

OIL AND GAS DOCKET NO. 8A-0259655

THE APPLICATION OF H. L. BROWN OPERATING, LLC FOR A PERMIT TO DISPOSE OF OIL AND GAS WASTE BY INJECTION INTO A POROUS FORMATION NOT PRODUCTIVE OF OIL OR GAS, L. P. HASTINGS LEASE, WELL NO. 7, EDMISSON, N.W. (CLEARFORK) FIELD, LUBBOCK COUNTY, TEXAS

Heard by: Richard D. Atkins, P.E. - Technical Examiner
Mark J. Helmueller - Legal Examiner

APPEARANCES:

APPLICANT:

Glenn E. Johnson
A. Darryl James

REPRESENTING:

H. L. Brown Operating, LLC

PROTESTANT:

Donald J. Camp

Floyd & Susan Pirtle, Surface Owners

PROCEDURAL HISTORY

Application Filed:	July 14, 2008
Request for Hearing:	August 24, 2008
Notice of Hearing:	October 24, 2008
Date of Hearing:	December 1, 2008
Transcript Received:	December 22, 2008
Proposal For Decision Issued:	January 27, 2009

EXAMINERS' REPORT AND PROPOSAL FOR DECISION

STATEMENT OF THE CASE

H. L. Brown Operating, LLC ("Brown") requests authority to dispose of produced salt water into its L. P. Hastings Lease, Well No. 7, Edmisson, N.W. (Clearfork) Field, Lubbock County, Texas. This application is protested by the surface owners of the tract on which the proposed disposal well is located. The examiners recommend the application be denied.

DISCUSSION OF THE EVIDENCE

Applicant's Evidence

The L. P. Hastings Lease, Well No. 7 was drilled in January 1982 to a total depth of

OIL AND GAS DOCKET NO. 8A-0259655

5,520 feet. The well produced from the Edmisson, N.W. (Clearfork) Field and was temporarily abandoned in January 1996 after producing 39,000 BO. Brown proposes to re-enter the well and dispose of the L. P. Hastings "A" Lease produced salt water into the Lower San Andres Formation between 4,250 feet and 4,650 feet. Brown requests authority to dispose of a maximum injection volume of 1,500 BWPD with an estimated average of 750 BWPD. The proposed maximum injection pressure is 1,500 psig with an estimated average of 1,000 psig.

The Texas Commission on Environmental Quality has determined that usable quality water occurs to a depth of 300 feet in this area. The subject well is completed with 1,578 feet of 8 $\frac{5}{8}$ " casing and 5,508 feet of 4 $\frac{1}{2}$ " production casing. The surface casing is cemented to surface and the production casing has a top of cement at 2,850 feet which is shown by a temperature survey (See attached Brown Exhibit No. 10). A cast iron bridge plug will be set 100 feet below the injection interval to isolate the lower portion of the wellbore.

There are six producing wells and one injection well on the L. P. Hastings "A" Lease. The current injection well, the L. P. Hastings "A" Lease, Well No. 11, was disposing of approximately 20,000 barrels of produced water per month. Brown believes injection from this well was watering out the offset producer, the L. P. Hastings "A" Lease, Well No. 10. As a result, Brown reduced the disposal volumes into Well No. 11 down to approximately 8,000 barrels of produced water per month. Brown now seeks additional disposal capacity on the Hastings "A" lease.

There are three wellbores within a $\frac{1}{4}$ mile radius of the No. 7 well. Two of the wells have been plugged and abandoned and one well is an active producing well. The first plugged well, the L. K. Turnbough Lease, Well No. 1, was drilled in September 1977 and plugged in June 2008. This well has two plugs set at 5,130 feet and 3,087 feet in the 4 $\frac{1}{2}$ " casing and two perforated and squeezed plugs in the 4 $\frac{1}{2}$ " casing at 1,700 feet and across the base of the surface casing at 415 feet. The second plugged well, the L. P. Hastings Lease, Well No. 6, was drilled in November 1981 and plugged as a junked hole. This well has a total depth of 5,500 feet and has 2,870 feet of 4 $\frac{1}{2}$ " casing left in the well that was never cemented. This well has three cement plugs above the top of the 4 $\frac{1}{2}$ " casing at 2,080 feet, across the base of the surface casing at 422 feet and at surface. Plugging reports for both wells indicate that the wells were filled with mud-laden fluid, as required by Commission rules in effect at the time of plugging. The third well, the L. P. Hastings Lease, Well No. 3, is a current Clearfork producer and is properly cased and cemented to protect ground water and prevent the migration of fluids from the proposed San Andres injection interval.

