

OIL AND GAS DOCKET NO. 7B-0258882

THE APPLICATION OF JOHNSON & MORRIS TO INJECT FLUID INTO A RESERVOIR PRODUCTIVE OF OIL OR GAS, DERRYBERRY, C. L. LEASE, WELL NOS. 6 AND 7, COLEMAN COUNTY REGULAR FIELD, COLEMAN COUNTY, TEXAS

HEARD BY: Richard D. Atkins, P.E. - Technical Examiner
Mark J. Helmueller - Legal Examiner

APPEARANCES:

APPLICANT:

George C. Neale
Rick Johnston
Ben L. Morris

REPRESENTING:

Johnson & Morris, a Partnership

PROTESTANTS:

Ms. Joanna Windham
Mr. Joe F. Windham, Jr.

Ms. Joanna Windham
Mr. Joe F. Windham, Jr.

PROCEDURAL HISTORY

Application Filed:	May 20, 2008
Request for Hearing:	August 15, 2008
Notice of Hearing:	September 11, 2008
Date of Hearing:	September 25, 2008
Transcript Received:	October 17, 2008
Proposal For Decision Issued:	December 3, 2008

EXAMINERS' REPORT AND PROPOSAL FOR DECISION

STATEMENT OF THE CASE

Johnson & Morris, a Partnership, requests authority pursuant to Statewide Rule 46 to inject salt water into the Marble Falls formation in its Derryberry, C. L. Lease, Well Nos. 6 and 7, Coleman County Regular Field.

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This application is protested by Ms. Joanna Windham and Mr. Joe F. Windham, Jr. who are the surface owners of the tract on which the wells are located.

DISCUSSION OF THE EVIDENCE

Applicant's Evidence

Johnson & Morris requests authority to expand its fluid injection authority granted in June 1976 on the Derryberry, C. L. Lease in the Coleman County Regular Field. Johnson & Morris currently has authority to inject into the Derryberry, C. L. Lease, Well No. 5. In this application, Johnson & Morris requests authority for Well Nos. 6 and 7. The wells have been recently drilled as new injection wells. Johnson & Morris plans to implement an inverted 5-spot waterflood pattern on the lease, with four producing wells surrounding each injection well. Johnson & Morris requests a maximum injection volume of 200 BWPD per well with a maximum surface injection pressure of 1,150 psig.

The Texas Commission on Environmental Quality recommends that usable quality ground water be protected to a depth of 250 feet in this area. The proposed injection interval is the Marble Falls formation occurring between approximately 2,250 feet and 2,350 feet. Johnson & Morris seeks authority to inject produced saltwater and additional saltwater from a water supply well. The water supply well is completed in the Cambrian formation at a depth of 3,890 feet to 3,980 feet. The proposed injection is for the purpose of waterflooding the lease.

The Derryberry, C. L. Lease, Well No. 6, was drilled and completed in December 2007 to a total depth of 2,390 feet. The well has 282 feet of 8 5/8" surface casing cemented to surface and 2,386 feet of 4 1/2" production casing cemented to approximately 1,200 feet. Injection will be through 2 3/8" tubing set on a packer at 2,235 feet into perforations from 2,272 feet to 2,294 feet (See attached wellbore diagram).

There are four wellbores within a 1/4 mile radius of the proposed injection well No. 6. The S. M. Neil Lease, Well No. A-1, was drilled in 1951 to a total depth of 1,400 feet. This well was plugged as a dry hole with a plug across the base of surface casing set at 61 feet. The other three wells are the Derryberry, C. L. Lease, Well Nos. 1, 2 and 4. These wells are carried as producers on the oil proration schedule and are cased and cemented in such a manner to protect the fresh water resources and prevent the migration of fluids from the injection interval.

