

**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, 24025**

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**EMPIRE NEW MEXICO, LLC'S RESPONSE IN OPPOSITION TO  
GOONIGHT PERMAN MIDSTREAM, LLC'S MOTION FOR AN ORDER  
DIRECTING EMPIRE TO CEASE EMSU WATERFLOOD INJECTIONS ABOVE  
PERMITTED SURFACE INJECTION PRESSURES AND TO PROVIDE A  
VERIFIED ACCOUNTING OF WATERFLOOD INJECTION**

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NOW COMES Empire New Mexico, LLC, ("Empire") by and through its undersigned counsel of record and for its Response in Opposition to Goodnight's Motion for an Order Directing Empire to Cease EMSU Waterflood Injections Above Permitted Surface Injection Pressures and to Provide a Verified Accounting of Waterflood Injection, states as follows:

**Introduction.**

While Empire has no objections with complying with applicable permit restrictions, Goodnight's Motion for an Order Directing Empire to Cease EMSU Waterflood Injections

Above Permitted Surface Injection Pressures and to Provide a Verified Accounting of Waterflood Injection (the “Motion”) once again demonstrates Goodnight’s strategy and pattern of utilizing the Oil Conservation Division (“OCD”), Oil Conservation Commission (“OCC”), and the current hearings process in an abusive and wasteful manner in order to unnecessarily complicate and drive up the costs of resolving the actual issues before the OCC. Unlike Empire’s motion which sought to terminate Goodnight’s over injection in order to protect actual, definable, demonstratable harm to Empire’s correlative rights, including resulting revenue created for the citizens of New Mexico, Goodnight could not articulate a single harm and was forced to invent a “doctrine” of *per se* harm in a disingenuous attempt to pretend it has any interest in the results of a motion it has clearly filed in retaliation for being made to follow its existing permits. Even assuming, *arguendo*, Empire did breach its permits, Goodnight’s failure to state a harm is tacit agreement that it suffers no harm. Amazingly, Empire opposes salt water disposal within the EMSU because such salt water disposal will necessarily increase pressures and fluid volumetric expansion which will affect Grayburg production and future ROZ production. Nonetheless, Empire can explain the reasons for seemingly higher injection pressures as set forth below.

#### **Statement of Facts.**

1. Goodnight does not have any operating rights of working interest in EMSU.
2. Rice Operating (“Rice”), Permian Line Service, LLC (“Permian Line”), and Pilot Water Solutions SWD, LLC (“Pilot Water”), do not have any operating rights of working interest in EMSU.
3. Goodnight, Rice, Permian Line, and Pilot are commercial salt water disposal businesses.

4. Neither Goodnight, Rice, Permian Line, nor Pilot operate wells and leases for oil and gas production on adjoining lands.
5. Goodnight, Rice, Permian Line, and Pilot are defendants in a Lea County lawsuit brought by Empire for their salt water disposal that damages the EMSU.
6. The Oil Conservation Division has regulatory authority, but did not independently raise any concerns about Empire's waterflood injections now or in the past.
7. Empire is operating at pressure levels that its predecessor in interest, XTO, was running.
8. Empire acquired the waterflood project set to 750 psi, presumably approved by the OCD. XTO, a subsidiary of Exxon, is a good operator. Empire was not aware of any reason to check pressure settings following its acquisition.

#### **Argument and Authorities.**

##### **I. Goodnight has not demonstrated any harm caused by Empire's waterflood injection.**

It is axiomatic that, in order to bring an action, a party must have suffered an "injury in fact"—an invasion of a legally protected interest which is (a) concrete and particularized, and (b) "actual or imminent, not 'conjectural' or 'hypothetical'," *See, Lujan v. Defs. of Wildlife*, 504 U.S. 555, 560, 112 S. Ct. 2130, 2136 (1992). (Internal citations omitted.) The New Mexico Supreme Court also requires an injury in fact:

Our current standing doctrine generally requires litigants to allege three elements: (1) they are directly injured as a result of the action they seek to challenge; (2) there is a causal relationship between the injury and the challenged conduct; and (3) the injury is likely to be redressed by a favorable decision. These requirements are known in short form as injury in fact, causation, and redressability, and are derived from federal standing jurisprudence.

*ACLU of New Mexico v. City of Albuquerque*, 2008-NMSC-045, ¶ 1, 144 N.M. 471, 473, 188 P.3d 1222, 1224. The litigant must show that he is “imminently threatened with injury” or that he is faced with “a real risk of future injury” as a result of the challenged action. *Id.* ¶ 11.

Goodnight’s claim that “Empire’s recurring permit violations give rise to a *per se* harm to each of the offsetting operators, not just Goodnight,” (Motion, page 3) is not sufficient to meet this requirement, especially when Goodnight does not demonstrate -- or even allege -- any actual harm that it or the other offsetting operators has suffered from Empire’s waterflood injections.

Goodnight’s allegation that the violations “give rise to a *per se* harm” has no basis in law whatsoever. “[T]he Supreme Court has long taught that the violation of a statutory jurisdictional limitation—quite unlike the violation of a more prosaic rule or statute—is *per se* harmful. *See, e.g., Torres v. Oakland Scavenger Co.*, 487 U.S. 312, 317 n. 3, 108 S.Ct. 2405, 101 L.Ed.2d 285 (1988).” *United States v. Krueger*, 809 F.3d 1109, 1122 (10th Cir. 2015). (Concurrence by Judge Gorsuch.)

Nor has Goodnight demonstrated that Empire’s waterflood injections are somehow causing injury to the Grayburg formation or to the environment or the public health.

Even assuming, *arguendo*, that Empire’s waterflood injections have exceeded its allowable psi, Goodnight has not shown any injury to itself or to any other entity.

While it is true that the Commission is authorized “to require wells to be drilled, operated and produced in such manner so to prevent injury to neighboring leases or properties,” NMSA 1978 § 70-2-12, nowhere in the Motion does Goodnight explain how any neighboring leases or properties are being affected at all by Empire’s alleged excess pressure in the EMSU. The mere

allegation that they are being affected is not enough to show an injury in fact, as required by New Mexico case law.

Even the case cited by Goodnight, *LaBalbo v. Hymes*, 1993-NMCA-010, ¶ 11, 115 N.M. 314, 318, 850 P.2d 1017, 1021, does not support Goodnight's position. "To obtain a preliminary injunction, a plaintiff must show that (1) the plaintiff will suffer irreparable injury unless the injunction is granted; (2) the threatened injury outweighs any damage the injunction might cause the defendant; (3) issuance of the injunction will not be adverse to the public's interest; and (4) there is a substantial likelihood plaintiff will prevail on the merits. ... However, if a plaintiff failed to establish one of the required factors, the reviewing court should affirm denial of the injunction." (Emphasis added.)

Likewise, the Court of Appeals in *Tenneco Oil Co. v. New Mexico Water Quality Control Comm'n*, 1986-NMCA-033, ¶ 12, 105 N.M. 708, 710, 736 P.2d 986, 988, stated, "Mere allegations of irreparable harm are not, of course, sufficient. A showing of irreparable harm is a threshold requirement in any attempt by applicants to obtain a stay." (Emphasis added.)

Since Goodnight has not shown that it is suffering any injury at all, much less an irreparable injury, this Motion must be denied.

**II. Much of the data on which Goodnight has based its Motion is faulty and should be disregarded.**

As explained in the Self-Affirmed Statement of Darrel Davis, attached hereto as Exhibit "A" and incorporated herein by this reference, much of the data relied on by Goodnight is faulty and/or misleading. *See, e.g.*, Paragraphs 5, 6, 7, and 8 of the Statement. Additionally, Goodnight

did not calculate the Injection Pressure Gradients correctly, as explained in Paragraphs 13 and 14 of the Statement.

To begin with, at Paragraph 6 of the self-affirmed statement of Darrell Davis 50% of the wells comprising Goodnight's argument are within tolerable limits. Tolerable limits of the 750 psi setting on Empire's injection wells as stated in Mr. Davis's Statement, the overage in pressure is within 3% of the 750 psi set point. Empire has continued to employ the 750 psi set point that XTO set point throughout the EMSU. In fact, however, administrative orders approving expansion of the waterflood operating have pressure limitations higher than 750 psi. See, Exhibits B, C, D, E, F, G, H and I, being administrative orders WFX-785, 786, 730, 745, 754, 760, 634, 618. These orders show a variation above and below 750 psi.

The original order number R-7766 approving the waterflood operation for the EMSU contains a provision setting 0.2 psi/ft. It further provides that pressure increases may be granted by the division director upon a justification for a higher pressure setting.<sup>1</sup>

Looking at Paragraphs 10, 11 and 12 of Mr. Davis's statement we see that the wellhead pressure of 889 psi translates to Grayburg pressure that is 592 psi lower than the San Andres reservoir pressure. Consequently, 10-15 psi higher than the maximum allowed pressures using the 0.2 psi/ft are not even close to fracturing the Grayburg formation. Furthermore, erroneously high injection pressures greater than 900 psi were used by Goodnight to calculate average injection pressures. The data used by Goodnight simply is not good data because in any event the pressure could not exceed the manifold pressure. In addition, some of the pressures used by

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<sup>1</sup> The injection wells herein authorized and/or the injection pressurization system shall be so equipped as to limit injection pressure at the wellhead to no more than 0.2 psi per foot of depth from the surface to the top injection perforation, provided however, the Division Director may authorize a higher surface injection pressure upon satisfactory showing that such pressure will not result in fracturing of the confining strata.

Goodnight were not taken at the wellhead but were taken at a point before the wing valve or “valve” downstream of the pressure censor. This merely recorded the line pressure and not the wellhead pressure.

Higher injection pressures are necessary where the Grayburg interval has low permeability. This is illustrated in Paragraph 10 of Mr. Davis’s statement.

Empire acknowledges that it may be running higher than maximum allowable pressures but those higher pressures do no damage to the Grayburg formation.

In summary, nearly all of the data used by Goodnight to calculate higher injection pressures is faulty. Goodnight, by its Motion, is wrong and intended to cast Empire in a bad light.

Since the data on which Goodnight predicates its Motion on erroneous information, the Motion should be denied.

### **Conclusion.**

Because Goodnight has not shown any proof that it or any other entity is being harmed by the alleged excess injection pressures, this Motion should be denied.

As shown by the Self-Affirmed Statement of Darrell Davis, much of the data Goodnight relied on in bringing this Motion is faulty. Nevertheless, Empire will review the data and take action to reduce pressures if any exceed the allowable amounts.

Empire submits that, if anything, the issues raised in the Motion should be deferred, as they were with Empire’s motion to limit Goodnight’s injection and dealt with at or after the evidentiary hearing scheduled in February, 2025.

WHEREFORE, having fully responded, Empire New Mexico, LLC respectfully requests that the Motion be denied, and for any other relief to which it may be deemed to be entitled.

Respectfully submitted,

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**CERTIFICATE OF SERVICE**

I hereby certify that a true and correct copy of the foregoing was served to counsel of record by electronic mail this 25th day of October, 2024, as follows:

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**DIV. CASE NOS. 24018-24020, 24025**

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**SELF-AFFIRMED STATEMENT OF DARRELL DAVIS IN RESPONSE TO  
GOODNIGHT'S MOTION REGARDING EMSU WATERFLOOD INJECTION ABOVE  
PERMITTED SURFACE INJECTION PRESSURES**

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1. I am over the age of 18. I am Senior Reservoir and Production Engineer for Empire Petroleum Corporation and have personal knowledge of the matters stated herein.
2. I make the following statements to explain instances at EMSU where reported average surface injection pressures exceeded maximum allowable pressures.
3. Empire currently delivers water injection to wells at EMSU and EMSU-B using three water injection pumps. These pumps currently provide a manifold discharge pressure of 902 psi with line pressure at the injector wells of 800 to 850 psi. (See Figure 1)
4. Each well has a pressure and flowrate sensor which allows for injection wellhead pressures and rates to be monitored.
5. Goodnight indicates that there were 304 instances since 1/1/2022 where Empire's average monthly surface injection pressure exceeded maximum allowable pressures. It appears that their table only contains 272 such instances.



6. Of the 272 instances contained in Table 1 sorted by pressure amount exceeding maximum allowable pressure, 137 instances (50%) occurred on wells where the average pressure exceeded the maximum allowable by less than 22.5 psi or within 3% of 750 psi set point. This 750 psi set point for each well in SCADA was used by the previous Operator XTO and field personnel indicate that the NMOCD granted this pressure for EMSU at some point but we have been unable to locate the paperwork. The 750 psi is 10-15 psi higher than maximum allowed pressures using the 0.2 psi/ft using top perforation, so we are working to adjust the EMSU pressure set point to 725 psi on all wells to stay below the limit and to take into account the slight variations above the set point. Figures 2 thru 6 show the SCADA panel with current set points, pressures and rates for the various wells.

7. There were 23 incidences where there was no or very limited flow and the reported average pressure was impacted by the way the well was shut-in. By closing the wing valve or valve downstream of the pressure sensor, the pressure sensor records the line pressure and not the wellhead pressure. These data points where a high pressure and zero rate is recorded, should be excluded from the calculation.

8. Other instances had erroneously high pressure points which were used in the calculation of average injection pressure and this skewed the data on the high side. Pressures greater than 900 psi, the manifold pressure, are erroneous data and needs to be excluded from the calculation. Greater efforts will be made to eliminate this poor data in the calculation process to insure accuracy.

9. The high water injection wellhead pressures at EMSU are required due to the low permeability of the Grayburg interval and low water density (0.43 psi/ft instead of 0.465 psi/ft) due to the low salt content of the Grayburg and San Andres brines.

10. When most Grayburg water injectors are shut-in, the wellhead pressures drop to zero psi and the fluid level drops to around 2000 feet below the surface in the tubing string. EMSU-336, 366, 368, 376, 378, and 404 (near the Goodnight SWD wells) were all shut-in on October 7, 2024 to see how their tubing pressures would react and the following morning their wellhead pressures were close to zero psi. These wells normally inject at the following wellhead pressures and rates. It can be seen that rates are limited due to the low permeability of the Grayburg interval. The low fluid density and frictional pressure drop requires that wellhead injection pressures be maintained at maximum allowable on some wells to allow for reasonable injection rates.

- EMSU-336 750 psi @ 189 BWPD
- EMSU-366 250 psi @ 103 BWPD
- EMSU-368 730 psi @ 345 BWPD
- EMSU-376 750 psi @ 339 BWPD
- EMSU-378 750 psi @ 288 BWPD
- EMSU-404 430 psi @ 181 BWPD

11. A shut-in bottomhole pressure survey run in the EMSU-378 on October 8, 2024 showed 951 psi at 4050'. (0.43 psi/ft fluid gradient in the tubing string but 0.235 psi/ft in the Grayburg reservoir interval). (See Figure 7) This Grayburg pressure is 592 psi lower than the San Andres reservoir pressure which has a pressure gradient of approximately 0.381 psi/ft. The well is located in the center of the four Goodnight SWD wells. (See Figure 8)

12. Water injection is being maintained below fracture pressure even at wellhead pressures of 889 psi as shown by the calculated injection pressure gradient of 0.669 psi/ft for the #272 entry in Table 1. Goodnight's estimate of 0.704 psi/ft Injection Pressure Gradient used 0.465 psi/ft for the water density whereas it is actually 0.43 psi/ft due to the low salt content. This reduces the injection bottomhole pressure by 130 psi.

13. Goodnight's estimate of Injection Pressure Gradient also does not take into account frictional losses in the tubing string. Since the water injection rates are relatively low, the frictional pressure loss is small (~50 psi), but it does reduce the overall injection pressure at the perforations.

14. By considering the proper water density and frictional pressure in the estimate of Injection Pressure Gradient, it provides some comfort that Empire is not exceeding the fracture gradient, but it does not justify our exceeding the Maximum Allowed Injection Pressures.

I affirm that my statements above are true and correct to the best of my knowledge as of the date next to my signature shown below and that these statements are made under penalty of perjury under the laws of the state of New Mexico.

