



RAILROAD COMMISSION OF TEXAS

HEARINGS DIVISION

OIL AND GAS DOCKET NO. 01-0273129

COMMISSION CALLED HEARING FOR BELLOWS OPERATING CO., LC TO SHOW CAUSE WHY PERMIT NO. 13346 SHOULD NOT BE SUSPENDED OR REVOKED AND ALTERNATIVELY, ON THE APPLICATION OF BELLOWS OPERATING CO., LC FOR COMMERCIAL DISPOSAL AUTHORITY PURSUANT TO 16 TAC §3.9 FOR THE BRUNS UNIT, WELL NO. 1, FULCHER (EDWARDS A) FIELD, GONZALES

HEARD BY: Brian Fancher, P.G. - Technical Examiner
Michael Crnich - Legal Examiner

APPEARANCES: **REPRESENTING:**

APPLICANT:

Kelli Tieken Kenney	Bellows Operating Co., LC
Rick Johnston, P.E.	
Gary Bellows	
Dana Seal	

PROTESTANT:

Darnell Knippa	Self, <i>pro se</i>
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PROCEDURAL HISTORY

Application Filed:	June 21, 2011
Permit Issued:	August 22, 2011
Permit Suspended:	September 30, 2011
Protest Received:	October 4, 2011
Request for Hearing:	October 05, 2011
Notice of Hearing:	December 5, 2011
Hearing Held:	June 21, 2012
Proposal for Decision Issued:	December 20, 2012



EXAMINERS' REPORT AND PROPOSAL FOR DECISION**STATEMENT OF THE CASE**

Bellows Operating Co., LC ("Bellows") requests commercial disposal authority pursuant to Statewide Rule 9 for the Bruns Unit, Well No. 1, Fulcher (Edwards A) Field, Gonzales County, Texas.

Notice of the subject application was published in the Gonzales Inquirer, a newspaper of general circulation in Gonzales County, on April 26, 2011. Notice of the application was sent to the Gonzales County Clerk, offset operators within 1/2 mile and to the surface owners of each tract which adjoins the disposal tract on June 20, 2011.

On August 22, 2011, Bellows administratively received authority to commercially dispose of salt water into the subject well through an injection interval from 4,250 feet to 7,900 feet (Permit No. 13346).

By letter dated September 30, 2011, the Commission's Underground Injection Control ("UIC") group of the Oil and Gas Division notified Bellows that the administrative permit granted on August 22, 2011 for the subject well was suspended. The UIC letter explains that a written protest was filed prior to administrative approval of Permit N. 13346, thus the permit was issued in error. Consequently, Bellows submitted its hearing request for the subject application on October 05, 2011.

The application is protested by Darnell Knippa, an adjacent surface owner to the tract on which the proposed disposal well is located.

Initially, the subject hearing was scheduled to convene on January 04, 2012. By letter dated December 28, 2011, Bellows requested the subject hearing be postponed. On December 29, 2011, the above Motion For Continuance was granted, postponing the hearing indefinitely.

By letter dated April 17, 2012, Bellows requested the subject application be rescheduled for hearing on June 21, 2012. On April 20, 2012, the rescheduled hearing request was granted.

As a result of the testimony provided on behalf of Bellows at the hearing, the examiners issued a letter, dated July 10, 2011, to all parties on the service list associated with the Notice of Hearing dated December 05, 2011. The examiners' letter explains the erroneous top of cement behind the 5 1/2" casing as indicated in the completion information for the subject well and the applicant's Forms W-14, along with the applicant's request to incorporate RCRA Exempt Waste. The examiners' letter provides any party not present at the hearing the opportunity to protest within 21 days of the date of the letter. No additional protest was received by the Commission.

The examiners take Official Notice of the section titled "Cementing Criteria" found in the Commission's *Injection/Disposal Well Permit, Testing, and Monitoring Seminar Manual*.

