

June 19, 2007

OIL AND GAS DOCKET NO. 7C-0250697

THE APPLICATION OF DUNAGIN TRANSPORT COMPANY FOR A COMMERCIAL PERMIT TO DISPOSE OF OIL AND GAS WASTE INTO A RESERVOIR PRODUCTIVE OF OIL OR GAS, MINZENMAYER LEASE WELL NO. 5A, DORMAN, WEST (GOEN) FIELD, RUNNELS COUNTY, TEXAS

HEARD BY: Thomas H. Richter, P.E., Technical Examiner
James M. Doherty, Hearings Examiner

APPLICANT:

David Gross, Attorney
Dale E. Miller
Bradley Dunagin

REPRESENTING:

Dunagin Transport Company

PROTESTANTS:

Harley & Allen Belk

Mrs. Bobby Nelson

Adjacent landowners &
Runnels SWD
Adjacent landowner

PROCEDURAL HISTORY

Date of Application:	February 20, 2007
Date of Notice:	March 30, 2007
Date of Hearing:	April 19, 2007
Date of Transcript:	May 7, 2007
Date PFD Issued:	June 19, 2007

EXAMINERS' REPORT AND PROPOSAL FOR DECISION
STATEMENT OF THE CASE

This is the application of Dunagin Transport Company ("Dunagin") to convert an existing shut-in well for disposal of saltwater and operate a commercial disposal facility. The Protestant ("Belk") operates a commercial disposal well in the area. Belk believes that there is no need for a competing commercial disposal facility and the proposed facility may have an adverse environmental impact. Protestant ("Nelson") is concerned with subsurface groundwater protection.

DISCUSSION OF THE EVIDENCE

APPLICANT'S EVIDENCE

Dunagin operates 16 water transport trucks and operates 4 other commercial disposal wells located in Jones, Stonewall and Kent Counties north of the subject proposed well.

The proposed disposal well, the Minzenmayer Lease Well No. 5A, was drilled by D.W.R. Oil Co. in 2005 and completed in the Dorman, West (Goen) Field through perforations from 4,580' to 4,770' as follows:

- Surface casing (8-5/8") set at 175' and cement was circulated from the casing shoe to the ground surface.
- Longstring casing (5-1/2") set at 4,770' and cemented to an estimated top of 3,911'. A second stage cementing DV tool was set at 3,000' and the estimated top of cement is at 540'.

The proposed injection interval is 4,580' to 4,770' (190' of the Goen and Jennings Sands).¹ Tubing (2-3/8") will be set on a packer at 4,500'. There are several overlying shale barriers immediately above the injection interval. The shale is an impermeable barrier to fluid migration. The base of the deepest usable quality water is 150 feet (TCEQ Letter dated October 24, 2005). The proposed maximum injection volume is 10,000 (estimated average 2,000) barrels per day and the proposed maximum injection pressure is 2,290 psig.

The proposed Goen/Jennings injection interval is uniform and continuous in the area with no indications of boundaries or limitations. Average porosity is 17% and average horizontal permeability is 250 millidarcies. The current bottomhole pressure is 600 psig. Cumulative production from the fields are \pm 1.8 MMBO and the remaining producing wells are producing at 1% oil cut. This indicates a near depleted reservoir. Injection will be into the water-leg of the Goen/Jennings reservoirs. The proposed injection well will not harm other producing oil and or gas formations. The three producing wells in the Goen reservoir are up-dip of the proposed injection interval in the Goen Sand.

A review was made of all well completions, producing or plugged, within one mile of the subject well. Within 1/4 mile, which is the required area of review pursuant to Statewide Rule 46, all wells have been properly plugged and abandoned in such a manner to prevent fluid migration for the protection of usable quality water and provide zonal confinement. Indeed, all the wells located within 3/4 mile have been properly plugged and abandoned. There are 90 wells within one mile, 20 of which produced from the Goen and 8 from the Jennings. The nearest three Goen producing wells are outside the 1/4 mile radial area.² The wells have water production rates of 500; 1050 and 1500 BWPD respectively.³

There are two wells between 3/4 mile and one mile that indicate plugged with "mud". Both

¹ The Dorman, West (Goen) Field was discovered in 1976 at 4,512' and has cumulative production of 1.77 million barrels of oil. The Dorman, West (Jennings) Field was discovered in 1976 at 4,718' and has cumulative production of 160,068 barrels of oil. There are no wells in the Jennings field.