/s/ Darrell Davis

Darrell Davis, Sr. Reservoir & Production Engineer  
EMPIRE PETROLEUM CORPORATION  
October 17, 2024

**Table 1 – Incidents Where Average Injection Pressure Exceeded Maximum Allowed  
(Sorted By Amount Pressure Exceeded Allowable)**

## Page 1 of 5

| Item # | API          | Unit | Well # | C-115 Report Month | C-115 Monthly Injected Volume | C-115 Reported Average Inj. Pressure | Top Perf | Permit Max | Avg. Monthly PSI over Permit Max | Goodnight Calculated Injection Pressure Gradient (0.465 psi/ft) | Inj BHP (excl Friction) using 0.43 psi/ft | Empire Calculated Injection Pressure Gradient (0.43 psi/ft) |
|--------|--------------|------|--------|--------------------|-------------------------------|--------------------------------------|----------|------------|----------------------------------|-----------------------------------------------------------------|-------------------------------------------|-------------------------------------------------------------|
| 1      | 30-025-04425 | EMSU | #140   | 11/01/23           | 6654                          | 742                                  | 3703     | 741        | 1                                | 0.665                                                           | 2,334                                     | 0.630                                                       |
| 2      | 30-025-04518 | EMSU | #243   | 06/01/22           | 4599                          | 744                                  | 3713     | 743        | 1                                | 0.665                                                           | 2,341                                     | 0.630                                                       |
| 3      | 30-025-29575 | EMSU | #247   | 03/01/24           | 14910                         | 741                                  | 3700     | 740        | 1                                | 0.665                                                           | 2,332                                     | 0.630                                                       |
| 4      | 30-025-29575 | EMSU | #247   | 05/01/24           | 15751                         | 741                                  | 3700     | 740        | 1                                | 0.665                                                           | 2,332                                     | 0.630                                                       |
| 5      | 30-025-04496 | EMSU | #257   | 10/01/23           | 25110                         | 756                                  | 3774     | 755        | 1                                | 0.665                                                           | 2,379                                     | 0.630                                                       |
| 6      | 30-025-04532 | EMSU | #195   | 11/01/22           | 13455                         | 753                                  | 3753     | 751        | 2                                | 0.666                                                           | 2,367                                     | 0.631                                                       |
| 7      | 30-025-04532 | EMSU | #195   | 03/01/24           | 12904                         | 753                                  | 3753     | 751        | 2                                | 0.666                                                           | 2,367                                     | 0.631                                                       |
| 8      | 30-025-29615 | EMSU | #211   | 07/01/22           | 22993                         | 742                                  | 3698     | 740        | 2                                | 0.666                                                           | 2,332                                     | 0.631                                                       |
| 9      | 30-025-29615 | EMSU | #211   | 08/01/23           | 17821                         | 742                                  | 3698     | 740        | 2                                | 0.666                                                           | 2,332                                     | 0.631                                                       |
| 10     | 30-025-04464 | EMSU | #231   | 01/01/24           | 5520                          | 756                                  | 3768     | 754        | 2                                | 0.666                                                           | 2,376                                     | 0.631                                                       |
| 11     | 30-025-04464 | EMSU | #231   | 03/01/24           | 5375                          | 756                                  | 3768     | 754        | 2                                | 0.666                                                           | 2,376                                     | 0.631                                                       |
| 12     | 30-025-04518 | EMSU | #243   | 05/01/22           | 4669                          | 745                                  | 3713     | 743        | 2                                | 0.666                                                           | 2,342                                     | 0.631                                                       |
| 13     | 30-025-04598 | EMSU | #275   | 12/01/22           | 18243                         | 750                                  | 3741     | 748        | 2                                | 0.665                                                           | 2,359                                     | 0.630                                                       |
| 14     | 30-025-04598 | EMSU | #275   | 02/01/24           | 819                           | 750                                  | 3741     | 748        | 2                                | 0.665                                                           | 2,359                                     | 0.630                                                       |
| 15     | 30-025-04583 | EMSU | #342   | 07/01/22           | 13392                         | 754                                  | 3760     | 752        | 2                                | 0.666                                                           | 2,371                                     | 0.631                                                       |
| 16     | 30-025-04697 | EMSU | #368   | 07/01/22           | 0                             | 747                                  | 3726     | 745        | 2                                | 0.665                                                           | 2,349                                     | 0.630                                                       |
| 17     | 30-025-04633 | EMSU | #396   | 02/01/22           | 1386                          | 737                                  | 3676     | 735        | 2                                | 0.665                                                           | 2,318                                     | 0.630                                                       |
| 18     | 30-025-06304 | EMSU | #146   | 11/01/23           | 32325                         | 750                                  | 3734     | 747        | 3                                | 0.666                                                           | 2,356                                     | 0.631                                                       |
| 19     | 30-025-04469 | EMSU | #210   | 04/01/22           | 10589                         | 753                                  | 3749     | 750        | 3                                | 0.666                                                           | 2,365                                     | 0.631                                                       |
| 20     | 30-025-04469 | EMSU | #210   | 04/01/23           | 10589                         | 753                                  | 3749     | 750        | 3                                | 0.666                                                           | 2,365                                     | 0.631                                                       |
| 21     | 30-025-04469 | EMSU | #210   | 11/01/23           | 5919                          | 753                                  | 3749     | 750        | 3                                | 0.666                                                           | 2,365                                     | 0.631                                                       |
| 22     | 30-025-29575 | EMSU | #247   | 12/01/23           | 14824                         | 743                                  | 3700     | 740        | 3                                | 0.666                                                           | 2,334                                     | 0.631                                                       |
| 23     | 30-025-04568 | EMSU | #297   | 04/01/22           | 42015                         | 747                                  | 3720     | 744        | 3                                | 0.666                                                           | 2,347                                     | 0.631                                                       |
| 24     | 30-025-04568 | EMSU | #297   | 04/01/23           | 42015                         | 747                                  | 3720     | 744        | 3                                | 0.666                                                           | 2,347                                     | 0.631                                                       |
| 25     | 30-025-04425 | EMSU | #140   | 12/01/23           | 6716                          | 745                                  | 3703     | 741        | 4                                | 0.666                                                           | 2,337                                     | 0.631                                                       |
| 26     | 30-025-04532 | EMSU | #195   | 02/01/24           | 12017                         | 755                                  | 3753     | 751        | 4                                | 0.666                                                           | 2,369                                     | 0.631                                                       |
| 27     | 30-025-29615 | EMSU | #211   | 06/01/22           | 22221                         | 744                                  | 3698     | 740        | 4                                | 0.666                                                           | 2,334                                     | 0.631                                                       |
| 28     | 30-025-04464 | EMSU | #231   | 02/01/24           | 5161                          | 758                                  | 3768     | 754        | 4                                | 0.666                                                           | 2,378                                     | 0.631                                                       |
| 29     | 30-025-04554 | EMSU | #324   | 06/01/24           | 4183                          | 748                                  | 3720     | 744        | 4                                | 0.666                                                           | 2,348                                     | 0.631                                                       |
| 30     | 30-025-04554 | EMSU | #324   | 07/01/24           | 4183                          | 748                                  | 3720     | 744        | 4                                | 0.666                                                           | 2,348                                     | 0.631                                                       |
| 31     | 30-025-04614 | EMSU | #350   | 06/01/24           | 17150                         | 728                                  | 3620     | 724        | 4                                | 0.666                                                           | 2,285                                     | 0.631                                                       |
| 32     | 30-025-04614 | EMSU | #350   | 07/01/24           | 17150                         | 728                                  | 3620     | 724        | 4                                | 0.666                                                           | 2,285                                     | 0.631                                                       |
| 33     | 30-025-04640 | EMSU | #354   | 01/01/23           | 0                             | 748                                  | 3718     | 744        | 4                                | 0.666                                                           | 2,347                                     | 0.631                                                       |
| 34     | 30-025-04469 | EMSU | #210   | 01/01/24           | 5883                          | 755                                  | 3749     | 750        | 5                                | 0.666                                                           | 2,367                                     | 0.631                                                       |
| 35     | 30-025-04518 | EMSU | #243   | 04/01/22           | 4297                          | 748                                  | 3713     | 743        | 5                                | 0.666                                                           | 2,345                                     | 0.631                                                       |
| 36     | 30-025-04518 | EMSU | #243   | 04/01/23           | 4297                          | 748                                  | 3713     | 743        | 5                                | 0.666                                                           | 2,345                                     | 0.631                                                       |
| 37     | 30-025-04518 | EMSU | #243   | 01/01/24           | 4616                          | 748                                  | 3713     | 743        | 5                                | 0.666                                                           | 2,345                                     | 0.631                                                       |
| 38     | 30-025-04518 | EMSU | #243   | 03/01/24           | 4703                          | 748                                  | 3713     | 743        | 5                                | 0.666                                                           | 2,345                                     | 0.631                                                       |
| 39     | 30-025-04518 | EMSU | #243   | 05/01/24           | 4997                          | 748                                  | 3713     | 743        | 5                                | 0.666                                                           | 2,345                                     | 0.631                                                       |
| 40     | 30-025-29575 | EMSU | #247   | 01/01/24           | 14521                         | 745                                  | 3700     | 740        | 5                                | 0.666                                                           | 2,336                                     | 0.631                                                       |
| 41     | 30-025-29575 | EMSU | #247   | 02/01/24           | 13829                         | 745                                  | 3700     | 740        | 5                                | 0.666                                                           | 2,336                                     | 0.631                                                       |
| 42     | 30-025-04330 | EMSU | #108   | 03/01/22           | 2849                          | 752                                  | 3730     | 746        | 6                                | 0.667                                                           | 2,356                                     | 0.632                                                       |
| 43     | 30-025-04330 | EMSU | #108   | 03/01/23           | 2849                          | 752                                  | 3730     | 746        | 6                                | 0.667                                                           | 2,356                                     | 0.632                                                       |
| 44     | 30-025-29615 | EMSU | #211   | 05/01/22           | 23428                         | 746                                  | 3698     | 740        | 6                                | 0.667                                                           | 2,336                                     | 0.632                                                       |
| 45     | 30-025-29615 | EMSU | #211   | 07/01/23           | 18286                         | 746                                  | 3698     | 740        | 6                                | 0.667                                                           | 2,336                                     | 0.632                                                       |
| 46     | 30-025-08702 | EMSU | #253   | 06/01/23           | 23843                         | 758                                  | 3761     | 752        | 6                                | 0.667                                                           | 2,375                                     | 0.632                                                       |
| 47     | 30-025-04598 | EMSU | #275   | 03/01/24           | 10281                         | 754                                  | 3741     | 748        | 6                                | 0.667                                                           | 2,363                                     | 0.632                                                       |
| 48     | 30-025-04571 | EMSU | #299   | 05/01/24           | 11985                         | 741                                  | 3675     | 735        | 6                                | 0.667                                                           | 2,321                                     | 0.632                                                       |
| 49     | 30-025-04583 | EMSU | #342   | 06/01/22           | 12490                         | 758                                  | 3760     | 752        | 6                                | 0.667                                                           | 2,375                                     | 0.632                                                       |
| 50     | 30-025-04592 | EMSU | #344   | 12/01/23           | 13317                         | 760                                  | 3771     | 754        | 6                                | 0.667                                                           | 2,382                                     | 0.632                                                       |
| 51     | 30-025-04641 | EMSU | #388   | 10/01/23           | 27285                         | 745                                  | 3693     | 739        | 6                                | 0.667                                                           | 2,333                                     | 0.632                                                       |
| 52     | 30-025-04641 | EMSU | #388   | 11/01/23           | 26565                         | 745                                  | 3693     | 739        | 6                                | 0.667                                                           | 2,333                                     | 0.632                                                       |
| 53     | 30-025-04508 | EMSU | #215   | 06/01/24           | 10981                         | 751                                  | 3722     | 744        | 7                                | 0.667                                                           | 2,351                                     | 0.632                                                       |
| 54     | 30-025-04508 | EMSU | #215   | 07/01/24           | 10981                         | 751                                  | 3722     | 744        | 7                                | 0.667                                                           | 2,351                                     | 0.632                                                       |
| 55     | 30-025-04518 | EMSU | #243   | 01/01/22           | 4367                          | 750                                  | 3713     | 743        | 7                                | 0.667                                                           | 2,347                                     | 0.632                                                       |

**Table 1 – Incidents Where Average Injection Pressure Exceeded Maximum Allowed  
(Sorted By Amount Pressure Exceeded Allowable)**

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| Item # | API          | Unit | Well # | C-115 Report Month | C-115 Monthly Injected Volume | C-115 Reported Average Inj. Pressure | Top Perf | Permit Max | Avg. Monthly PSI over Permit Max | Goodnight Calculated Injection Pressure Gradient (0.465 psi/ft) | Inj BHP (exc Friction) using 0.43 psi/ft | Empire Calculated Injection Pressure Gradient (0.43 psi/ft) |
|--------|--------------|------|--------|--------------------|-------------------------------|--------------------------------------|----------|------------|----------------------------------|-----------------------------------------------------------------|------------------------------------------|-------------------------------------------------------------|
| 56     | 30-025-04518 | EMSU | #243   | 10/01/22           | 5089                          | 750                                  | 3713     | 743        | 7                                | 0.667                                                           | 2,347                                    | 0.632                                                       |
| 57     | 30-025-04518 | EMSU | #243   | 01/01/23           | 4367                          | 750                                  | 3713     | 743        | 7                                | 0.667                                                           | 2,347                                    | 0.632                                                       |
| 58     | 30-025-04518 | EMSU | #243   | 02/01/24           | 4390                          | 750                                  | 3713     | 743        | 7                                | 0.667                                                           | 2,347                                    | 0.632                                                       |
| 59     | 30-025-29575 | EMSU | #247   | 03/01/22           | 13904                         | 747                                  | 3700     | 740        | 7                                | 0.667                                                           | 2,338                                    | 0.632                                                       |
| 60     | 30-025-29575 | EMSU | #247   | 03/01/23           | 13904                         | 747                                  | 3700     | 740        | 7                                | 0.667                                                           | 2,338                                    | 0.632                                                       |
| 61     | 30-025-04568 | EMSU | #297   | 10/01/23           | 42258                         | 751                                  | 3720     | 744        | 7                                | 0.667                                                           | 2,351                                    | 0.632                                                       |
| 62     | 30-025-04583 | EMSU | #342   | 10/01/22           | 13879                         | 759                                  | 3760     | 752        | 7                                | 0.667                                                           | 2,376                                    | 0.632                                                       |
| 63     | 30-025-04592 | EMSU | #344   | 01/01/22           | 13117                         | 761                                  | 3771     | 754        | 7                                | 0.667                                                           | 2,383                                    | 0.632                                                       |
| 64     | 30-025-04592 | EMSU | #344   | 01/01/23           | 13117                         | 761                                  | 3771     | 754        | 7                                | 0.667                                                           | 2,383                                    | 0.632                                                       |
| 65     | 30-025-29598 | EMSU | #118   | 01/01/24           | 5315                          | 775                                  | 3834     | 767        | 8                                | 0.667                                                           | 2,424                                    | 0.632                                                       |
| 66     | 30-025-04425 | EMSU | #140   | 02/01/24           | 6105                          | 749                                  | 3703     | 741        | 8                                | 0.667                                                           | 2,341                                    | 0.632                                                       |
| 67     | 30-025-04425 | EMSU | #140   | 06/01/24           | 6183                          | 749                                  | 3703     | 741        | 8                                | 0.667                                                           | 2,341                                    | 0.632                                                       |
| 68     | 30-025-04425 | EMSU | #140   | 07/01/24           | 6183                          | 749                                  | 3703     | 741        | 8                                | 0.667                                                           | 2,341                                    | 0.632                                                       |
| 69     | 30-025-29615 | EMSU | #211   | 03/01/24           | 16935                         | 748                                  | 3698     | 740        | 8                                | 0.667                                                           | 2,338                                    | 0.632                                                       |
| 70     | 30-025-29615 | EMSU | #211   | 05/01/24           | 16466                         | 748                                  | 3698     | 740        | 8                                | 0.667                                                           | 2,338                                    | 0.632                                                       |
| 71     | 30-025-04464 | EMSU | #231   | 04/01/24           | 5361                          | 762                                  | 3768     | 754        | 8                                | 0.667                                                           | 2,382                                    | 0.632                                                       |
| 72     | 30-025-04518 | EMSU | #243   | 08/01/22           | 5151                          | 751                                  | 3713     | 743        | 8                                | 0.667                                                           | 2,348                                    | 0.632                                                       |
| 73     | 30-025-04518 | EMSU | #243   | 11/01/22           | 3897                          | 751                                  | 3713     | 743        | 8                                | 0.667                                                           | 2,348                                    | 0.632                                                       |
| 74     | 30-025-04518 | EMSU | #243   | 04/01/24           | 4566                          | 751                                  | 3713     | 743        | 8                                | 0.667                                                           | 2,348                                    | 0.632                                                       |
| 75     | 30-025-04518 | EMSU | #243   | 06/01/24           | 5115                          | 751                                  | 3713     | 743        | 8                                | 0.667                                                           | 2,348                                    | 0.632                                                       |
| 76     | 30-025-04518 | EMSU | #243   | 07/01/24           | 5115                          | 751                                  | 3713     | 743        | 8                                | 0.667                                                           | 2,348                                    | 0.632                                                       |
| 77     | 30-025-04583 | EMSU | #342   | 11/01/22           | 10598                         | 760                                  | 3760     | 752        | 8                                | 0.667                                                           | 2,377                                    | 0.632                                                       |
| 78     | 30-025-04641 | EMSU | #388   | 12/01/23           | 18257                         | 747                                  | 3693     | 739        | 8                                | 0.667                                                           | 2,335                                    | 0.632                                                       |
| 79     | 30-025-29615 | EMSU | #211   | 08/01/22           | 22246                         | 749                                  | 3698     | 740        | 9                                | 0.668                                                           | 2,339                                    | 0.633                                                       |
| 80     | 30-025-29615 | EMSU | #211   | 12/01/23           | 17492                         | 749                                  | 3698     | 740        | 9                                | 0.668                                                           | 2,339                                    | 0.633                                                       |
| 81     | 30-025-04641 | EMSU | #388   | 01/01/24           | 1                             | 748                                  | 3693     | 739        | 9                                | 0.668                                                           | 2,336                                    | 0.633                                                       |
| 82     | 30-025-06283 | EMSU | #111   | 04/01/24           | 8028                          | 755                                  | 3727     | 745        | 10                               | 0.668                                                           | 2,358                                    | 0.633                                                       |
| 83     | 30-025-06306 | EMSU | #134   | 06/01/22           | 2581                          | 756                                  | 3732     | 746        | 10                               | 0.668                                                           | 2,361                                    | 0.633                                                       |
| 84     | 30-025-04532 | EMSU | #195   | 12/01/22           | 13273                         | 761                                  | 3753     | 751        | 10                               | 0.668                                                           | 2,375                                    | 0.633                                                       |
| 85     | 30-025-29615 | EMSU | #211   | 10/01/22           | 20694                         | 750                                  | 3698     | 740        | 10                               | 0.668                                                           | 2,340                                    | 0.633                                                       |
| 86     | 30-025-29615 | EMSU | #211   | 11/01/22           | 19956                         | 750                                  | 3698     | 740        | 10                               | 0.668                                                           | 2,340                                    | 0.633                                                       |
| 87     | 30-025-29615 | EMSU | #211   | 12/01/22           | 19544                         | 750                                  | 3698     | 740        | 10                               | 0.668                                                           | 2,340                                    | 0.633                                                       |
| 88     | 30-025-29615 | EMSU | #211   | 10/01/23           | 18321                         | 750                                  | 3698     | 740        | 10                               | 0.668                                                           | 2,340                                    | 0.633                                                       |
| 89     | 30-025-29615 | EMSU | #211   | 11/01/23           | 17103                         | 750                                  | 3698     | 740        | 10                               | 0.668                                                           | 2,340                                    | 0.633                                                       |
| 90     | 30-025-29615 | EMSU | #211   | 01/01/24           | 17254                         | 750                                  | 3698     | 740        | 10                               | 0.668                                                           | 2,340                                    | 0.633                                                       |
| 91     | 30-025-29615 | EMSU | #211   | 02/01/24           | 16011                         | 750                                  | 3698     | 740        | 10                               | 0.668                                                           | 2,340                                    | 0.633                                                       |
| 92     | 30-025-29615 | EMSU | #211   | 06/01/24           | 15860                         | 750                                  | 3698     | 740        | 10                               | 0.668                                                           | 2,340                                    | 0.633                                                       |
| 93     | 30-025-29615 | EMSU | #211   | 07/01/24           | 15860                         | 750                                  | 3698     | 740        | 10                               | 0.668                                                           | 2,340                                    | 0.633                                                       |
| 94     | 30-025-29575 | EMSU | #247   | 06/01/24           | 16093                         | 750                                  | 3700     | 740        | 10                               | 0.668                                                           | 2,341                                    | 0.633                                                       |
| 95     | 30-025-29575 | EMSU | #247   | 07/01/24           | 16093                         | 750                                  | 3700     | 740        | 10                               | 0.668                                                           | 2,341                                    | 0.633                                                       |
| 96     | 30-025-04471 | EMSU | #261   | 11/01/23           | 12192                         | 769                                  | 3795     | 759        | 10                               | 0.668                                                           | 2,401                                    | 0.633                                                       |
| 97     | 30-025-04643 | EMSU | #357   | 06/01/24           | 10733                         | 747                                  | 3684     | 737        | 10                               | 0.668                                                           | 2,331                                    | 0.633                                                       |
| 98     | 30-025-04643 | EMSU | #357   | 07/01/24           | 10733                         | 747                                  | 3684     | 737        | 10                               | 0.668                                                           | 2,331                                    | 0.633                                                       |
| 99     | 30-025-04532 | EMSU | #195   | 04/01/24           | 12449                         | 762                                  | 3753     | 751        | 11                               | 0.668                                                           | 2,376                                    | 0.633                                                       |
| 100    | 30-025-29615 | EMSU | #211   | 04/01/24           | 16214                         | 751                                  | 3698     | 740        | 11                               | 0.668                                                           | 2,341                                    | 0.633                                                       |
| 101    | 30-025-04643 | EMSU | #357   | 07/01/22           | 11165                         | 748                                  | 3684     | 737        | 11                               | 0.668                                                           | 2,332                                    | 0.633                                                       |
| 102    | 30-025-06283 | EMSU | #111   | 06/01/24           | 7852                          | 757                                  | 3727     | 745        | 12                               | 0.668                                                           | 2,360                                    | 0.633                                                       |
| 103    | 30-025-06283 | EMSU | #111   | 07/01/24           | 7852                          | 757                                  | 3727     | 745        | 12                               | 0.668                                                           | 2,360                                    | 0.633                                                       |
| 104    | 30-025-29598 | EMSU | #118   | 02/01/24           | 4978                          | 780                                  | 3834     | 767        | 13                               | 0.668                                                           | 2,429                                    | 0.633                                                       |
| 105    | 30-025-04583 | EMSU | #342   | 08/01/22           | 14456                         | 765                                  | 3760     | 752        | 13                               | 0.668                                                           | 2,382                                    | 0.633                                                       |
| 106    | 30-025-04583 | EMSU | #342   | 12/01/22           | 10721                         | 765                                  | 3760     | 752        | 13                               | 0.668                                                           | 2,382                                    | 0.633                                                       |
| 107    | 30-025-04592 | EMSU | #344   | 11/01/23           | 7692                          | 768                                  | 3771     | 754        | 14                               | 0.669                                                           | 2,390                                    | 0.634                                                       |
| 108    | 30-025-04697 | EMSU | #368   | 01/01/22           | 0                             | 759                                  | 3726     | 745        | 14                               | 0.669                                                           | 2,361                                    | 0.634                                                       |
| 109    | 30-025-04697 | EMSU | #368   | 01/01/23           | 0                             | 759                                  | 3726     | 745        | 14                               | 0.669                                                           | 2,361                                    | 0.634                                                       |
| 110    | 30-025-04643 | EMSU | #357   | 06/01/22           | 10720                         | 752                                  | 3684     | 737        | 15                               | 0.669                                                           | 2,336                                    | 0.634                                                       |