DISCUSSION OF THE EVIDENCE

Applicant's Evidence

The subject well is located in Gonzales County, situated approximately 3 miles northeast of the town of Cheapside, Texas. The Bruns Unit, Well No. 1 (API No. 42-177-31576)¹, was originally completed in February 1985, plugged in September 1991, and re-entered December 1997. The subject well's completion information indicates it has 9 5/8" surface casing set at 2500 feet that is cemented to the surface with 870 sacks of cement. The well has 5 1/2" production casing set at 11,974 feet that is cemented from the shoe to 8,411 feet with 600 sacks of cement. Bellows testified that a cast iron bridge plug has been set at 7,200 feet and a cement plug has been placed from 11,627 feet to 11,773 feet. The well will be equipped with 2 7/8" tubing and a packer set at 4,570 feet (See attached Bellows Exhibit No. 6 - Wellbore Diagram).

Bellows testified that a Radial Cement Bond Log ("CBL") was performed on the 5 1/2" casing on March 1, 2012. The CBL indicates cement has been squeezed behind the 5 1/2" casing with continual, adequate cement bond from 4,210 feet to 4,850 feet. The CBL does not provide data below 5,154 feet. No information was submitted on behalf of Bellows to support the date or the volume of cement squeezed behind the 5 1/2" casing from 4,210 to 4,850 feet.

Bellows testified it administratively received authority for commercial disposal (Permit No. 13346) in the subject well on August 22, 2011. Permit No. 13346 granted the disposal of salt water through injection from 4,250 feet to 7,900 feet with a Maximum Daily Injection Volume ("MDIV") of 10,000 barrels per day ("bbl/d") and Maximum Surface Injection Pressure ("MSIP") of 2,125 pounds per square inch ("psi").

As a part of its administrative application for commercial disposal, Bellows submitted a Commission Form W-14 dated June 20, 2011. This Form W-14 indicates the subject well is completed with casing and cement as described above, with exception to the top of cement behind the 5 1/2" casing at 2,803 feet and a bridge plug set at 11,724 feet.

At the hearing, Bellows submitted a revised Form W-14 dated June 20, 2012, indicating the top of cement behind the 5 1/2" casing is at 4,210 feet and a bridge plug has been set at 7,200 feet. As a result, Bellows requested the subject well be granted an injection interval from 4,620 feet to 7,200 feet, and that RCRA Exempt Waste be added to the types of fluids approved for disposal in the subject well.

In support of its application, Bellows submitted a petrophysical well log for the subject well. As indicated on the log, there is adequate shale above the proposed injection interval, which will

¹ The subject well was initially completed as the Spiekerman Lease, Well No. 1 (API No. 42-177-31576).

serve to prevent the migration of injected fluids beyond the top of the proposed injection interval. Furthermore, the well log indicates approximately 2,780 feet of shale at the base of the permitted injection interval. Bellows requests an MDIV of 10,000 bbl/d and a MSIP of 2,300 psig.

The Texas Commission on Environmental Quality ("TCEQ"), now the Commission Groundwater Advisory Unit, recommends that the usable-quality groundwater be protected to a depth of 950 feet below the land surface. The base of the underground source of drinking water ("USDW") is approximately 1,100 feet.

There are approximately eleven producing horizontal wells in the Eagle Ford formation located within a one-half mile radius of review of the proposed disposal well. According to Commission records, all eleven wells have surface casing set and cemented to at least 2,000 feet. The proposed disposal well currently has cement squeezed over one hundred feet above the top of its proposed injection interval, as verified by the CBL.

The proposed Bellows facility is located in the eastern portion of Gonzales County. There are four commercial disposal wells within a fifteen mile radius of the proposed facility. Only three of these commercial disposal wells are currently active and operating at maximum capacity. The fourth facility is inactive and for the private use of only Smith Petroleum Company. Bellows stated that there are significant wait times at the existing facilities. Use of the proposed well will eliminate substantial truck traffic through Gonzales County and less travel time and fewer miles result in reduced costs to operators.

The Eagle Ford development core area encompasses east Gonzales County and the two adjoining counties of DeWitt and Karnes. Bellows submitted a map depicting eleven completed Eagle Ford formation horizontal wells within a half mile radius alone. Bellows also submitted completion papers on two nearby EOG Resources' Eagle Ford formation wells. These wells averaged almost 600 BWPD during initial flowback. Bellows opined that the Eagle Ford formation wells will produce significant volumes of frac and produced water and believes that additional disposal facilities are necessary to accommodate the Eagle Ford development that is expected in this area.