² Two of the wells are operated by D.W.R. Oil Company that drilled the subject proposed injection well.

³ Commission Proration Schedule as of March 1, 2007.

wells are located up-dip (based on well log analysis) of the proposed well. Water front/pressure front calculations determine negligible effects at this distance. Water injection will be into a depleted interval.

There are several other operators that have private injection/disposal wells in this area that currently inject into the Goen interval. The commercial disposal well operated by Runnels SWD is the only commercial saltwater disposal well in Runnels County and disposes into the Poe Goen Sand.

The safe and proper disposal of produced saltwater is in the public interest to insure the protection of both surface and subsurface water. The facility and the disposal well will be constructed as such. The transportation of saltwater for disposal increases operating expenses for well owners. Reduced operating expenses results in the recovery of hydrocarbon reserves that would otherwise go unrecovered. Reduced truck highway miles decreases operating costs of well operators and maximizes hydrocarbon recovery.

The Commission's Environmental staff reviewed the application and did not state any concerns or problems based on its administrative review.

Dunagin Transport Company has a current approved form P-5 and maintains a \$25,000 letter of credit for financial assurance as required by the Commission.

Notice was given to the surface owner of the disposal tract, all surface owners of adjoining tracts and all operators within one-half mile. Notice of this application was published in the *Ballinger Ledger*, a newspaper of general circulation in Runnels County, on October 19, 2006. The application was filed with the Runnels County Clerk on September 13, 2006.

PROTESTANTS EVIDENCE

The Belks:

The Belks operate the Runnels SWD commercial disposal well facility approximately 4 miles from the proposed disposal well facility. Belk asserts there is no public need for another commercial disposal well facility in Runnels County. Runnels SWD disposed of 40,000 BWPM ten years ago. Currently, the disposal is 29,000 BWPM. As oil production in Runnels County declines, so will saltwater production and hence disposal requirements. Runnels SWD charges Dunagin Transport \$.35/barrel for disposal. Another commercial disposal well in the area would cause financial problems for the Runnels SWD well. Belk asserts that it has two SWD wells (a back-up reserve disposal well for the Runnels SWD No. 1).

Belk believes that water injection into the subject Goen sand member may result in adverse effects on the producing wells in the Goen reservoir. The wells are already producing 99% water.

Mrs. Bobby Nelson:

Nelson wants to be assured that there is sufficient shale barriers and cement in the subject well to prevent fluid migration. The proposed injection well is in a valley next to a creek and adjacent to her property. Nelson states that it appears Dunagin Transport apparently has a clean record. If the application is approved, the Commission should require any acquisition by another operator that a new permitting hearing should be held to show that the subsequent operator is safe and concerned about surface and subsurface water.

EXAMINERS' OPINION

The examiners recommend the application be approved pursuant to §27.051 of the Texas Water Code and Commission Statewide Rule 46. The proposed new commercial disposal well is completed in such a manner as to prevent the migration of injected fluids to zones other than the intended zone. Documentation of zone isolation for every well and protection of the usable quality water has been provided from all wells within 1/4 mile of the proposed injection well. Therefore, the usable quality water above and below the ground surface will not be placed at risk of pollution or contamination.

The safe and proper disposal of produced saltwater and waste water serves the public interest. The production of hydrocarbons serves the public interest. The Commission's Rules concerning underground injection and surface commercial disposal facilities are premised to assure the protection of fresh water above and below the ground surface (well completion technique, proper cementing, proper plugging and saltwater handling).

The requirements and restrictions of a commercial disposal facility permit addresses concerns as to security and the surface handling of fluids. Indeed, the Commission District offices routinely inspect commercial disposal facilities. There is no evidence to indicate that the operation of the subject disposal well will adversely impact the water quality of any nearby surface water or subsurface usable quality water.

Disposal into the Goen reservoir will have minimal if any impact on the recovery of oil and gas reserves from other producing wells in the Goen Sand. Dunagin points out the injection will be into the water leg of this near depleted zone and far down-dip of the closest producing wells. Pressure-water front encroachment calculations confirm no adverse effects. The wells in the reservoir are already producing $\pm 99\%$ water.

The protestant's concern over potential pollution of the ground surface or surface waters is understandable. The Commission adopted Statewide Rules (specifically 8, 9, 13, and 46), environmental policies, and established special permit requirements that specifically address these matters to minimize and mitigate the possibility of an adverse occurrence. The examiners believe that the subject well meets the regulatory requirements, and the additional special permit requirements will provide additional protection. The Commission requires additional special conditions for a commercial facility. The Commission routinely makes inspections of commercial disposal wells.

