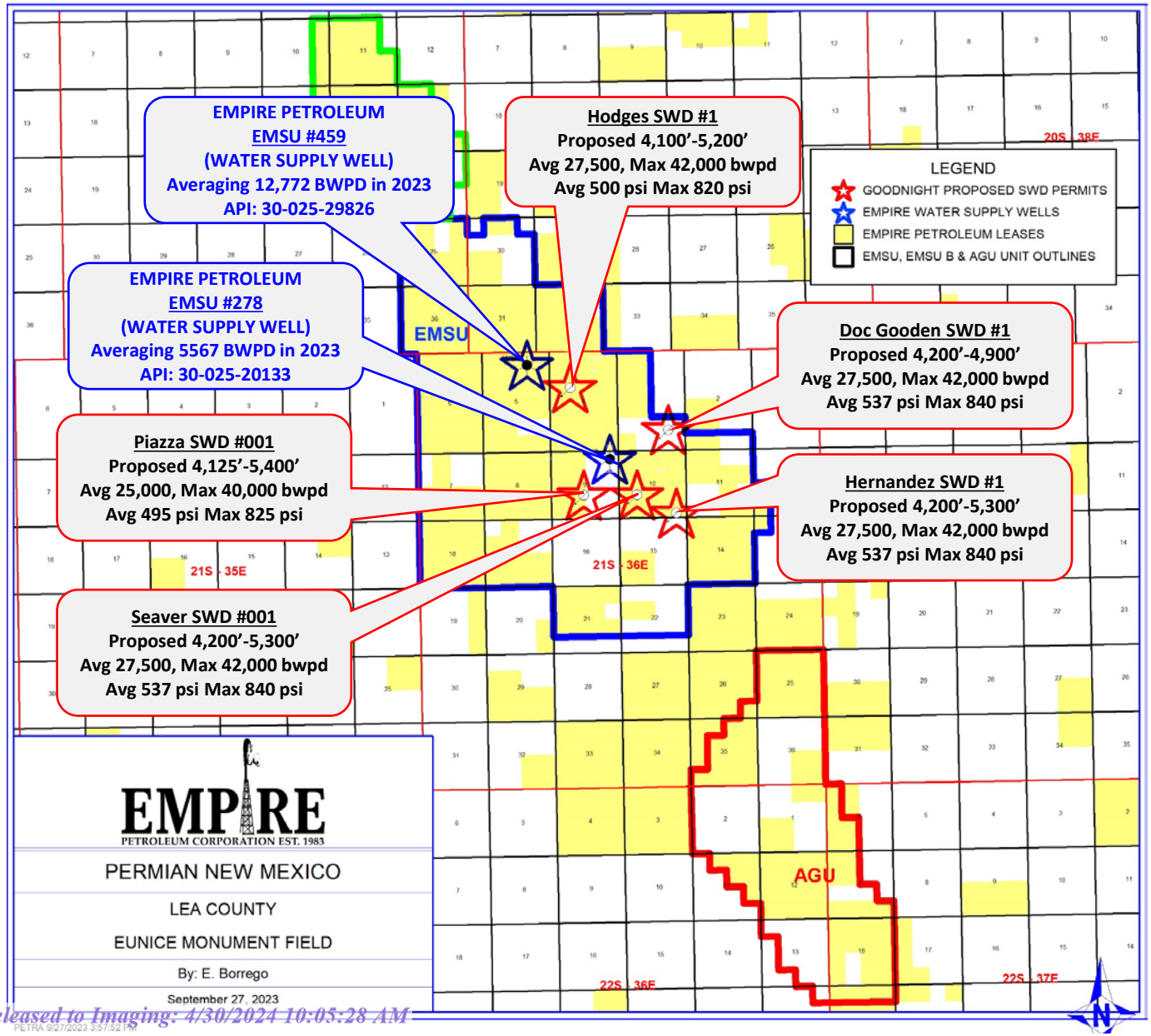
34. I understand this Self-Affirmed Statement will be used as written testimony in this case. I affirm that my testimony above is true and correct and is made under penalty of perjury under the laws of the State of New Mexico. My testimony is made as of the date next to my electronic signature below.

William West

Date:_October 26, 2023

GOODNIGHT MIDSTREAM PERMIAN, LLC - SWD DISPOSAL WILL CONTAMINATE EMPIRE'S SAN ANDRES WATER SUPPLY WELLS

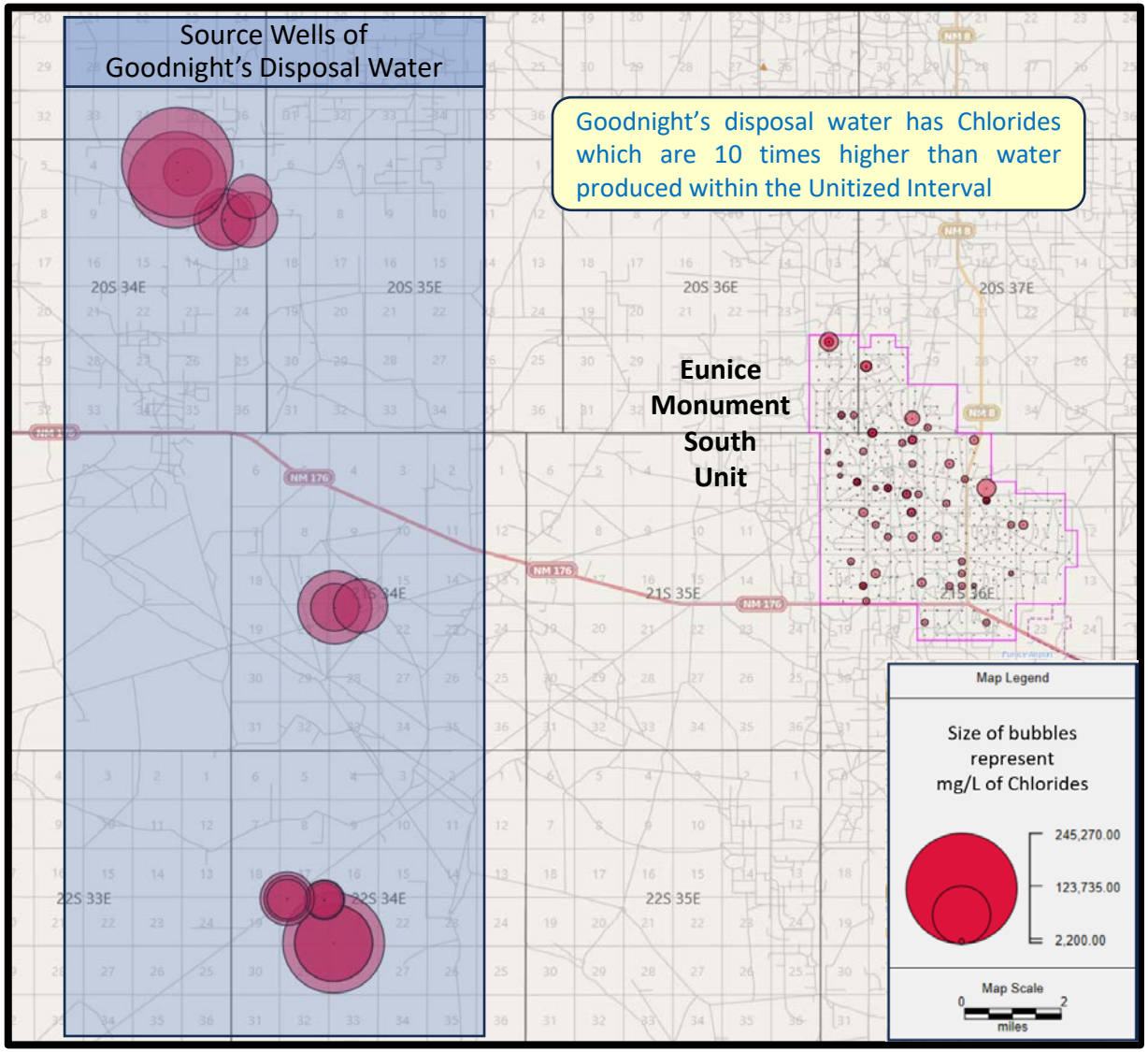
Exhibit G-8



KEY POINTS

- Empire currently operates two San Andres water supply wells near the proposed SWD wells.
- The high salinity disposal water will be produced by the water supply wells and contaminate the Grayburg interval.
- The chemistry and salinity of Goodnight's disposal water is not compatible with the original EMSU water composition.

