



# 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-377  
June 22, 2010

Enervest Operating, L.L.C.  
1001 Fannin Street, Suite 800  
Houston, Texas 77002-3500

Attention: Ms. Shirley Galik

**RE: Injection Pressure Increase Request**

West Loco Hills Grayburg No. 4 Sand Unit (R-13128)  
Loco Hills; Queen-Grayburg-San Andres Pool (39520)  
Eddy County, New Mexico

Reference is made to your request on behalf of Enervest Operating, L.L.C. (OGRID 143199) received by the Division June 9, 2010, to increase the surface injection pressure limit on the sixteen (16) injection wells (Exhibit "A").

The Phase I injection wells were permitted to inject produced water into the unitized Grayburg formation and governed by Division Order No. R-13128 Case No. 14243 issued in May, 2009, and the maximum surface injection pressure was limited to 510 psi.

It is our understanding the wells in Exhibit "A" need additional surface injection pressure to balance injection and withdrawal rates in order to optimize waterflood operations. The basis for granting these pressure increases are the sixteen step rate tests run by Cardinal Surveys Company in May and June 2010.

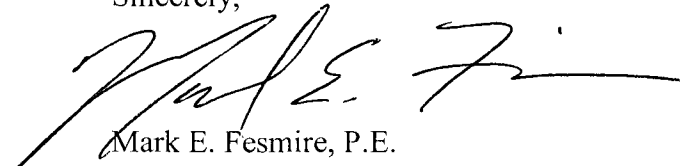
Enervest Operating, L.L.C. is hereby authorized to utilize the maximum surface injection pressures on the wells shown below in Exhibit "A", provided the tubing, size, type, setting depths and perforation depths do not change, but is prohibited from injecting at pressures that would induce fracturing in individual wells.



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, or is causing waste of oil and gas.

Sincerely,



Mark E. Fesmire, P.E.  
Acting Director

MEF/tw

cc: Oil Conservation Division - Artesia  
File: R-13128

**Exhibit "A"**  
**Energvest Operating, L.L.C.**  
**West Loco Hills Grayburg No. 4 Sand**  
**Unit Injection Wells Phase I**  
**T8S, R30E, NMPM, Chaves County,**  
**NM**  
**Injection Pressure Increases**

<b>Well</b>	<b>API</b>	<b>Top Perf</b>	<b>Bottom Perf</b>	<b>Maximum Surface Injection Pressure(psi)</b>
W.L.H. Unit No. 32	30-015-36772	2659	2686	1,100
W.L.H. Unit No. 33	30-015-37019	2614	2640	1,206
W.L.H. Unit No. 34	30-015-37017	2626	2645	870
W.L.H. Unit No. 35	30-015-36771	2630	2646	734
W.L.H. Unit No. 37	30-015-37021	2670	2696	1,404
W.L.H. Unit No. 38	30-015-37022	2654	2672	1,466
W.L.H. Unit No. 39	30-015-36769	2684	2714	996
W.L.H. Unit No. 41	30-015-37023	2680	2702	1,020
W.L.H. Unit No. 42	30-015-37026	2658	2684	804
W.L.H. Unit No. 44	30-015-37027	2678	2692	826
W.L.H. Unit No. 45	30-015-37025	2670	2694	880
W.L.H. Unit No. 48	30-015-37018	2653	2683	1,418
W.L.H. Unit No. 49	30-015-37015	2652	2676	1,104
W.L.H. Unit No. 50	30-015-37014	2639	2665	1,100
W.L.H. Unit No. 51	30-015-37013	2614	2640	1,398
W.L.H. Unit No. 53	30-015-37016	2642	2671	1,194