Brown submitted an economic comparison of the current operations on the Hastings "A" Lease versus the cost of trucking saltwater from the Hastings "A" Lease to a location outside the field. The trucking scenario included the added cost of \$2.50 per barrel for saltwater hauling. The estimated remaining producing life of the Hastings "A" Lease decreased by 23.6 years and the estimated remaining reserves decreased by 74,700 BO.

OIL AND GAS DOCKET NO. 8A-0259655

Brown has an active Organization Report and a \$50,000 financial assurance bond on file with the Commission. There are no pending enforcement actions against Brown.

Notice of the subject application was published in *The Lubbock Avalanche-Journal*, a newspaper of general circulation in Lubbock County, on May 18, 2008. A copy of the application was mailed on May 14, 2008 to the Lubbock County Clerk's Office and the surface owner. There are no other operators within ½ mile of the proposed well.

Protestant's Evidence

Floyd & Susan Pirtle own the 124 acre surface tract, depicted on the land map, on which the proposed disposal well is located. They are concerned that operation of the disposal well will endanger their fresh water which occurs down to 300 feet. They are also concerned that the disposal fluids will not be confined to the proposed disposal interval.

The protestants submitted a wellbore diagram of the L. P. Hastings Lease, Well No. 6, which was drilled in November 1981 and plugged as a junked hole. The well has a total depth of 5,500 feet and has 2,870 feet of 4 ½" casing left in the well that was never cemented. The well also has three cement plugs above the top of the 4 ½" casing at 2,080 feet, across the base of the surface casing at 422 feet and at the surface (See Protestants Cross Exhibit No. 7). Since the 4 ½" casing was never cemented, the well does not have the Yates, San Andres, Glorieta and Clearfork formations isolated, as they are all exposed to the open hole section.

The L. P. Hastings Lease, Well No. 6, is located approximately 300 feet west of the proposed disposal well, the L. P. Hastings Lease, Well No. 7. The protestants also submitted an inclination report on Well No. 7 that showed an accumulated wellbore displacement of 183.7 feet at a total depth of 5,520 feet. As a result, Well No. 6 could be as close as approximately 125 feet from Well No. 7. In addition, the protestants noted that Well No. 7 was temporarily abandoned 13 years ago in January 1996. They believe that a casing inspection and cement bond log should be run prior to conversion to a disposal well to confirm the integrity of Well No. 7.

The protestants also stated that Brown did not prove a need for additional disposal capacity, as no records were produced showing specific lease water production and existing disposal well capacity. In addition, Brown operates other wells which are currently shut in that have been active more recently and would appear to be better candidates for saltwater disposal. Specifically, the Hastings "A" Lease, Well No. 10, which recently watered out and is already located between two saltwater injection wells.

EXAMINERS' OPINION

The examiners recommend that this application be denied. Brown did not meet its burden of proof in showing that disposal fluids will be confined to the proposed disposal

OIL AND GAS DOCKET NO. 8A-0259655

interval due to the proximity of an improperly plugged well to the proposed disposal well. Additionally, Brown failed to show that operation of the proposed disposal well is in the public interest.

Commission records show the L. P. Hastings Lease, Well No. 6 could be as close as 125 feet from the proposed disposal well. This well has 2,870 feet of 4 ½" casing left in the well that was never cemented. The well also has three cement plugs above the top of the 4 ½" casing at 2,080 feet, across the base of the surface casing at 422 feet and at the surface. Since the 4 ½" casing was never cemented, the well does not have the Yates, San Andres, Glorieta and Clearfork formations isolated, as they are all exposed to the open hole section. Accordingly, the well is not properly plugged and is a potential conduit for the migration of saltwater from the disposal San Andres interval into other formations, which include the productive Clearfork and non-productive Yates formations. The examiners further note that Brown operates other shut-in wells which would appear to be better candidates for saltwater disposal, as they are not in the vicinity of the improperly plugged L. P. Hastings Lease, Well No. 6.

The examiners recommend that the application be denied and the Commission adopt the following Findings of Fact and Conclusions of Law.