Contrast of Chlorides content for Goodnight's SWD versus native water within the Unitized Interval.
Data for Goodnight's disposal water was supplied by Goodnight as part of Case No. 22626.
(Piazza SWD #1 application) see **Exhibit 10**



KEY POINTS

- The chlorides of the disposal water is much higher than the produced water at EMSU.
- Proves a non-compatible saltwater disposal well should not be allowed.
- A 3rd party operated SWD well should not be allowed to dispose of water in a unitized interval.
- Disposal of off-site water damages the CO2 oil recovery by increasing operating costs and occupying space where CO2 will be injected.
- Damages the existing waterflood oil recovery

Exhibit G-10

Water Analysis Data for Goodnight's disposal water.
It was supplied by Goodnight as part of Case No. 22626.
(Piazza SWD #1 application)

API	Well Name	Formation	Total Dissolved Solids (TDS), mg/L	Chloride (Cl), mg/L	Sulfate (SO4), mg/L	Bicarnonate (HCO3), mg/L
3002540626	GAUCHO 21 FEDERAL-002H	DELAWARE-BRUSHY CANYON		169,000	341	37
3002540626	GAUCHO 21 FEDERAL-002H	DELAWARE-BRUSHY CANYON		224,384	210	366
3002540626	GAUCHO 21 FEDERAL-002H	DELAWARE-BRUSHY CANYON	266,468	167,562		366
3002541564	GAUCHO UNIT-012H	BONE SPRING 2ND SAND		68,000	97	427
3002541564	GAUCHO UNIT-012H	BONE SPRING 2ND SAND	109,808	66,985	1,030	281
3002541565	GAUCHO UNIT-013H	BONE SPRING 2ND SAND		77,000	1,600	305
3002541565	GAUCHO UNIT-013H	BONE SPRING 2ND SAND	139,905	85,081	740	293
3002541571	GAUCHO UNIT-014H	BONE SPRING 2ND SAND		82,000	624	220
3002541566	GAUCHO UNIT-015H	BONE SPRING 2ND SAND	158,147	96,378	710	232
3002541566	GAUCHO UNIT-015H	BONE SPRING 2ND SAND	184,420	115,274	765	268
3002503587	H L VINSON-1	WOLFCAMP	67,277	66,400	690	187
3002503123	LEA 4O1 STATE-2	WOLFCAMP	60,950	33,568	3,049	1,087
3002502424	LEA UNIT-004H	BONE SPRING	29,436	16,720	1,142	634
3002502429	LEA UNIT-005	BONE SPRING	121,800			
3002502429	LEA UNIT-005	BONE SPRING	202,606	118,100	992	5,196
3002502427	LEA UNIT-1	BONE SPRING	15,429			
3002502427	LEA UNIT-1	BONE SPRING	180,701	108,300	670	1,016
3002502427	LEA UNIT-1	DELAWARE	214,787	132,700	1,816	208
3002502431	LEA UNIT-8	BONE SPRING	147,229	89,640	1,038	108
3002531696	MOBIL LEA STATE-001	DELAWARE	152,064	102,148	691	404
3002532105	MOBIL LEA STATE-003	DELAWARE	296,822	215,237	294	143
3002532466	MOBIL LEA STATE-005	DELAWARE	340,838	245,270	147	229
3002540986	MONK 21 STATE COM-001H	BONE SPRING 2ND SAND		103,000	439	207
3002540986	MONK 21 STATE COM-001H	BONE SPRING 2ND SAND	261,089	160,264	425	122
3002542193	MONK 21 STATE-004H	BONE SPRING 2ND SAND	184,233	112,775	425	488
3002503659	PHILLIPS STATE-1	WOLFCAMP	78,885	47,400	875	354
3002503743	STATE CA-1	WOLFCAMP	167,968	102,800	623	61

This table shows the water chemistry of the waters which Goodnight collects and disposes into EMSU.

KEY POINTS

- Delaware Basin water chemistry is much different than EMSU produced water, with high chlorides increasing corrosion rates and sulfate/bicarbonates increasing scaling tendencies
- This table provided by Goodnight shows chlorides as high as 245,270 mg/L

Exhibit G-11

Historical Water Analysis Data for Eunice Monument South Unit Unitized Interval (Page 1 of 2)

API	Well Name	Formation	Total Dissolved Solids (TDS), mg/L	Chloride (Cl), mg/L	Sulfate (SO4), mg/L	Bicarbonate (HCO3), mg/L
3002508706	EMSU-221	GRAYBURG/SAN ANDRES	5,482	2,200		1,494
3002504657	EMSU-218	GRAYBURG/SAN ANDRES	6,069	2,320		1,800
3002504456	EMSU-263	GRAYBURG/SAN ANDRES	7,637	3,018	108	1,918
3002504522	EMSU-192	GRAYBURG/SAN ANDRES	7,842	3,144	132	1,937
3002504456	EMSU-263	GRAYBURG/SAN ANDRES	7,866	3,365	54	1,739
3002506321	EMSU-175	GRAYBURG/SAN ANDRES	8,220	4,080	24	1,151
3002504498	EMSU-245	GRAYBURG/SAN ANDRES	8,259	3,020	142	1,296
3002504456	EMSU-263	GRAYBURG/SAN ANDRES	8,317	3,121	34	2,384
3002504504	EMSU-212	GRAYBURG/SAN ANDRES	8,418	3,867	51	1,260
3002504641	EMSU-388	GRAYBURG/SAN ANDRES	8,809	3,632	1,342	677
3002504456	EMSU-263	GRAYBURG/SAN ANDRES	8,816	3,261	109	2,493
3002504653	EMSU-400	GRAYBURG/SAN ANDRES	8,822	2,980	610	2,197
3002504513	EMSU-184	GRAYBURG/SAN ANDRES	9,090	4,000	192	1,828
3002504678	EMSU-409	GRAYBURG/SAN ANDRES	9,161	4,249	416	1,361
3002504670	EMSU-416	GRAYBURG/SAN ANDRES	9,303	5,218	382	264
3002504753	EMSU-446	GRAYBURG/SAN ANDRES	10,200	4,754	456	1,709
3002504456	EMSU-263	GRAYBURG/SAN ANDRES	10,291	4,800	175	1,728
3002504420	EMSU-163	GRAYBURG/SAN ANDRES	10,800	5,200	179	1,810
3002504497	EMSU-244	GRAYBURG/SAN ANDRES	10,815	5,199	529	1,290
3002504678	EMSU-409	GRAYBURG/SAN ANDRES	10,944	4,990	554	1,586
3002504665	EMSU-402	GRAYBURG/SAN ANDRES	10,996	5,856	150	1,184
3002530511	EMSU-620	GRAYBURG/SAN ANDRES	11,100	5,174	599	1,460
3002504497	EMSU-244	GRAYBURG/SAN ANDRES	11,165	5,067	624	1,590
3002504532	EMSU-195	GRAYBURG/SAN ANDRES	11,208	5,412		1,791
3002504684	EMSU-370	GRAYBURG/SAN ANDRES	11,598	6,380	18	1,380
3002504420	EMSU-163	GRAYBURG/SAN ANDRES	11,700	5,900	134	1,730
3002504597	EMSU-305	GRAYBURG/SAN ANDRES	11,739	4,975	181	2,412
3002530511	EMSU-620	GRAYBURG/SAN ANDRES	12,124	5,482	608	1,856
3002504456	EMSU-263	GRAYBURG/SAN ANDRES	12,160	4,814	135	3,095
3002504497	EMSU-244	GRAYBURG/SAN ANDRES	12,315	5,695	640	1,686
3002521902	EMSU-282	GRAYBURG/SAN ANDRES	13,209	6,316	1,070	1,173
3002504463	EMSU-260	GRAYBURG/SAN ANDRES	13,534	6,520	1,174	1,097
3002530511	EMSU-620	GRAYBURG/SAN ANDRES	13,745	6,544	1,058	1,313
3002504497	EMSU-244	GRAYBURG/SAN ANDRES	13,862	5,971	902	1,856
3002504419	EMSU-162	GRAYBURG/SAN ANDRES	13,871	6,780	417	1,751