Bellows submits that it has the expertise to build and manage the proposed facility. Bellows has a current approved Form P-5 (Organization Report), a posted \$50,000 financial assurance bond and no pending Commission enforcement actions.

Protestants' Evidence

Darnell Knippa, an adjacent mineral owner and landowner, is primarily concerned with the proposed wellhead safety and that the facility will pose a threat if a surface leak occurs and would flow onto his property. He is also worried that subject well could have damaged surface casing and that the proposed injection interval is insufficiently isolated. He is further concerned that the injection of fluids into the proposed well will migrate onto his subsurface property.

EXAMINERS' OPINION

The examiners recommend that the application for commercial disposal authority be approved, with conditions changing the base of the injection interval, setting a cast iron bridge plug, and submitted Commission required cement squeeze documentation.

The examiners believe that Bellows has established:

1. The water resources (surface and subsurface) are adequately protected from pollution;
2. The proposed injection well will not endanger or injure any oil, gas or mineral formations;
3. The proposed injection is in the public interest;
4. A satisfactory showing of financial responsibility, as required under Commission statutes.

The examiners conclude that 16 Texas Administrative Code ("TAC") §3.9(8) requires disposal wells, within the Commission's jurisdiction, to be cased and cemented in compliance with 16 TAC §3.13, in such a manner that the injected fluids will not endanger oil, gas, geothermal resources, or freshwater resources.

The examiners note that 16 Texas Administrative Code ("TAC") §3.9 governs the permitting, use, and maintenance of a disposal well under the jurisdiction of the Railroad Commission. Specifically, 16 TAC §3.9(1) provides oil and gas operators the following requirement:

"Every applicant who proposes to dispose of saltwater or other oil and gas waste into a formation not productive of oil, gas, or geothermal resources must obtain a permit from the Commission authorizing the disposal in accordance with this section"

Under the provisions of Rule 9 an operator is required to demonstrate that fluids will be confined to the injection interval that is requested.

Additionally, the examiners note that the information found under the title "Cementing Criteria", located in the Commission's *Injection/Disposal Well Permit, Testing, and Monitoring Seminar Manual*, stipulates that Commission policy maintains that a minimum of one hundred feet of cement must be demonstrated above the top of the injection interval if the mechanism used to determine the top of cement is a cement bond log. Bellows testified that the top of cement behind the 5 1/2" casing is at 4,210 feet, through cement bond log interpretation. No recompletion, workover, or cementer affidavit was submitted to demonstrate how the cement arrived at approximately 4,210 feet. Accordingly, the examiners believe that Bellows be required to submit all required Commission documentation demonstrating the cement squeeze information.

Currently, the permitted injection interval for the subject well is from 4,250 feet to 7,900 feet. The examiners conclude that allowing the top of the injection interval to be forty feet above the top of cement is inadequate; therefore, recommend that the top of the injection interval be at 4,620 feet, as proposed by Bellows.

In addition, the examiners believe that allowing the base of the injection interval for the subject well to cease at 7,600 feet is inappropriate, as it will not confine fluids to the injection interval. Based on the petrophysical log submitted on behalf of Bellows, the examiners find that the base of the injection interval should remain at its currently permitted depth of 7,900 feet. The examiners believe that the interval from 7,600 feet to 7,900 feet provides a potential conduit for any injected fluids to migrate outside the injection interval Bellows proposed at the hearing. The examiners believe that if the bridge plug currently set at 7,200 feet is removed or mechanically fails, Bellows, or its successor, be required to set a bridge plug at 7,920 feet with twenty feet of cement dump bailed on top of the bridge plug.

With the modifications recommended by the examiners, the proposed disposal well will be completed in a manner which will protect usable-quality water resources and injected fluids will be confined to the injection interval. Injection will be through tubing set on a packer to confine injected fluids to the Wilcox interval between 4,620 feet to 7,900 feet. Although there are eleven completed horizontal Eagle Ford formation wells within a one-half mile radius, all of the wells have surface casing set and cemented to at least 2,000 feet below ground surface. As a result, these wells are not potential conduits for injected fluids to reach water zones.

