

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

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

**COMM. CASE NO. 24123**

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

**DIV. CASE NOS. 23614-23617**

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

**DIV. CASE NO. 23775**

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

**DIV. CASE NOS. 24018-24020**

**EMPIRE NEW MEXICO LLC’S UNOPPOSED MOTION FOR LEAVE TO FILE  
AMENDED TESTIMONY OF FRANK J. MAREK**

Pursuant to Oil Conservation Commission (“Commission”) Rule 19.15.4.16(C) NMAC, Empire New Mexico, LLC (“Empire”) respectfully moves the Commission for leave to file amended testimony of its witness, Frank J. Marek, in the above-captioned matters, in a form attached as **Exhibit A** to this motion. As grounds for this motion, Empire states the following.

1. In preparing for the evidentiary hearing, Mr. Marek identified several clarifying, technical corrections to his previously submitted testimony. To ensure an accurate and complete record, Empire seeks to file amended testimony for Mr. Marek. These corrections do not materially

change Mr. Marek's conclusions or reasoning and, consequently, do not prejudice any of the parties to this proceeding.

2. Exhibit A to this motion reflects the proposed changes to Mr. Marek's Self-Affirmed Statement in redlined and clean formats. Empire requests that the Commission accept the revised statement for filing and consideration in these proceedings.

3. This motion comports with the Commission's authority to manage evidentiary materials in an adjudicatory hearing under 19.15.4.14(B) NMAC and with the general power to receive and admit relevant evidence under 19.15.4.17(A) NMAC.

4. Counsel for Empire has contacted the following parties to request their positions on this motion, and their positions are as follows: Goodnight Midstream Permian LLC – does not oppose; Rice Operating Company does not oppose; Pilot Water Solutions – does not oppose; New Mexico Oil Conservation Division – takes no position.

WHEREFORE, Empire New Mexico, LLC respectfully requests that the Commission grant this motion and accept the corrected Self-Affirmed Statement of Frank J. Marek for filing.

Respectfully submitted,

**HARDY MCLEAN LLC**

By: /s/ Dana S. Hardy  
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*Attorneys for Empire New Mexico, LLC*

**CERTIFICATE OF SERVICE**

I hereby certify that a true and correct copy of the foregoing was served upon the following counsel of record by electronic mail on April 4, 2025.

<p>Michael H. Feldewert                  Adam G. Rankin                  Nathan R. Jurgensen                  Julia Broggi                  Paula M. Vance                  Holland &amp; Hart LLP                  P.O. Box 2208                  Santa Fe, New Mexico 87504-2208                  Telephone: (505) 986-2678  <a href="mailto:mfeldewert@hollandhart.com">mfeldewert@hollandhart.com</a>  <a href="mailto:agrarkin@hollandhart.com">agrarkin@hollandhart.com</a>  <a href="mailto:nrjurgensen@hollandhart.com">nrjurgensen@hollandhart.com</a>  <a href="mailto:jbroggi@hollandhart.com">jbroggi@hollandhart.com</a>  <a href="mailto:pmvance@hollandhart.com">pmvance@hollandhart.com</a>  <b><i>Attorneys for Goodnight Midstream Permian, LLC</i></b></p>	<p>Jesse K. Tremaine                  Christopher L. Moander                  New Mexico Energy, Minerals and Natural Resources Department                  1220 South St. Francis Drive                  Santa Fe, New Mexico 87505                  Tel (505) 709-5687  <a href="mailto:Jessek.tremaine@emnrd.nm.gov">Jessek.tremaine@emnrd.nm.gov</a>  <a href="mailto:chris.moander@emnrd.nm.gov">chris.moander@emnrd.nm.gov</a>  <b><i>Attorneys for New Mexico Oil Conservation Division</i></b></p>
<p>Matthew M. Beck                  PEIFER, HANSON, MULLINS &amp; BAKER, P.A.                  P.O. Box 25245                  Albuquerque, NM 87125-5245                  Tel: (505) 247-4800  <a href="mailto:mbeck@peiferlaw.com">mbeck@peiferlaw.com</a>  <b><i>Attorneys for Rice Operating Company and Permian Line Service, LLC</i></b></p>	<p>Miguel A. Suazo                  BEATTY &amp; WOZNIAK, P.C.                  500 Don Gaspar Ave.                  Santa Fe, NM 87505                  Tel: (505) 946-2090  <a href="mailto:msuazo@bwenergyllaw.com">msuazo@bwenergyllaw.com</a>  <b><i>Attorneys for Pilot Water Solutions SWD, LLC</i></b></p>