This table shows the water chemistry of the waters which Empire produces at EMSU.

KEY POINTS

- The water chemistry of produced water at EMSU indicates low chlorides which allows Empire to treat the water at lower costs than would occur if Delaware Basin water enters the production stream.

Exhibit G-12

Historical Water Analysis Data for Eunice Monument South Unit Unitized Interval (Page 2 of 2)

API	Well Name	Formation	Total Dissolved Solids (TDS), mg/L	Chloride (Cl), mg/L	Sulfate (SO4), mg/L	Bicarbonate (HCO3), mg/L
3002504656	EMSU-384	GRAYBURG/SAN ANDRES	14,072	6,220	42	2,107
3002504678	EMSU-409	GRAYBURG/SAN ANDRES	14,156	6,186	983	1,721
3002504456	EMSU-263	GRAYBURG/SAN ANDRES	14,492	8,037	38	1,734
3002531409	EMSU-639	GRAYBURG/SAN ANDRES	14,661	7,176	1,250	1,056
3002530511	EMSU-620	GRAYBURG/SAN ANDRES	15,151	6,306	1,051	2,105
3002531409	EMSU-639	GRAYBURG/SAN ANDRES	15,677	8,807	305	884
3002504464	EMSU-231	GRAYBURG/SAN ANDRES	15,797	6,393	2,020	1,889
3002534824	EMSU-575	GRAYBURG/SAN ANDRES	15,797	8,338	1,137	880
3002504667	EMSU-401	GRAYBURG/SAN ANDRES	15,882	7,519	367	1,976
3002531426	EMSU-638	GRAYBURG/SAN ANDRES	15,965	7,860	1,452	1,001
3002504562	EMSU-294	GRAYBURG/SAN ANDRES	16,408	8,357	1,410	847
3002504556	EMSU-325	GRAYBURG/SAN ANDRES	17,262	8,018	590	2,306
3002504737	EMSU-441	GRAYBURG/SAN ANDRES	17,562	8,748	106	1,952
3002521902	EMSU-282	GRAYBURG/SAN ANDRES	17,899	9,016	1,192	1,378
3002534824	EMSU-575	GRAYBURG/SAN ANDRES	17,934	9,432	1,389	934
3002529826	EMSU-459	GRAYBURG/SAN ANDRES	18,031	8,711	2,463	525
3002504321	EMSU-104	GRAYBURG/SAN ANDRES	18,200	10,000	558	1,070
3002534824	EMSU-575	GRAYBURG/SAN ANDRES	18,385	9,523	1,462	931
3002504540	EMSU-286	GRAYBURG/SAN ANDRES	18,408	10,604	290	898
3002504555	EMSU-323	GRAYBURG/SAN ANDRES	18,542	9,402	650	1,513
3002504321	EMSU-104	GRAYBURG/SAN ANDRES	18,800	10,100	512	1,410
3002504570	EMSU-321	GRAYBURG/SAN ANDRES	19,590	10,162	677	1,342
3002504688	EMSU-404	GRAYBURG/SAN ANDRES	20,286	10,900	231	1,818
3002504473	EMSU-209	GRAYBURG/SAN ANDRES	20,770	10,623	917	1,415
3002504447	EMSU-179	GRAYBURG/SAN ANDRES	22,277	12,064	169	1,279
3002504513	EMSU-184	GRAYBURG/SAN ANDRES	22,897	11,905	1,130	1,171
3002504655	EMSU-361	GRAYBURG/SAN ANDRES	23,547	8,304	512	2,050
3002504604	EMSU-306	GRAYBURG/SAN ANDRES	24,581	12,363	354	835
3002529396	EMSU-117	GRAYBURG/SAN ANDRES	24,857	13,881	1,522	743
3002529396	EMSU-117	GRAYBURG/SAN ANDRES	25,848	14,249	1,579	865
3002504689	EMSU-377	GRAYBURG/SAN ANDRES	26,813	11,901	529	1,781
3002506207	EMSU-157	GRAYBURG/SAN ANDRES	42,129	24,973	475	806
3002504320	EMSU-107	GRAYBURG/SAN ANDRES	46,200	27,000	401	1,920
3002504458	EMSU-236	GRAYBURG/SAN ANDRES	59,126	32,804	4,357	18

This table shows the water chemistry of the waters which Empire produces at EMSU.

KEY POINTS

- The water chemistry of produced water at EMSU indicates low chlorides which allows Empire to treat the water at lower costs than would occur if Delaware Basin water enters the production stream.

EXHIBIT 2

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

EMPIRE'S PRE-HEARING STATEMENT

Empire New Mexico LLC ("Empire") provides this Pre-Hearing Statement as required by the Rules of the Division.

APPEARANCES

APPLICANT:	**APPLICANT'S ATTORNEY**
GOODNIGHT MIDSTREAM PERMIAN, LLC	Michael H. Feldewert Adam G. Rankin Julia Broggi Paula M. Vance Holland & Hart LLP P.O. Box 2208 Santa Fe, New Mexico 87504-2208 (505) 988-4421 mfeldewert@hollandhart.com agrankin@hollandhart.com jbroggi@hollandhart.com pmvance@hollandhart.com
OPPOSING PARTY	
EMPIRE NEW MEXICO LLC	Ernest L. Padilla Padilla Law Firm, P.A. P.O. Box 2523 Santa Fe, NM 87504 (505) 988-7577 padillalawnm@outlook.com Dana S. Hardy Jaclyn M. McLean Hinkle Shanor LLP P.O. Box 2068 Santa Fe, NM 87504-2068

(505) 982-4554
dhardy@hinklelawfirm.com
jmclean@hinklelawfirm.com

Sharon T. Shaheen
Samantha H. Catalano
Montgomery & Andrews, P.A.
P.O. Box 2307
Santa Fe, NM 87504-2307
(505) 986-2678
sshaheen@montand.com
scatalano@montand.com
ec: wmcginnis@montand.com

STATEMENT OF THE CASE

In these four applications, Applicant Goodnight Midstream Permian, LLC ("Applicant" or "Goodnight") seeks orders authorizing injection of produced saltwater for purposes of disposal in the San Andres formation [SWD; San Andres (Pool Code 96121)] between approximately 4,100 and 5,300 feet below the ground. Goodnight proposes to drill all four wells[1] within the Eunice Monument South Unit ("EMSU"), which Empire operates.

