State of New Mexico Energy, Minerals and Natural Resources Department

Susana Martinez Governor

David Martin Cabinet Secretary

Brett F. Woods, Ph.D. Deputy Cabinet Secretary David R. Catanach, Division Director Oil Conservation Division



Administrative Order IPI-498 August 26, 2015 Administrative Application Reference No. pMAM1523655150

Ms. Denise Pinkerton Chevron U.S.A. Inc. 15 Smith Road Midland, TX 79705

RE: <u>Injection Pressure Increase</u>

Central Vacuum Unit Tertiary Recovery Project Vacuum Grayburg San Andres Pool (62180)

Dear Sir or Madame:

Reference is made to your request on behalf of Chevron U.S.A. Inc. (OGRID 4323) received on August 24, 2015, to increase the maximum allowed surface tubing pressure on the following well(s):

| Well No. | API Number | ULSTR | Order Allowing Injection | Existing Pressure Limit, Psi | Existing Tubing OD, In. |
|----------|--------------|--------------|--------------------------------|------------------------------------|-------------------------------|
| CVU #259 | 30-025-40464 | G-1-18S-34F | WFX-901 | 1500 | 2-3/8 |
| CVU #345 | 30-025-31204 | N-31-17S-35E | PMX-200 | 1500 | 2-3/8 |
| CVU #458 | 30-025-38640 | A-36-17S-34E | WFX-835 | 1875 | 2-3/8 |

It is our understanding that the requested pressure increase is needed in order to increase the rate of injection and this pressure increase will not result in the fracturing of the formation and confining strata.

Based on the results of the submitted step rate injection test(s), the following shall be the new pressure limit(s) while equipped with injection tubing:

| Well No. | Step Rate Test Date | New Pressure Limit | While Injecting | Injection Interval, Feet | Pressure Gradient (in psi/ft) |
|----------|------------------------|-----------------------|-----------------|-----------------------------|-------------------------------------|
| CVU #259 | 8/19/15 | 2100 | water | 4922 to 5024 | 0.43 |
| CVU #345 | 8/17/15 | 2350 | water | 4309 to 4710 | 0.55 |
| CVU #458 | 8/14/15 | 2200 | water | 4369 to 4781 | 0.5 |

This approval is based on the provision that the tubing size, packer setting depth and completion interval for the well(s) does not change. Any future requested pressure increase will require resubmission of additional data and/or a new step-rate test. The Division Director retains the right to require at any time wireline verification of completion and packer

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setting depths in the well(s). This approval is subject to your being in compliance with all other Division rules, including but not limited to Division Rule 19.15.5.9 NMAC.

The Division Director may rescind any injection permit if it becomes apparent that the injected fluid is not being confined to the permitted disposal interval or is endangering any fresh water aquifer.

Sincerely,

DAVID R. CATANACH

Director

DRC/wvjj

ce: Oil Conservation Division - Hobbs District Office

State Land Office - Oil, Gas, and Minerals Division Well File(s), WFX-901, PMX-200, WFX-835