/s/ Dana S. Hardy

Dana S. Hardy

**EXHIBIT A**

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**DIV. CASE NOS. 24018-24020**

**SELF-AFFIRMED STATEMENT OF FRANK J. MAREK**

My name is Frank J. Marek. I am a registered professional engineer in Texas, and currently Senior [Engineering Advisor of Haas & Vice President of William M. Cobb Petroleum Consultants & Associates](#), in Dallas Texas. I obtained a bachelor’s degree in Petroleum Engineering in 1977 from Texas A&M University. I have held leadership positions in industry organizations including the Society of Petroleum Engineers (SPE) and the Society of Petroleum Evaluation Engineers (SPEE).

I have been involved with numerous carbonate waterfloods in the Permian Basin since the early 1980’s. This includes projects in Lea and Eddy Counties, New Mexico. I also have significant experience with CO2 tertiary oil recovery projects in the area.

My first experience with the EMSU was with a study my firm prepared in August, 1987. This was a study of the waterflood potential of the EMSU on the current, at the time, 80-acre well spacing. I was also involved in an April, 1988 follow up study which investigated the potential for infill drilling to 40 acre spacing and waterflooding on 80 acre 5-spot patterns.

## EXHIBIT A

I have been asked to express my opinions regarding saltwater disposal (SWD) operations within the San Andres interval at the Eunice Monument South Unit (EMSU), located in Lea County, New Mexico. The EMSU is a secondary oil recovery project (waterflood) formed in 1984. The unitized interval at EMSU is defined as follows:

“The unitized interval shall include the formations from a lower limit defined by the base of the San Andres formation to an upper limit defined by the top of the Grayburg formation or at -100 foot subsea datum, whichever is higher.”

This captures the entire Grayburg and San Andres interval.

Exhibits H-1 through H-3 present cross sections showing well logs for the Goodnight Ryno SWD #1 well, EMSU #679, EMSU #660, and the R. R. Bell #4 well. The NuTech processed log for the Ryno SWD #1 well shows oil saturation throughout the entire San Andres interval, top to base. The deepest measurement on this log shows an Deepest oil saturation of 40% in San Andres is seen at a depth of 2142 feet-1851.5' SSD using the most recent NuTech log saturations. Current perforations are shown on all of the well logs. Clearly, water is being disposed of (injected) into the unitized San Andres interval. Although water injection into the Ryno SWD #1 well is structurally deeper than producing perforations in the Grayburg wells, water is being injected into a documented residual oil zone (ROZ). This is further supported by conventional core data in well EMSU-679. This core shows an oil saturation of 16.2% at a measured depth of 4357 feet, or -761 feet SSD. The ROZ clearly exists down to a datum of -761 feet SSD, and likely deeper, based on the Ryno SWD #1 Nutech log. Following is a summary of data points relating to the depth of the ROZ at the EMSU:

~~-728~~748 feet SSD > top injection perf in the Ryno SWD #1 well

-761 feet SSD > deepest core point on EMSU-~~669~~679, 16.2% oil

~~-2013~~1928 feet SSD > deepest injection perf in the Ryno SWD #1 well

~~-2142~~1851.5 feet SSD > Ryno SWD #1 deepest penetration, 40% point in San Andres where oil from Nutech saturation exists in revised NuTech log interpretation.

The Ryno SWD #1 well is clearly injecting into a well documented ROZ. The high water disposal rates will likely cause higher pressures in the ROZ, and higher potential for hydraulic fracturing and vertical communication, all of which will be detrimental to future ROZ operations. These same factors may also have a negative impact on current field operations in the traditional Grayburg/San Andres producing zones.

As a final note, in my 48~~47~~ years of experience, I have never seen an instance where a waterflood unit owner allowed an outside party to dispose of water into the unitized interval. I certainly believe that such water disposal should not be allowed at the EMSU.

**EXHIBIT A**

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 signature below.