Goodnight proposes to inject produced water into the EMSU unitized interval at a maximum injection rate of 42,000 bpd, average injection rate of 27,500 bpd, maximum injection pressure of 840 psi (surface), and average injection pressure pf 537 psi (surface). Applicant proposes to inject high salinity saltwater from the Delaware Mountain Group, Wolfcamp, and Bone Spring formations into the low salinity Grayburg -San Andres formation.

The unitized interval of the EMSU extends from the top of the Grayburg formation to the base of the San Andres formation. The vertical limits of the unitized interval are the same as the

[1] 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.

vertical limits of the Eunice Monument Grayburg-San Andres Pool covering the Grayburg and San Andres formations. The EMSU 14,189.84-acre Unit was formed December 27, 1984 and water injection began November, 1986. Currently, Empire 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_2 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_2 flooding this San Andres ROZ interval it is estimated 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.

As will be explained in detail at the hearing, the proposed injection will adversely affect Empire's operations of the EMSU in at least five ways. First, the proposed injection will impair Empire's ability to recover hydrocarbons from the residual oil zones ("ROZ") in the San Andres formation through CO_2 injection and the Grayburg formation. Among other things, the added volume of water into the unitized interval will require Empire to displace the large volumes of water disposed by Goodnight and inject at higher pressures during the CO_2 flood. Empire will be required to displace an estimated 1.0 to 1.5 billion barrels of disposal water and then reinject it, thus increasing Empire's operating cost for reinjection of the produced water and increasing corrosion and lease operating expenses.

Second, vertical fractures allow communication between the San Andres and Grayburg formations. High salinity water injected into the San Andres will migrate up to impair existing waterflood operations in the Grayburg formation by causing increased corrosion rates and scaling,

and greatly higher lifting costs. Notably, disposal into the San Andres portion of Empire's unitized interval using the proposed saltwater disposal (SWD) wells will reach Empire's San Andres water supply wells (EMSU-278 and EMSU-459), which are less than 4000 feet away- with damage starting in 13 days. Further, the high salinity water will migrate down-dip into the Goat Seep Aquifer and contaminate a source of low salinity water (<10,000 ppm) in the Chihuahuan Desert. This damage to an important freshwater aquifer is a major environmental liability to New Mexico, its citizens and state and federal lands.

Third, injection of large volumes of water into the San Andres formation will prematurely water out Empire's wells, resulting in the loss of oil & gas, vastly increased operating costs, and increased plugging and abandonment liabilities decades sooner. Fourth, injection of such volumes preclude potential storage of CO_2 for use in recovery of hydrocarbons in both the San Andres and the Grayburg formations. This is the largest carbonate reservoir in the State of New Mexico and the second largest in the USA. The water would result in vast financial losses to state and federal lands and Empire. Fifth, 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.

All of these issues are compounded and exacerbated by Goodnight's current disposal of saltwater in the Grayburg - San Andres formation by Goodnight using numerous other injection wells, including several located within the EMSU and others located within approximately one to two miles of the EMSU. Goodnight's active wells located within the EMSU include the Andre Dawson SWD #1 (30-025-50634), the Sosa SWD #1(30-025-47947), and the Ryno SWD #1, f/k/a Snyder SWD (30-025-43901). Active Goodnight disposal wells within one mile of the EMSU include the Yaz SWD #1 (30-025-46382), the Ted SWD #1(30-025-44386), the Pedro SWD #1

(30-025-50079), the Nolan Ryan SWD #1 (30-025-45349), and the Penroc State E TR #2 (30-025-26491). Goodnight is currently seeking to increase the injection rate for the Andre Dawson SWD #1 in pending Case No. 23775. In addition, Goodnight has permitted the Verlander SWD #1 (30-025-50632), which is also located within one mile of the EMSU. Further, in pending Case No. 22626, Goodnight proposed the Piazza SWD #1 to be located within the EMSU, which case was heard on September 15, 2022.

In sum, Goodnight's proposed wells will result in waste of hydrocarbons and thereby violate the correlative rights of Empire and other interest owners in the EMSU. The applications should therefore be denied.

MATERIAL FACTS

The locations and parameters of the proposed wells are undisputed. The core disputed facts are: (1) whether recoverable hydrocarbons exist in the San Andres and (2) whether the disposal of saltwater as proposed by Goodnight impairs the ability of Empire, as the operator of EMSU, to recover the hydrocarbons found within the unitized interval of the EMSU.

PROPOSED EVIDENCE

APPLICANT:

WITNESSES	EST. TIME	EXHIBITS
TBD		

EMPIRE (OPPOSING PARTY):

WITNESSES	
VP – Land and Legal Jack E. Wheeler	9
Consulting Geologist Robert F. Lindsay	26
Consulting Geological Engineer Laurence S. Melzer	8

Consulting Engineer Frank J. Marek	4
Consulting Chemical Engineer Galen Dillewyn	2
Petroleum Geologist Nicholas A. Cestari	7
Senior VP of Operations William West	21

The qualifications and full narrative of the direct testimony and exhibits for each witness will be filed concurrently with this Pre-Hearing Statement. Empire provides a summary of each witness's testimony below.

Jack E. Wheeler (VP – Land and Legal) is employed by Empire and will testify regarding (1) the creation and history of the EMSU, Empire's acquisition of its interests in the EMSU, and Empire's operations therein, (2) Division orders relating to the EMSU, and (3) the locations of Goodnight's proposed and currently active or permitted SWDs within the EMSU.

Robert F. Lindsay (Consulting Geologist, Lindsay Consulting) will testify to his characterization of the geology of the San Andres/Grayburg reservoir, including (1) the presence of a residual oil zone (ROZ) within the San Andres, (2) identifiable vertical fractures and plumes that can allow vertical migration into the San Andres ROZ of fluids injected into the Grayburg, (3) the lack of an effective geologic seal between the Grayburg and the San Andres, and (4) the manner in which the injection of high-salinity produced saltwater into the San Andres may both communicate upsection into the Grayburg reservoir through fractures, impairing existing waterflood operations, and work its way down-dip into the Goat Seep aquifer and contaminate this low-salinity water source.

Laurence S. Melzer (Consulting Geological Engineer, Melzer CO2 Consulting) will testify about (1) the use of enhanced oil recovery techniques including CO2 to recover previously-unproduced ROZs around the world, including in the Permian Basin, (2) his estimates of recoverable ROZ resources in Lea County, New Mexico, and (3) how SWD injection into ROZ reservoirs such as the San Andres ROZ will severely impair the ROZ for both oil exploration and CO2 storage, thus creating waste.

Frank J. Marek (Consulting Engineer, Cobb & Associates) will testify to his evaluation of the impact of existing SWD operations on waterflood projects in the EMSU, including (1) his analysis of cross-sections across the Unit showing oil saturation throughout the entire San Andres interval, and (2) the ways in which injection and further injection of produced water into the unitized interval detrimentally impact Empire's ability to recover hydrocarbons from the ROZ and therefore results in waste.

Galen Dillewyn (Consulting Chemical Engineer, NUTECH Energy Alliance) will testify to his analysis of the San Andes/Grayburg reservoir's quality, porosity, permeability and

saturation using the NUTECH/NULOOK process.

Nicholas A. Cestari (Empire Petroleum Geologist) is employed by Empire and will testify to his experience reviewing and studying the unitized Grayburg/San Andres interval in the EMSU, including (1) a geologic overview of the EMSU, (2) cross-sections showing proposed and active Goodnight wells injecting into the unitized interval, (3) subsea structure maps of the Grayburg and San Andres, (4) NUTECH log analysis, (5) proof of the ROZ in the San Andres, including geochemical evidence, (6) the EMSU 200H landing zone, and (7) the lack of geologic barrier between the Grayburg and San Andres.

