

OIL AND GAS DOCKET NOS. 7B-0246062 & 7B-0246270

THE APPLICATION OF L.C.S. PRODUCTION COMPANY TO INJECT INTO A RESERVOIR PRODUCTIVE OF OIL OR GAS IN THE MEAD STRAWN UNIT, WELL NOS. 1WI, 11WI, 12WI AND 13WI, MEAD (STRAWN) FIELD, JONES COUNTY, TEXAS

Heard by: Margaret Allen, Technical Hearings Examiner
Mark Helmueller, Hearings Examiner

Procedural history

Application for Well No. 1WI received: November 16, 2005
Application for Well Nos. 11WI, 12WI and 13WI received: December 19, 2005
Protests received: November 21 & December 23, 2005
Consolidated hearing held: April 4, 2006
Proposal for decision issued: June 9, 2006

Appearances

| <u>Applicant</u> | Representing |
|------------------------|---------------------------|
| David Gross | L.C.S. Production Company |
| Dale Miller | |
| John Thomas Raney | |
| Richard F. Whipple | |
| | |
| <u>Protestants</u> | |
| Ricky and Vickie Young | Themselves |

EXAMINERS' REPORT AND PROPOSAL FOR DECISION

STATEMENT OF THE CASE

L.C.S. Resources Company ("L.C.S.") is seeking to inject produced water into the Strawn reservoir in its Mead Strawn Unit, Well Nos. 1WI, 11WI, 12WI and 13WI. The applications are protested by Ricky and Vickie Young ("protestants") who own the surface and some mineral interests in the areas. The protestants are concerned that injection into the subject wells, particularly Well No. 12WI, will increase pollution on their land.

The hearing notice on the applications for Well Nos. 11WI, 12 WI and 13WI indicates that staff from the Environmental Services Section had concerns on the following issues:

1. The applicant had identified a well within 1/4 mile of its proposed injection wells that was not plugged in a manner sufficient to ensure fluid confinement to the proposed injection interval.
2. The plugging record (Form 4 dated October 8, 1951) for the Roark, Hooker,

Jones & Stasney-Chancey et al Well No. 1 (map code No. 7 on the Area of Review map) indicates that the well lacks cement plugs above the proposed injection interval and the base of the usable quality ground water.

3. Should the examiners propose granting the application, Environmental Services recommends that the injection authority be contingent upon the applicant locating, re-entering, and properly plugging AOR map code No. 7 prior to commencing injection.

DISCUSSION OF THE EVIDENCE

Applicant's evidence

L.C.S. is planning to re-enter four wells, to be known as 1WI, 10WI, 12WI, and 13WI ("subject wells") on its Mead Strawn Unit, to use for the disposal of produced water and to maintain reservoir pressure. The Mead Strawn Unit is a 1232 acre cooperative unit that was formed in 1962. One of the tracts has non-pooled interests and production has always been reported separately for Tract 13. Some of the interest in Tract 13 is in the voluntary unit however, and L.C.S. maintains that production reported from this R.B. Bennett Tract has maintained the cooperative pooling agreement in effect.

There are now 15 producing wells and one injection well on the unit. Cumulative production has been 1.3 million barrels of oil and L.C.S. hopes that its planned pressure maintenance/waterflood will eventually be able to recover an additional 750,000 to 1,000,000 barrels.

Original reservoir pressure was 1600-1700 psi and it is unlikely that injection pressure will ever be higher. However, L.C.S. is requesting the approved surface pressure be 2225 psi for three of the wells and 2230 psi for the fourth well, which is a pressure gradient of 0.5 psi per foot of depth. When some of the subject wells were drilled, the base of usable-quality water was considered to be 100' below the surface. In the last few years, the Texas Commission of Environmental Quality has recommended protection to a depth of 150'. Two of the proposed injection wells have less than 150' of surface casing, and applicant will install a liner cemented to the surface in these wells.

Three of the wells, Nos. 1WI, 11WI and 12WI, were drilled in the 1950's. The cemented 4-1/2" liner in these wells will provide two strings of casing and cement to protect usable-quality water.

Well No. 1WI was drilled in 1952, and had surface casing cemented to 170'. The production casing was cemented from 4601' to 3741'. When the well was plugged in 1972, the production casing was cut off at 2550' and the upper part pulled out of the hole. L.C.S. will cement a liner to 4601', and inject into the interval between 4470' and 4550'.

Well No. 11WI was drilled in 1951, and had surface casing cemented to 110' and production casing cemented from 4950' to 3588'. The well was plugged in 1960 and the production casing removed from the surface to 2582'. The liner will be cemented to 4900', and the proposed injection interval is from 4463' to 4966'.

