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# RAILROAD COMMISSION OF TEXAS

## HEARINGS DIVISION

**OIL AND GAS DOCKET NO. 8A-0308090**

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**THE APPLICATION SOJOURNER DRILLING CORPORATION FOR UNITIZATION AND SECONDARY RECOVERY FOR THE GIRARD (TANNEHILL) UNIT, LONG-HALL (TANNEHILL) FIELD, KENT COUNTY, TEXAS**

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**HEARD BY:** Karl Caldwell – Technical Examiner  
Clayton Hoover – Administrative Law Judge

**HEARING DATE:** February 2 and May 3, 2018  
**RECORD CLOSED:** May 30, 2018  
**CONFERENCE DATE:** June 19, 2018

**APPEARANCES:**

**REPRESENTING:**

**APPLICANT:**

Sojourner Drilling Corporation

David Nelson  
Rob Gilmore  
Elma Bernal  
Jeff Ritchie

**EXAMINERS' REPORT AND RECOMMENDATION**

**STATEMENT OF THE CASE**

Sojourner Drilling Corporation ("Sojourner") requests Commission authority for unitization of the proposed Girard (Tannehill) Unit ("Unit") and approval of secondary recovery operations on the Unit. Notice of the application was published in the *Texas Spur*, a newspaper of general circulation in Dickens and Kent Counties, for four consecutive weeks: January 18, January 25, February 1, and February 8, 2018. Notice of the application was also sent by U. S. Mail to the persons identified on the Certificate of Service attached to the Notice of Hearing dated January 12, 2018. Sojourner has 100% of the Working Interest signed up to the Unit, and over 99% of the Royalty Interest Owners have also signed up. The application is unopposed and the Technical Examiner and

Administrative Law Judge (collectively "Examiners") recommend approval of the application.

### DISCUSSION OF THE EVIDENCE

The proposed unitized formation as defined in the Unit Agreement is the subsurface portion of the Unit known as the Tannehill sand formation, constituting the correlative and continuous stratigraphic interval containing the productive interval recognized by the Railroad Commission of Texas as the Long-Hall (Tannehill) Field. The proposed Unit consists of 9 tracts of land which contain 381.95 acres (Attachment A). Sojourner extended an offer to participate to Cholla Petroleum Inc. ("Cholla"), who holds interest through a company named Palo Verde Oil, LP, which has elected in part to participate in the Unit, and in part declined to participate. Palo Verde Oil, LP has a working interest in various tracts and has signed the Unit agreement. There is a tract that is operated by Cholla and there is a common ownership between Cholla and Palo Verde Oil, LP. The Cholla tract is operated by Cholla, and there is a well on this tract. Cholla declined to contribute that tract to the Unit, deciding not to give up operation of the well on that tract to another operator, and as such, that tract is not included in the Unit. Everyone who owns an interest within the area defined by production (that will contribute to production) was given an opportunity to participate in the Unit, and all have elected to participate with the exception of Cholla's tract, which was not included in the Unit, and 1 royalty interest owner, who is expected to sign up.

Bob Gilmore, a petroleum engineer with Stephens Engineering, studied a waterflood to the south of the proposed Unit area. This waterflood to the south of the proposed Unit was used to aid in projections for Sojourner's proposed water flood. Based on Mr. Gilmore's study, the waterflood to the south will produce a ratio of approximately 0.7:1 secondary to primary production. Mr. Gilmore believes a similar ratio is achievable with Sojourner's proposed waterflood. Mr. Gilmore prepared a preliminary waterflood survey for the proposed waterflood as of April 1, 2014, and arrived at an estimated primary depletion of 85%, with an estimated secondary to primary production ratio of approximately 0.68:1. At the time, Mr. Gilmore used \$90 per barrel of oil (BO), with a return on investment (ROI) of 10 or 11:1; with an estimated cost of roughly \$3,000,000 to drill additional wells on the proposed Unit at a revenue of \$34,000,000. Even at \$60 BO, the anticipated value of the oil produced from the unitization and secondary recovery project will exceed the cost to implement the project. The preliminary waterflood survey was updated in early 2016, with a calculated secondary to primary ratio for oil reserves at 0.686 BO to 1 BO of primary reserves.

The participation formula for the Unit is comprised of the three following factors: (1) five percent (5%) existing wellbores; (2) twenty percent (20%) acre-feet; and (3) seventy-five percent (75%) primary production. At the time of the hearing, 100% of the working interest ownership, and over 99% of the royalty interest ownership had signed the Unit Agreement. Mr. Gilmore testified that the rights of the owners of all interests in the field,

whether signers of the unit agreement or not, will be protected under its operation. There are state-owned lands in the proposed Unit, and the General Land Office has signed the Unit Agreement.