**Table 1 – Incidents Where Average Injection Pressure Exceeded Maximum Allowed  
(Sorted By Amount Pressure Exceeded Allowable)**

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| Item # | API          | Unit | Well # | C-115 Report Month | C-115 Monthly Injected Volume | C-115 Reported Average Inj. Pressure | Top Perf | Permit Max | Avg. Monthly PSI over Permit Max | Goodnight Calculated Injection Pressure Gradient (0.465 psi/ft) | Inj BHP (excl Friction) using 0.43 psi/ft | Empire Calculated Injection Pressure Gradient (0.43 psi/ft) |
|--------|--------------|------|--------|--------------------|-------------------------------|--------------------------------------|----------|------------|----------------------------------|-----------------------------------------------------------------|-------------------------------------------|-------------------------------------------------------------|
| 111    | 30-025-04419 | EMSU | #162   | 10/01/22           | 4114                          | 761                                  | 3725     | 745        | 16                               | 0.669                                                           | 2,363                                     | 0.634                                                       |
| 112    | 30-025-29867 | EMSU | #240   | 03/01/22           | 7464                          | 752                                  | 3682     | 736        | 16                               | 0.669                                                           | 2,335                                     | 0.634                                                       |
| 113    | 30-025-29867 | EMSU | #240   | 03/01/23           | 7464                          | 752                                  | 3682     | 736        | 16                               | 0.669                                                           | 2,335                                     | 0.634                                                       |
| 114    | 30-025-08702 | EMSU | #253   | 08/01/22           | 10575                         | 768                                  | 3761     | 752        | 16                               | 0.669                                                           | 2,385                                     | 0.634                                                       |
| 115    | 30-025-12543 | EMSU | #144   | 01/01/22           | 17238                         | 758                                  | 3700     | 740        | 18                               | 0.670                                                           | 2,349                                     | 0.635                                                       |
| 116    | 30-025-12543 | EMSU | #144   | 01/01/23           | 17238                         | 758                                  | 3700     | 740        | 18                               | 0.670                                                           | 2,349                                     | 0.635                                                       |
| 117    | 30-025-04469 | EMSU | #210   | 02/01/24           | 5367                          | 768                                  | 3749     | 750        | 18                               | 0.67                                                            | 2,380                                     | 0.635                                                       |
| 118    | 30-025-04643 | EMSU | #357   | 10/01/22           | 11057                         | 755                                  | 3684     | 737        | 18                               | 0.67                                                            | 2,339                                     | 0.635                                                       |
| 119    | 30-025-04641 | EMSU | #388   | 02/01/24           | 19932                         | 757                                  | 3693     | 739        | 18                               | 0.670                                                           | 2,345                                     | 0.635                                                       |
| 120    | 30-025-04489 | EMSU | #241   | 06/01/24           | 10975                         | 751                                  | 3660     | 732        | 19                               | 0.670                                                           | 2,325                                     | 0.635                                                       |
| 121    | 30-025-04489 | EMSU | #241   | 07/01/24           | 10975                         | 751                                  | 3660     | 732        | 19                               | 0.670                                                           | 2,325                                     | 0.635                                                       |
| 122    | 30-025-08702 | EMSU | #253   | 01/01/22           | 26516                         | 771                                  | 3761     | 752        | 19                               | 0.670                                                           | 2,388                                     | 0.635                                                       |
| 123    | 30-025-08702 | EMSU | #253   | 01/01/23           | 26516                         | 771                                  | 3761     | 752        | 19                               | 0.670                                                           | 2,388                                     | 0.635                                                       |
| 124    | 30-025-04571 | EMSU | #299   | 06/01/24           | 10730                         | 754                                  | 3675     | 735        | 19                               | 0.670                                                           | 2,334                                     | 0.635                                                       |
| 125    | 30-025-04571 | EMSU | #299   | 07/01/24           | 10730                         | 754                                  | 3675     | 735        | 19                               | 0.670                                                           | 2,334                                     | 0.635                                                       |
| 126    | 30-025-04643 | EMSU | #357   | 03/01/22           | 10250                         | 756                                  | 3684     | 737        | 19                               | 0.67                                                            | 2,340                                     | 0.635                                                       |
| 127    | 30-025-04643 | EMSU | #357   | 03/01/23           | 10250                         | 756                                  | 3684     | 737        | 19                               | 0.67                                                            | 2,340                                     | 0.635                                                       |
| 128    | 30-025-04469 | EMSU | #210   | 05/01/22           | 10239                         | 770                                  | 3749     | 750        | 20                               | 0.67                                                            | 2,382                                     | 0.635                                                       |
| 129    | 30-025-04471 | EMSU | #261   | 06/01/22           | 0                             | 779                                  | 3795     | 759        | 20                               | 0.670                                                           | 2,411                                     | 0.635                                                       |
| 130    | 30-025-04539 | EMSU | #293   | 01/01/22           | 0                             | 769                                  | 3745     | 749        | 20                               | 0.670                                                           | 2,379                                     | 0.635                                                       |
| 131    | 30-025-04539 | EMSU | #293   | 01/01/23           | 0                             | 769                                  | 3745     | 749        | 20                               | 0.670                                                           | 2,379                                     | 0.635                                                       |
| 132    | 30-025-04640 | EMSU | #354   | 04/01/22           | 5494                          | 764                                  | 3718     | 744        | 20                               | 0.67                                                            | 2,363                                     | 0.635                                                       |
| 133    | 30-025-04640 | EMSU | #354   | 04/01/23           | 5494                          | 764                                  | 3718     | 744        | 20                               | 0.67                                                            | 2,363                                     | 0.635                                                       |
| 134    | 30-025-06306 | EMSU | #134   | 02/01/22           | 3197                          | 767                                  | 3732     | 746        | 21                               | 0.671                                                           | 2,372                                     | 0.636                                                       |
| 135    | 30-025-06306 | EMSU | #134   | 02/01/23           | 3197                          | 767                                  | 3732     | 746        | 21                               | 0.671                                                           | 2,372                                     | 0.636                                                       |
| 136    | 30-025-04643 | EMSU | #357   | 11/01/22           | 10780                         | 759                                  | 3684     | 737        | 22                               | 0.671                                                           | 2,343                                     | 0.636                                                       |
| 137    | 30-025-04641 | EMSU | #388   | 03/01/24           | 26487                         | 761                                  | 3693     | 739        | 22                               | 0.671                                                           | 2,349                                     | 0.636                                                       |
| 138    | 30-025-04493 | EMSU | #183   | 06/01/24           | 10070                         | 745                                  | 3610     | 722        | 23                               | 0.671                                                           | 2,297                                     | 0.636                                                       |
| 139    | 30-025-04493 | EMSU | #183   | 07/01/24           | 10070                         | 745                                  | 3610     | 722        | 23                               | 0.671                                                           | 2,297                                     | 0.636                                                       |
| 140    | 30-025-29575 | EMSU | #247   | 04/01/22           | 9732                          | 763                                  | 3700     | 740        | 23                               | 0.671                                                           | 2,354                                     | 0.636                                                       |
| 141    | 30-025-29575 | EMSU | #247   | 04/01/23           | 9732                          | 763                                  | 3700     | 740        | 23                               | 0.671                                                           | 2,354                                     | 0.636                                                       |
| 142    | 30-025-04643 | EMSU | #357   | 05/01/22           | 11170                         | 760                                  | 3684     | 737        | 23                               | 0.671                                                           | 2,344                                     | 0.636                                                       |
| 143    | 30-025-06306 | EMSU | #134   | 03/01/22           | 3008                          | 770                                  | 3732     | 746        | 24                               | 0.671                                                           | 2,375                                     | 0.636                                                       |
| 144    | 30-025-06306 | EMSU | #134   | 05/01/22           | 3588                          | 770                                  | 3732     | 746        | 24                               | 0.671                                                           | 2,375                                     | 0.636                                                       |
| 145    | 30-025-06306 | EMSU | #134   | 03/01/23           | 3008                          | 770                                  | 3732     | 746        | 24                               | 0.671                                                           | 2,375                                     | 0.636                                                       |
| 146    | 30-025-04643 | EMSU | #357   | 01/01/22           | 10543                         | 761                                  | 3684     | 737        | 24                               | 0.672                                                           | 2,345                                     | 0.637                                                       |
| 147    | 30-025-04643 | EMSU | #357   | 01/01/23           | 10543                         | 761                                  | 3684     | 737        | 24                               | 0.672                                                           | 2,345                                     | 0.637                                                       |
| 148    | 30-025-04643 | EMSU | #357   | 12/01/23           | 12014                         | 762                                  | 3684     | 737        | 25                               | 0.672                                                           | 2,346                                     | 0.637                                                       |
| 149    | 30-025-04471 | EMSU | #261   | 07/01/22           | 0                             | 785                                  | 3795     | 759        | 26                               | 0.672                                                           | 2,417                                     | 0.637                                                       |
| 150    | 30-025-04629 | EMSU | #356   | 07/01/22           | 22857                         | 755                                  | 3645     | 729        | 26                               | 0.672                                                           | 2,322                                     | 0.637                                                       |
| 151    | 30-025-04643 | EMSU | #357   | 11/01/23           | 11576                         | 764                                  | 3684     | 737        | 27                               | 0.672                                                           | 2,348                                     | 0.637                                                       |
| 152    | 30-025-04643 | EMSU | #357   | 04/01/22           | 10523                         | 765                                  | 3684     | 737        | 28                               | 0.673                                                           | 2,349                                     | 0.638                                                       |
| 153    | 30-025-04643 | EMSU | #357   | 12/01/22           | 10923                         | 765                                  | 3684     | 737        | 28                               | 0.673                                                           | 2,349                                     | 0.638                                                       |
| 154    | 30-025-04643 | EMSU | #357   | 04/01/23           | 10523                         | 765                                  | 3684     | 737        | 28                               | 0.673                                                           | 2,349                                     | 0.638                                                       |
| 155    | 30-025-06306 | EMSU | #134   | 04/01/22           | 3064                          | 775                                  | 3732     | 746        | 29                               | 0.673                                                           | 2,380                                     | 0.638                                                       |
| 156    | 30-025-06306 | EMSU | #134   | 04/01/23           | 3064                          | 775                                  | 3732     | 746        | 29                               | 0.673                                                           | 2,380                                     | 0.638                                                       |
| 157    | 30-025-04472 | EMSU | #201   | 03/01/22           | 5621                          | 778                                  | 3746     | 749        | 29                               | 0.673                                                           | 2,389                                     | 0.638                                                       |
| 158    | 30-025-04472 | EMSU | #201   | 03/01/23           | 5621                          | 778                                  | 3746     | 749        | 29                               | 0.673                                                           | 2,389                                     | 0.638                                                       |
| 159    | 30-025-04469 | EMSU | #210   | 06/01/22           | 9112                          | 779                                  | 3749     | 750        | 29                               | 0.673                                                           | 2,391                                     | 0.638                                                       |
| 160    | 30-025-08702 | EMSU | #253   | 10/01/22           | 25782                         | 782                                  | 3761     | 752        | 30                               | 0.673                                                           | 2,399                                     | 0.638                                                       |
| 161    | 30-025-04598 | EMSU | #275   | 04/01/24           | 5901                          | 778                                  | 3741     | 748        | 30                               | 0.673                                                           | 2,387                                     | 0.638                                                       |
| 162    | 30-025-06306 | EMSU | #134   | 08/01/22           | 3136                          | 777                                  | 3732     | 746        | 31                               | 0.673                                                           | 2,382                                     | 0.638                                                       |
| 163    | 30-025-04640 | EMSU | #354   | 06/01/22           | 9281                          | 775                                  | 3718     | 744        | 31                               | 0.673                                                           | 2,374                                     | 0.638                                                       |
| 164    | 30-025-06306 | EMSU | #134   | 10/01/22           | 3085                          | 778                                  | 3732     | 746        | 32                               | 0.673                                                           | 2,383                                     | 0.638                                                       |
| 165    | 30-025-29575 | EMSU | #247   | 06/01/22           | 16311                         | 772                                  | 3700     | 740        | 32                               | 0.674                                                           | 2,363                                     | 0.639                                                       |