Statewide Rule 46 contemplates that "affected persons" have standing to oppose

disposal/injection well applications and Statewide Rule 46(c)(5) indicates that “affected persons” means a person who has suffered or will suffer actual injury or economic damage “other than a member of the general public or as a competitor”. Thus Statewide Rule 46 contemplates Belk’s concern about competition is not a basis for denial of the Dunagin application.

Protestant Nelson’s concern with the possible acquisition of the facility in the future is addressed by Statewide Rule 46(d)(2) relating to the transfer of permits from one operator to another.

FINDINGS OF FACT

1. Notice of this hearing was given to all persons required to be given notice by the provisions of Statewide Rule 46. Notice of this hearing was given to all affected persons, at least ten (10) days prior to the date of the hearing. Notice of this application was published in the *Ballinger Ledger*, a newspaper of general circulation in Runnels County, on October 19, 2006. Notice of the application was filed with the Runnels County Clerk on September 13, 2006.
2. The proposed disposal well, the Minzenmayer Lease Well No. 5A, was drilled by D.W.R. Oil Co. 2005 in the Dorman, West (Goen) Field through perforations from 4,580' to 4,770' as follows:
 - a. Surface casing (8-5/8") set at 175' and cement was circulated from the casing shoe to the ground surface.
 - b. Longstring casing (5-1/2") set at 4,770' and cemented to an estimated top of 4,116'. A second stage cementing DV tool was set at 3,000' and the estimated top of cement is at 1540'.
3. Injection zone isolation will be accomplished to prevent fluid migration and protect usable quality subsurface waters.
 - a. Tubing (2-3/8") will be set on a packer at 4,500'.
 - b. The proposed injection interval is 4,580' to 4,770' (190' of the Goen and Jennings Sands). There are overlying shale barriers immediately above the injection interval which create an impermeable barrier to fluid migration.
 - c. The base of the deepest usable quality water is 150 feet (TCEQ Letter dated October 24, 2005).
 - d. The proposed maximum injection volume is 10,000 (estimated average 2,000) barrels per day and the proposed maximum injection pressure is 2,290 psig.

4. A review was made of all well completions, producing or plugged, within one mile of the subject well. Within 1/4 mile, which is the required area of review pursuant to Statewide Rule 46, all wells have been properly plugged and abandoned in such a manner to prevent fluid migration for the protection of usable quality water and provide zonal confinement.
5. The proposed method of operation and the requirements and restrictions of a commercial disposal facilities permit address concerns regarding the surface handling of fluids.
 - a. The Commission District offices routinely inspects commercial disposal facilities.
 - b. The Commission adopted Statewide Rules (specifically 8, 9, 13, 46), and environmental policies, and established special permit requirements, to minimize and mitigate the possibility of an adverse environmental impact on usable water.
6. The safe and proper disposal of produced saltwater serves the public interest.
7. Use of the proposed disposal well is in the public interest because it will provide an economical means of disposing of produced salt water from completed wells thereby increasing ultimate recovery of hydrocarbon reserves.
8. The proposed injection well will not harm other producing oil and or gas formations.
9. Dunagin Transport Company has a current approved form P-5 and maintains adequate financial assurance as required by the Commission.
10. No existing rights will be impaired by operation of the proposed injection/disposal well.

CONCLUSIONS OF LAW

1. Proper notice was timely given to all parties entitled to notice pursuant to applicable statutes and rules.
2. All things have occurred and have been accomplished to give the Commission jurisdiction in this case.
3. The use of the proposed disposal well will not endanger oil, gas, or geothermal resources or cause the pollution of surface water or fresh water strata.
4. The applicant has complied with the requirements for approval set forth in Statewide Rule 46 and the provisions of Sec. 27.051 of the Texas Water Code.
5. The use of the proposed disposal well is in the public interest pursuant to Sec 27.051 of the Texas Water Code.

EXAMINERS' RECOMMENDATION

Based on the above findings and conclusions, the examiners recommend that the application of Dunagin Transport Company to operate a commercial facility to dispose of field produced saltwater into the Minzenmayer Lease Well No. 1 into the Dorman, West (Goen) Field in Runnels County be approved as set out in the attached Final Order.

Respectfully submitted,

Thomas H. Richter, P.E.
Technical Hearings Examiner
Office of General Counsel

James M. Doherty
Hearings Examiner
Office of General Counsel