Sincerely,

**WILLIAM M. COBB & ASSOCIATES, INC.**  
Texas Registered Engineering Firm F-84



Frank J. Marek, P.E.  
Senior Vice President



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My first experience with the EMSU was with a study my firm prepared in August 1987. This was a study of the waterflood potential of the EMSU on the current, at the time, 80-acre well spacing. I was also involved in an April 1988 follow up study which investigated the potential for infill drilling to 40 acre spacing and waterflooding on 80 acre 5-spot patterns.

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-748 feet SSD > top injection perf in the Ryno SWD #1 well

-761 feet SSD > deepest core point on EMSU-679, 16.2% oil

-1928 feet SSD > deepest injection perf in the Ryno SWD #1 well

-1851.5 feet SSD > Ryno SWD #1 deepest point in San Andres where oil saturation exists in revised NuTech log interpretation.

The Ryno SWD #1 well is clearly injected into a well-documented ROZ. The high-water disposal rates will likely cause higher pressures in the ROZ, and higher potential for hydraulic fracturing and vertical communication, all of which will be detrimental to future ROZ operations. These same factors may also have a negative impact on current field operations in the traditional Grayburg/San Andres producing zones.

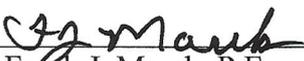
As a final note, in my 48 years of experience, I have never seen an instance where a waterflood unit owner allowed an outside party to dispose of water into the unitized interval. I certainly believe that such water disposal should not be allowed at EMSU.