**Table 1 – Incidents Where Average Injection Pressure Exceeded Maximum Allowed  
(Sorted By Amount Pressure Exceeded Allowable)**

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| Item # | API          | Unit | Well # | C-115 Report Month | C-115 Monthly Injected Volume | C-115 Reported Average Inj. Pressure | Top Perf | Permit Max | Avg. Monthly PSI over Permit Max | Goodnight Calculated Injection Pressure Gradient (0.465 psi/ft) | Inj BHP (excl Friction) using 0.43 psi/ft | Empire Calculated Injection Pressure Gradient (0.43 psi/ft) |
|--------|--------------|------|--------|--------------------|-------------------------------|--------------------------------------|----------|------------|----------------------------------|-----------------------------------------------------------------|-------------------------------------------|-------------------------------------------------------------|
| 166    | 30-025-08702 | EMSU | #253   | 11/01/22           | 25032                         | 786                                  | 3761     | 752        | 34                               | 0.674                                                           | 2,403                                     | 0.639                                                       |
| 167    | 30-025-04471 | EMSU | #261   | 05/01/22           | 0                             | 793                                  | 3795     | 759        | 34                               | 0.674                                                           | 2,425                                     | 0.639                                                       |
| 168    | 30-025-04605 | EMSU | #314   | 05/01/23           | 0                             | 791                                  | 3787     | 757        | 34                               | 0.674                                                           | 2,419                                     | 0.639                                                       |
| 169    | 30-025-04640 | EMSU | #354   | 05/01/22           | 8141                          | 778                                  | 3718     | 744        | 34                               | 0.674                                                           | 2,377                                     | 0.639                                                       |
| 170    | 30-025-04640 | EMSU | #354   | 07/01/22           | 9502                          | 778                                  | 3718     | 744        | 34                               | 0.674                                                           | 2,377                                     | 0.639                                                       |
| 171    | 30-025-04629 | EMSU | #356   | 08/01/22           | 22930                         | 763                                  | 3645     | 729        | 34                               | 0.674                                                           | 2,330                                     | 0.639                                                       |
| 172    | 30-025-06306 | EMSU | #134   | 11/01/22           | 3028                          | 781                                  | 3732     | 746        | 35                               | 0.674                                                           | 2,386                                     | 0.639                                                       |
| 173    | 30-025-04471 | EMSU | #261   | 01/01/22           | 0                             | 794                                  | 3795     | 759        | 35                               | 0.674                                                           | 2,426                                     | 0.639                                                       |
| 174    | 30-025-04471 | EMSU | #261   | 01/01/23           | 0                             | 794                                  | 3795     | 759        | 35                               | 0.674                                                           | 2,426                                     | 0.639                                                       |
| 175    | 30-025-29575 | EMSU | #247   | 05/01/22           | 16783                         | 776                                  | 3700     | 740        | 36                               | 0.675                                                           | 2,367                                     | 0.640                                                       |
| 176    | 30-025-04471 | EMSU | #261   | 03/01/22           | 0                             | 796                                  | 3795     | 759        | 37                               | 0.675                                                           | 2,428                                     | 0.640                                                       |
| 177    | 30-025-04471 | EMSU | #261   | 08/01/22           | 1072                          | 796                                  | 3795     | 759        | 37                               | 0.675                                                           | 2,428                                     | 0.640                                                       |
| 178    | 30-025-04471 | EMSU | #261   | 03/01/23           | 0                             | 796                                  | 3795     | 759        | 37                               | 0.675                                                           | 2,428                                     | 0.640                                                       |
| 179    | 30-025-04330 | EMSU | #108   | 05/01/22           | 2772                          | 784                                  | 3730     | 746        | 38                               | 0.675                                                           | 2,388                                     | 0.640                                                       |
| 180    | 30-025-29867 | EMSU | #240   | 04/01/22           | 7516                          | 774                                  | 3682     | 736        | 38                               | 0.675                                                           | 2,357                                     | 0.640                                                       |
| 181    | 30-025-29867 | EMSU | #240   | 04/01/23           | 7516                          | 774                                  | 3682     | 736        | 38                               | 0.675                                                           | 2,357                                     | 0.640                                                       |
| 182    | 30-025-08702 | EMSU | #253   | 12/01/22           | 259456                        | 790                                  | 3761     | 752        | 38                               | 0.675                                                           | 2,407                                     | 0.640                                                       |
| 183    | 30-025-04640 | EMSU | #354   | 08/01/22           | 8988                          | 782                                  | 3718     | 744        | 38                               | 0.675                                                           | 2,381                                     | 0.640                                                       |
| 184    | 30-025-06306 | EMSU | #134   | 12/01/22           | 3294                          | 786                                  | 3732     | 746        | 40                               | 0.676                                                           | 2,391                                     | 0.641                                                       |
| 185    | 30-025-29575 | EMSU | #247   | 01/01/22           | 14970                         | 780                                  | 3700     | 740        | 40                               | 0.676                                                           | 2,371                                     | 0.641                                                       |
| 186    | 30-025-29575 | EMSU | #247   | 01/01/23           | 14970                         | 780                                  | 3700     | 740        | 40                               | 0.676                                                           | 2,371                                     | 0.641                                                       |
| 187    | 30-025-04642 | EMSU | #358   | 03/01/24           | 8864                          | 778                                  | 3691     | 738        | 40                               | 0.676                                                           | 2,365                                     | 0.641                                                       |
| 188    | 30-025-04641 | EMSU | #388   | 04/01/24           | 24932                         | 779                                  | 3693     | 739        | 40                               | 0.676                                                           | 2,367                                     | 0.641                                                       |
| 189    | 30-025-04330 | EMSU | #108   | 04/01/22           | 2701                          | 787                                  | 3730     | 746        | 41                               | 0.676                                                           | 2,391                                     | 0.641                                                       |
| 190    | 30-025-04330 | EMSU | #108   | 04/01/23           | 2701                          | 787                                  | 3730     | 746        | 41                               | 0.676                                                           | 2,391                                     | 0.641                                                       |
| 191    | 30-025-29598 | EMSU | #118   | 10/01/22           | 1093                          | 809                                  | 3834     | 767        | 42                               | 0.676                                                           | 2,458                                     | 0.641                                                       |
| 192    | 30-025-04640 | EMSU | #354   | 10/01/22           | 1241                          | 786                                  | 3718     | 744        | 42                               | 0.676                                                           | 2,385                                     | 0.641                                                       |
| 193    | 30-025-06290 | EMSU | #116   | 03/01/22           | 35846                         | 785                                  | 3712     | 742        | 43                               | 0.676                                                           | 2,381                                     | 0.641                                                       |
| 194    | 30-025-06290 | EMSU | #116   | 03/01/23           | 35846                         | 785                                  | 3712     | 742        | 43                               | 0.676                                                           | 2,381                                     | 0.641                                                       |
| 195    | 30-025-29575 | EMSU | #247   | 07/01/22           | 16615                         | 783                                  | 3700     | 740        | 43                               | 0.677                                                           | 2,374                                     | 0.642                                                       |
| 196    | 30-025-04539 | EMSU | #293   | 04/01/22           | 0                             | 792                                  | 3745     | 749        | 43                               | 0.676                                                           | 2,402                                     | 0.641                                                       |
| 197    | 30-025-04539 | EMSU | #293   | 04/01/23           | 0                             | 792                                  | 3745     | 749        | 43                               | 0.676                                                           | 2,402                                     | 0.641                                                       |
| 198    | 30-025-04640 | EMSU | #354   | 11/01/22           | 8533                          | 787                                  | 3718     | 744        | 43                               | 0.677                                                           | 2,386                                     | 0.642                                                       |
| 199    | 30-025-04641 | EMSU | #388   | 04/01/22           | 14569                         | 782                                  | 3693     | 739        | 43                               | 0.677                                                           | 2,370                                     | 0.642                                                       |
| 200    | 30-025-04641 | EMSU | #388   | 04/01/23           | 14569                         | 782                                  | 3693     | 739        | 43                               | 0.677                                                           | 2,370                                     | 0.642                                                       |
| 201    | 30-025-29615 | EMSU | #211   | 01/01/22           | 9511                          | 784                                  | 3698     | 740        | 44                               | 0.677                                                           | 2,374                                     | 0.642                                                       |
| 202    | 30-025-29615 | EMSU | #211   | 01/01/23           | 9511                          | 784                                  | 3698     | 740        | 44                               | 0.677                                                           | 2,374                                     | 0.642                                                       |
| 203    | 30-025-06290 | EMSU | #116   | 10/01/22           | 35413                         | 787                                  | 3712     | 742        | 45                               | 0.677                                                           | 2,383                                     | 0.642                                                       |
| 204    | 30-025-04640 | EMSU | #354   | 12/01/22           | 8921                          | 789                                  | 3718     | 744        | 45                               | 0.677                                                           | 2,388                                     | 0.642                                                       |
| 205    | 30-025-04471 | EMSU | #261   | 04/01/22           | 0                             | 805                                  | 3795     | 759        | 46                               | 0.677                                                           | 2,437                                     | 0.642                                                       |
| 206    | 30-025-04471 | EMSU | #261   | 04/01/23           | 0                             | 805                                  | 3795     | 759        | 46                               | 0.677                                                           | 2,437                                     | 0.642                                                       |
| 207    | 30-025-04641 | EMSU | #388   | 01/01/22           | 0                             | 785                                  | 3693     | 739        | 46                               | 0.678                                                           | 2,373                                     | 0.643                                                       |
| 208    | 30-025-04641 | EMSU | #388   | 01/01/23           | 0                             | 785                                  | 3693     | 739        | 46                               | 0.678                                                           | 2,373                                     | 0.643                                                       |
| 209    | 30-025-04629 | EMSU | #356   | 06/01/22           | 22604                         | 776                                  | 3645     | 729        | 47                               | 0.678                                                           | 2,343                                     | 0.643                                                       |
| 210    | 30-025-04641 | EMSU | #388   | 03/01/23           | 0                             | 786                                  | 3693     | 739        | 47                               | 0.678                                                           | 2,374                                     | 0.643                                                       |
| 211    | 30-025-04629 | EMSU | #356   | 10/01/22           | 23610                         | 777                                  | 3645     | 729        | 48                               | 0.678                                                           | 2,344                                     | 0.643                                                       |
| 212    | 30-025-06290 | EMSU | #116   | 04/01/22           | 35286                         | 791                                  | 3712     | 742        | 49                               | 0.678                                                           | 2,387                                     | 0.643                                                       |
| 213    | 30-025-06290 | EMSU | #116   | 04/01/23           | 35286                         | 791                                  | 3712     | 742        | 49                               | 0.678                                                           | 2,387                                     | 0.643                                                       |
| 214    | 30-025-06290 | EMSU | #116   | 05/01/22           | 36607                         | 792                                  | 3712     | 742        | 50                               | 0.678                                                           | 2,388                                     | 0.643                                                       |
| 215    | 30-025-29867 | EMSU | #240   | 01/01/22           | 7595                          | 786                                  | 3682     | 736        | 50                               | 0.678                                                           | 2,369                                     | 0.643                                                       |
| 216    | 30-025-29867 | EMSU | #240   | 01/01/23           | 7595                          | 786                                  | 3682     | 736        | 50                               | 0.678                                                           | 2,369                                     | 0.643                                                       |
| 217    | 30-025-04633 | EMSU | #396   | 10/01/22           | 3684                          | 785                                  | 3676     | 735        | 50                               | 0.679                                                           | 2,366                                     | 0.644                                                       |
| 218    | 30-025-29575 | EMSU | #247   | 08/01/22           | 16520                         | 791                                  | 3700     | 740        | 51                               | 0.679                                                           | 2,382                                     | 0.644                                                       |
| 219    | 30-025-06290 | EMSU | #116   | 06/01/22           | 28939                         | 795                                  | 3712     | 742        | 53                               | 0.679                                                           | 2,391                                     | 0.644                                                       |
| 220    | 30-025-04629 | EMSU | #356   | 11/01/22           | 23051                         | 783                                  | 3645     | 729        | 54                               | 0.68                                                            | 2,350                                     | 0.645                                                       |

**Table 1 – Incidents Where Average Injection Pressure Exceeded Maximum Allowed  
(Sorted By Amount Pressure Exceeded Allowable)**

