

OIL AND GAS DOCKET NO. 09-0254315

THE APPLICATION OF CHAPARRAL NATURAL RESOURCES, INC. TO INJECT FLUID INTO A RESERVOIR PRODUCTIVE OF OIL AND GAS, SCHERTZ UNIT WELL NO. 2, BIG BUCK (CADDO 1ST) FIELD, DENTON COUNTY, TEXAS

Heard By: Andres J. Trevino, Technical Examiner
James M. Dorherty, Hearings Examiner

Appearances:

David Gross
Dale D. Miller

Glenn Goode

Representing:

Chaparral Natural Resources, Inc.

Glenn Goode

Procedural History of Case:

Application Filed:	November 7, 2007
Request for Hearing:	October 19, 2007
Notice of Hearing:	November 15, 2007
Hearing Held:	January 10, 2008
Proposal for Decision Issued:	January 27, 2009

EXAMINERS' REPORT AND PROPOSAL FOR DECISION

STATEMENT OF THE CASE

Chaparral Natural Resources, Inc. ("Chaparral") requests authority pursuant to Statewide Rule 46 to inject salt water into the Caddo 1st reservoir in its Schertz Unit Well No. 2 in the Big Buck (Caddo 1st) Field in Denton County.

This application is protested by Glenn Goode, the surface owner of the tract on which the proposed injection well is located.

DISCUSSION OF THE EVIDENCE

Applicant's Evidence

Chaparral wishes to dispose of produced saltwater from their Schertz Well No. 1 into the Schertz No. 2 in the Big Buck (Caddo 1st) Field. Chaparral will pipe produced saltwater to the proposed disposal well in order to reduce saltwater disposal costs.

The Schertz No. 2 has a total depth of 1,905 feet. The well has 98 feet of 8 5/8" surface

casing cemented to surface and 1,886 feet of 4 ½" casing cemented to the surface. The well has an open hole completion from 1,886 feet to 1,905 feet. The Texas Commission on Environmental Quality recommends that usable-quality ground water be protected to 1,195 feet. (See attached wellbore diagram).

The proposed injection will be through tubing with a packer set at 1,857 feet. The proposed injection interval is the Caddo 1st Limestone between 1,886 feet and 1,905 feet. The maximum rate of injection requested is 100 barrels of salt water per day. The daily average injection is estimated at 20 barrels of salt water per day. The maximum requested injection pressure is 450 psi.

The water to be injected is produced salt water from Chaparral's Schertz Well No. 1 which is located approximately ⅓ of a mile away. Chaparral plans to pipe in the saltwater to the disposal well. Chaparral's Schertz Well No. 1 currently produces 2 to 6 BO per day and 7 to 9 barrels of saltwater per day. Chaparral is currently paying \$3 per barrel to have a truck haul produced saltwater to an offsite disposal facility. By disposing of its produced saltwater via a pipe to its disposal well, Chaparral will eliminate disposal truck traffic to the lease and will minimize disposal costs. Chaparral estimates it will recover an additional 12,000 barrels of oil from its Schertz Well No. 1 because the reduction of saltwater disposal costs will extend the economic life of this well.

There are two wellbores within a ¼ mile radius of the Schertz Unit Well No. 2 which penetrated the proposed injection interval. One of the wellbores was plugged and abandoned in August 1982 by filling the wellbore with cement from the bottom of the well at a depth of 1,854 feet to the surface. The other well is a shut-in gas well operated by Denton Oil & Gas and completed in the Big Buck (Johnson Sand, Upper) Field. Commission records show the well is completed with 100 feet of surface casing and 1,884 feet of production casing. Both strings of casing were circulated to the surface with cement.

Notice of the subject application was published in *The Denton Record-Chronicle*, a newspaper of general circulation in Denton County, on July 20, 2007. A copy of the application was sent on September 5, 2007 to the Denton County Clerk's Office. Also on September 5, 2007, a copy of the application was sent to Mr. Glenn Goode, the surface owner. There is one offsetting operator (Denton Oil & Gas, Inc.) within ½ mile of the well.

Chaparral has an active P-5 on file with the Commission, with \$50,000 financial assurance. There are no pending enforcement actions against Chaparral Natural Resources, Inc.

Protestant's Evidence

Glenn Goode owns the surface on which the Schertz Unit Well No. 2 is located. Mr. Goode is concerned the project will further contaminate his property unnecessarily. Mr. Goode also raised general concerns over the adequacy of Chaparral's past clean up efforts of past surface contamination. Mr. Goode stated he is in the process of selling his land but

was impeded by existing contamination on the property at the time of the sale. Mr Goode filed a complaint to the Wichita Falls District Office about existing contamination around the proposed disposal well. The District personnel inspected the property and issued a Notice of Violation for three Commission rules. The property was reinspected several times for compliance. Mr. Goode received a Status Report dated August 16, 2007 from the District Office informing him that Chaparral had resolved all previous violations. The report also advised Mr. Goode to review the exemptions of "crude oil or any fraction" from the definition of hazardous substances and that petroleum releases are not subject to CERCLA reporting and liability provisions. Mr. Goode provided "before" and "after" photographs of the remediated sites which he felt demonstrated the clean ups were inadequate.