Well No. 12WI was drilled in 1953 and plugged in 1968. The surface casing is at 129', and the production casing, which was cemented from 4103' to 5045', remains in place. The liner depth will be 4500', and the proposed injection interval is between 4450' and 4970'.

When Well No. 13WI was drilled in 1991, the surface casing was reported to be at 180' and production casing was reported cemented from 5053' to 775'. The plugging report from 1991, shows 168' of surface casing and that the top 628' of the production casing were removed. Because this is a much newer well and has adequate surface casing (whether at 168' or 180'), L.C.S. proposes only to tie into the 628' depth with new casing to replace the casing that was removed. The proposed injection interval is between 4481' and 4980'.

The requested maximum daily injection volume into Well No. 1WI is 700 BWPD at a maximum pressure of 2230 psi. The requested maximum rate in each of Well Nos. 11WI, 12WI and 13WI is 1000 BWPD, with a maximum injection pressure of 2225 psi.

There are 167 wells within a one mile radius around the four wells that are the subjects of this hearing. Most of them are plugged, and only seven of them do not have isolation between the depth of the proposed injection interval and the base of usable-quality water. L.C.S. plans re-enter two of these wells (one of which is the well referenced in the notice of hearing) and will either use them as producing or injection wells or plug them. The applicant has no objection to any permit for the subject wells being contingent on re-entering these two wells and either using them or plugging them.

L.C.S. does not believe the other five wells can cause problems because they are geologically isolated from the producing sandstone in the Mead Strawn Unit. One of these five wells, the H.G. Lewis M.C. Palmer Lease Well No. 1, offsets the northeastern edge of the field, The M.C. Palmer had a plug set at 115-125' but was otherwise plugged with heavy mud in 1953. However, the Mead Strawn sand thins considerably to the northeast and by the location of the M.C. Palmer No. 1 has become impermeable. The M.C. Palmer is over 1/2 mile from Well No. 1W, the closest subject well.

The other four wells of concern are on the southeastern end of the field, and all were once completed in the stratigraphically shallower Pitzer Field. They are all at least 1/2 mile from Well No. 13WI, the closest subject well. The Mead Strawn sand at this end of the field is wet, then eventually pinches out.

Protestants' evidence

The protestants own 160 surface acres over the Mead (Strawn) Field and their house is only 234' from Well No. 12WI. This well was plugged and not apparent on the surface when the Youngs bought this property, and they do not wish it to become operational again. Among other reasons, they believe such an old well would be more inclined to cause problems than a newer well would be. Given the number of plugged wellbores around the Mead (Strawn) Field, there should be other possible injection wells besides this one so close to their house.

According to the Youngs' evidence, some of the wells on this unit have trash and oil residue in nearby pits that have not been cleaned up in several years. The fences around these pits are in disrepair

and the protestants' cattle walk through them. The protestants also claim that L.C.S. has been using Well No. 10WI as an injection well for a few months, and it has twice spewed saltwater into the air. If the applicant is this irresponsible, the Youngs believe they have no assurance that operation of Well No. 12WI will not cause pollution around their house.

The Youngs also believe that the unit has dissolved due to non-production for several years between 1998 and 2005, and therefore L.C.S. has no authority to operate on their land. According to the Youngs, another surface landowner within the Mead (Strawn) Unit had a water well that was contaminated by oil operations and he had to move.

EXAMINERS' OPINION

The examiners believe this application should be granted. The wells will be properly cased and cemented to protect usable-quality water. This application is in the public interest as it will increase the ultimate recovery from the Mead (Strawn) Unit by 750,000 to 1,000,000 barrels of oil. Imposing the same pressure limitation for all four wells of 2225 psi will simplify compliance.

The permit should be contingent on the applicant re-entering and either using or replugging the Roark, Hooker, Jones & Stasney-Chancey et al Well No. 1. This is the only well within 1/4 mi which is not producing, shut-in according to Commission regulations, or been properly plugged according to Commission standards.

Protestants contend that the unit agreement is no longer valid, and LCS no longer possesses a right to operate on their property. LCS contends that the unit agreement remains in force and effect by virtue of continuous production on the Mead-Strawn Unit. LCS explains the separate production reporting and Commission lease identification for the tract as required by fractional mineral interests owners who opted out of the unit agreement.

The Commission lacks the jurisdiction to determine contractual rights, but can inquire into whether an applicant possesses a good faith claim of a current right to the mineral interest in evaluating a permit application. The existence of a dispute to title is not alone sufficient to defeat an applicant's right to a permit if a reasonably satisfactory showing is made of a good faith claim of ownership. *Trapp v. Shell Oil Co.* 198 S.W.2d 424 (Texas 1946)

In this case, LCS provided a copy of the Unit Agreement and records showing continuous production on the Mead-Strawn Unit. It contends this preserves its rights with respect to the Young property. It is the examiners' conclusion that LCS has therefore made a reasonably satisfactory showing of a good faith claim of ownership to support the requested permits.