William West (Senior Vice-President of Operations) will testify about (1) the volumes of Goodnight's SWD injections to date and their quantifiable impacts on EMSU secondary recovery operations, (2) evidence of communication between the San Andres and Grayburg formations, (3) the estimated area of exposure of SWD saltwater within the EMSU, (4) SWD impacts on secondary and tertiary recovery projects going forward, and (5) Goodnight's violation of an existing permit.

PROCEDURAL MATTERS

This matter is set for a contested hearing on November 2, 2023. Empire's witnesses will be available for cross-examination.

Respectfully submitted,

PADILLA LAW FIRM

By */s/ Ernest L. Padilla*
Ernest L. Padilla
P.O. Box 2523
Santa Fe, NM 87504
(505) 988-7577
padillalawnm@outlook.com

Dana S. Hardy
Jaclyn M. McLean
HINKLE SHANOR LLP
P.O. Box 2068
Santa Fe, NM 87504-2068
(505) 982-4554
dhardy@hinklelawfirm.com
jmclean@hinklelawfirm.com

Sharon T. Shaheen
Samantha H. Catalano
MONTGOMERY & ANDREWS, P.A.
P.O. Box 2307

Santa Fe, NM 87504-2307
(505) 986-2678
sshaheen@montand.com
scatalano@montand.com
ec: wmcginnis@montand.com

Attorneys for Empire New Mexico, LLC

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing was served on the following by electronic mail on October 26, 2023:

Michael H. Feldewert
Adam G. Rankin
Julia Broggi
Paula M. Vance
Holland & Hart LLP
P.O. Box 2208
Santa Fe, New Mexico 87504-2208
Telephone: (505) 986-2678
mfeldewert@hollandhart.com
agrankin@hollandhart.com
jbroggi@hollandhart.com
pmvance@hollandhart.com

Attorneys for Goodnight Midstream Permian, LLC

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

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

QUESTIONS

Operator: Empire New Mexico LLC 2200 S. Utica Place Tulsa, OK 74114	OGRID: 330679
	Action Number: 279958
	Action Type: [HEAR] Prehearing Statement (PREHEARING)

QUESTIONS

Testimony	
Please assist us by provide the following information about your testimony.	
Number of witnesses	*Not answered.*
Testimony time (in minutes)	*Not answered.*

EXHIBIT 3

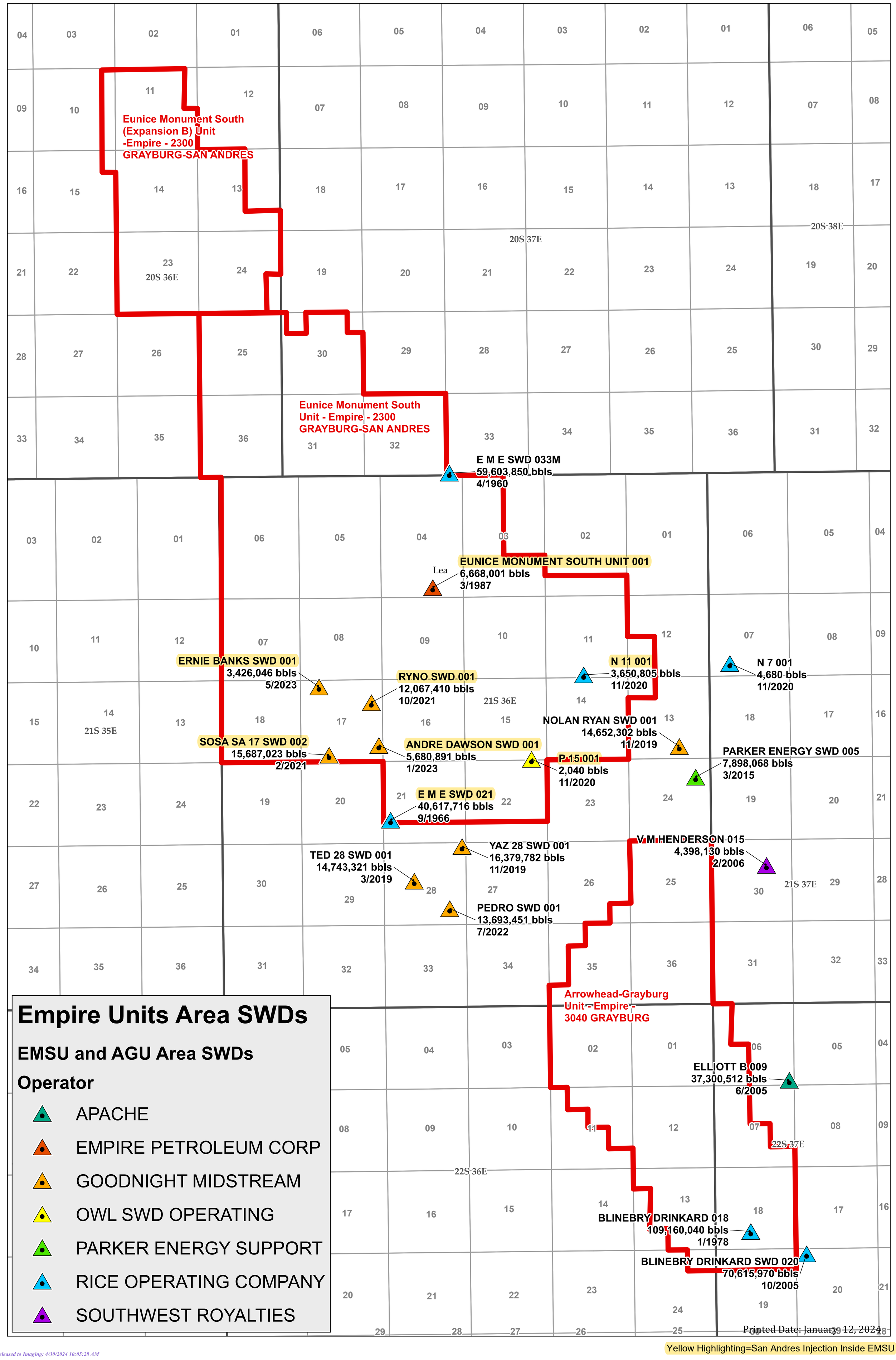

Eunice Monument South
(Expansion B) Unit
-Empire - 2300
GRAYBURG-SAN ANDRES
Eunice Monument South
Unit - Empire - 2300
GRAYBURG-SAN ANDRES
20S 37E
20S 38E
20S 36E
21S 35E
21S 36E
21S 37E
22S 36E
22S 37E
E M E SWD 033M
59,603,850 bbls
4/1960
EUNICE MONUMENT SOUTH UNIT 001
6,668,001 bbls
3/1987
Lea
ERNIE BANKS SWD 001
3,426,046 bbls
5/2023
RYNO SWD 001
12,067,410 bbls
10/2021
N 11 001
3,650,805 bbls
11/2020
N 7 001
4,680 bbls
11/2020
SOSA SA 17 SWD 002
15,687,023 bbls
2/2021
ANDRE DAWSON SWD 001
5,680,891 bbls
1/2023
NOLAN RYAN SWD 001
14,652,302 bbls
11/2019
P 15 001
2,040 bbls
11/2020
PARKER ENERGY SWD 005
7,898,068 bbls
3/2015
E M E SWD 021
40,617,716 bbls
9/1966
YAZ 28 SWD 001
16,379,782 bbls
11/2019
TED 28 SWD 001
14,743,321 bbls
3/2019
V M HENDERSON 015
4,398,130 bbls
2/2006
PEDRO SWD 001
13,693,451 bbls
7/2022
Arrowhead-Grayburg
Unit - Empire -
3040 GRAYBURG
ELLIOTT B 009
37,300,512 bbls
6/2005
BLINEBRY DRINKARD 018
109,160,040 bbls
1/1978
BLINEBRY DRINKARD SWD 020
70,615,970 bbls
10/2005
Empire Units Area SWDs
EMSU and AGU Area SWDs
Operator
APACHE
EMPIRE PETROLEUM CORP
GOODNIGHT MIDSTREAM
OWL SWD OPERATING
PARKER ENERGY SUPPORT
RICE OPERATING COMPANY
SOUTHWEST ROYALTIES
Printed Date: January 12, 2024
Yellow Highlighting=San Andres Injection Inside EMSU

EXHIBIT 4

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

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

CASE NOS. 23614
23615
23616
23617

CERTIFICATE OF SERVICE

I hereby certify that the foregoing Subpoena was served this 19th day of September, 2023 on counsel for Goodnight Midstream Permian, LLC.

