



New Mexico Energy, Minerals and Natural Resources Department

Bill Richardson
Governor

Joanna Prukop
Cabinet Secretary

Mark Fesmire
Division Director
Oil Conservation Division



Administrative Order IPI-357
November 18, 2009

Apache Corporation
3120 S. Yale
Suite 1500
Tulsa, OK 74136-4224

Attention: Mr. Jeff Fredrick

RE: Injection Pressure Increase Request

House SWD Well No. 1 (API No. 30-025-39193) SWD-1169
Unit M, Sec. 12, T20 South, R38 East, NMPM, Lea County, New Mexico
Lower San Andres formation
Through open hole from 4600 feet to 5500 feet

Reference is made to your request on behalf of Apache Corporation (OGRID 873) received by the Division July 20, 2009, to increase the surface injection pressure limit on the above named disposal well.

Administrative Order No. SWD-1169 approved on March 23, 2009, permitted the House SWD Well No. 1 for injection into the lower San Andres formation from open hole at 4600 feet to 5500 feet through 3-1/2 inch plastic-lined tubing and allowed a maximum surface injection pressure of 920 psi.

Administrative Order No. IPI-351 was approved on August 3, 2009 allowing a surface pressure increase to 1550 psi.

It is our understanding that this well will not take a sufficient volume of water at this pressure limit and a higher pressure limit is needed to enable increased water disposal.

The basis for granting this pressure increase is the step rate test run by Cudd Energy Services on this well in October 22, 2009. Cudd measured the surface and downhole pressures during this test with electronic pressure gauges. The results from the step rate test data show that an increase in the surface injection pressure for this well is justified and will not result in the fracturing of the injection formation and confining strata.



You are hereby authorized to utilize up to **1720 psi** as the maximum surface injection pressure on this well provided the tubing, size, type, setting depth and perforation depths do not change. However, you are prohibited from injecting at pressures that would induce fracturing.

The injection authority granted herein shall terminate one year after the effective date of this order if the operator has not commenced injection operations into the subject well, provided however, the Division, upon written request by the operator, may grant an extension thereof for good cause shown.

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,

A handwritten signature in black ink, appearing to read 'Mark E. Fesmire', with a stylized flourish at the end.

Mark E. Fesmire, P.E.
Director

MEF/tw

cc:
Oil Conservation Division - Hobbs
File: SWD-1169