



# 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.

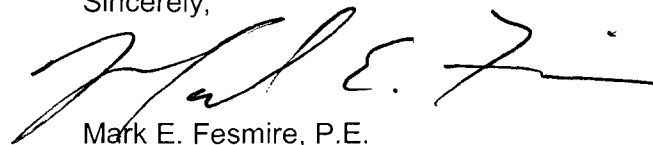
You are hereby authorized to utilize up to the following maximum surface injection pressures on these wells provided the tubing, size, type, and packer setting depth does not change.

<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