Michael H. Feldewert	mfeldewert@hollandhart.com
Adam G. Rankin	agrankin@hollandhart.com
Julia Broggi	jbroggi@hollandhart.com
Paula M. Vance	pmvance@hollandhart.com
Dana S. Hardy	dhardy@hinklelawfirm.com
Jaclyn M. McLean	jmclean@hinklelawfirm.com
Sharon T. Shaheen	sshaheen@montand.com
Samantha H. Catalano	scatalano@montand.com

/s/ Ernest L. Padilla
Ernest L. Padilla

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

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

CASE NOS. 23614
23615
23616
23617

SUBPOENA

TO: Goodnight Midstream Permian, LLC
c/o Adam Rankin
Holland & Hart LLP
P.O. Box 2208
Santa Fe, NM 87504-2208

YOU ARE HEREBY COMMANDED pursuant to NMSA 1978, §70-2-8 and Rule 19.15.4.16.A NMAC to produce the following documents at the offices of Padilla Law Firm, P.A., Ernest L. Padilla, PO Box 2523, Santa Fe, New Mexico, 87504, within fifteen (15) days of the service of this subpoena on or before Friday, September 29, 2023:

1. All documents, communications, correspondence, emails, data, analyses, reports, and summaries, including but not limited to internal and external correspondence, memoranda, and assessments, that address, reflect on, or concern the existence or non-existence of hydrocarbons in the San Andres formation within the Eunice Monument South Unit, including any logs, reports, or other data providing downhole information.

2. Raster images of openhole logs run on the Andre Dawson SWD No. 1 (API #30-025-50634), Ernie Banks SWD No. 1 (API #30-025-50633), and Pedro SWD No. 1 (API #30-025-50079).

3. Daily water injection volumes and wellhead pressures for the Andre Dawson SWD No. 1 (API #30-025-50634) and Ernie Banks SWD No. 1 (API #30-025-50633).

4. All water analyses of injected water into the San Andres formation by Goodnight Midstream Permian, LLC SWD wells in Lea County, New Mexico.

5. Copies of the surface use agreements or other agreements by and between Goodnight Midstream Permian LLC, or its affiliates, and surface owners or other persons purporting to have ownership of the San Andres formation within the Eunice Monument South Unit underlying the surface locations of SWD wells proposed in Oil Conservation Division Cases 23614, 23615, 23616, and 23617.

This subpoena is issued on application of Empire New Mexico, LLC through its attorneys, Ernest L. Padilla, Padilla Law Firm, P.A., Dana Hardy, Hinkle Shanor, LLP. and Sharon T. Shaheen, Montogomery & Andrews, P.A.

Dated this 18th day of September, 2023.

NEW MEXICO OIL CONSERVATION DIVISION

BY: _____

Date: 9/18/2023

EXHIBIT 5

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**

EMPIRE
PETROLEUM CORPORATION EST. 1983

(Amended Exhibits to include revised Exhibit E-2 and Exhibits F-1 – F-6)

November 2, 2023

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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** **23615** **23616** **23617**

SELF-AFFIRMED STATEMENT OF WILLIAM WEST

1. I am over the age of 18. I am a Petroleum Engineer working as Senior Vice President of Operations for Empire Petroleum Corporation and have personal knowledge of the matters stated herein. I have not previously testified before the Oil Conservation Division ("Division"). My credentials as an expert Petroleum Engineer may be found in the attached resume. In short, I graduated from Marietta College with a Bachelor of Science Degree in Petroleum Engineering in May 1999. I began my career with Marathon Oil Company and have been employed in the oil and gas industry since graduation. I have been the Senior Vice President of Operations for Empire Petroleum Corporation since May 2023. I am a Certified Professional Engineer in the State of Wyoming - WY ID # 12599. I have over 25 years of oil and gas experience and have worked in most of the major oil and gas producing basins and States including New Mexico in my career.

2. My area of responsibility for Empire Petroleum Corporation includes the area of Lea County, New Mexico. I am responsible for the secondary waterflood operations in the Eunice Monument South Unit ("EMSU") and am working on developing the tertiary recovery CO2 Project there. I submit the following information in support of Empire's opposition in the Goodnight saltwater disposal application.

3. In regard to Goodnight Midstream Permian, LLC's applications to drill four new SWD wells[1] the following facts were considered:

- **The Eunice Monument South Unit (EMSU) waterflood currently produces approximately 830 BOPD; 67,600 BWPD; 540 MCFPD and injects approximately 67,600**

[1] Goodnight also has a pending application for authorization to inject produced water into the Piazza SWD #1 and to increase the rate of water disposal into the Andre Dawson SWD #1 (API 30-025-50634) from 25,000 barrels water per day (BWPD) to 40,000 BWPD. As I will explain below, Goodnight proposes to inject all of this water into the same formation within Empire's unitized interval, and the impact of the injection is cumulative.

Exhibit G

occurred prior to the injection of San Andres water into the Grayburg interval during the waterflood.

11. **Exhibit G-8** shows Goodnight's proposed five SWD wells in relation to Empire's two active San Andres water supply wells EMSU-278 and EMSU-459. Empire produces San Andres water to assist with the waterflood of the Grayburg interval. The EMSU-278 WSW is approximately 3511 feet from the proposed Piazza SWD #1 and approximately 3529 feet from the proposed Seaver SWD #1. The EMSU-278 well has produced an average of 5,567 BWPD during 2023. The EMSU-459 is approximately 3822 feet from the Hodges SWD #1 proposed well and has produced an average of 12,772 BWPD during 2023. The disposal of high salinity corrosive fluids into the SWD wells proposed by Goodnight will result in damage to these water supply wells and the high salinity water will then be re-injected into the EMSU injection wells causing further damage to Grayburg oil producers. These SWD wells should not be drilled and the existing SWD wells within the boundaries of the unitized interval must be shut-in to prevent further damage.

12. **Exhibit G-9** shows the relative magnitude of the saltwater chlorides that Goodnight is disposing into the EMSU versus the chlorides of the EMSU water. The disposal water chlorides average 86,147 mg/L based on water analysis provided from Goodnight's Wrigley facility over the period of November, 2022 to August, 2023. As shown by **Exhibit G-10**, Goodnight is gathering water with chlorides as high as 224,384 mg/L. **Exhibits G-11 and G-12** show historical water analyses for produced water from EMSU, with average chlorides content of 7,814 mg/L.

13. **Exhibit G-13** is the 2005-2006 XTO well completion report for EMSU-660, which demonstrates that the San Andres made water during swabbing operations but made 3 BO and 1057 BW when it was produced using ESP (Electric Submersible Pump). This shows that oil can be produced from the San Andres but requires CO_2 flooding to mobilize the residual oil.