### FINDINGS OF FACT

1. Notice of the application was published in the *Texas Spur*, a newspaper of general circulation in Dickens and Kent Counties, for four consecutive weeks: January 18, January 25, February 1, and February 8, 2018. Notice of the application was also sent by U. S. Mail to the persons identified on the Certificate of Service attached to the Notice of Hearing dated January 12, 2018.
2. The proposed Girard (Tannehill) Unit consists of 9 tracts of land which contain 381.95 acres.
3. The proposed unitized formation as defined in the Unit Agreement is the subsurface portion of the Unit known as the Tannehill sand formation, constituting the correlative and continuous stratigraphic interval containing the productive interval recognized by the Railroad Commission of Texas as the Long-Hall (Tannehill) Field.
4. At the time of the hearing, 100% of the working interest ownership, and over 99% of the royalty interest ownership had signed the Unit Agreement.
5. The agreement was voluntarily executed by all parties affixing their signatures thereto and no person has been compelled or required to enter into the agreement. The Unit Agreement binds only those persons who have executed it, their heirs, successors, assigns and legal representatives.
6. The rights of all owners of interests in the field will be protected under the operation of the Unit, regardless of whether an owner signed the Unit Agreement.
7. The owners of interests in the oil and gas under each tract of land within the area reasonably defined by development have been given an opportunity to enter into the Unit on the same yardstick basis as owners of interests in the oil and gas under the other tracts in the Unit.
8. The cost to drill additional wells is estimated to cost \$3,000,000, while the estimated revenue of oil is \$34,000,000, based on an oil price of \$90 per barrel. The cost of the proposed project does not exceed the value of additional reserves to be recovered.

9. The participation formula for the Unit is comprised of the three following factors: (1) five percent (5%) existing wellbores; (2) twenty percent (20%) acre-feet; and (3) seventy-five percent (75%) primary production.
10. The secondary recovery project will not be successful unless the area is unitized.
11. The proposed injection program will move hydrocarbons across lease lines, and unitization is necessary in order to protect the correlative rights of the various interest owners.
12. The unitization agreement is necessary to accomplish the purposes of establishing a Unit to effect secondary recovery operations for water injection and to operate cooperative facilities necessary thereto. Other available or existing methods or facilities for secondary recovery operations are inadequate for the purpose of secondary recovery.
13. The Unit Agreement does not provide, either directly or indirectly, for the cooperative refining or marketing of crude petroleum, distillate, condensate, or gas, or any by-product thereof.
14. The Unit Agreement is subject to all valid orders, rules and regulations of the Railroad Commission.
15. The Unit Agreement contains no provision regarding the field rules, nor does it limit the amount of production of oil and gas from the unitized area. The Unit Agreement does not release the operator from his obligation to reasonably develop lands or leases as a whole.
16. The Unit Agreement is a voluntary agreement entered into for the purpose of conducting secondary recovery operations.
17. The Unit Agreement does not provide for the location of wells.
18. There are state-owned lands in the proposed Unit, and the General Land Office has signed the Unit Agreement.
19. The Unit Agreement is in the interest of public welfare as being reasonably necessary to prevent waste and to promote conservation.
20. The reservoir described in the Unit Agreement is identified as a single reservoir for Commission purposes and is a suitable reservoir for a secondary recovery project.

21. The Unit Agreement contains only the acreage reasonably necessary to accomplish the proposed secondary recovery project.
22. Sojourner agreed, that, pursuant to the provisions of Texas Government Code §2001.144(a)(4)(A), this Final Order shall be effective on the date a Master Order relating to this Final Order is signed.

**CONCLUSIONS OF LAW**

1. Resolution of the subject application is a matter committed to the jurisdiction of the Railroad Commission of Texas. Tex. Nat. Res. Code § 81.051.
2. All notice requirements have been satisfied. 16 Tex. Admin. Code § 1.45.
3. Applicant's proposed secondary recovery project satisfies all of the requirements set out in Tex. Nat. Res. Code Ann. §§101.001-052.
4. Approval of the proposed unit agreement for secondary recovery operations is in the public interest and is necessary to prevent waste and to promote the conservation of oil or gas or both.
5. Pursuant to §2001.144(a)(4)(A), of the Texas Government Code, and the agreement of the applicant, this Final Order is effective when a Master Order relating to this Final Order is signed.

**EXAMINERS' RECOMMENDATION**

Based on the above filings of fact and conclusions of law, the Examiners recommend approval of the proposed Girard (Tannehill) Unit and secondary recovery operations project as set out in the attached order.

Respectfully submitted,



Karl Caldwell  
Technical Examiner



Clayton Hoover  
Administrative Law Judge