Approval of the application is in the public interest. Bellows has shown that the proposed disposal well will provide needed capacity for disposal of frac and produced water from numerous wells to be drilled and produced within Gonzales and surrounding counties. The proposed disposal well will add much needed capacity in the area. There are currently four permitted disposal wells within a fifteen mile radius of the proposed well. One of these wells is inactive and for private use only, and the remaining three are operating at maximum permitted capacity and experiencing significant truck wait times.

FINDINGS OF FACT

1. Notice of the subject application was published in the Gonzales Inquirer, a newspaper of general circulation in Gonzales County, on April 26, 2011.
2. Notice of the application was sent to the Gonzales County Clerk, offset operators within 1/2-mile, and to the surface owners of each tract which adjoins the disposal tract on June 20, 2011.
3. The proposed injection into the Bruns Unit, Well No. 1 ("Bruns No.1"), will not endanger useable-quality groundwater.
 - a. The Texas Commission on Environmental Quality ("TCEQ"), now the Groundwater Advisory Unit ("GAU"), recommends that useable-quality groundwater be protected to a depth of 950 feet below the land surface.

- b. The well has 9 5/8" surface casing set at 2,500 feet that is cemented to the surface with 870 sacks of cement.
 - c. The well has 5 1/2" production casing set at 11,974 feet that is cemented to 8,411 feet with 600 sacks of cement.
 - d. Bellows Operating Co., LLC ("Bellows") performed a cement bond log ("CBL") on the 5 1/2" casing in the Bruns No. 1 on March 01, 2012 that indicated a cement squeeze was performed on the 5 1/2" production casing that resulted in a top of cement in the 5 1/2" annulus being at 4,250 feet.
 - e. The injection interval from 4,620 feet to 7,900 feet in the subject well is appropriate and will confine injected fluids to the injection interval.
4. The proposed injection into the Bruns No. 1 from 4,620 feet to 7,900 feet will not endanger usable quality ground water or production from other oil, gas, or other mineral bearing formations.
 - a. The well will be equipped with 2 7/8" tubing and a packer set at 4,570 feet.
 - b. The only nearby producing wells are eleven Eagle Ford formation producing wells located within a 1/2 mile radius of review of the proposed disposal well. These wells produce from a zone below the base of the injection interval.
 5. Use of the subject well as a commercial disposal well is in the public interest because it will reduce hauling distances and will provide needed commercial disposal capacity for wells to be drilled, completed and produced in the area of the proposed facility.
 - a. There are only 4 permitted disposal wells within a 15 mile radius of the proposed well. Of these four, one is inactive and for private use only. The three active commercial disposal wells are operating at maximum capacity.
 - b. There are significant wait times at the existing facilities.
 6. Bellows has a current approved Form P-5 (Organization Report), a posted \$50,000 financial assurance bond and no pending Commission enforcement actions.

CONCLUSIONS OF LAW

1. Proper notice was issued in accordance with the applicable statutory and regulatory requirements.

2. All things necessary to give the Railroad Commission jurisdiction to consider this matter have occurred.
3. Approval of the application will not harm useable-quality water resources, will not endanger oil, gas, or geothermal resources, will promote further development in this area of Gonzales County and is in the public interest pursuant to Sec. 27.051 of the Texas Water Code.
4. Bellows Operating Co., LC has met its burden of proof and its application, as recommended by the examiners, satisfies the requirements of Chapter 27 of the Texas Water Code and the Railroad Commission's Statewide Rule 9.

EXAMINERS' RECOMMENDATION

Based on the above findings of fact and conclusions of law, the examiners recommend that the Commission approve the application of Bellows Operating Co., LC for commercial disposal authority pursuant to Statewide Rule 9 for the Bruns Unit, Well No. 1, as set out in the attached Final Order.

Respectfully submitted,


Brian Fancher, P.G.
Technical Examiner


Michael Crnich
Legal Examiner