



RAILROAD COMMISSION OF TEXAS

HEARINGS DIVISION

OIL & GAS DOCKET NO. 7C-0293719

THE APPLICATION OF BOAZ ENERGY II, LLC TO CONSIDER UNITIZATION AND SECONDARY RECOVERY AUTHORITY FOR THE MCGREGOR UNIT, FORT MCKAVITT (LIME 4150) FIELD, SCHLEICHER COUNTY, TEXAS

HEARD BY: Paul Dubois – Technical Examiner
Cecile Hanna – Hearings Examiner

DATE OF HEARING: December 4, 2014

CONFERENCE DATE: March 10, 2015

APPEARANCES:

REPRESENTING:

Mickey Olmstead
Clark Jobe
Trey Roberson
Casey Morton
Emily Hood

Boaz Energy II, LLC

EXAMINERS' REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Boaz Energy II, LLC (Boaz) seeks Commission authority for unitization of the McGregor Unit ("the Unit") in the Fort McKavitt (Lime 4150) Field, Schleicher County, Texas, and approval of secondary recovery operations on the Unit. The application is unopposed and the Examiners recommend approval of the authority for unitization and approval of secondary recovery operations on the Unit.

In a companion case (Oil and Gas Docket No. 7C-0293717, also heard on December 4, 2014), Boaz seeks to consolidate the Camar (Canyon), Camar (Strawn-Oil), Camar (Strawn-Upper), Fort McKavitt (Strawn) and Fort McKavitt (Lime 4150) Fields into the Fort McKavitt (Lime 4150) Field and to adopt field rules for the Fort McKavitt (Lime 4150) Field. The purpose of the proposed consolidation is to facilitate unitization and secondary recovery.

DISCUSSION OF THE EVIDENCE

The proposed unit occupies 6,057.6 acres of land in Schleicher County, about two miles west of the Menard County line. The purpose of the unit agreement is to establish a pooled unit for secondary recovery operations in the field. Mr. Trey Roberson, Land Manager for Boaz, testified that the proposed unitization of the McGregor Unit and unit agreements conform to Texas Natural Resources Code § 101 *et seq.* He further stated that these hydrocarbons could not be recovered without the proposed unitization and secondary recovery. The unit agreement has been ratified by 99.9 percent of the royalty interest owners and by 97 percent of the working interest owners. Boaz anticipates that 99 percent of the working interest owners will eventually ratify the agreement.

The Fort McKavitt (Lime 4150) Field (as proposed to be consolidated) is currently developed with 56 active wells. The field has produced more than 4.6 MMBO. Most wells in the field produce less than 5 BOPD, and the total daily production is 68 BOPD. The unitized interval is the correlative interval from 3,882 feet to 4,319 feet, as seen on the dual induction log for the McGregor 3 No. 1 Well (API No. 42-413-32267) in Block 8, Section 3 of the TWNG RR Co. Survey, A-640, Schleicher County, Texas. This interval represents the entirety of the proposed unitized interval and runs from the top of the Strawn Group to the top of the Strawn Lime. The unitized interval is comprised of floodable sands with an average porosity of 16 percent, average permeability of 45 millidarcies, and an initial water saturation of 35 percent. The average net effective oil pay thickness is 10 feet. The reservoir has a solution gas drive mechanism. The reservoir is in the late primary recovery stage. The original reservoir pressure was approximately 1,500 psi, and the current reservoir pressure is approximately 70 psi.

The subsea structure of the top of the Strawn Group (top of the unitized interval) strikes from northeast to southwest across the site and dips to the northwest. A gas-oil contact was mapped in the field by Getty Oil Company, a former operator in the field, in the northwest corner at a subsea depth of -2,030 feet. In the Unit area the Strawn sands present an average net isopach thickness of 10 feet, with the thicker areas in the central and west parts of the Unit. The isopach map delineates the extent of the producible area. Boaz has acquired acreage west of the proposed unit and intends to water flood that area as a separate project.

The proposed Unit area partially overlies a portion of the inactive Getty Oil Camar (Strawn) Unit, which was dissolved in 1996. In addition, Aries Operating's Camar, SW (Strawn) Unit is located about a mile to the southwest of the McGregor Unit. These unitizations were of the same Strawn interval that is currently being sought by Boaz. Boaz used these other units as analogies to its planning for the McGregor Unit.

Boaz plans to begin its redevelopment of the field by drilling 32 new oil wells, converting 9 existing wells to injection, and drilling 25 new injection wells. Boaz estimates the current remaining recoverable primary oil to be 800 MBO, and expects to recover 210 MBO (26 percent) through the secondary recovery project. Total capital expenditures are

estimated to be \$5.1 million. Boaz anticipates the value of the anticipated secondary reserves to exceed the capital expenditures for the project.

FINDINGS OF FACT

1. Notice of the application and notice of the hearing were served on the working interest owners, royalty interest owners, and offset operators at least ten days prior to the hearing.
2. The proposed McGregor Unit consists of 6,057.6 acres in Schleicher County, Texas.
3. The unitized formation is the correlative interval from 3,882 feet to 4,319 feet, as seen on the dual induction log for the McGregor 3 No. 1 Well (API No. 42-413-32267) in Block 8, Section 3 of the TWNG RR Co. Survey, A-640, Schleicher County, Texas.
4. At the time of the hearing, 99.9 percent of the royalty owners and 97 percent of the working interest ownership had signed the unit agreement.
5. Secondary recovery operations are expected to result in the recovery of an estimated 210 MBO, which would otherwise go unrecovered.
6. The total cost to implement the secondary recovery project is expected to be \$5.1 million. The cost does not exceed the value of additional reserves to be recovered.
7. The secondary recovery project will not be successful unless the area is unitized.
8. 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. 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.
9. 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.

10. 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.
11. The unitization agreement is necessary to accomplish the purposes of establishing a unit to effect secondary recovery operations for water injection and operating cooperative facilities necessary thereto. Other available or existing methods or facilities for secondary recovery operations are inadequate for the purpose of secondary recovery.
12. 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.
13. The unit agreement is subject to all valid orders, rules and regulations of the Railroad Commission.
14. The unit agreement contains no provision regarding field rules, nor does it limit the amount of production of oil or 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.
15. The unit agreement is a voluntary agreement entered into for the purpose of conducting secondary recovery operations.
16. There are no state owned lands in the proposed unit.
17. The unit agreement is in the interest of public welfare as being reasonably necessary to prevent waste and to promote conservation.
18. The reservoir described in the unit agreement is identified as a single reservoir for Commission purposes and is a suitable reservoir for a water injection secondary recovery operation.
19. The unit agreement contains only the acreage reasonably necessary to accomplish the proposed secondary recovery project.
20. Existing infrastructure will be maintained to allocate production to wells on tracts for which 100% sign-up was not achieved.

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.

EXAMINERS' RECOMMENDATION

Based on the above findings of fact and conclusions of law, the Examiners recommend approval of the proposed McGregor Unit and secondary recovery operations, as set out in the attached order.

Respectfully submitted,



Paul Dubois
Technical Examiner



Cecile Hanna
Hearings Examiner