

COMMISSION CALLED HEARING TO SHOW CAUSE WHY DSC'S INJECTION PERMIT (PERMIT NO. 02899) FOR THE LEO HANSELMAN UNIT 1 WELL NO. 1, MARCADO CREEK (4400) FIELD, VICTORIA COUNTY, TEXAS, SHOULD NOT BE AMENDED OR REVOKED FOR FAILURE TO ENSURE INJECTION FLUID IS CONFINED TO THE APPROVED STRATA AND FOR FAILURE TO OPERATE IN COMPLIANCE WITH ITS PERMIT.

Heard by: Margaret Allen, Technical Hearings Examiner

Procedural history

Notice of show cause hearing issued: October 16, 2001

Hearing held: November 2, 2001

Hearing closed: February 22, 2002

Proposal for decision issued: March 27, 2002

Appearances

<u>Respondent</u>	Representing
John R. Hays	DSC
Steve Wood	
Kerry Pollard	

EXAMINERS' REPORT AND PROPOSAL FOR DECISION

STATEMENT OF THE CASE

In 2000, the prior operator of the Leo Hanselman Unit 1, Well No. 1, GDDC, applied for a permit for a second disposal well on this unit in the Marcado Creek (4400) Field, Victoria County. That application was protested by Leo Hanselman, Jr./Leo Hanselman Sr. Trust, mineral interest and offset interest owner, and a hearing was held February 16, 2001. On August 7, 2001, the commission signed a Final Order, in Docket No. 02-0227275, denying GDDC's application for the Leo Hanselman Unit 1 Lease Well No. 2 disposal well. The order included the following paragraph:

It is further **ORDERED** by the Commission that staff set a hearing and cause notice to be issued to the current operator of the Leo Hanselman Unit 1, Well No. 1, that it shall be required at the hearing to show cause why its permit for the Leo Hanselman Unit 1, Well No. 1, should not be amended or revoked for failure to ensure injection fluid is confined to the approved strata and for failure to operate in compliance with its permit.

DSC, the current operator, wants to continue using the Leo Hanselman Unit 1, Well No. 1 ("subject well" or "Well No. 1") as a commercial disposal well to dispose of oil and gas waste. No

protest was made to DSC's continued operation.

DISCUSSION OF THE EVIDENCE

The Leo Hanselman Unit 1, Well No. 1 was drilled to 5200' in 1974. Surface casing was cemented from 512' to the surface and the production casing was cemented from a depth of 5020' to the surface. TNRCC estimated that usable-quality ground water occurs to a depth of 1200', though the log of Well No. 1 shows it extends to 1210'. In 1981, a bridge plug was set at 4090' and the well converted to a commercial disposal facility. The permitted injection interval extends from 2900' to 3650', and tubing is set on a packer at 3515'. The injection perforations are between 3544' and 3580'.

On December 8, 2000, Well No. 1's permit was amended to increase the maximum disposal volume from 2000 to 4000 barrels of water, at a maximum pressure of 1450 psi. The prior operator, GDDC, apparently still had more oil and gas waste than Well No. 1 could dispose of. Commission inspection reports and photographs submitted at GDDC's hearing February 16, 2001, showed full to overflowing storage tanks and numerous spills.

When DSC purchased the property in March, 2001, it was aware that GDDC had applied for a second disposal permit but was not involved in the application. DSC found the five-acre facility had been badly maintained with problems that included contaminated dirt, over-flowing tanks and a great deal of junk that needed to be removed. DSC has continued to operate the well and has been injecting about 1500 barrels of water per day at a surface pressure of 1100 psi.

Before the proposal for decision was issued June 8, 2001, on GDDC's application, DSC had already performed a large amount of property clean up. Some of the dried drilling mud was hauled off and some landfarmed. Soil contaminated with oil was hauled to a disposal site and the entire property was covered in gravel. DSC placed concrete pads under the shaker, the injection pumps and any other equipment that might leak. Two thirds of the piping was replaced, and new pumps and flow lines installed. According to DSC, the prior operator left the area unfenced, and DSC has now installed a secure fence. Clean-up has continued since the notice of this show-cause hearing was issued, and DSC estimates the clean-up costs to have been \$200,000.

The Commission's inspection reports confirm that DSC began cleaning up the facility before GDDC's application for a second well was acted on. An inspection report dated April 24, 2001, noted that the facility had changed operators and there had been a lot of clean up already. Some tanks had been removed and the storage pits again had the two feet of freeboard required by the permit. Insufficient freeboard on the storage tanks was one of the common infractions noted in inspection reports and presented at GDDC's hearing. An inspection report from May, 2001, indicated still more improvements, including repairs to the fire wall, removal of much of the contaminated soil and the graveling of the entire yard.

DSC operates vacuum trucks under the name of QV Services of Texas. The applicant submitted testimonials from some of its customers to show that continued operation of this disposal well is in the public interest. These customers noted that oil and gas waste will have to be transported 125 miles farther to find another commercial disposal well if this facility is shut down.

The other primary problem noted at GDDC's hearing in February, 2001, was the existence of

a wellbore of unknown status 1100' from Well No. 1. DSC presented evidence showing this well was reported plugged in 1962, with cement plugs at 3781', at 615' and at 50'. Surface casing had been set to 615', and production casing extending from 4769' to 615' was left in the hole, but the amount of cement that was behind the production casing is unknown.