The Derryberry, C. L. Lease, Well No. 7, was drilled and completed in December 2007 to a total depth of 2,358 feet. The well has 256 feet of 8 5/8" surface casing cemented to surface and 2,356 feet of 4 1/2" production casing cemented to approximately 1,200 feet. Injection will be through 2 3/8" tubing set on a packer at 2,204 feet into perforations from 2,232 feet to 2,259 feet (See attached wellbore diagram).

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There are three wellbores within a ¼ mile radius of the proposed injection well No. 7. The McCarroll Lease, Well No. 1, was drilled in 1958 to a total depth of 2,392 feet and completed as a producing oil well. This well was plugged in 1990 with cement plugs set at 2,028 feet, 442 feet and a plug across the base of surface casing set at 73 feet. The McCarroll Lease, Well No. 1-A, was drilled in 1977 to a total depth of 743 feet. This well was plugged as a dry hole with cement plugs set at 500 feet, 200 feet and at surface. The remaining well is the Derryberry, C. L. Lease, Well No. 4. This well is carried as a producer on the oil proration schedule and is cased and cemented in such a manner to protect the fresh water resources and prevent the migration of fluids from the injection interval.

Johnson & Morris desires to waterflood their lease to recover additional oil reserves. The Derryberry, C. L. Lease began producing in 1973. It currently has four producing wells and one shut-in injection well carried on the oil proration schedule. The cumulative lease production to date is 31.2 MBO and 437.6 MMCFG. Johnson & Morris estimates that this production represents approximately 6% of the original oil in place. There is one mature waterflood project located to the south on the Brewer Lease. Injection began on the lease in 1976 and demonstrated a favorable response within six months. Based on the performance of the Brewer Lease, Johnson & Morris believe that waterflooding will increase the recovery of oil to between 25 and 30 percent of the original oil in place or approximately 125 MBO.

Commission records indicate that Johnson & Morris has a current P-5 with the Commission. Johnson & Morris operates 33 wells and has financial assurance posted in the amount of \$50,000.

Notice of the subject application was published in *The Chronicle & Democrat-Voice*, a newspaper of general circulation in Coleman County, on July 8, 2008. A copy of the application was mailed to the Coleman County Clerk's Office on May 19, 2008. Also on May 19, 2007, Johnson & Morris mailed copies of the application to the surface owners of the tract on which the injection wells are located. There are no other operators within ½ mile of the proposed injection wells.

Protestant's Evidence

Surface owners, Ms. Joanna Windham and Mr. Joe F. Windham, Jr., appeared at the hearing to protest the application. The surface owners are concerned about the condition of the surface after the drilling of the two new injection wells. They submitted a DVD and several photographs depicting oil spills and damage to the surface over a two year period.

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The surface owners complained that an area the size of a football field was cleared for each location. The large oak trees and brush was stacked two stories high creating a large lightning strike fire hazard. In addition, the drilling pits were earthen unlined pits that were left for over a year-and-a-half and were covered up without removing any of the contaminated soil. Additionally, the rat holes were left uncovered and full of an oily substance.

The surface owners also complained of stacks of pipe and flowlines laying on the surface in the pastures. These items were preventing them from mowing the broomweed, which also presents another fire hazard in Coleman County. The owners requested that the pipe be removed and the flowlines be buried below plow depth.

EXAMINERS' OPINION

The examiners recommend that the application be approved. The proposed injection wells are completed in a manner which will protect useable quality water resources and will confine the injected fluids to the injection interval. Use of the wells for injection will result in the recovery of approximately 125 MBO, as the reservoir is re-pressured. Therefore, the approval of the application is in the public interest.

Although the protestants complained of surface use issues, there was no evidence of violations by Johnson & Morris of any Railroad Commission rules and regulations. The examiners do not believe the photographs and testimony are sufficient to deny the requested injection application.

