



NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

Mark E. Fesmire, P.E.
Director
Oil Conservation Division

September 16, 2005

Alberto Gutierrez, C.P.G. 505-842-8000 Fax 505-842-7380
Agent on behalf of DEFS
500 Marquette Ave NW
Suite 1350
Albuquerque, NM 87102

(aag@geology.com)

RE: Acid Gas injection Well Application for the:
Proposed Linam AGI Well No. 1 API No. 30-025-NA
Unit K, Section 30, Township 18 South, Range 37 East, NMPM, Lea County, NM
Injection into the Lower Bone Springs from 8,700 to 8,900

Dear Mr. Gutierrez:

The Division received this application on September 13, 2005.

The Division Director has decided this must be approved in an **Oil Conservation Commission (not Division) hearing**. Please plan on contacting your attorney and have the case presented before the Commission.

I have looked over your application and reviewed the other three New Mexico Acid Gas injection wells' permitting process and recommend you consider the following:

- 1) We use a gradient above the top injection perforation of 0.2 psi/ft. Therefore, the maximum allowed surface injection pressure will be 1740 psi at this depth. Please let the DEFS reservoir engineers know this – so they can predict if this reservoir will have adequate permeability to accept enough fluid with this pressure restriction. The operator can apply for an increased pressure limit after demonstrating that injected fluid will not fracture the formation and will remain in the intended injection interval. This is normally done with a Step Rate Test, but can include other methods.
- 2) Only this Lower Bone Springs (8,700 – 8,900) will likely be considered in this permit application. If other intervals are needed, an amendment can be requested – although this consists essentially of a new application with a new Area of Review evaluation and notice. The Brushy Canyon could be evaluated for injection while drilling or after drilling by various means, prior to the Division granting a permit. Division records indicate that the Lower San Andres and deeper intervals have been used for injection in this area in the past (see SWD-68 and SWD-182).
- 3) Division rules allow the examiner or the Director to require additional notice of any application as needed. In this instance, I will recommend the following notice be provided to affected parties within a 1 mile radius of this wellbore. This includes all tracts that are wholly or partially contained within this 1 mile radius. For each of these tracts, the Division designated operator of record for all depths from the intended injection interval to the surface should be notified. Division records indicate there are only two active wells within a 1 mile radius. These are operated respectively by XTO Energy and by Southwest Royalties. If a tract does not have an operator, then the lessees must be notified. If no lessees, then the mineral interest owners must be notified. The surface owner of the well site, the facility site, and the

flowline to the well must be notified. The surface owner in our State records database for this location is the New Mexico State Land Office. The surface lessee should also be notified. **Proof of notice should also be provided to the City of Hobbs** in addition to a normal Newspaper notice.

4) Please advise the Division in your application of the presence of an H₂S contingency plan for accidental releases of H₂S from your flowline or wellhead.

5) Please send an expected fluid composition of the fluid to be injected. Are all wastes to be disposed of exempt from regulation as hazardous wastes by Subtitle C of RCRA?

6) Is water to be injected along with H₂S and CO₂ and other gases? If so, what is the composition and source of the water to be injected? Is this the reason, you are proposing plastic coated tubing?

7) If this is to be dry gas, please state the pressure and temperature that this will remain dry and possibly in a non-corrosive state. What is the quality control and where is the dehydrators?

8) Assuming this is to be dry gas: Please let the Division know why DEFS has decided against using non-plastic coated L-80 tubing and with Diesel loaded in the annulus - as requested by DEFS in the previous Acid Gas injection well (SWD-838-B) located in Section 7, Township 18 South, Range 28 East, NMPM, Eddy County, New Mexico. For that injection well, Mr. Russell Bentley with Duke Energy in Houston was the project engineer. Duke maintained that plastic coated tubing will be permeated and destroyed by acid gas. Duke also believed that a diesel filled annulus - in lieu of water filled - would prevent any tubing leaks from contacting water and creating carbonic acid and causing casing corrosion.

9) Be advised that continuous or at least daily recordings of tubing pressure, annulus pressure, and injection rate will probably be required. The operator will be required to provide a plot of these recordings on a regular basis to the Division. If this data is available, frequent MIT tests will probably not be required, especially since MIT tests on Acid Gas wells are potentially dangerous.

10) There appears to be a shallow plugged wellbore 30-025-05519 at the exact location you are proposing to drill a new well. Your application does not say this is a re-entry of an old wellbore.

11) Your application does not have a wellbore diagram of the proposed injection well - **please provide one with the formation depths marked on it.** Please plan on circulating cement on all casing strings within this proposed well and covering the Ogallala with surface casing and cement.

12) Your application does not have wellbore diagrams of the Plugged and Abandoned wells in the Area of Review that penetrated, or almost penetrated, the depth of proposed injection. We believe there are only three wells close to the depth you are proposing for injection within 1 mile of your proposed well. Please provide wellbore diagrams for wells with the following API numbers: 30-025-05512, 30-025-03976, and 30-025-21832.

Sincerely,



William V. Jones PE
Engineer for the Division

cc: Hobbs District office of the Division
Joshua Epel DEFS 370 17th St. #2500, Denver, CO 80202