



New Mexico Energy, Minerals and Natural Resources Department

Bill Richardson
Governor

Jon Goldstein
Cabinet Secretary

Jim Noel
Deputy Cabinet Secretary

Mark Fesmire
Division Director
Oil Conservation Division



Administrative Order IPI-360
February 18, 2010

Melrose Operating Company
20333 State Highway 249
Suite 310
Houston, TX 77070

Attention: David Catanach, Agent

RE: Injection Pressure Increase Request

Artesia Unit Waterflood Project (Case No 13199, Order No R-11720)

| | | |
|--------------------------|----------------------|-------------------------|
| Artesia Unit Well No. 1 | API No. 30-015-01564 | Unit L, Sec 26, WFX-733 |
| Artesia Unit Well No. 29 | API No. 30-015-01742 | Unit N, Sec 35, WFX-768 |
| Artesia Unit Well No. 53 | API No. 30-015-01788 | Unit J, Sec 03, R-11720 |
| Artesia Unit Well No. 46 | API No. 30-015-02541 | Unit F, Sec 03, IPI-301 |

All are NMPM, Eddy County

Artesia-Queen-Grayburg-San Andres Pool

Reference is made to your request on behalf of Melrose Operating Company (OGRID 184860) received January 20, 2010, to increase the surface injection pressure limits on the four above named wells in the Artesia Unit Waterflood Project.

Division Order R-11720-A and Administrative Orders No. WFX-733 and WFX-768, permitted Melrose Operating Company to inject water into the Artesia-Queen-Grayburg-San Andres Pool through the gross interval from approximately 1,897 feet to 2,750 feet using 2-3/8-inch plastic lined tubing set in a packer located within 100 Feet of the uppermost injection perforations in the following described wells for purposes of secondary recovery to wit:

Artesia Unit Well No. 1 (API No. 30-015-01564)
Unit L, Sec 26, Township 17 South, Range 28 East, NMPM
Perforated Interval: 2,072 feet to 2,600 feet
Maximum Surface Injection Pressure: 394 psi

Artesia Unit Well No. 29 (API No. 30-015-01742)
Unit N, Sec 35, Township 17 South, Range 28 East, NMPM
Perforated Interval: 2,454 feet to 2,467 feet
Maximum Surface Injection Pressure: 491 psi



Artesia Unit Well No. 53 (API No. 30-015-01788)
Unit J, Sec 03, Township 18 South, Range 28 East, NMPM
Perforated Interval: 2,327 feet to 2,337 feet
Maximum Surface Injection Pressure: 436 psi

Artesia Unit Well No. 46 (API No. 30-015-02541)
Unit F, Sec 03, Township 18 South, Range 28 East, NMPM
Perforated Interval: 1,946 feet to 2,419 feet
Maximum Surface Injection Pressure: 425 psi

It is our understanding that these wells will not take sufficient volumes of water at these pressure limits and higher pressure limits are needed to optimize the waterflood operation within this unit.

The basis for granting your requested pressure increases is based on the injection step rate tests run on these wells in September of 2009. You measured both surface and bottomhole pressures during this test.

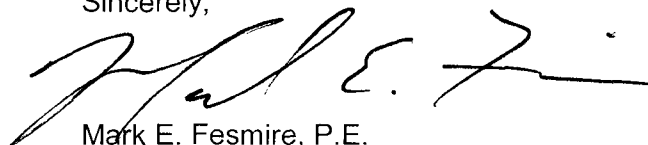
You are hereby authorized to utilize up to the following maximum surface injection pressures on these wells provided the tubing, size, type, and packer setting depth does not change.

| <u>Well</u> | | <u>Max Pressure</u> |
|--------------------------|----------------------|---------------------|
| Artesia Unit Well No. 1 | API No. 30-015-01564 | 1050 psi |
| Artesia Unit Well No. 29 | API No. 30-015-01742 | 1300 psi |
| Artesia Unit Well No. 53 | API No. 30-015-01788 | 850 psi |
| Artesia Unit Well No. 46 | API No. 30-015-02541 | 1000 psi |

This approval is subject to your being in compliance with all other Division rules, including but not limited to Division Rule 5.9.

The Division Director may rescind this injection pressure increase if it becomes apparent that the injected fluid is not being confined to the injection zone or is endangering any fresh water aquifers.

Sincerely,



Mark E. Fesmire, P.E.
Acting Division Director

MEF/tw

cc: Oil Conservation Division – Artesia
WFX-733 & WFX-768
Case No. 13199