14. **Exhibit G-14** shows the location of a CO_2 pipeline that runs south from Hobbs and within 7.5 miles east of EMSU. This pipeline can be used to transport natural (subsurface CO_2 resources) or anthropogenic (industrial emissions) CO_2 supplies to be used for the CO_2 flood. With 45-Q tax credits paying $60/tonne ($3.19/MCF) of CO_2 sequestered, parties interested in obtaining this tax credit for 12 years will have a location to inject the anthropogenic CO_2 they capture.

15. **Exhibit G-15** shows the 15 Goodnight SWD wells that are disposing of water in the San Andres interval and the calculated areas affected by disposal for current (July-1-2023) and 1, 5, 10, and 20 additional years of disposal. The San Andres has a net-to-gross interval of approximately 50% (portion of interval which can accept water) so we use half of the perforated interval in the calculation of impacted area. The San Andres has an estimated average porosity of 10%, initial connate water saturation of 30%, and residual oil saturation of 30%. The disposal water goes through the San Andres interval and pushes the San Andres water through the openings in the rock, but does not move the oil because it is residual to water. This residual oil reduces the volume of rock which can be filled up with disposal water, and therefore the saltwater disposal impacts a larger area with each barrel pumped. The area impacted is based upon the water disposal volume plus an equivalent volume of water which is displaced by the disposal.

Federal, and Private controlled property. Since water disposal is impacting Empire's unitized Grayburg / San Andres interval, it must be stopped.

25. Since the barrier between the Grayburg and San Andres is not continuous over all parts of the field, as shown by the sulfur increase, water production increase in the central portions of the field, and drop in San Andres reservoir pressure, the high salinity disposal water will move over large distances and find a natural fracture or breach in the barrier and begin interfering with our EMSU production. The location of the five proposed SWD wells are near the area where the greatest water production from the San Andres occurred. The high water production indicates that the Grayburg and San Andres intervals are in communication in the area; therefore the applications for these SWD wells should be denied.

26. As of July 1, 2023, Goodnight has disposed of 83.5 million barrels of water into the San Andres interval using the 10 active SWD wells shown on **Exhibit G-16**. The invasion areas shown in the exhibits represent fluid movement radially away from the wellbore due to water disposal volume plus an equivalent volume of San Andres water which is displaced by the disposal. The pressure response caused by the saltwater disposal will occur over a much larger distance and this pressure will force San Andres water into the natural fractures and breaches in the barrier with the Grayburg. This disposal of high salinity corrosive fluids will prematurely water out our producing wells and cause corrosion in the wells and facilities. **Disposal of saltwater into the San Andres impairs Empire's correlative rights and unit operations, and results in waste of oil and gas.**

D. SWD Impact Upon Waterflood and CO_2 Flood Performance

27. Empire has previously identified communication between the Grayburg and San Andres intervals. The entry of high salinity corrosive water into Empire's water supply wells and water injection system will result in production of corrosive water and impact waterflood performance both from an oil reserve recovery standpoint and also financially as Empire would need to address the contaminated water in its injection and production operations. Based on 40,000 BWPD disposed into the new wells and the Andre Dawson and Ernie Banks SWD wells, and June 2023 rates on the other active disposal wells, Goodnight will be disposing of 372,540 BWPD (135,977,100 barrels per year) in these wells. This saltwater disposal will impair Empire's ability to implement a CO_2 flood since the reservoir pressure will increase with the water disposal. To prevent further damage caused by these wells, they should be shut-in immediately.

28. It is estimated that 1.0 to 1.5 billion barrels of water will be produced by Empire as it injects CO_2 for enhanced oil recovery. Goodnight's disposal of water into the unitized interval will increase the reservoir pressure and make it more difficult for Empire to inject this produced water back into the reservoir. The disposal will increase Empire's capital and operating costs.

E. Goodnight has violated at least one of its existing permits.

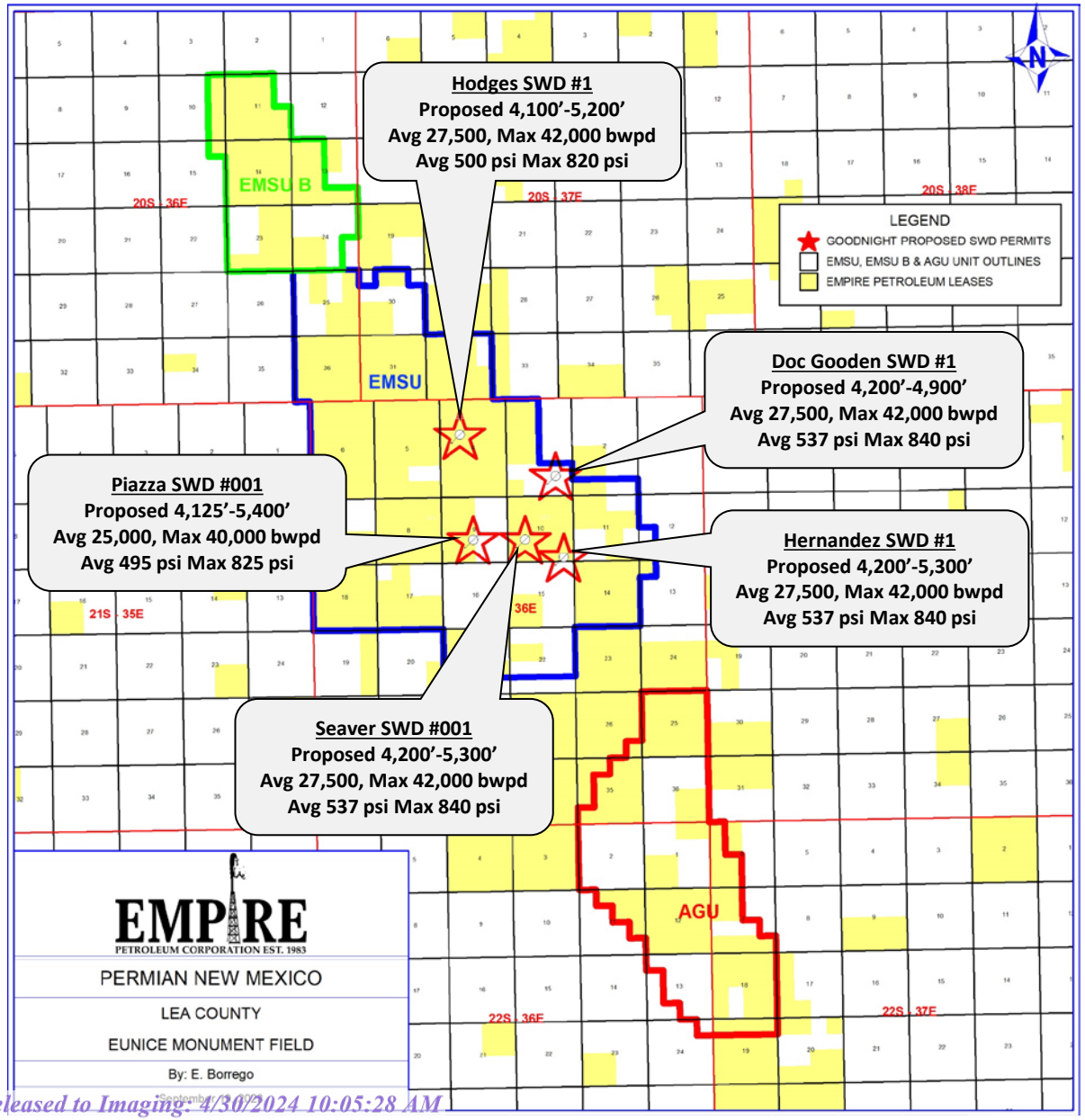
29. Goodnight has requested that the OCD increase the maximum disposal rate of the Andre Dawson SWD #1 from 25,000 BWPD to 40,000 BWPD. Goodnight has leased 40-acre tracts in Sections 3, 4, 9, and 10 of Township 21, Range 36 (Lea County) for saltwater disposal.