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| Item # | API          | Unit | Well # | C-115 Report Month | C-115 Monthly Injected Volume | C-115 Reported Average Inj. Pressure | Top Perf | Permit Max | Avg. Monthly PSI over Permit Max | Goodnight Calculated Injection Pressure Gradient (0.465 psi/ft) | Inj BHP (exc Friction) using 0.43 psi/ft | Empire Calculated Injection Pressure Gradient (0.43 psi/ft) |
|--------|--------------|------|--------|--------------------|-------------------------------|--------------------------------------|----------|------------|----------------------------------|-----------------------------------------------------------------|------------------------------------------|-------------------------------------------------------------|
| 221    | 30-025-04643 | EMSU | #357   | 01/01/24           | 12376                         | 791                                  | 3684     | 737        | 54                               | 0.68                                                            | 2,375                                    | 0.645                                                       |
| 222    | 30-025-04643 | EMSU | #357   | 10/01/23           | 12356                         | 793                                  | 3684     | 737        | 56                               | 0.68                                                            | 2,377                                    | 0.645                                                       |
| 223    | 30-025-06290 | EMSU | #116   | 07/01/22           | 35598                         | 799                                  | 3712     | 742        | 57                               | 0.680                                                           | 2,395                                    | 0.645                                                       |
| 224    | 30-025-04472 | EMSU | #201   | 04/01/22           | 10379                         | 806                                  | 3746     | 749        | 57                               | 0.68                                                            | 2,417                                    | 0.645                                                       |
| 225    | 30-025-04472 | EMSU | #201   | 04/01/23           | 10379                         | 806                                  | 3746     | 749        | 57                               | 0.68                                                            | 2,417                                    | 0.645                                                       |
| 226    | 30-025-04571 | EMSU | #299   | 01/01/22           | 4194                          | 793                                  | 3675     | 735        | 58                               | 0.681                                                           | 2,373                                    | 0.646                                                       |
| 227    | 30-025-04571 | EMSU | #299   | 01/01/23           | 4194                          | 793                                  | 3675     | 735        | 58                               | 0.681                                                           | 2,373                                    | 0.646                                                       |
| 228    | 30-025-04503 | EMSU | #213   | 03/01/22           | 21035                         | 818                                  | 3796     | 759        | 59                               | 0.680                                                           | 2,450                                    | 0.645                                                       |
| 229    | 30-025-04503 | EMSU | #213   | 03/01/23           | 21035                         | 818                                  | 3796     | 759        | 59                               | 0.680                                                           | 2,450                                    | 0.645                                                       |
| 230    | 30-025-04629 | EMSU | #356   | 12/01/22           | 23276                         | 788                                  | 3645     | 729        | 59                               | 0.681                                                           | 2,355                                    | 0.646                                                       |
| 231    | 30-025-04633 | EMSU | #396   | 07/01/22           | 3969                          | 796                                  | 3676     | 735        | 61                               | 0.682                                                           | 2,377                                    | 0.647                                                       |
| 232    | 30-025-04633 | EMSU | #396   | 08/01/22           | 3760                          | 796                                  | 3676     | 735        | 61                               | 0.682                                                           | 2,377                                    | 0.647                                                       |
| 233    | 30-025-04472 | EMSU | #201   | 01/01/22           | 3909                          | 811                                  | 3746     | 749        | 62                               | 0.681                                                           | 2,422                                    | 0.646                                                       |
| 234    | 30-025-04472 | EMSU | #201   | 01/01/23           | 3909                          | 811                                  | 3746     | 749        | 62                               | 0.681                                                           | 2,422                                    | 0.646                                                       |
| 235    | 30-025-04633 | EMSU | #396   | 05/01/22           | 3418                          | 799                                  | 3676     | 735        | 64                               | 0.682                                                           | 2,380                                    | 0.647                                                       |
| 236    | 30-025-04633 | EMSU | #396   | 06/01/22           | 2284                          | 799                                  | 3676     | 735        | 64                               | 0.682                                                           | 2,380                                    | 0.647                                                       |
| 237    | 30-025-06290 | EMSU | #116   | 08/01/22           | 33502                         | 809                                  | 3712     | 742        | 67                               | 0.683                                                           | 2,405                                    | 0.648                                                       |
| 238    | 30-025-04598 | EMSU | #275   | 10/01/22           | 3555                          | 817                                  | 3741     | 748        | 69                               | 0.683                                                           | 2,426                                    | 0.648                                                       |
| 239    | 30-025-04598 | EMSU | #275   | 11/01/22           | 3555                          | 817                                  | 3741     | 748        | 69                               | 0.683                                                           | 2,426                                    | 0.648                                                       |
| 240    | 30-025-04633 | EMSU | #396   | 04/01/22           | 3454                          | 804                                  | 3676     | 735        | 69                               | 0.684                                                           | 2,385                                    | 0.649                                                       |
| 241    | 30-025-29575 | EMSU | #247   | 04/01/24           | 9258                          | 812                                  | 3700     | 740        | 72                               | 0.684                                                           | 2,403                                    | 0.649                                                       |
| 242    | 30-025-29598 | EMSU | #118   | 06/01/22           | 5065                          | 840                                  | 3834     | 767        | 73                               | 0.684                                                           | 2,489                                    | 0.649                                                       |
| 243    | 30-025-04633 | EMSU | #396   | 03/01/22           | 2562                          | 808                                  | 3676     | 735        | 73                               | 0.685                                                           | 2,389                                    | 0.650                                                       |
| 244    | 30-025-29575 | EMSU | #247   | 10/01/22           | 16016                         | 815                                  | 3700     | 740        | 75                               | 0.685                                                           | 2,406                                    | 0.650                                                       |
| 245    | 30-025-29598 | EMSU | #118   | 05/01/22           | 5257                          | 843                                  | 3834     | 767        | 76                               | 0.685                                                           | 2,492                                    | 0.650                                                       |
| 246    | 30-025-04503 | EMSU | #213   | 06/01/22           | 20534                         | 835                                  | 3796     | 759        | 76                               | 0.685                                                           | 2,467                                    | 0.650                                                       |
| 247    | 30-025-29598 | EMSU | #118   | 04/01/22           | 4938                          | 846                                  | 3834     | 767        | 79                               | 0.686                                                           | 2,495                                    | 0.651                                                       |
| 248    | 30-025-29598 | EMSU | #118   | 04/01/23           | 4938                          | 846                                  | 3834     | 767        | 79                               | 0.686                                                           | 2,495                                    | 0.651                                                       |
| 249    | 30-025-04503 | EMSU | #213   | 07/01/22           | 20765                         | 838                                  | 3796     | 759        | 79                               | 0.686                                                           | 2,470                                    | 0.651                                                       |
| 250    | 30-025-04503 | EMSU | #213   | 05/01/22           | 21748                         | 840                                  | 3796     | 759        | 81                               | 0.686                                                           | 2,472                                    | 0.651                                                       |
| 251    | 30-025-04633 | EMSU | #396   | 01/01/22           | 3249                          | 818                                  | 3676     | 735        | 83                               | 0.688                                                           | 2,399                                    | 0.653                                                       |
| 252    | 30-025-04503 | EMSU | #213   | 04/01/22           | 21002                         | 843                                  | 3796     | 759        | 84                               | 0.687                                                           | 2,475                                    | 0.652                                                       |
| 253    | 30-025-04503 | EMSU | #213   | 04/01/23           | 21002                         | 843                                  | 3796     | 759        | 84                               | 0.687                                                           | 2,475                                    | 0.652                                                       |
| 254    | 30-025-04598 | EMSU | #275   | 05/01/22           | 5346                          | 832                                  | 3741     | 748        | 84                               | 0.687                                                           | 2,441                                    | 0.652                                                       |
| 255    | 30-025-04503 | EMSU | #213   | 01/01/22           | 21888                         | 844                                  | 3796     | 759        | 85                               | 0.687                                                           | 2,476                                    | 0.652                                                       |
| 256    | 30-025-04503 | EMSU | #213   | 01/01/23           | 21888                         | 844                                  | 3796     | 759        | 85                               | 0.687                                                           | 2,476                                    | 0.652                                                       |
| 257    | 30-025-29598 | EMSU | #118   | 07/01/22           | 5195                          | 853                                  | 3834     | 767        | 86                               | 0.687                                                           | 2,502                                    | 0.652                                                       |
| 258    | 30-025-29598 | EMSU | #118   | 08/01/22           | 1982                          | 854                                  | 3834     | 767        | 87                               | 0.688                                                           | 2,503                                    | 0.653                                                       |
| 259    | 30-025-29575 | EMSU | #247   | 11/01/22           | 15555                         | 830                                  | 3700     | 740        | 90                               | 0.689                                                           | 2,421                                    | 0.654                                                       |
| 260    | 30-025-04598 | EMSU | #275   | 08/01/22           | 12                            | 838                                  | 3741     | 748        | 90                               | 0.689                                                           | 2,447                                    | 0.654                                                       |
| 261    | 30-025-04598 | EMSU | #275   | 07/01/22           | 6                             | 839                                  | 3741     | 748        | 91                               | 0.689                                                           | 2,448                                    | 0.654                                                       |
| 262    | 30-025-29575 | EMSU | #247   | 12/01/22           | 15884                         | 833                                  | 3700     | 740        | 93                               | 0.690                                                           | 2,424                                    | 0.655                                                       |
| 263    | 30-025-04598 | EMSU | #275   | 06/01/22           | 0                             | 850                                  | 3741     | 748        | 102                              | 0.692                                                           | 2,459                                    | 0.657                                                       |
| 264    | 30-025-04629 | EMSU | #356   | 05/01/22           | 23575                         | 837                                  | 3645     | 729        | 108                              | 0.695                                                           | 2,404                                    | 0.660                                                       |
| 265    | 30-025-06306 | EMSU | #134   | 01/01/22           | 3171                          | 856                                  | 3732     | 746        | 110                              | 0.694                                                           | 2,461                                    | 0.659                                                       |
| 266    | 30-025-06306 | EMSU | #134   | 01/01/23           | 3171                          | 856                                  | 3732     | 746        | 110                              | 0.694                                                           | 2,461                                    | 0.659                                                       |
| 267    | 30-025-29598 | EMSU | #118   | 11/01/22           | 5071                          | 878                                  | 3834     | 767        | 111                              | 0.694                                                           | 2,527                                    | 0.659                                                       |
| 268    | 30-025-29598 | EMSU | #118   | 12/01/22           | 4990                          | 888                                  | 3834     | 767        | 121                              | 0.697                                                           | 2,537                                    | 0.662                                                       |
| 269    | 30-025-04642 | EMSU | #358   | 04/01/24           | 7350                          | 870                                  | 3691     | 738        | 132                              | 0.701                                                           | 2,457                                    | 0.666                                                       |
| 270    | 30-025-04518 | EMSU | #243   | 12/01/22           | 232                           | 876                                  | 3713     | 743        | 133                              | 0.701                                                           | 2,473                                    | 0.666                                                       |
| 271    | 30-025-04554 | EMSU | #324   | 01/01/22           | 2339                          | 889                                  | 3720     | 744        | 145                              | 0.704                                                           | 2,489                                    | 0.669                                                       |
| 272    | 30-025-04554 | EMSU | #324   | 01/01/23           | 2339                          | 889                                  | 3720     | 744        | 145                              | 0.704                                                           | 2,489                                    | 0.669                                                       |

Figure 1 – SCADA EMSU Water Injection Pumps Status Screen

This is a screen shot of the SCADA panel readings for the water injection pumps for October 10, 2024. It shows that there are 3 of 5 pumps running with water discharge rates of 27,250 BW, 28,146 BW, and 27,990 BW at pressures of 920 psi, 924 psi, and 971 psi. The overall header pressure shows to be 902 psi. The higher pressure is required to get the water to the wells since there is significant pressure drop in the injection lines and distance to the wells, particularly EMSU-B wells. We plan to reduce this pressure by approximately 50 psi by slowing down the pumps and injecting less water.

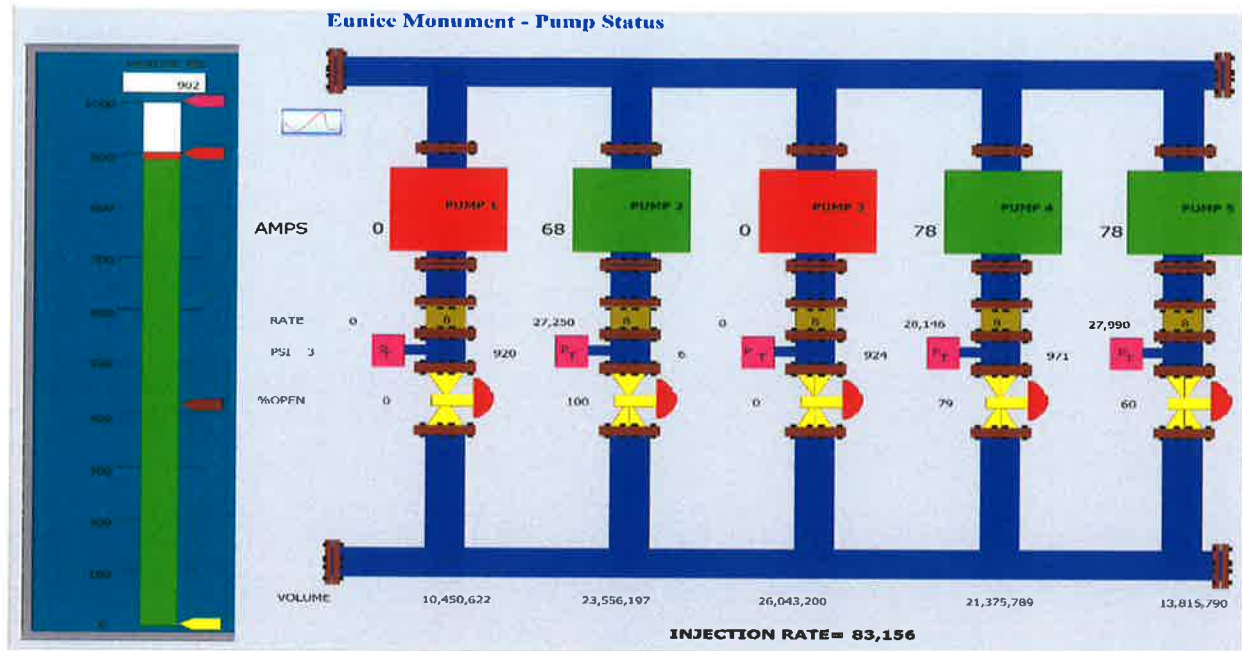


Figure 2 – Page 1 of SCADA Injection Well Table

This is a screen shot of Page 1 of the EMSU water injector table where maximum water injection rates and pressures are specified in the two columns on the right and actual rates and pressures are shown in the columns to the right of the Target Rates. For EMSU-146 it is close to its Target Rate and Maximum Rate of 1400 BWP, showing 1398 BWP @ 515 psi injection wellhead pressure. It can be seen that even though the maximum injection wellhead pressure is set at 750 psi for all wells, there is one well (EMSU-120) which is exceeding the pressure by 2 psi, with recorded pressure of 752 psi. It is for this reason and the fact that some wells have lower maximum allowed surface injection pressures, we will change the set pressure on all wells to 725 psi.

| Eunice Monument - Injection Wells Page 1 |          |                          |                |                            |          |          |         |
|------------------------------------------|----------|--------------------------|----------------|----------------------------|----------|----------|---------|
| Total<br>80,892 BPD                      |          | EMSU Total<br>63,645 BPD |                | EMSU-B Total<br>17,247 BPD |          |          |         |
| Well #                                   | Header # |                          | Target<br>Rate | Rate                       | Pressure | Set Rate | Set PSI |
| 104                                      | 107      |                          | 250 BPD        | 623 BPD                    | 207 PSI  | 250      | 750     |
| 108                                      | 107      |                          | 200 BPD        | 63 BPD                     | 735 PSI  | 200      | 750     |
| 118                                      | 125      |                          | 300 BPD        | 109 BPD                    | 746 PSI  | 300      | 750     |
| 120                                      | 125      |                          | 424 BPD        | 429 BPD                    | 752 PSI  | 700      | 750     |
| 116                                      | 127      |                          | 430 BPD        | 687 BPD                    | 316 PSI  | 430      | 750     |
| 126                                      | 127      |                          | 0 BPD          | 0 BPD                      | 0 PSI    | 0        | 750     |
| 138                                      | 143      |                          | 288 BPD        | 284 BPD                    | 739 PSI  | 600      | 750     |
| 140                                      | 143      |                          | 399 BPD        | 188 BPD                    | 694 PSI  | 400      | 750     |
| 144                                      | 143      |                          | 0 BPD          | 0 BPD                      | 0 PSI    | 0        | 750     |
| 134                                      | 147      |                          | 50 BPD         | 0 BPD                      | 0 PSI    | 50       | 750     |
| 146                                      | 147      |                          | 1,400 BPD      | 1,398 BPD                  | 515 PSI  | 1,400    | 750     |
| 148                                      | 147      |                          | 50 BPD         | 85 BPD                     | 631 PSI  | 50       | 750     |
| 162                                      | 161      |                          | 700 BPD        | 700 BPD                    | 554 PSI  | 700      | 750     |
| 170                                      | 161      |                          | 400 BPD        | 385 BPD                    | 78 PSI   | 400      | 750     |
| 172                                      | 161      |                          | 900 BPD        | 964 BPD                    | 495 PSI  | 900      | 750     |
| 164                                      | 167      |                          | 178 BPD        | 167 BPD                    | 676 PSI  | 180      | 750     |
| 189                                      | 184      |                          | 297 BPD        | 295 BPD                    | 375 PSI  | 297      | 750     |
| 193                                      | 184      |                          | 300 BPD        | 781 BPD                    | 404 PSI  | 300      | 750     |
| 196                                      | 184      |                          | 600 BPD        | 379 BPD                    | 730 PSI  | 600      | 750     |
| 188                                      | 186      |                          | 400 BPD        | 400 BPD                    | 299 PSI  | 400      | 750     |
| 187                                      | 186      |                          | 450 BPD        | 440 BPD                    | 20 PSI   | 450      | 750     |
| 197                                      | 186      |                          | 499 BPD        | 496 BPD                    | 749 PSI  | 600      | 750     |
| 215                                      | 198      |                          | 340 BPD        | 343 BPD                    | 750 PSI  | 600      | 750     |
| 183                                      | 200      |                          | 201 BPD        | 442 BPD                    | 747 PSI  | 600      | 750     |
| 199                                      | 200      |                          | 400 BPD        | 400 BPD                    | 92 PSI   | 400      | 750     |
| 211                                      | 200      |                          | 529 BPD        | 525 BPD                    | 750 PSI  | 1,000    | 750     |
| 111                                      | 111      |                          | 1,001 BPD      | 245 BPD                    | 736 PSI  | 1,200    | 750     |

Figure 3 – Page 2 of SCADA Injection Well Table

This is a screen shot of Page 2 of the EMSU water injector table. It shows that 5 wells are exceeding the 750 psi set points by 1 to 3 psi. We will lower the set points to 725 psi and stay well below the maximum allowed wellhead pressure.

| Eunice Monument - Injection Wells Page 2 |          |                          |             |                            |          |          |         |
|------------------------------------------|----------|--------------------------|-------------|----------------------------|----------|----------|---------|
| Total<br>80,878 BPD                      |          | EMSU Total<br>63,631 BPD |             | EMSU-B Total<br>17,247 BPD |          |          |         |
| Well #                                   | Header # |                          | Target Rate | Rate                       | Pressure | Set Rate | Set PSI |
| 181                                      | 202      |                          | 0 BPD       | 52 BPD                     | 753 PSI  | 200      | 750     |
| 201                                      | 202      |                          | 250 BPD     | 0 BPD                      | 10 PSI   | 250      | 750     |
| 217                                      | 222      |                          | 650 BPD     | 631 BPD                    | 7 PSI    | 650      | 750     |
| 221                                      | 222      |                          | 550 BPD     | 636 BPD                    | 0 PSI    | 550      | 750     |
| 222                                      | 222      |                          | 600 BPD     | 667 BPD                    | 666 PSI  | 600      | 750     |
| 223                                      | 222      |                          | 600 BPD     | 312 BPD                    | 746 PSI  | 600      | 750     |
| 247                                      | 222      |                          | 513 BPD     | 515 BPD                    | 749 PSI  | 600      | 750     |
| 213                                      | 226      |                          | 461 BPD     | 460 BPD                    | 751 PSI  | 600      | 750     |
| 226                                      | 226      |                          | 600 BPD     | 0 BPD                      | 0 PSI    | 600      | 750     |
| 227                                      | 226      |                          | 0 BPD       | 0 BPD                      | 0 PSI    | 0        | 750     |
| 228                                      | 226      |                          | 600 BPD     | 322 BPD                    | 608 PSI  | 600      | 750     |
| 210                                      | 230      |                          | 600 BPD     | 145 BPD                    | 743 PSI  | 600      | 750     |
| 229                                      | 230      |                          | 600 BPD     | 369 BPD                    | 744 PSI  | 600      | 750     |
| 231                                      | 230      |                          | 598 BPD     | 159 BPD                    | 741 PSI  | 600      | 750     |
| 241                                      | 242      |                          | 372 BPD     | 356 BPD                    | 751 PSI  | 400      | 750     |
| 242                                      | 242      |                          | 600 BPD     | 601 BPD                    | 621 PSI  | 600      | 750     |
| 243                                      | 242      |                          | 158 BPD     | 157 BPD                    | 752 PSI  | 200      | 750     |
| 257                                      | 242      |                          | 662 BPD     | 645 BPD                    | 749 PSI  | 700      | 750     |
| 225                                      | 244      |                          | 700 BPD     | 701 BPD                    | 623 PSI  | 700      | 750     |
| 245                                      | 244      |                          | 1,400 BPD   | 889 BPD                    | 548 PSI  | 1,400    | 750     |
| 255                                      | 244      |                          | 1,000 BPD   | 858 BPD                    | 616 PSI  | 1,000    | 750     |
| 622                                      | 244      |                          | 600 BPD     | 71 BPD                     | 604 PSI  | 600      | 750     |
| 251                                      | 252      |                          | 300 BPD     | 1,071 BPD                  | 605 PSI  | 300      | 750     |
| 253                                      | 252      |                          | 641 BPD     | 640 BPD                    | 750 PSI  | 975      | 750     |
| 643                                      | 252      |                          | 600 BPD     | 756 BPD                    | 745 PSI  | 600      | 750     |
| 239                                      | 260      |                          | 600 BPD     | 515 BPD                    | 383 PSI  | 600      | 750     |
| 240                                      | 260      |                          | 700 BPD     | 657 BPD                    | 584 PSI  | 700      | 750     |
| 261                                      | 260      |                          | 484 BPD     | 487 BPD                    | 752 PSI  | 600      | 750     |

