

**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

**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**

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.¹

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

¹ 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 NO. 23775

**APPLICATIONS OF EMPIRE NEW MEXICO LLC
TO REVOKE INJECTION AUTHORITY,
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DIV. CASE NOS. 24018-24020, 24025

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

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	19286	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.

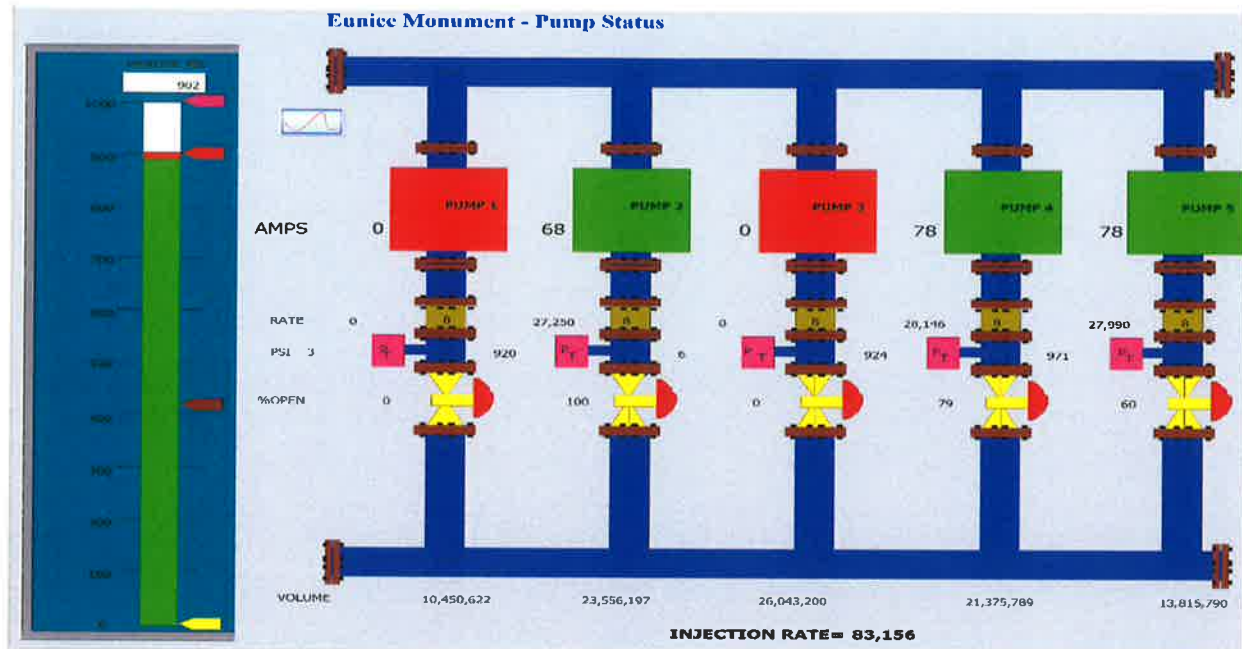


Figure 2 – Page 1 of SCADA Injection Well Table

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 80,892 BPD		EMSU Total 63,645 BPD		EMSU-B Total 17,247 BPD			
Well #	Header #			Target 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 80,878 BPD		EMSU Total 63,631 BPD		EMSU-B Total 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	262		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 80,889 BPD		EMSU Total 63,641 BPD		EMSU-B Total 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.