In addition, the examiners recommend that the District Office inspect the Mead (Strawn) Lease to insure compliance with Statewide Rule 8 regarding pits.

FINDINGS OF FACT

1 Notice of hearing on this application to inject into the subject wells was issued to all interested

persons, offset operators and to all surface owners at least ten (10) days prior to the hearing.

- a. Notice of the application (Form H-1) for Well No. 1WI was mailed to offset operators, surface owners and the Jones County Clerk on November 16 and 22, 2005.
 - b. Notice of the application (Form H-1) for Well Nos. 11WI, 12WI and 13WI was mailed to all offset operators, surface owners and the Jones County Clerk on December 19, 2005.
 - c. Notice of the application for Well No. 1WI was published in the *Western Observer*, a newspaper of general circulation in Jones County, on October 12, 2005.
 - d. Notice of the application for Well Nos. 11WI, 12WI and 13WI was published in the *Western Observer*, a newspaper of general circulation in Jones County, on November 16, 2002.
 - e. Notice of the hearings was issued by the Commission on February 22 and 27, and March 10, 2006.
2. L.C.S. Production Company (“L.C.S.”) is requesting permits for four wells on its Mead (Strawn) Unit to dispose of produced water and maintain pressure.
 3. Cumulative production from the Mead (Strawn) Unit has been 1,300,000 barrels of oil.
 4. The base of usable-quality water occurs at 150' below the surface.
 5. The three proposed injection wells drilled in the 1950's will have two strings of casing and cement throughout. and the injected fluid will be confined to the Strawn Formation.
 - a. Well No. 1WI has surface casing at 170' and production casing from 4601' to 2550', with cement top at 3741'. The liner will be set at 4601' and injection will be into perforations between 4470' and 4550'.
 - b. Well No. 11WI has surface casing at 110' and production casing from 4950' to 2582', with cement top at 3588'. The liner will be set at 4900' and injection will be into perforations between 4463' and 4966'.
 - c. Well No. 12WI has surface casing at 129' and production casing from 5045' to the surface, with cement top at 4103'. The liner will be set at 4500' and injection will be into perforations between 4450' and 4970'.
 6. Well No. 13WI, drilled in 1991, has at least 168' of surface casing and production casing from 5053' to 628', with cement top at 775'. New casing will be cemented to 628' to replace the missing production casing, and injection will be into perforations between 4481' and 4980'.

7. There is only one well within 1/4 mile of any of the proposed injection wells that is not producing, shut-in according to Commission regulations, or been properly plugged according to Commission standards.
8. L.C.S. will re-enter the Roark, Hooker, Jones & Stasney-Chancey et al Well No. 1 and either use it as a producing or injection well, or plug it.
9. The maximum daily injection volume into Well No. 1WI will be 700 BWPD and the maximum rate in each of Well Nos. 11WI, 12WI and 13WI will be 1000 BWPD.
10. The maximum injection pressure will be 2225 psi.
11. Approval of this application is in the public interest as it will result in the recovery of an additional 750,000 to 1,000,000 barrels of oil.

CONCLUSIONS OF LAW

1. Proper notice was given to all necessary parties as required by Statewide Rule 46(c) [Tex. R.R. Comm'n, 16 TEX. ADMIN. CODE § 3.46(c)] 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. Granting the application to allow up to 700 BWPD into Well No. 1WI and up to 1000 BWPD into each of Well Nos. 11WI, 12WI and 13WI, under the terms and conditions set forth in the attached final order, will not endanger fresh water resources or endanger oil or gas resources in the area.
4. Granting the application is in the public interest.
5. The application meets the requirements for approval pursuant to Statewide Rule 46 and the Texas Water Code §27.051.
6. The terms and conditions set forth in the attached Final Order are reasonably necessary to protect usable-quality water from pollution.
7. LCS has made a reasonably satisfactory showing of a good faith claim of ownership to support the requested permits.

EXAMINERS' RECOMMENDATION

Based on the above findings and conclusions, the examiners recommend **APPROVAL** of the

application of L.C.S. Production Company to inject into its Mead Strawn Unit, Well Nos. 1WI, 11WI, 12WI and 13WI, with a maximum injection volume of 700 barrels per day into Well No. 1WI and 1000 BWPD in Well Nos. 11WI, 12WI and 13WI, at maximum surface injection pressures of 2225 psi. Prior to beginning injection, L.C.S. Production Company must re-enter the Roark, Hooker, Jones & Stasney-Chancey et al Lease Well No. 1. This well must be used as a producing well or injection well, or be plugged and abandoned in accordance with current Commission rules.

Respectfully submitted,

Mark Helmueller
Legal Examiner

Margaret Allen
Technical Examiner