Figure 4 – Page 3 of SCADA Injection Well Table

This is a screen shot of Page 3 of the EMSU water injector table. It shows that 2 wells are exceeding the 750 psi set points by 1 to 2 psi.

| Eunice Monument - Injection Wells Page 3 |          |                          |             |                            |          |          |         |
|------------------------------------------|----------|--------------------------|-------------|----------------------------|----------|----------|---------|
| Total<br>80,889 BPD                      |          | EMSU Total<br>63,641 BPD |             | EMSU-B Total<br>17,248 BPD |          |          |         |
| Well #                                   | Header # |                          | Target Rate | Rate                       | Pressure | Set Rate | Set PSI |
| 273                                      | 266      |                          | 1,200 BPD   | 511 BPD                    | 744 PSI  | 1,200    | 750     |
| 263                                      | 276      |                          | 700 BPD     | 736 BPD                    | 568 PSI  | 700      | 750     |
| 275                                      | 276      |                          | 700 BPD     | 696 BPD                    | 740 PSI  | 700      | 750     |
| 303                                      | 276      |                          | 999 BPD     | 1,000 BPD                  | 263 PSI  | 1,000    | 750     |
| 696                                      | 276      |                          | 576 BPD     | 578 BPD                    | 750 PSI  | 600      | 750     |
| 279                                      | 280      |                          | 900 BPD     | 786 BPD                    | 694 PSI  | 900      | 750     |
| 281                                      | 280      |                          | 1,312 BPD   | 1,314 BPD                  | 750 PSI  | 1,400    | 750     |
| 299                                      | 280      |                          | 599 BPD     | 380 BPD                    | 740 PSI  | 600      | 750     |
| 301                                      | 280      |                          | 600 BPD     | 624 BPD                    | 708 PSI  | 600      | 750     |
| 287                                      | 292      |                          | 633 BPD     | 636 BPD                    | 751 PSI  | 700      | 750     |
| 293                                      | 292      |                          | 600 BPD     | 597 BPD                    | 39 PSI   | 600      | 750     |
| 283                                      | 294      |                          | 750 BPD     | 748 BPD                    | 736 PSI  | 750      | 750     |
| 285                                      | 294      |                          | 600 BPD     | 658 BPD                    | 180 PSI  | 600      | 750     |
| 295                                      | 294      |                          | 1,000 BPD   | 995 BPD                    | 457 PSI  | 1,000    | 750     |
| 326                                      | 294      |                          | 600 BPD     | 600 BPD                    | 500 PSI  | 600      | 750     |
| 336                                      | 294      |                          | 250 BPD     | 0 BPD                      | 9 PSI    | 250      | 750     |
| 679                                      | 294      |                          | 237 BPD     | 238 BPD                    | 752 PSI  | 400      | 750     |
| 271                                      | 308      |                          | 300 BPD     | 310 BPD                    | 668 PSI  | 300      | 750     |
| 307                                      | 308      |                          | 600 BPD     | 560 BPD                    | 742 PSI  | 600      | 750     |
| 312                                      | 308      |                          | 200 BPD     | 113 BPD                    | 734 PSI  | 200      | 750     |
| 305                                      | 315      |                          | 100 BPD     | 108 BPD                    | 4 PSI    | 100      | 750     |
| 314                                      | 315      |                          | 599 BPD     | 601 BPD                    | 355 PSI  | 600      | 750     |
| 316                                      | 315      |                          | 1,000 BPD   | 985 BPD                    | 454 PSI  | 1,000    | 750     |
| 345                                      | 315      |                          | 600 BPD     | 597 BPD                    | 620 PSI  | 600      | 750     |
| 346                                      | 315      |                          | 650 BPD     | 648 BPD                    | 350 PSI  | 650      | 750     |
| 297                                      | 323      |                          | 833 BPD     | 832 BPD                    | 230 PSI  | 833      | 750     |
| 322                                      | 323      |                          | 850 BPD     | 675 BPD                    | 733 PSI  | 850      | 750     |
| 324                                      | 323      |                          | 250 BPD     | 128 BPD                    | 742 PSI  | 250      | 750     |

Figure 5 – Page 4 of SCADA Injection Well Table

This is a screen shot of Page 4 of the EMSU water injector table. It shows that 2 wells are exceeding the 750 psi set points by 2 to 7 psi. By lowering the set points to 725 psi, we will be able to stay below the maximum allowed wellhead pressure.

| Total<br>80,903 BPD | EMSU Total<br>63,655 BPD | EMSU-B Total<br>17,248 BPD | Target<br>Rate | Rate      | Pressure | Set Rate | Set PSI |
|---------------------|--------------------------|----------------------------|----------------|-----------|----------|----------|---------|
| Well #              | Header #                 |                            | 0 BPD          | 313 BPD   | 757 PSI  | 600      | 750     |
| 320                 | 341                      |                            | 623 BPD        | 620 BPD   | 749 PSI  | 700      | 750     |
| 340                 | 341                      |                            | 649 BPD        | 332 BPD   | 730 PSI  | 650      | 750     |
| 342                 | 341                      |                            | 1,200 BPD      | 2,933 BPD | 634 PSI  | 1,200    | 750     |
| 318                 | 343                      |                            | 1,200 BPD      | 1,202 BPD | 11 PSI   | 1,200    | 750     |
| 343                 | 343                      |                            | 500 BPD        | 499 BPD   | 708 PSI  | 500      | 750     |
| 344                 | 343                      |                            | 600 BPD        | 539 BPD   | 727 PSI  | 600      | 750     |
| 350                 | 353                      |                            | 515 BPD        | 512 BPD   | 749 PSI  | 700      | 750     |
| 347                 | 355                      |                            | 350 BPD        | 484 BPD   | 748 PSI  | 350      | 750     |
| 348                 | 355                      |                            | 300 BPD        | 282 BPD   | 736 PSI  | 300      | 750     |
| 354                 | 355                      |                            | 400 BPD        | 732 BPD   | 584 PSI  | 400      | 750     |
| 356                 | 355                      |                            | 0 BPD          | 604 BPD   | 752 PSI  | 600      | 750     |
| 390                 | 355                      |                            | 300 BPD        | 304 BPD   | 736 PSI  | 300      | 750     |
| 358                 | 359                      |                            | 800 BPD        | 795 BPD   | 681 PSI  | 800      | 750     |
| 359                 | 359                      |                            | 999 BPD        | 1,067 BPD | 586 PSI  | 1,000    | 750     |
| 360                 | 359                      |                            | 700 BPD        | 689 BPD   | 737 PSI  | 700      | 750     |
| 386                 | 359                      |                            | 150 BPD        | 855 BPD   | 21 PSI   | 150      | 750     |
| 332                 | 369                      |                            | 1,000 BPD      | 1,029 BPD | 728 PSI  | 1,000    | 750     |
| 334                 | 369                      |                            | 500 BPD        | 0 BPD     | 0 PSI    | 500      | 750     |
| 368                 | 369                      |                            | 700 BPD        | 874 BPD   | 516 PSI  | 700      | 750     |
| 370                 | 369                      |                            | 376            | 369       | 2 PSI    | 400      | 750     |
| 376                 | 369                      |                            | 0 BPD          | 0 BPD     | 11 PSI   | 0        | 0       |
| 364                 | 381                      |                            | 80 BPD         | 0 BPD     | 0 PSI    | 80       | 750     |
| 366                 | 381                      |                            | 150 BPD        | 0 BPD     | 421 PSI  | 150      | 750     |
| 380                 | 381                      |                            | 404            | 381       | 0 PSI    | 100      | 750     |
| 386                 | 381                      |                            |                |           |          |          |         |
| 404                 | 381                      |                            |                |           |          |          |         |

**Figure 6 – Page 5 of SCADA Injection Well Table**

This is a screen shot of Page 5 of the EMSU water injector table. It shows that 1 well is exceeding the 750 psi set point by 5 psi. The lower set point will resolve this issue.

[illegible]

**Figure 7 – EMSU-378 Grayburg Water Injector Bottomhole Pressure**

This is the static bottomhole pressure for water injector EMSU-378 run on October 8, 2024. It shows 951 psi @ 4050' (0.235 psi/ft reservoir pressure gradient)



Client:

Test Date:

Tool Serial:

Empire Petroleum Corporation

10/08/2024 - 10/08/2024

DC9276

Well Name:

Location:

Field / Pool:

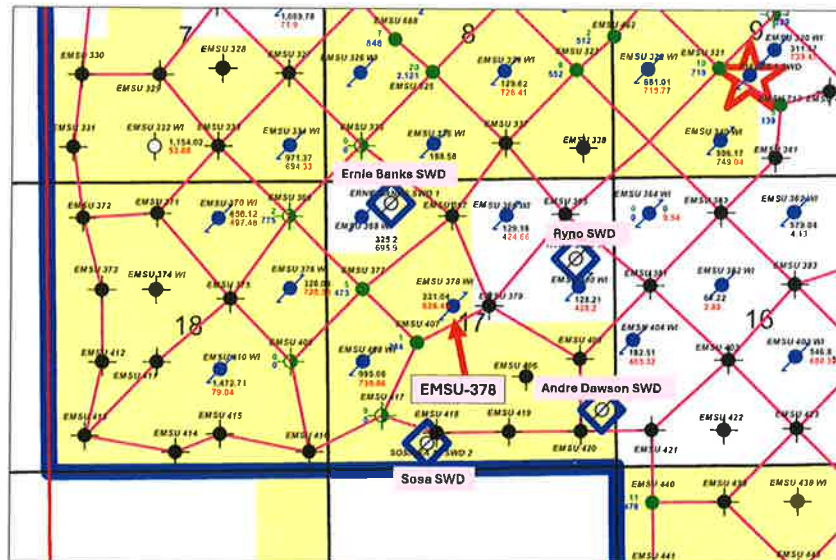
Empire EMSU 378

Gradients

|   | Real Time<br>(MM/dd/yyyy<br>HH:mm:ss) | Stop Type | Depth (ft) | TVD (ft) | Pressure<br>(psia) | Pressure<br>Gradient<br>(TVD) | Temp.<br>(degF) | Temp.<br>Gradient<br>(TVD) |
|---|---------------------------------------|-----------|------------|----------|--------------------|-------------------------------|-----------------|----------------------------|
| 1 | 10/08/2024<br>12:00:26                | Static    | 0          | 0        | 8.909              | 0.000000                      | 80.296          | 0.000000                   |
| 3 | 10/08/2024<br>12:06:14                | Static    | 2000       | 2000     | 73.718             | 0.032405                      | 81.187          | 0.000445                   |
| 4 | 10/08/2024<br>12:13:00                | Static    | 3000       | 3000     | 493.979            | 0.420261                      | 84.502          | 0.003315                   |
| 5 | 10/08/2024<br>12:20:19                | Static    | 4000       | 4000     | 932.980            | 0.439001                      | 87.371          | 0.002869                   |
| 6 | 10/08/2024<br>12:22:26                | Static    | 4050       | 4050     | 950.860            | 0.357600                      | 88.811          | 0.028800                   |

**Figure 8 – Location Map for EMSU-378 Water Injector**

This map shows the location of the Grayburg water injector EMSU-378 in relation to Goodnight's four SWD wells which are located inside EMSU. Goodnight reported pressures for the San Andres as 0.381 psi/ft whereas the EMSU-378 just had a static bottomhole pressure of 950 psi @ 4050' (0.235 psi/ft) showing that the Grayburg reservoir pressure is less than the San Andres and therefore San Andres water is being pushed into the Grayburg through the natural fractures as a result of the SWD raising San Andres reservoir pressure.





## NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON

Governor

Betty Rivera  
Cabinet Secretary

Lori Wrotenbery

Director

Oil Conservation Division

ADMINISTRATIVE ORDER NO. WFX-785

### **APPLICATION OF CHEVRONTEXACO TO EXPAND ITS EUNICE MONUMENT SOUTH UNIT WATERFLOOD PROJECT IN THE EUNICE MONUMENT OIL POOL IN LEA COUNTY, NEW MEXICO**

#### **ADMINISTRATIVE ORDER OF THE OIL CONSERVATION DIVISION**

Under the provisions of Division Order No. R-7766, ChevronTexaco has made application to the Division on September 10, 2002 for permission to expand its Eunice Monument South Unit Waterflood Project in the Eunice Monument Oil Pool in Lea County, New Mexico.

#### **THE DIVISION DIRECTOR FINDS THAT:**

- (1) The application has been filed in due form.
- (2) Satisfactory information has been provided that all offset operators have been duly notified of the application.
- (3) No objection has been received within the waiting period as prescribed by Rule 701(B).
- (4) The proposed injection wells are eligible for conversion to injection under the terms of Rule 701.
- (5) The proposed expansion of the above referenced Waterflood Project will not cause waste nor impair correlative rights.
- (6) The application should be approved.

#### **IT IS THEREFORE ORDERED THAT:**

The applicant, ChevronTexaco is hereby authorized to inject water into the Grayburg formation at approximately 3,703 feet to approximately 3,954 feet through plastic lined tubing set in a packer located within 100 feet of the uppermost injection intervals in the following described wells for purposes of secondary recovery to wit:

Oil Conservation Division \* 1220 South St. Francis Drive \* Santa Fe, New Mexico 87505  
Phone: (505) 476-3440 \* Fax (505) 476-3462 \* <http://www.emurd.state.nm.us>

EXHIBIT

B

Administrative Order WFX-785

ChevronTexaco

November 4, 2002

Page 2

| Well Name    | API Number   | Well Location<br>(T21S, R36E, Lea<br>County) | Injection<br>Interval | Packer<br>Depth | Maximum<br>Injection Pressure |
|--------------|--------------|----------------------------------------------|-----------------------|-----------------|-------------------------------|
| EMSU No. 343 | 30-025-04589 | Unit M, Section 10                           | 3,738' - 3,910'       | 3,650'          | (0.2 psi/ft) 748              |
| EMSU No. 345 | 30-025-29823 | Unit O, Section 10                           | 3,768' - 3,922'       | 3,700'          | (0.2 psi/ft) 754              |
| EMSU No. 347 | 30-025-04606 | Unit M, Section 11                           | 3,777' - 3,935'       | 3,700'          | (0.2 psi/ft) 755              |
| EMSU No. 357 | 30-025-04636 | Unit A, Section 15                           | 3,703' - 3,942'       | 3,660'          | (0.2 psi/ft) 741              |
| EMSU No. 359 | 30-025-04651 | Unit C, Section 15                           | 3,755' - 3,954'       | 3,700'          | (0.2 psi/ft) 751              |

IT IS FURTHER ORDERED THAT:

The operator shall take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

Prior to commencing injection operations into the well, the casing shall be pressure tested from the surface to the packer setting depth to assure the integrity of said casing.

The casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge at the surface or left open to the atmosphere to facilitate detection of leakage in the casing, tubing or packer.

The injection well or system shall be equipped with a pressure limiting device which will limit the wellhead pressure on the injection wells to the pressures as specified above.

The Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said wells that such higher pressure will not result in migration of the injected fluid from the Grayburg formation. Such proper showing shall consist of a valid step-rate test run in accordance with and acceptable to this office.

The operator shall notify the supervisor of the Hobbs district office of the Division of the date and time of the installation of injection equipment and of the mechanical integrity tests so that the same may be inspected and witnessed.

The operator shall immediately notify the supervisor of the Hobbs district office of the Division of the failure of the tubing, casing or packer in said wells and shall take such steps as may be timely and necessary to correct such failure or leakage.

The subject wells shall be governed by all provisions of Division Order No. R-7766 and Rules 702-706 of the Division Rules and Regulations not inconsistent herewith.

Administrative Order WFX-785

ChevronTexaco

November 4, 2002

Page 3

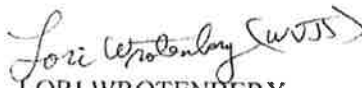
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PROVIDED FURTHER THAT, jurisdiction is retained by the Division for the entry of such further orders as may be necessary for the prevention of waste and/or protection of correlative rights or upon failure of the operator to conduct operations (1) to protect fresh water or (2) consistent with the requirements in this order, whereupon the Division may, after notice and hearing, terminate the injection authority granted herein.

The injection authority granted herein shall terminate one year after the effective date of this order if the operator has not commenced injection operations into the subject wells, provided however, the Division, upon written request by the operator, may grant an extension thereof for good cause shown.