Eunice Monument - Injection Wells Page 4							
Total 80,903 BPD		EMSU Total 63,655 BPD		EMSU-B Total 17,248 BPD			
Well #	Header #		Target Rate	Rate	Pressure	Set Rate	Set PSI
320	341		0 BPD	313 BPD	757 PSI	600	750
340	341		623 BPD	620 BPD	749 PSI	700	750
342	341		649 BPD	332 BPD	730 PSI	650	750
318	343		1,200 BPD	2,933 BPD	634 PSI	1,200	750
343	343		1,200 BPD	1,202 BPD	11 PSI	1,200	750
344	343		500 BPD	499 BPD	708 PSI	500	750
350	353		600 BPD	539 BPD	727 PSI	600	750
347	355		515 BPD	512 BPD	749 PSI	700	750
348	355		350 BPD	484 BPD	748 PSI	350	750
354	355		300 BPD	282 BPD	736 PSI	300	750
356	355		400 BPD	732 BPD	584 PSI	400	750
390	355		0 BPD	604 BPD	752 PSI	600	750
358	359		300 BPD	304 BPD	736 PSI	300	750
359	359		800 BPD	795 BPD	681 PSI	800	750
360	359		999 BPD	1,067 BPD	586 PSI	1,000	750
366	359		700 BPD	689 BPD	737 PSI	700	750
332	369		150 BPD	855 BPD	21 PSI	150	750
334	369		1,000 BPD	1,029 BPD	728 PSI	1,000	750
368	369		500 BPD	0 BPD	0 PSI	500	750
370	369		700 BPD	874 BPD	516 PSI	700	750
376	369		400 BPD	0 BPD	2 PSI	400	750
364	381		0 BPD	0 BPD	11 PSI	0	0
366	381		90 BPD	0 BPD	0 PSI	80	750
380	381		150 BPD	0 BPD	421 PSI	150	750
404	381		100 BPD	0 BPD	0 PSI	100	750

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.

Eunice Monument - Injection Wells Page 5							
Total 80,909 BPD		EMSU Total 63,662 BPD		EMSU-B Total 17,247 BPD			
Well #	Header #		Target Rate	Rate	Pressure	Set Rate	Set PSI
362	383		600 BPD	592 BPD	4 PSI	600	750
382	383		50 BPD	70 BPD	3 PSI	50	750
384	383		1,000 BPD	1,035 BPD	19 PSI	1,000	750
357	397		150 BPD	239 BPD	176 PSI	150	750
388	397		350 BPD	878 BPD	692 PSI	350	750
396	397		126 BPD	129 BPD	750 PSI	1,300	750
398	397		1,399 BPD	479 BPD	719 PSI	1,400	755
378	407		350 BPD	0 BPD	25 PSI	350	750
408	407		962 BPD	967 BPD	755 PSI	1,000	750
374	411		0 BPD	0 BPD	0 PSI	0	750
410	411		900 BPD	891 BPD	20 PSI	900	750
402	423		550 BPD	547 BPD	665 PSI	550	750
400	427		550 BPD	553 BPD	719 PSI	550	750
426	427		450 BPD	431 BPD	720 PSI	450	750
434	427		1,400 BPD	1,079 BPD	44 PSI	1,400	750
442	442		1,000 BPD	932 BPD	447 PSI	1,000	750
446	451						

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:

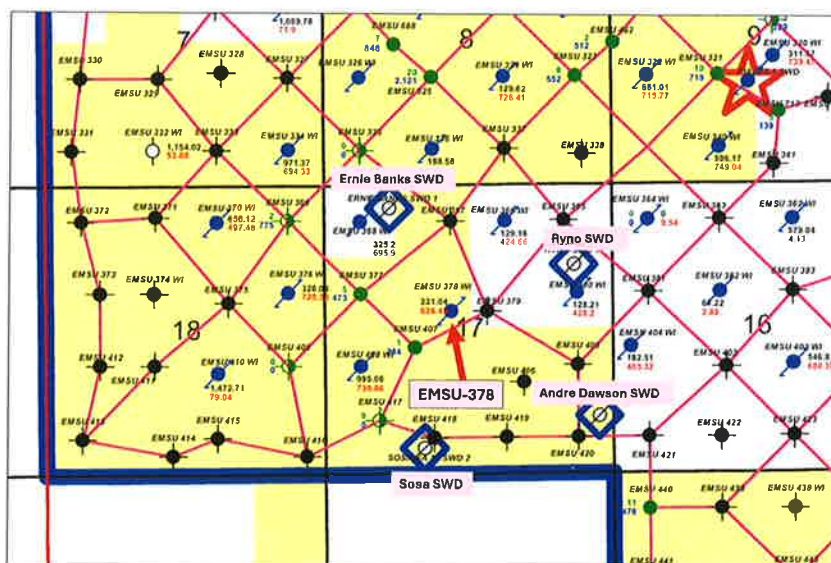
Empire EMSU 378

Gradients

	Real Time (MM/dd/yyyy HH:mm:ss)	Stop Type	Depth (ft)	TVD (ft)	Pressure (psia)	Pressure Gradient (TVD)	Temp. (degF)	Temp. Gradient (TVD)
1	10/08/2024 12:00:26	Static	0	0	8.909	0.000000	80.296	0.000000
3	10/08/2024 12:06:14	Static	2000	2000	73.718	0.032405	81.187	0.000445
4	10/08/2024 12:13:00	Static	3000	3000	493.979	0.420261	84.502	0.003315
5	10/08/2024 12:20:19	Static	4000	4000	932.980	0.439001	87.371	0.002869
6	10/08/2024 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 (T21S, R36E, Lea County)	Injection Interval	Packer Depth	Maximum 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

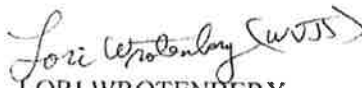
Page 3

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 (Lea County)	Injection Interval	Packer Depth	Maximum 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

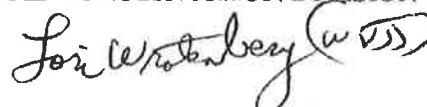
Page 3

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 Andres 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

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.

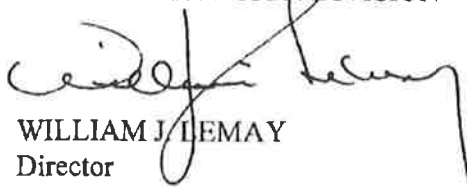
Administrative Order WFX-730
Chevron U.S.A. Production Company
December 12 1997
Page 3

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

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

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

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.

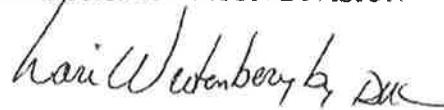
Administrative Order WFX-754
Chevron USA Production Company
July 8, 1999
Page 3

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

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

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 15th 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.

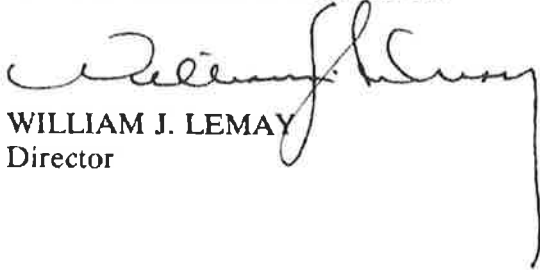
The operator shall immediately notify the supervisor of the Hobbs district office of the Division of the failure of the tubing, casing or packer in said well and shall take such steps as may be timely and necessary to correct such failure or leakage.

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 or Openhole Interval	Packer Depth	Tubing Size	Injection 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

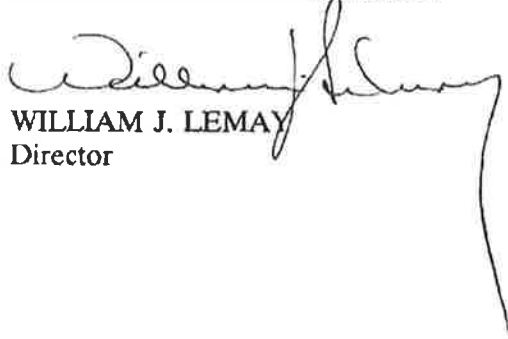
Page 3

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

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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