

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

**APPLICATION OF CHEVRON USA INC.  
TO APPROVE SALT WATER DISPOSAL  
WELL IN LEA COUNTY, NEW MEXICO.**

**CASE NO. 23686**

**APPLICATION OF CHEVRON USA INC.  
TO APPROVE SALT WATER DISPOSAL  
WELL IN EDDY COUNTY, NEW MEXICO.**

**CASE NO. 23687**

**NOTICE OF FILING REVISED EXHIBITS**

Chevron USA, Inc. (“Chevron”) hereby submits this notice that Chevron is filing two revised exhibits as discussed at the November 8, 2023 New Mexico Oil Conservation Commission hearing in these two matters. First, Chevron is filing a revised slide entitled “El Mar Field Decline Analysis Demonstrates Limited Remaining Reserves in Entire Field,” which is identified as page number 147 of 267 in Chevron’s exhibit packet. Chevron revised this slide to reflect the date of 1977 as the date the most recent well was drilled. Chevron is also filing a revised slide entitled “Lamar XLOT Data Summary,” which is identified as slide 150 of 267. Chevron revised this slide to change “Minimum stress gradient (psi/ft)” to “Minimum Stress closure pressure (psi/ft).” Chevron respectfully requests that these revised exhibits be substituted for the exhibits previously filed.

Respectfully submitted,

By: /s/ Deana M. Bennett

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## CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing was served on the following counsel of record by electronic mail on November 8, 2023:

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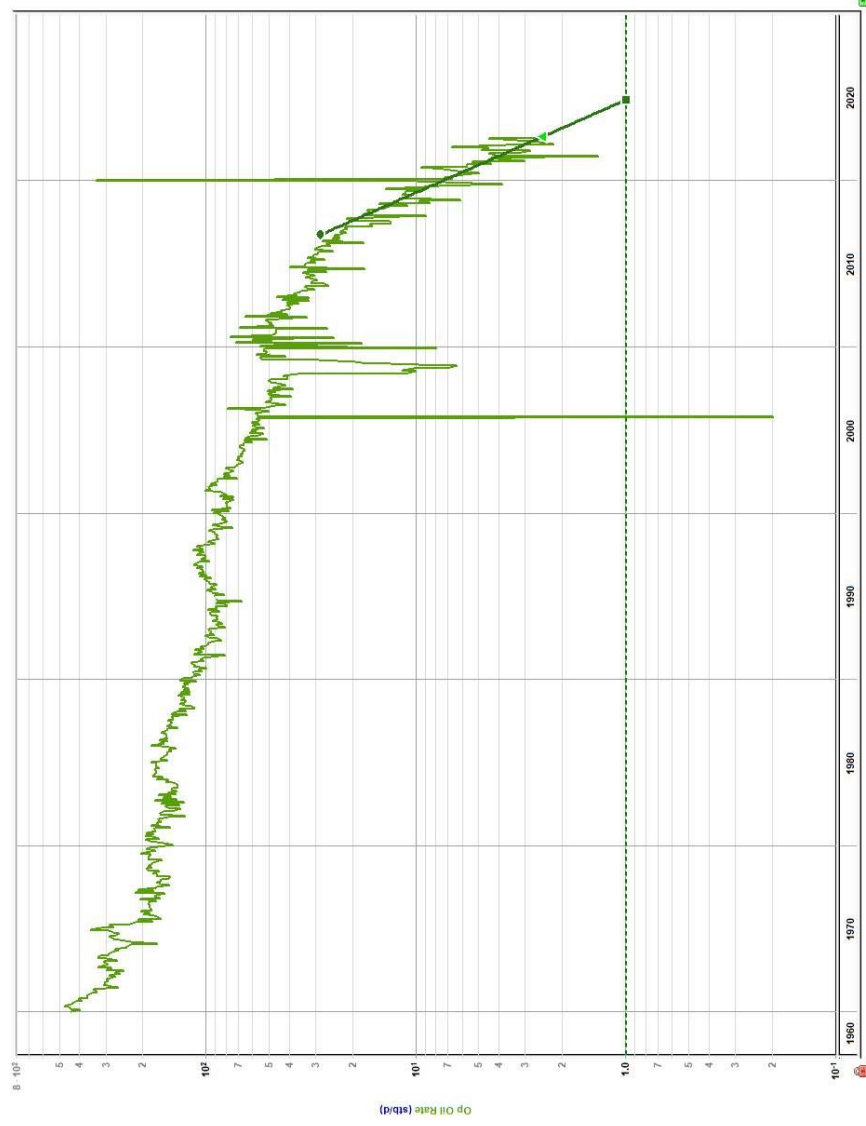
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# El Mar Field Decline Analysis Demonstrates Limited Remaining Reserves in Entire Field

Decline Type	Exponential
Annual Decline, %/year	33.82
Cutoff Rate, BO/Month	30.0
End Date	Nov 2024
Remaining Oil, MSTB	1.313

El Mar Field Well Count: 20 in 2022  
Most recent well drilled: 1977



Gas excluded from analysis due to data missing post 1997

OCD Examiner **Barbara** Nov. 8-9, 2023  
No. 20230-23687  
145

# Lamar XLOT Test Data Summary

Test	Cycle 1	Cycle 2	Cycle 3
Test date	10/29/2022	10/29/2022	10/29/2022
Pumping start time	1:24:45 AM	2:08:28 AM	2:40:58 AM
Pumping duration (mm:ss)	2:17	1:41	1:38
Total injection volume (bbl)	0.59	0.73	1.18
Average injection rate (bpm)	0.26	0.43	0.72
Shut-in time (min)	23.5	23.0	32.0
Flowback volume (bbl)	-	0.25	0.20
Surface ISIP (psi)	1,744	1,713	1,701
ISIP at csg shoe (1583.94ft TVD) (ps	2,499	2,468	2,456
Leak off pressure (psi)	2,380	2,411	2,426
Leak off pressure (ppg)	28.90	29.27	29.45
Fracture closure time (min)	10.8	14.6	18.0
Minimum stress at casing shoe (psi)	1930	1821	1,799 - 1,729
Minimum stress closure pressure (psi/ft)	1.22	1.15	1.14 - 1.10
Minimum stress gradient (ppg)	23.43	22.11	21.84

\* Minimum stress from the G-dP/dG Plot is used as the value is more evident.

\*\* Fracture closure from Cycle 1 may not occur.

\*\*\* No density log data available to calculate overburden stress, but it is estimated to be around 1.2 psi/ft.

- Reduction in ISIP from Cycles 1 to 3 indicates the rock was weakened and fracture complexity was reduced.
- Reduction in closure stress suggests that the impact of multiple fractures diminished after each injection.
- The fracture closure time was longer than the model predicted, which indicates that Lamar is tighter than 1md.

**Max BHP gradient during injection operations will be ~ 0.7 psi/ft giving a safety factor on the Lamar fracture closure pressure of 1.57 – 1.74**

- Casing Shoe Depth ~1584 ft.
- The XLOT results clearly show that the Lamar has higher closure stress (1.1–1.22 psi/ft) and ultralow perm.
- Higher values in tensile strength, Young's Modulus and fracture toughness make the Lamar difficult to break down. LOP: 1.5–1.53 psi/ft
- Above properties and testing pressure behavior suggest that Lamar can act as a seal during disposal in the DMG

No sign of clear formation breakdown observed up to 2,200psi surface pressure (36.4ppg EMW)