DONE at Santa Fe, New Mexico, on this 4th day of November 2002.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

  
LORI WROTENBERY  
Director

S E A L

LW/wvjj

cc: Oil Conservation Division – Hobbs  
Case File No.8398 (R-7766)



Case No. 8398

## NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**BILL RICHARDSON**

Governor

Joanna Prukop  
Cabinet Secretary

**Lori Wrotenbery**

Director

Oil Conservation Division

ADMINISTRATIVE ORDER NO. WFX-786

***APPLICATION OF CHEVRONTEXACO TO EXPAND ITS EUNICE MONUMENT SOUTH  
UNIT WATERFLOOD PROJECT IN THE EUNICE MONUMENT-GRAYBURG SAN  
ANDRES OIL POOL IN LEA COUNTY, NEW MEXICO***

**ADMINISTRATIVE ORDER  
OF THE OIL CONSERVATION DIVISION**

Under the provisions of Division Order No. R-7766, ChevronTexaco has made application to the Division on January 17, 2003 for permission to expand its Eunice Monument South Unit Waterflood Project in the Eunice Monument Oil Pool in Lea County, New Mexico.

**THE DIVISION DIRECTOR FINDS THAT:**

- (1) The application has been filed in due form.
- (2) Satisfactory information has been provided that all offset operators have been duly notified of the application.
- (3) No objection has been received within the waiting period as prescribed by Rule 701(B).
- (4) The proposed injection wells are eligible for conversion to injection under the terms of Rule 701.
- (5) The proposed expansion of the above referenced Waterflood Project will not cause waste nor impair correlative rights.
- (6) The application should be approved.

**IT IS THEREFORE ORDERED THAT:**

The applicant, ChevronTexaco is hereby authorized to inject water into the Grayburg unitized interval through plastic lined tubing set in a packer located within 100 feet of the uppermost injection intervals in the following described wells for purposes of secondary recovery to wit:

Oil Conservation Division \* 1220 South St. Francis Drive \* Santa Fe, New Mexico 87505  
Phone: (505) 476-3440 \* Fax (505) 476-3462 \* <http://www.emnrd.state.nm.us>

**EXHIBIT**

**C**

Administrative Order WFX-786

ChevronTexaco

February 3, 2003

Page 2

| Well Name    | API Number   | Unit, Section      | Tsp, Rge<br>(Lea County) | Injection<br>Interval | Packer<br>Depth | Maximum<br>Injection Pressure |
|--------------|--------------|--------------------|--------------------------|-----------------------|-----------------|-------------------------------|
| EMSU No. 222 | 30-025-04531 | Unit O, Section 6  | T21S, R36E               | 3,754' - 4,010'       | 3,700'          | (0.2 psi/ft) 751              |
| EMSU No. 252 | 30-025-04528 | Unit W, Section 6  | T21S, R36E               | 3,758' - 3,977'       | 3,708'          | (0.2 psi/ft) 752              |
| EMSU No. 196 | 30-025-04514 | Unit E, Section 5  | T21S, R36E               | 3,685' - 3,950'       | 3,650'          | (0.2 psi/ft) 737              |
| EMSU No. 575 | 30-025-34824 | Unit N, Section 31 | T20S, R37E               | 3,744' - 3,874'       | 3,650'          | (0.2 psi/ft) 749              |

IT IS FURTHER ORDERED THAT:

The operator shall take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

Prior to commencing injection operations into each well, the casing shall be pressure tested from the surface to the packer setting depth to assure the integrity of said casing.

The casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge at the surface or left open to the atmosphere to facilitate detection of leakage in the casing, tubing or packer.

The injection wells or systems shall be equipped with a pressure limiting device which will limit the wellhead pressure on the injection wells to the pressures as specified above.

The Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said wells that such higher pressure will not result in migration of the injected fluid from the unitized interval. Such proper showing shall consist of a valid step-rate test run in accordance with and acceptable to this office.

The operator shall notify the supervisor of the Hobbs district office of the Division of the date and time of the installation of injection equipment and of the mechanical integrity tests so that the same may be inspected and witnessed.

The operator shall immediately notify the supervisor of the Hobbs district office of the Division of the failure of the tubing, casing or packer in said wells and shall take such steps as may be timely and necessary to correct such failure or leakage.

The subject wells shall be governed by all provisions of Division Order No. R-7766 and Rules 702-706 of the Division Rules and Regulations not inconsistent herewith.

PROVIDED FURTHER THAT, jurisdiction is retained by the Division for the entry of such further orders as may be necessary for the prevention of waste and/or protection of correlative rights or upon failure of the operator to conduct operations (1) to protect fresh water or (2) consistent with the requirements in this order, whereupon the Division may, after notice and hearing, terminate the

*Administrative Order WFX-786*

*ChevronTexaco*

*February 3, 2003*

*Page 3*

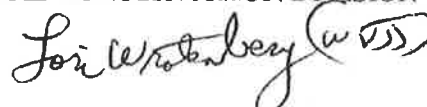
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injection authority granted herein.

The injection authority granted herein shall terminate one year after the effective date of this order if the operator has not commenced injection operations into the subject wells, provided however, the Division, upon written request by the operator, may grant an extension thereof for good cause shown.

DONE at Santa Fe, New Mexico, on this 3rd day of February 2003.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION



LORI WROTENBERY  
Director

S E A L

LW/wvjj

cc: Oil Conservation Division – Hobbs  
State Land Office – Oil and Gas Division  
Case File No.8398 (R-7766) ✓



NEW MEXICO ENERGY, MINERALS  
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505  
(505) 827-7131

ADMINISTRATIVE ORDER NO. WFX-730

**APPLICATION OF CHEVRON U.S.A. PRODUCTION COMPANY TO EXPAND ITS  
WATERFLOOD PROJECT IN THE EUNICE MONUMENT GRAYBURG-SAN ANDRES  
POOL IN LEA COUNTY, NEW MEXICO**

ADMINISTRATIVE ORDER  
OF THE OIL CONSERVATION DIVISION

Under the provisions of Division Order No. R-7766, Chevron U.S.A. Production Company has made application to the Division on October 8, 1997 for permission to expand its Eunice Monument South Unit Waterflood Project in the Eunice Monument Grayburg-San Andres Pool in Lea County, New Mexico.

THE DIVISION DIRECTOR FINDS THAT:

- (1) The application has been filed in due form.
- (2) Satisfactory information has been provided that all offset operators have been duly notified of the application.
- (3) No objection has been received within the waiting period as prescribed by Rule 701(B).
- (4) The proposed injection well is eligible for conversion to injection under the terms of Rule 701.
- (5) The proposed expansion of the above referenced waterflood project will not cause waste nor impair correlative rights.
- (6) The application should be approved.

IT IS THEREFORE ORDERED THAT:

The applicant, Chevron U.S.A. Production Company, be and the same is hereby authorized to inject water into the Grayburg and San Ardres formations at approximately 3778 feet to approximately 4097 feet through 2 3/8-inch plastic lined tubing set in a packer located within 100 feet of the uppermost injection perforations in the following described well for purposes of secondary recovery to wit:

EXHIBIT

D

Administrative Order WFX-730  
Chevron U.S.A. Production Company  
December 12, 1997  
Page 2

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**Eunice Monument South Unit Well No.679**  
Unit Letter 'D', Section 8, Township 21 South, Range 36 East  
Injection Interval: 3778 feet to 4097 feet  
Packer Setting: 3678 feet  
Maximum Injection Pressure: 756 psig  
  
Located in Lea County, New Mexico.

IT IS FURTHER ORDERED THAT:

The operator shall take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

Prior to commencing injection operations into the well, the casing shall be pressure tested from the surface to the packer setting depth to assure the integrity of said casing.

The casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge at the surface or left open to the atmosphere to facilitate detection of leakage in the casing, tubing or packer.

The injection well or system shall be equipped with a pressure limiting device which will limit the wellhead pressure on the injection well to no more than .2 psi per foot of depth to the uppermost injection perforation.

The Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the injected fluid from the Grayburg or San Andres formations. Such proper showing shall consist of a valid step-rate test run in accordance with and acceptable to this office.

The operator shall notify the supervisor of the Hobbs district office of the Division of the date and time of the installation of injection equipment and of the mechanical integrity tests so that the same may be inspected and witnessed.

The operator shall immediately notify the supervisor of the Hobbs district office of the Division of the failure of the tubing, casing or packer in said well and shall take such steps as may be timely and necessary to correct such failure or leakage.

The subject well shall be governed by all provisions of Division Order No. R-7766, as amended and Rules 702-706 of the Division Rules and Regulations not inconsistent herewith.

Administrative Order WFX-730  
Chevron U.S.A. Production Company  
December 12 1997  
Page 3

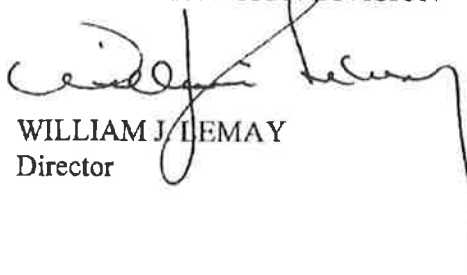
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PROVIDED FURTHER THAT, jurisdiction of this cause is hereby retained by the Division for the entry of such further order or orders as may be deemed necessary or convenient for the prevention of waste and/or protection of correlative rights; upon failure of the operator to conduct operations in a manner which will ensure the protection of fresh water or in a manner inconsistent with the requirements set forth in this order, the Division may, after notice and hearing, terminate the injection authority granted herein.

The injection authority granted herein shall terminate one year after the effective date of this order if the operator has not commenced injection operations into the subject well, provided however, the Division, upon written request by the operator, may grant an extension thereof for good cause shown.

DONE at Santa Fe, New Mexico, on this 12th day of December, 1997.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION



WILLIAM J. LEMAY  
Director

S E A L

cc: Oil Conservation Division – Hobbs  
Case File No.8398



**NEW MEXICO ENERGY, MINERALS  
& NATURAL RESOURCES DEPARTMENT**

OIL CONSERVATION DIVISION  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505  
(505) 827-7131

*ADMINISTRATIVE ORDER NO. WFX-745*

***APPLICATION OF CHEVRON USA PRODUCTION COMPANY TO EXPAND ITS  
WATERFLOOD PROJECT IN THE EUNICE MONUMENT GRAYBURG-SAN  
ANDRES POOL IN LEA COUNTY, NEW MEXICO.***

**ADMINISTRATIVE ORDER  
OF THE OIL CONSERVATION DIVISION**

Under the provisions of Division Order R-7766, Chevron USA Production Company has made application to the Division on November 6, 1998 for permission to reinstate and expand its Eunice Monument South Unit 'B' Waterflood Project in the Eunice Monument Grayburg-San Andres Pool in Lea County, New Mexico.

**THE DIVISION DIRECTOR FINDS THAT:**

- (1) The application has been filed in due form.
- (2) Satisfactory information has been provided that all offset operators have been duly notified of the application.
- (3) No objection has been received within the waiting period as prescribed by Rule 701(B).
- (4) The proposed injection wells are eligible for conversion to injection under the terms of Rule 701.
- (5) The proposed expansion of the above referenced waterflood project will not cause waste nor impair correlative rights.
- (6) The application should be approved.

**IT IS THEREFORE ORDERED THAT:**

The applicant, Chevron USA Production Company, be and the same is hereby authorized to inject water into the Grayburg formation at approximately 3748 feet to approximately 4060 feet through 2 3/8-inch plastic lined tubing set in a packer located within 100 feet of the uppermost injection perforations in the following described well for purposes of secondary recovery to wit:

**EXHIBIT  
E**

Administrative Order WFX-745  
Chevron USA Production Company  
November 24, 1998  
Page 2

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**Eunice Monument South Unit 'B' Well No.853**

API No.30-025-04198

660' FNL & 330' FEL – Unit 'A'

Injection Interval: 3748 feet to 4060 feet

Packer Setting: 3710 feet

Maximum Injection Pressure: 750 psig

Located in Section 10, Township 20 South, Range 36 East, Lea County, New Mexico.

IT IS FURTHER ORDERED THAT:

The operator shall take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

Prior to commencing injection operations into the well, the casing shall be pressure tested from the surface to the packer setting depth to assure the integrity of said casing.

The casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge at the surface or left open to the atmosphere to facilitate detection of leakage in the casing, tubing or packer.

The injection well or system shall be equipped with a pressure limiting device which will limit the wellhead pressure on the injection wells to no greater than .2 psi per foot of depth to the uppermost injection perforations or casing shoe.

The Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the injected fluid from the Grayburg formation. Such proper showing shall consist of a valid step-rate test run in accordance with and acceptable to this office.

The operator shall notify the supervisor of the Hobbs district office of the Division of the date and time of the installation of injection equipment and of the mechanical integrity tests so that the same may be inspected and witnessed.

The operator shall immediately notify the supervisor of the Hobbs district office of the Division of the failure of the tubing, casing or packer in said wells and shall take such steps as may be timely and necessary to correct such failure or leakage.

The subject wells shall be governed by all provisions of Division Order No. R-7766, and Rules 702-706 of the Division Rules and Regulations not inconsistent herewith.

Administrative Order WFX-745  
Chevron USA Production Company  
November 24, 1998  
Page 3

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PROVIDED FURTHER THAT, jurisdiction is retained by the Division for the entry of such further orders as may be necessary for the prevention of waste and/or protection of correlative rights or upon failure of the operator to conduct operations (1) to protect fresh water or (2) consistent with the requirements in this order, whereupon the Division may, after notice and hearing, terminate the injection authority granted herein.

The injection authority granted herein shall terminate one year after the effective date of this order if the operator has not commenced injection operations into the subject wells, provided however, the Division, upon written request by the operator, may grant an extension thereof for good cause shown.

DONE at Santa Fe, New Mexico, on this 24th day of November, 1998.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION



LORI WROTENBERY  
Director

S E A L

LW/BES/kv

cc: Oil Conservation Division - Hobbs  
Case File No.8398



**NEW MEXICO ENERGY, MINERALS  
& NATURAL RESOURCES DEPARTMENT**

OIL CONSERVATION DIVISION  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505  
(505) 827-7131

*ADMINISTRATIVE ORDER NO. WFX-754*

***APPLICATION OF CHEVRON USA PRODUCTION COMPANY TO EXPAND ITS  
WATERFLOOD PROJECT IN THE EUNICE MONUMENT OIL POOL IN LEA COUNTY,  
NEW MEXICO***

**ADMINISTRATIVE ORDER  
OF THE OIL CONSERVATION DIVISION**

Under the provisions of Division Order No. R-7766, Chevron USA Production Company has made application to the Division on April 8, 1999 for permission to expand its Eunice Monument South Unit Area 'B' Waterflood Project in the Eunice Monument Oil Pool in Lea County, New Mexico.

**THE DIVISION DIRECTOR FINDS THAT:**

- (1) The application has been filed in due form.
- (2) Satisfactory information has been provided that all offset operators have been duly notified of the application.
- (3) No objection has been received within the waiting period as prescribed by Rule 701(B).
- (4) The proposed injection wells are eligible for conversion to injection under the terms of Rule 701.
- (5) The proposed expansion of the above referenced Eunice Monument South Unit Area 'B' Waterflood Project will not cause waste nor impair correlative rights.
- (6) The application should be approved.

**IT IS THEREFORE ORDERED THAT:**

The applicant, Chevron USA Production Company be and the same is hereby authorized to inject water into the Grayburg formation at approximately 3,732 feet to approximately 3,874 feet through 2 3/8-inch plastic lined tubing set in a packer located within 100 feet of the uppermost injection perforations in the following described well for purposes of secondary recovery to wit:

EXHIBIT

**F**

Administrative Order WFX-754  
Chevron USA Production Company  
July 8, 1999  
Page 2

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**Eunice Monument South Unit Area 'B' Well No.851**

320' FNL & 2310' FWL, UL 'C'

Injection Interval: 3,732 feet to 3,874 feet

Maximum Injection Pressure: (.2 psi/ft) 746 psig

Located in Section 11, Township 20 South, Range 36 East, Lea County, New Mexico.

**IT IS FURTHER ORDERED THAT:**

The operator shall take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

Prior to commencing injection operations into the well, the casing shall be pressure tested from the surface to the packer setting depth to assure the integrity of said casing.

The casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge at the surface or left open to the atmosphere to facilitate detection of leakage in the casing, tubing or packer.

The injection well or system shall be equipped with a pressure limiting device which will limit the wellhead pressure on the injection wells to .2 psi per foot of depth to the uppermost injection perforation.

The Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said wells that such higher pressure will not result in migration of the injected fluid from the Grayburg formation. Such proper showing shall consist of a valid step-rate test run in accordance with and acceptable to this office.

The operator shall notify the supervisor of the Hobbs district office of the Division of the date and time of the installation of injection equipment and of the mechanical integrity tests so that the same may be inspected and witnessed.

The operator shall immediately notify the supervisor of the Hobbs district office of the Division of the failure of the tubing, casing or packer in said wells and shall take such steps as may be timely and necessary to correct such failure or leakage.

The subject wells shall be governed by all provisions of Division Order No. R-7766 and Rules 702-706 of the Division Rules and Regulations not inconsistent herewith.