34. I understand this Self-Affirmed Statement will be used as written testimony in this case. 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 next to my electronic signature below.

William West

Date:_October 26, 2023

GOODNIGHT MIDSTREAM PERMIAN, LLC
SWD APPLICATIONS



KEY POINTS

- No third-party injection wells should be allowed inside a unitized oil and gas field
- This damages oil and gas production,
- This also damages future carbon credits
- The Delaware Basin disposal water is not compatible with existing waterflood, damaging oil recovery
- Excess water increases lease operating costs
- Excess water causes direct plugging & abandonment liabilities that must be assumed by those authorizing this destructive activity and the parties injecting the water.

EXHIBIT 6

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**

EMPIRE
PETROLEUM CORPORATION EST. 1983

(Amended Exhibits to include revised Exhibit E-2 and Exhibits F-1 – F-6)

November 2, 2023

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

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

CASE NOS. 23614
23615
23616
23617

SELF-AFFIRMED STATEMENT OF ROBERT F. LINDSAY

1. My name is Robert Forrest Lindsay. I am over eighteen years of age and have personal knowledge of the facts herein. I am a geologist with 47 years' experience in the petroleum industry, having worked for Gulf (1976-1985), Chevron (1985-2001), ChevronTexaco (2001-2002), Saudi Aramco (2002-2015), and Lindsay Consulting (2016-Present). My expertise is in reservoir characterization.

2. I hold a Bachelor of Science degree in Geology from Weber State College (June, 1974), a Master of Science degree in Geology from Brigham Young University (December, 1976), and Doctor of Philosophy degree in geology from the University of Aberdeen, Scotland (July, 2014).

3. I worked on Eunice Monument complex of unitized oil fields for Chevron from 1988 to 2002. I retired from Chevron in 2002. While working for Saudi Aramco (2002-2015), I used the 14-man year data base that I built on Eunice Monument unitized oil fields, other oil fields, and mountain range outcrops to complete a PhD degree (2014) on the Grayburg Formation.

4. I am a member of the following: 1) American Association of Petroleum Geologists (AAPG); 2) Society for Sedimentary Geology (SEPM); 3) Society of Independent Professional Earth Scientists (SIPES); 4) Past-president and honorary life member of the West Texas Geological Society (WTGS); 5) Past-president and honorary life member of the Permian Basin Section–SEPM (PBS-SEPM); and 6) Texas Board of Professional Geoscientists #1386.

5. I served my country in U.S. Army Special Forces as a medical specialist.

Exhibit B

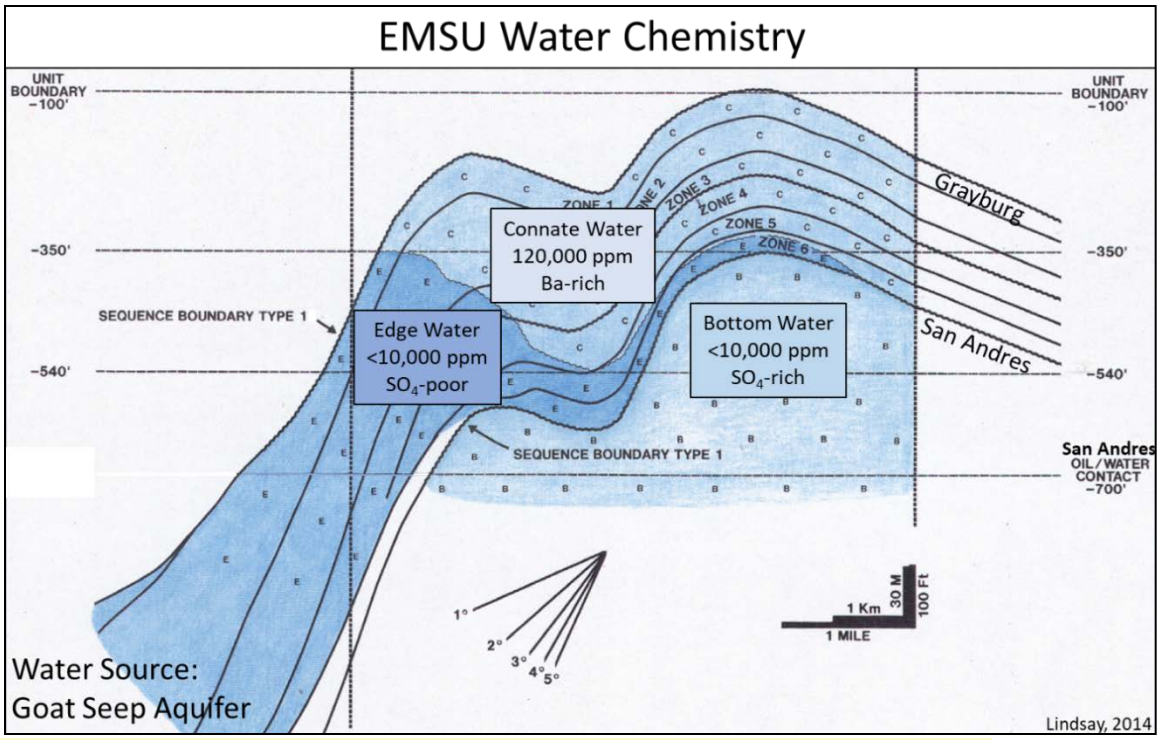

Figure B14. A water chemistry study in EMSU revealed three water chemistries. First, connate water (120,000 ppm) is present in the Grayburg reservoir and contains barium (Ba). Second, low salinity (<10,000 ppm) edge water entered the west side of the Grayburg reservoir. Edge water contains no sulfate. Edge water is sourced from the Goat Seep Aquifer, which is 1.5 to 2 miles down-dip of the west unit boundary of EMSU. Edge water entry into the Grayburg reservoir was by a drop in reservoir pressure. Edge water is sourced from the present-day Guadalupe and Glass mountains. Third, low salinity (<10,000 ppm) bottom water in the San Andres residual oil zone (ROZ), which is sulfate rich. San Andres water was sourced from present-day Sacramento Mountains by meteoric recharge, which dissolved evaporite beds ($CaSO_4$) as it recharged into the subsurface and added sulfate (SO_4) to the low salinity water.

D. PROOF OF CHANNELING AND CROSSFLOW BETWEEN ZONES THROUGHOUT THE FIELD THEREFORE HAS BEEN DOCUMENTED BY PRODUCTION DATA AND INCREASE IN SULPHUR CONTENT. IT IS MORE LIKELY THAN NOT THAT THIS WILL OCCUR AS A RESULT OF GOODNIGHT'S SALTWATER DISPOSAL.

4. The above testimony confirms the following:
   - First, injection of high salinity produced water into the San Andres residual oil zone (ROZ) in EMSU will communicate up section through fractures into the Grayburg reservoir and will thereby result in the waste of hydrocarbons.
   - Additional water entry into the Grayburg reservoir at EMSU will more likely than not have negative effects on production within the reservoir.
   - Injection of high salinity produced water will through time communicate down section to contaminate with the low salinity (<10,000 ppm) Goat Seep Aquifer.
   - Goat Seep aquifer is a source of low salinity (<10,000 ppm) water in the subsurface in this part of New Mexico where sources of fresh water are rare and should not be contaminated and will therefore harm public health and the environment.

I understand this Self-Affirmed Statement will be used as written testimony in this case. 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 next to my electronic signature below.

Robert F. Lindsay, October 5, 2023