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Respectfully submitted,

Haas & Cobb Petroleum Consultants

F-26129

  
\_\_\_\_\_  
Frank J. Marek, P.E.  
Senior Engineering Advisor

Date: 4/2/2025



# ***EXHIBITS***

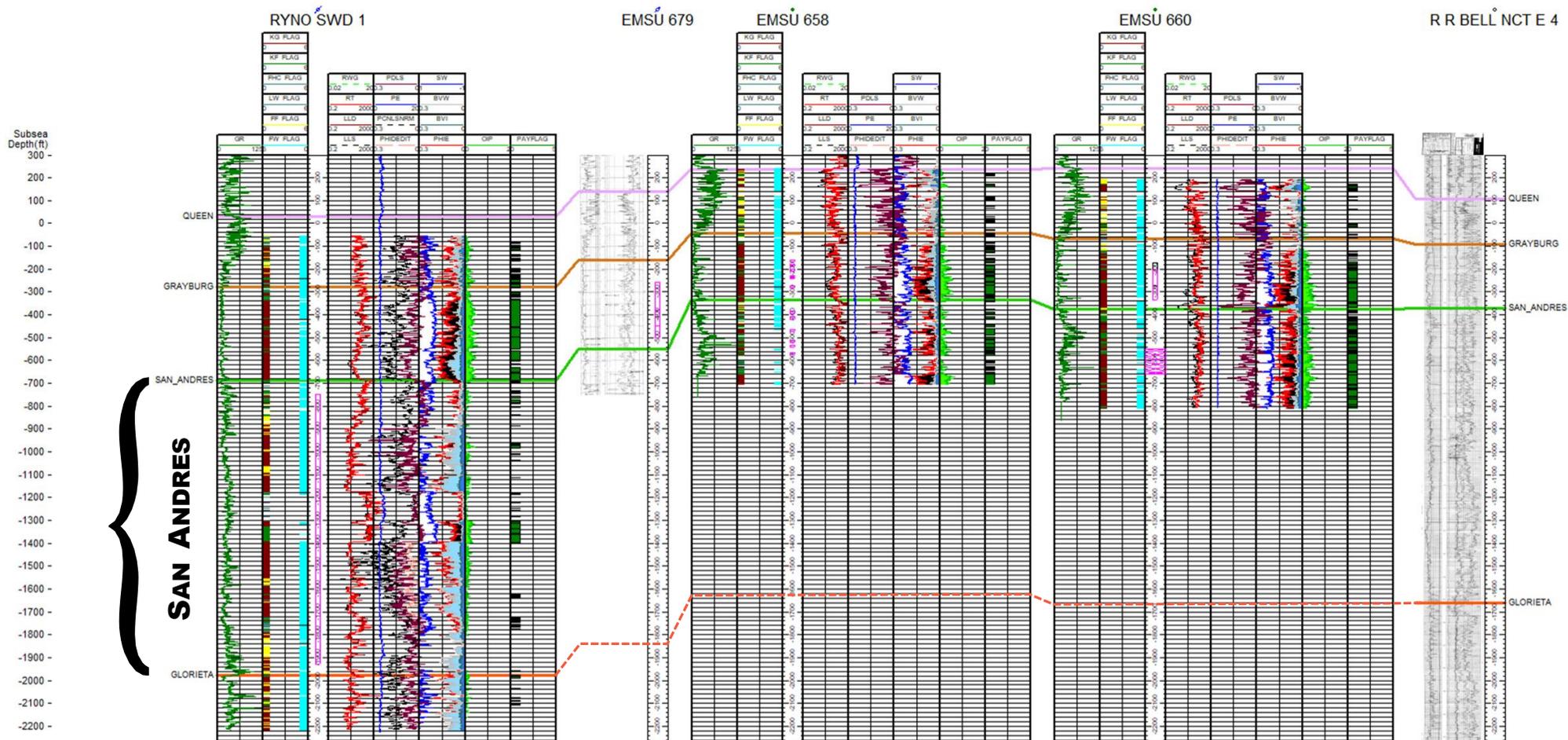
***H-1 through H-3***



**A**

### Structural Cross-Section

**A'**



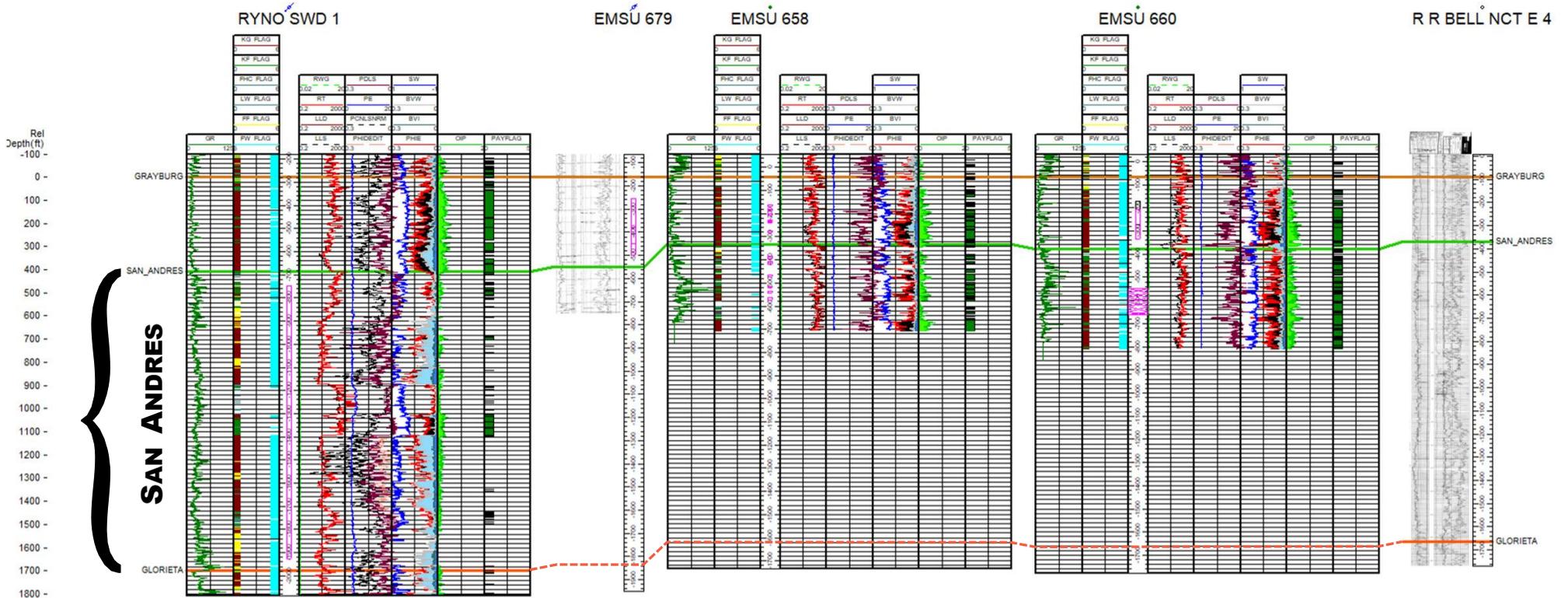
Log sections are based on NuTech's original analysis

Exhibit H-2

### Stratigraphic Cross-Section

**A**

**A'**



Log sections are based on NuTech's original analysis

Exhibit H-3