FINDINGS OF FACT

1. Johnson & Morris, a Partnership, gave notice of this application to all persons entitled to notice pursuant to Statewide Rule 46. Notice of the application was published in *The Chronicle & Democrat-Voice*, a newspaper of general circulation in Coleman County, on July 8, 2008.
2. The Derryberry, C. L. Lease, Well No. 6, was drilled and completed in December 2007 to a total depth of 2,390 feet.
3. The Derryberry, C. L. Lease, Well No. 6, is cased and cemented in a manner to protect usable quality water.
 - a. The Texas Commission on Environmental Quality recommends that usable-quality water be protected to 250 feet in the area of the proposed well.

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- b. The well has 282 feet of 8 $\frac{5}{8}$ " surface casing cemented to surface.
4. Fluids injected into the Derryberry, C. L. Lease, Well No. 6, will be confined to the injection interval.
 - a. The well has 2,386 feet of 4 $\frac{1}{2}$ " production casing, with a calculated top of cement behind casing at 1,200 feet.
 - b. Injection will be through 2 $\frac{3}{8}$ " tubing set on a packer at 2,235 feet.
 - c. There are four wellbores within a $\frac{1}{4}$ mile radius of the proposed injection well. One has been properly plugged and abandoned. Three wells are carried as producers on the oil proration schedule and are cased and cemented in such a manner to protect the fresh water resources and prevent the migration of fluids from the injection interval.
5. The Derryberry, C. L. Lease, Well No. 7, was drilled and completed in December 2007 to a total depth of 2,358 feet.
6. The Derryberry, C. L. Lease, Well No. 7, is cased and cemented in a manner to protect usable quality water.
 - a. The Texas Commission on Environmental Quality recommends that usable-quality water be protected to 250 feet in the area of the proposed well.
 - b. The well has 256 feet of 8 $\frac{5}{8}$ " surface casing cemented to surface.
7. Fluids injected into the Derryberry, C. L. Lease, Well No. 7, will be confined to the injection interval.
 - a. The well has 2,356 feet of 4 $\frac{1}{2}$ " production casing, with a calculated top of cement behind casing at 1,200 feet.
 - b. Injection will be through 2 $\frac{3}{8}$ " tubing set on a packer at 2,204 feet.
 - c. There are three wellbores within a $\frac{1}{4}$ mile radius of the proposed injection well. Two have been properly plugged and abandoned. One well is carried as a producer on the oil proration schedule and is cased and cemented in such a manner to protect the fresh water resources and prevent the migration of fluids from the injection interval.

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8. Use of the Derryberry, C. L. Lease, Well Nos. 6 and 7 as injection wells is in the public interest.
 - a. A water supply well is completed in the Cambrian formation and the proposed injection is for the purpose of waterflooding the lease.
 - b. Waterflooding will increase the recovery of oil to between 25 and 30 percent of the original oil in place or approximately 125 MBO.
 - c. Use of the wells will provide a safe and economic means of disposal of produced saltwater in the area.
9. The use of the proposed injection wells will not endanger or injure any oil, gas, or other mineral formation.
10. Both ground and surface fresh water will be adequately protected from pollution.
11. Johnson & Morris is an active operator with financial assurance in the amount of \$50,000.

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. The use or installation of the proposed injection wells is in the public interest.
4. The use or installation of the proposed injection wells will not endanger or injure any oil, gas, or other mineral formation.
5. Operation of the wells under the terms of the proposed permit will protect both ground and surface fresh water from pollution.
6. Johnson & Morris has made a satisfactory showing of financial responsibility to the extent required by Section 27.073 of the Texas Water Code.

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7. Johnson & Morris has met its burden of proof and satisfied the requirements of Chapter 27 of the Texas Water Code and the Railroad Commission's Statewide Rule 46.

EXAMINERS' RECOMMENDATION

Based on the above findings of fact and conclusions of law, the examiners recommend that the application be approved as set out in the attached Final Order.

Respectfully submitted,

Richard D. Atkins, P.E.
Technical Examiner

Mark J. Helmueller
Legal Examiner