FINDINGS OF FACT

1. Notice of this application and hearing was provided to all persons entitled to notice at least ten (10) days prior to the date of the hearing.
2. Notice of this application was published in *The Lubbock Avalanche-Journal*, a newspaper of general circulation in Lubbock County, on May 18, 2008.
3. H. L. Brown Operating, LLC ("Brown") requests authority to dispose of produced salt water into its L. P. Hastings Lease, Well No. 7, Edmisson, N.W. (Clearfork) Field, Lubbock County, Texas. Brown plans to re-enter the well and dispose of the L. P. Hastings "A" Lease produced salt water into the Lower San Andres Formation between 4,250 feet and 4,650 feet. Brown requests authority to dispose of a maximum injection volume of 1,500 BWPD with an estimated average of 750 BWPD. The proposed maximum injection pressure is 1,500 psig with an estimated average of 1,000 psig.
4. The application is protested by Floyd & Susan Pirtle, the surface owners of the tract on which the proposed disposal well is located.
5. The L. P. Hastings Lease, Well No. 7 was drilled in January 1982 to a total depth of 5,520 feet. The well produced from the Edmisson, N.W. (Clearfork) Field and was temporarily abandoned in January 1996 after producing 39,000 BO.

OIL AND GAS DOCKET NO. 8A-0259655

6. The Texas Commission on Environmental Quality has determined that usable quality water occurs to a depth of 300 feet in this area. The subject well is completed with 1,578 feet of 8 $\frac{5}{8}$ " casing and 5,508 feet of 4 $\frac{1}{2}$ " production casing. The surface casing is cemented to surface and the production casing has a top of cement at 2,850 feet which is shown by a temperature survey.
7. There are three wellbores within a $\frac{1}{4}$ mile radius of the No. 7 well. Two of the wells have been plugged and abandoned and one well is an active producing well.
 - a. The L. K. Turnbough Lease, Well No. 1, was drilled in September 1977 and plugged in June 2008. This well has two plugs set at 5,130 feet and 3,087 feet in the 4 $\frac{1}{2}$ " casing and two perforated and squeezed plugs in the 4 $\frac{1}{2}$ " casing at 1,700 feet and across the base of the surface casing at 415 feet.
 - b. The L. P. Hastings Lease, Well No. 6, was drilled in November 1981 and plugged as a junked hole. This well has a total depth of 5,500 feet and has 2,870 feet of 4 $\frac{1}{2}$ " casing left in the well that was never cemented. This well has three cement plugs above the top of the 4 $\frac{1}{2}$ " casing at 2,080 feet, across the base of the surface casing at 422 feet and at surface.
 - c. The third well, the L. P. Hastings Lease, Well No. 3, is a current Clearfork producer and is properly cased and cemented to protect ground water and prevent the migration of fluids from the proposed San Andres injection interval.
8. The L. P. Hastings Lease, Well No. 6 well is not properly plugged and is a potential conduit for migration of saltwater from the San Andres disposal interval into other formations, which include the productive Clearfork and non-productive Yates formations.
 - a. Commission records show that the L. P. Hastings Lease, Well No. 6, could be as close as 125 feet from the proposed disposal well.
 - b. The well has 2,870 feet of 4 $\frac{1}{2}$ " casing left in the well that was never cemented.
 - c. The well has three cement plugs above the top of the 4 $\frac{1}{2}$ " casing at 2,080 feet, across the base of the surface casing at 422 feet and at the surface.
 - d. Since the 4 $\frac{1}{2}$ " casing was never cemented, the well does not have the Yates, San Andres, Glorieta and Clearfork formations isolated, as

OIL AND GAS DOCKET NO. 8A-0259655

they are all exposed to the open hole section.

CONCLUSIONS OF LAW

1. Proper notice was issued in accordance with the applicable statutory and regulatory requirements.
2. All things have occurred to give the Railroad Commission jurisdiction to consider this matter.
3. H. L. Brown Operating, LLC has not satisfied the requirements of Chapter 27 of the Texas Water Code and the Railroad Commission's Statewide Rule 9 for the disposal of produced water in the L. P. Hastings Lease, Well No. 7.
4. H. L. Brown Operating, LLC did not meet its burden of establishing that disposal fluids will be confined to the proposed disposal interval.

EXAMINERS' RECOMMENDATION

Based on the above findings of fact and conclusions of law, the examiners recommend that the application of H. L. Brown Operating, LLC for authority to dispose of oil and gas waste into its L. P. Hastings Lease, Well No. 7, be denied.

Respectfully submitted,

Richard D. Atkins, P.E.
Technical Examiner

Mark J. Helmueller
Legal Examiner