Administrative Order WFX-754  
Chevron USA Production Company  
July 8, 1999  
Page 3

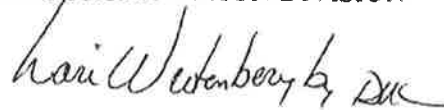
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PROVIDED FURTHER THAT, jurisdiction is retained by the Division for the entry of such further orders as may be necessary for the prevention of waste and/or protection of correlative rights or upon failure of the operator to conduct operations (1) to protect fresh water or (2) consistent with the requirements in this order, whereupon the Division may, after notice and hearing, terminate the injection authority granted herein.

The injection authority granted herein shall terminate one year after the effective date of this order if the operator has not commenced injection operations into the subject wells, provided however, the Division, upon written request by the operator, may grant an extension thereof for good cause shown.

DONE at Santa Fe, New Mexico, on this 8th day of July, 1999.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION



LORI WROTENBERY  
Director

S E A L

LW/BES/kv

cc: Oil Conservation Division – Hobbs  
Case File No.8398



**NEW MEXICO ENERGY, MINERALS  
& NATURAL RESOURCES DEPARTMENT**

OIL CONSERVATION DIVISION  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505  
(505) 827-7131

ADMINISTRATIVE ORDER NO. WFX-760

**APPLICATION OF CHEVRON U.S.A. PRODUCTION COMPANY TO EXPAND ITS  
WATERFLOOD PROJECT IN THE ARROWHEAD-GRAYBURG POOL IN LEA  
COUNTY, NEW MEXICO**

**ADMINISTRATIVE ORDER  
OF THE OIL CONSERVATION DIVISION**

Under the provisions of Division Order No. R-9483, Chevron U.S.A. Production Company has made application to the Division on April 28, 2000 for permission to expand its Arrowhead Grayburg Waterflood Project in the Arrowhead Grayburg Pool in Lea County, New Mexico.

**THE DIVISION DIRECTOR FINDS THAT:**

- (1) The application has been filed in due form.
- (2) Satisfactory information has been provided that all offset operators have been duly notified of the application.
- (3) No objection has been received within the waiting period as prescribed by Rule 701(B).
- (4) The proposed injection wells are eligible for conversion to injection under the terms of Rule 701.
- (5) The proposed expansion of the above referenced waterflood project will not cause waste nor impair correlative rights.
- (6) The application should be approved.

**IT IS THEREFORE ORDERED THAT:**

The applicant, Chevron U.S.A. Production Company be and the same is hereby authorized to inject water into the Grayburg formation at approximately 3,436 feet to approximately 3,965 feet through 2 3/8-inch plastic lined tubing set in a packer located within 100 feet of the uppermost injection perforations in the following described well for purposes of secondary recovery to wit:

EXHIBIT

G

Administrative Order WFX-760  
Chevron U.S.A. Production Company  
May 15, 2000  
Page 2

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**AGU Well No. 133**  
API No. 30-025-04939  
1980 FSL & 660 FWL, Unit 'L'  
Section 36, Township 21 South, Range 36 East, NMPM  
Injection Interval: 3,755 feet to 3,800 feet  
Maximum Injection Pressure: (.2 psi/ft) 751 psig

**AGU Well No. 151**  
API No. 30-025-08738  
660 FNL & 1980 FEL, Unit 'B'  
Section 2, Township 22 South, Range 36 East, NMPM  
Injection Interval: 3,436 feet to 3,965 feet  
Maximum Injection Pressure: (.2 psi/ft) 687 psig

**AGU Well No. 159**  
API No. 30-025-08723  
1980 FNL & 1980 FWL, Unit 'F'  
Section 1, Township 22 South, Range 36 East, NMPM  
Injection Interval: 3,670 feet to 3,835 feet  
Maximum Injection Pressure: (.2 psi/ft) 734 psig

Located in Lea County, New Mexico.

**IT IS FURTHER ORDERED THAT:**

The operator shall take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

Prior to commencing injection operations into the well, the casing shall be pressure tested from the surface to the packer setting depth to assure the integrity of said casing.

The casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge at the surface or left open to the atmosphere to facilitate detection of leakage in the casing, tubing or packer.

The injection well or system shall be equipped with a pressure limiting device which will limit the wellhead pressure on the injection wells to no greater than .2 psi per foot of depth to the uppermost injection perforations or casing shoe.

The Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the injected fluid from the Grayburg formation. Such proper showing shall consist of a valid

Administrative Order WFX-760  
Chevron U.S.A. Production Company  
May 15, 2000  
Page 3

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step-rate test run in accordance with and acceptable to this office.

The operator shall notify the supervisor of the Hobbs district office of the Division of the date and time of the installation of injection equipment and of the mechanical integrity tests so that the same may be inspected and witnessed.

The operator shall immediately notify the supervisor of the Hobbs district office of the Division of the failure of the tubing, casing or packer in said wells and shall take such steps as may be timely and necessary to correct such failure or leakage.

The subject wells shall be governed by all provisions of Division Order No. R-9483 as amended and Rules 702-706 of the Division Rules and Regulations not inconsistent herewith.

PROVIDED FURTHER THAT, jurisdiction is retained by the Division for the entry of such further orders as may be necessary for the prevention of waste and/or protection of correlative rights or upon failure of the operator to conduct operations (1) to protect fresh water or (2) consistent with the requirements in this order, whereupon the Division may, after notice and hearing, terminate the injection authority granted herein.

The injection authority granted herein shall terminate one year after the effective date of this order if the operator has not commenced injection operations into the subject wells, provided however, the Division, upon written request by the operator, may grant an extension thereof for good cause shown.

DONE at Santa Fe, New Mexico, on this 15<sup>th</sup> day of May, 2000.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION



LORI WROTENBERY  
Director

LW/MWA/kv

cc: Oil Conservation Division --Hobbs  
Case File No. 10260



BRUCE KING  
GOVERNOR

ANITA LOCKWOOD  
CABINET SECRETARY

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



POST OFFICE BOX 2088  
STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO 87504  
(505) 827-5800

ADMINISTRATIVE ORDER NO. WFX-634

*APPLICATION OF CHEVRON U.S.A., INC. TO EXPAND ITS WATERFLOOD PROJECT  
IN THE ARROWHEAD POOL IN LEA COUNTY, NEW MEXICO*

ADMINISTRATIVE ORDER  
OF THE OIL CONSERVATION DIVISION

Under the provisions of Division Order No. R-9483, Chevron U.S.A., Inc. has made application to the Division on April 10, 1992, for permission to expand its Arrowhead Grayburg Unit Waterflood Project in the Arrowhead Pool in Lea County, New Mexico.

THE DIVISION DIRECTOR FINDS THAT:

- (1) The application has been filed in due form.
- (2) Satisfactory information has been provided that all offset operators have been duly notified of the application.
- (3) No objection has been received within the waiting period as prescribed by Rule 701(B).
- (4) The proposed injection wells are eligible for conversion to injection under the terms of Rule 701.
- (5) The proposed injection wells are in lieu of previously proposed new-drill injection wells approved under the provisions of Division Order No. R-9483, shown on Exhibit "B" attached hereto.
- (6) The proposed expansion of the above referenced Arrowhead Grayburg Unit Waterflood Project will not cause waste nor impair correlative rights.
- (7) The application should be approved.



Administrative Order WFX-634  
Chevron U.S.A., Inc.  
June 8, 1992  
Page 2

IT IS THEREFORE ORDERED THAT:

The applicant, Chevron U.S.A., Inc., be and the same is hereby authorized to inject water into the Grayburg and San Andres formations at approximately 3680 feet to approximately 3900 feet through 2 3/8 inch plastic lined tubing set in a packer located within 100 feet of the uppermost injection perforations or openhole interval in the following wells shown on Exhibit "A" attached hereto for purposes of secondary recovery to wit.

IT IS FURTHER ORDERED THAT:

The proposal to drill the new injection wells, shown on Exhibit "B" attached hereto, and previously approved by Division Order No. R-9483, is hereby placed in abeyance until further notice. All other provisions of Division Order No. 9483 will remain in effect.

The operator shall take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

Prior to commencing injection operations into the wells, the casing in each well shall be pressure tested from the surface to the packer setting depth to assure the integrity of said casing.

The casing-tubing annulus in each well shall be loaded with an inert fluid and equipped with a pressure gauge at the surface or left open to the atmosphere to facilitate detection of leakage in the casing, tubing or packer.

The injection wells or system shall be equipped with a pressure limiting device which will limit the wellhead pressure on the injection wells to no more than .2 psi/ft. of depth to the uppermost perforation or openhole interval.

The Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said wells that such higher pressure will not result in migration of the injected fluid from the Grayburg and San Andres formations. Such proper showing shall consist of a valid step-rate test run in accordance with and acceptable to this office.

Administrative Order WFX-634  
Chevron U.S.A., Inc.  
June 8, 1992  
Page 3

The operator shall notify the supervisor of the Hobbs district office of the Division of the date and time of the installation of injection equipment and of the mechanical integrity tests so that the same may be inspected and witnessed.

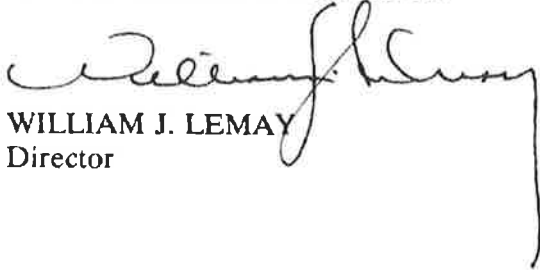
The operator shall immediately notify the supervisor of the Hobbs district office of the Division of the failure of the tubing, casing or packer in said well and shall take such steps as may be timely and necessary to correct such failure or leakage.

The subject wells shall be governed by all provisions of Division Order No. R-9483, as amended and Rules 702-706 of the Division Rules and Regulations not inconsistent herewith.

PROVIDED FURTHER THAT, jurisdiction of this cause is hereby retained by the Division for the entry of such further order or orders as may be deemed necessary or convenient for the prevention of waste and/or protection of correlative rights; upon failure of the operator to conduct operations in a manner which will ensure the protection of fresh water or in a manner inconsistent with the requirements set forth in this order, the Division may, after notice and hearing, terminate the injection authority granted herein.

DONE at Santa Fe, New Mexico, on this 8th day of June, 1992.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

  
WILLIAM J. LEMAY  
Director

S E A L

jc/

cc: Oil Conservation Division - Hobbs  
Case File No. 10260

**EXHIBIT "A"**  
**DIVISION ORDER NO. WFX-634**  
**ARROWHEAD GRAYBURG UNIT**  
**APPROVED INJECTION WELLS**

| Well Number     | Location              | Unit | S-T-R      | Injection Perforations<br>or Openhole Interval | Packer Depth | Tubing<br>Size | Injection<br>Pressure |
|-----------------|-----------------------|------|------------|------------------------------------------------|--------------|----------------|-----------------------|
| AGU No. 128 WIC | 1650' FNL & 2013' FEL | G    | 36-21S-36E | 3800' to 3900'                                 | 3700'        | 2 3/8"         | 760 PSIG              |
| AGU No. 194 WIC | 2310' FNL & 330' FWL  | E    | 12-22S-36E | 3680' to 3900'                                 | 3580'        | 2 3/8"         | 736 PSIG              |

Lea County, New Mexico

**EXHIBIT "B"**  
**DIVISION ORDER NO. WFX-634**  
**PROPOSED NEW-DRILL INJECTION WELL LOCATIONS**  
**IN ABEYANCE**

| <i>Proposed Well Number</i> | <i>Location</i> |      | <i>Unit</i> | <i>S-T-R</i> |
|-----------------------------|-----------------|------|-------------|--------------|
| AGU No. 128                 | SE/4            | NE/4 | G           | 36-21S-36E   |
| AGU No. 194                 | SE/4            | NE/4 | E           | 12-22S-36E   |
|                             |                 |      |             |              |

Lea County, New Mexico



BRUCE KING  
GOVERNOR

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



POST OFFICE BOX 2088  
STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO 87504  
(505) 827-5800

*ADMINISTRATIVE ORDER NO. WFX-618*

*APPLICATION OF CHEVRON U.S.A. INC. TO EXPAND ITS WATERFLOOD PROJECT  
IN THE EUNICE MONUMENT - GRAYBURG SAN ANDRES POOL IN LEA COUNTY,  
NEW MEXICO*

ADMINISTRATIVE ORDER  
OF THE OIL CONSERVATION DIVISION

Under the provisions of Division Order No. R-7766, Chevron U.S.A. Inc. has made application to the Division on December 9, 1991, for permission to expand its Eunice Monument South Unit Waterflood Project in the Eunice Monument - Grayburg San Andres Pool in Lea County, New Mexico.

THE DIVISION DIRECTOR FINDS THAT:

- (1) The application has been filed in due form.
- (2) Satisfactory information has been provided that all offset operators have been duly notified of the application.
- (3) No objection has been received within the waiting period as prescribed by Rule 701(B).
- (4) The proposed injection wells are eligible for conversion to injection under the terms of Rule 701.
- (5) The proposed expansion of the above referenced Waterflood Project will not cause waste nor impair correlative rights.
- (6) The application should be approved.



Administrative Order WFX-618  
Chevron U.S.A. Inc.  
January 21, 1992  
Page 2

IT IS THEREFORE ORDERED THAT:

The applicant, Chevron U.S.A. Inc., be and the same is hereby authorized to inject water into the Eunice Monument - Grayburg San Andres Pool at approximately 3682 feet to approximately 3972 feet through 2 3/8 inch plastic lined tubing set in a packer located within 100 feet of the uppermost injection perforations in the wells shown on Exhibit "A" attached hereto for purposes of secondary recovery to wit.

IT IS FURTHER ORDERED THAT:

The operator shall take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

Prior to commencing injection operations into the wells, the casing in each well shall be pressure tested from the surface to the packer setting depth to assure the integrity of said casing.

The casing-tubing annulus in each well shall be loaded with an inert fluid and equipped with a pressure gauge at the surface or left open to the atmosphere to facilitate detection of leakage in the casing, tubing or packer.

The injection wells or system shall be equipped with a pressure limiting device which will limit the wellhead pressure on the injection wells to no more than .2 psi/ft. of depth to the uppermost perforation, as shown on Exhibit "A".

The Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said wells that such higher pressure will not result in migration of the injected fluid from the Eunice Monument - Grayburg San Andres Pool. Such proper showing shall consist of a valid step-rate test run in accordance with and acceptable to this office.

The operator shall notify the supervisor of the Hobbs district office of the Division of the date and time of the installation of injection equipment and of the mechanical integrity tests so that the same may be inspected and witnessed.

The operator shall immediately notify the supervisor of the Hobbs district office of the Division of the failure of the tubing, casing or packer in any of said wells and shall take such steps as may be timely and necessary to correct such failure or leakage.

Administrative Order WFX-618

Chevron U.S.A. Inc.

January 21, 1992

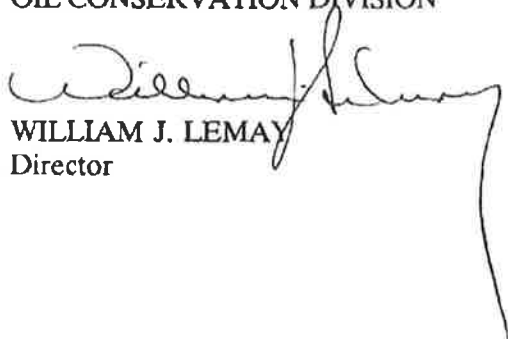
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The subject wells shall be governed by all provisions of Division Order No. R-7766, as amended and Rules 702-706 of the Division Rules and Regulations not inconsistent herewith.

PROVIDED FURTHER THAT, jurisdiction of this cause is hereby retained by the Division for the entry of such further order or orders as may be deemed necessary or convenient for the prevention of waste and/or protection of correlative rights; upon failure of the operator to conduct operations in a manner which will ensure the protection of fresh water or in a manner inconsistent with the requirements set forth in this order, the Division may, after notice and hearing, terminate the injection authority granted herein.

DONE at Santa Fe, New Mexico, on this 21st day of January, 1992.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

  
WILLIAM J. LEMAY  
Director

S E A L

jc/

cc: Oil Conservation Division - Hobbs  
State Land Office - Santa Fe

**EXHIBIT "A"**  
**DIVISION ORDER NO. WFX-618**  
**EUNICE MONUMENT SOUTH UNIT**  
**APPROVED INJECTION WELLS**

| Well Number  | Location              | Unit | S-T-R     | Injection Intervals | Packer Depth | Tubing Size | Injection Pressure |
|--------------|-----------------------|------|-----------|---------------------|--------------|-------------|--------------------|
| EMSU NO. 226 | 3300' FSL & 1980' FEL | O    | 5-21S-36E | 3714' - 3972'       | 3675'        | 2 3/8"      | 743 PSIG           |
| EMSU NO. 228 | 3300' FSL & 660' FWL  | M    | 4-21S-36E | 3700' - 3870'       | 3650'        | 2 3/8"      | 740 PSIG           |
| EMSU NO. 240 | 1830' FSL & 2080' FWL | S    | 4-21S-36E | 3682' - 3886'       | 3600'        | 2 3/8"      | 736 PSIG           |
| EMSU NO. 242 | 1980' FSL & 660' FEL  | Q    | 5-21S-36E | 3724' - 3950'       | 3675'        | 2 3/8"      | 745 PSIG           |

ALL IN LEA COUNTY, NEW MEXICO