DSC agreed to obtain permission from the offsetting property owner to re-enter this well, the Delhi Taylor Annie Martin No. 1. On January 30 and 31, 2002, DSC set five plugs at 1220', 1020', 565', 400' and 4' in this well. There are two other plugged and abandoned wells within the 1/4 mile radius of review around Well No. 1 required under Statewide Rule 9. These two wells were adequately plugged originally so as to prevent saltwater injected into Well No. 1 from rising above the injection interval.

In the last 17 years, three and one half million barrels of waste have been disposed of into Well No. 1, for an average of 560 barrels a day. Assuming net pay of 80', permeability of 100 md and porosity of 25%, DSC showed the pressure increase 1100' from Well No. 1 would have been only 35 psi after 10 years, and will be 39 psi after 20 years. Even assuming the less porosity and permeability, any reasonable calculation indicates the pressure increase at the Delhi Taylor Annie Martin No. 1 will be less than 100 psi. DSC believes this offsetting well is now cased and plugged to withstand a pressure increase of this magnitude.

EXAMINER'S OPINION

The examiner believes that DSC has shown cause why its permit should not be revoked or amended and that this proceeding should be dismissed. Further, DSC's the current disposal permit for Leo Hanselman Unit 1, Well No. 1 should remain in effect. The existing disposal well is cased and cemented to protect usable-quality water. The current operator, DSC, has cleaned up the site and replaced the inadequate equipment. This operator also re-entered and plugged the only wellbore of unknown status within a 1/4 mile radius. Injected waste will be confined to the disposal sandstones.

The applicant has demonstrated that the proposed disposal well is in the public interest because the closest similar facility is over 100 miles away. Waste produced by oil and gas activity should be disposed of safely and reasonable close to the site of generation.

FINDINGS OF FACT

1. Notice of this show cause hearing was issued by the Commission to all affected persons on October 16, 2001.
2. Evidence was presented to the Commission in Oil & Gas Docket No. 02-0227275, that the previous operator of the Leo Hanselman Unit 1, Well No. 1, may have failed to ensure injection fluid was confined to the approved strata and may not have been in compliance with its permit.
3. Permit No. 02899 had been issued in 1981, allowing the Leo Hanselman Unit 1, Well No. 1, to be used as a commercial disposal well in the Mercado Creek (4400) Field, Victoria County.
 - a. The maximum permitted injection pressure is 1450 psi and maximum volume permitted

- to be disposed of into Well No. 1 is 4,000 barrels of oil and gas waste per day.
- b. Surface casing in the Leo Hanselman Unit 1, Well No. 1 is set and cemented to a depth of 512' below the surface and the production casing was cemented from a depth of 5020' to the surface. Usable-quality water occurs to a depth of 1210 feet.
 - c. The permitted injection interval extends from 2900' to 3650'.
 - d. Injection is into tubing set on a packer at 3515 feet, into perforations between 3544' and 3580'.
4. There are three wellbores within the 1/4 mile radius of review that have been plugged and abandoned in a manner to insure the waste being disposed of remains in the disposal interval.
 - a. Evidence previously submitted to the Commission shows that two wellbores within 1/4 mile were properly plugged and cemented in accordance with current Commission practice.
 - b. DSC replugged the Delhi-Taylor Annie Martin No. 1, which was abandoned in 1962, and is 1100' from the Leo Hanselman Unit 1, Well No. 1.
 - c. On January 30 and 31, 2002, DSC set plugs at 1220', 1020', 565', 400' and 4' in the Delhi Taylor Annie Martin No. 1.
 5. The pressure increase at the Delhi Taylor Annie Martin No. 1, 1100' from the Leo Hanselman Unit 1, Well No. 1, as a result of disposal into the Leo Hanselman Unit 1, Well No. 1, will be less than 100 psi.
 6. Continuation of this permit is in the public interest because other disposal wells are over 100 miles from this facility and operations in accordance with the permit will not endanger usable-quality ground water or oil and gas resources.
 7. DSC, the current operator has cleaned up the Leo Hanselman Unit 1 site and replaced the inadequate equipment which had caused leaks and spills on the property.
 8. DSC's Leo Hanselman Unit 1, Well No. 1 complies with all requirements to be operated as a commercial disposal well as defined in Statewide Rules.

CONCLUSIONS OF LAW

1. Proper notice was given to all necessary parties as required by Statewide Rule 9(5) [Tex. R.R. Comm'n, 16 TEX. ADMIN. CODE § 3.9(5)] and other applicable statutory and regulatory provisions.
2. All things necessary to give the Commission jurisdiction to decide this matter have been performed or have occurred.

3. Continuation of the permit to dispose of oil and gas waste into the DSC Leo Hanselman Unit 1, Well No. 1, in accordance with its existing permit, will not endanger fresh water resources nor endanger oil or gas resources in the area.
4. Continuation of the permit for the DSC Leo Hanselman Unit 1, Well No. 1 is in the public interest.
5. Continuation of the permit to dispose of oil and gas waste into the DSC Leo Hanselman Unit 1, Well No. 1 meets the requirements for approval pursuant to Statewide Rule 9 and the Texas Water Code §27.051 and §27.073.

EXAMINER'S RECOMMENDATION

Based on the above findings and conclusions, the examiner recommends that the hearing to show cause why the injection permit (Permit No. 02899) for the Leo Hanselman Unit 1 Well No. 1, Marcado Creek (4400) Field, Victoria County, Texas, should not be amended or revoked, be **DISMISSED**.

Respectfully submitted,

Margaret Allen
Technical Hearings Examiner

Date of Commission Action _____