EXAMINERS' OPINION

The examiners recommend that the application be approved. The proposed injection well is completed in a manner which will protect useable quality water resources and will confine the injected fluids to the injection interval. Use of the well for disposal will result in the recovery of approximately 12,000 BO as disposal costs are reduced.

Surface casing is set above the current base of usable quality water. The surface casing is cemented to the surface. The well will require annual annulus pressure tests due to the short surface casing. Also, the well will require weekly tubing-casing pressure monitoring due to the high yield slurry volume of cement used to cement the longstring exceeds 1.54 cu.ft/sack. The Commission views the high yield cement as having less compressive strength than low yield cement therefore as an additional environmental precaution requires the operator to perform weekly tubing-casing pressure monitoring. The weekly tubing-casing pressure monitoring and annual annulus pressure tests will provide assurance of the mechanical integrity of the tubing and casing.

Chaparral resolved all previous violations identified by District personnel. The procedures used by Chaparral to repair and remediate affected soil areas are accepted by District personnel as adequate. Any future violations by the applicant should be addressed by the Wichita Falls District Office. A review of the Commission's enforcement docket database did not disclose any current enforcement dockets against Chaparral Natural Resources, Inc.

Approval of the requested permit is in the public interest to efficiently produce existing oil reserves in the area and reduce truck traffic. The decreased cost to dispose of produced saltwater will extend the economic life of the producing well. Extending the economic life of the well will allow the well to produce more hydrocarbons. The evidence indicates that the operation of the subject injection well will not adversely impact any surface or subsurface useable quality water.

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 Denton Record-Chronicle*, a newspaper of general circulation in Denton County, on July 20, 2007.
3. The proposed injection into the Schertz Unit Well No. 2 will not endanger useable quality water.
 - a. The Texas Commission on Environmental Quality recommends protection of useable quality water resources to a depth of 1,195 feet the area of these wells.
 - b. The well has 98 feet of 8 ⁵/₈" surface casing cemented to surface and 1,886 feet of 4 ¹/₂" casing cemented to the surface. The well has an open hole completion from 1,886 feet to 1,905 feet.
 - c. Weekly tubing-casing pressure monitoring and annual annulus pressure tests are necessary due to the short surface casing and high yield cement slurry volume exceeding 1.54 cu.ft/sack.
4. Fluids injected into the Schertz Unit Well No. 2 will be confined to the injection interval.
 - a. The proposed disposal interval is the Caddo 1st Limestone between 1,886 feet to 1,905 feet.
 - b. The proposed injection will be through 2⁷/₈" tubing set on a packer at 1,857 feet.
 - c. There are two wellbores within ¹/₄ mile of the subject well which penetrate the injection interval. These wellbores are plugged or cased in a manner which will not provide a conduit for migration of injected water from the injection interval into other oil, gas or mineral bearing formations or useable quality water zones.
5. Use of the Schertz Unit Well No. 2 to dispose of produced water from Chaparral's Schertz Well No. 1 on its leasehold is in the public interest to provide an economical means of disposal and extend the life of the producing well operated by Chaparral, thereby preventing the waste of oil.
6. Chaparral Natural Resources, Inc. has an active P-5 on file with the Commission, with \$50,000 financial assurance.

7. The Commission's docket database did not show any current enforcement dockets for Chaparral Natural Resources, Inc.

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. Approval of the application will not harm useable quality water resources and will not present a hazard to other mineral bearing formations.
4. The use or installation of the proposed injection well is in the public interest as it will extend the life of producing wells and prevent the waste of oil.
5. Chaparral Natural Resources, Inc. has met its burden of proof and satisfied the requirements of Chapter 27.051 of the Texas Water Code and the Railroad Commission's Statewide Rule 46.
6. Chaparral Natural Resources, Inc. has made a satisfactory showing of financial responsibility to the extent required by Chapter 27.073 of the Texas Water Code.

EXAMINERS' RECOMMENDATION

Based on the above findings and conclusions, the examiners recommend that the application of Chaparral Natural Resources, Inc. for authority to inject salt water into its Schertz Unit Well No. 2 be approved as set out in the attached Final Order.

Respectfully submitted,

Andres J. Trevino, P.E.
Technical Examiner

James M. Doherty
Hearings Examiner