RAILROAD COMMISSION OF TEXAS

HEARINGS DIVISION

OIL AND GAS DOCKET NO. 7C-0294346

THE APPLICATION OF SAGA PETROLEUM OF COLORADO LLC TO CONSIDER FIELD CONSOLIDATION OF THE VAUGHN FIELD AND THE VAUGHN (QUEEN) FIELD INTO THE PROPOSED VAUGHN CONSOLIDATED FIELD AND TO ADOPT FIELD RULES FOR THE PROPOSED VAUGHN CONSOLIDATED FIELD, CROCKETT COUNTY, TEXAS

HEARD BY: Paul Dubois – Technical Examiner
John Dodson – Hearings Examiner

HEARING DATE: January 6, 2014

CONFERENCE DATE: March 24, 2015

APPEARANCES:	**REPRESENTING:**
Buddy Richter, P.E.	Saga Petroleum Company of Colorado, LLC

EXAMINER'S REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Saga Petroleum Company of Colorado, LLC (Saga) requests the Vaughn and the Vaughn (Queen) Fields be consolidated into the Vaughn Consolidated Field, and that field rules be adopted for the new field. Saga seeks the following provisions:

- Correlative interval from 732 feet to 2,000 feet;
- 330-foot lease line spacing and no between well spacing restrictions;
- 10-acre standard and 5-acre optional proration units; and
- Salvage classification.

The application is not protested. The Examiners recommend the fields be consolidated and the proposed field rules be adopted.

DISCUSSION OF EVIDENCE

The Vaughn Field was discovered on September 17, 1947, at a depth of 1,445 feet. The Vaughn Field produces from the San Andres Formation. Nearly 300 wells have been drilled in the field, and 81 wells are currently producing. Cumulative production from the field is 13,804,827 BO. The Vaughn Field has the following average reservoir properties: (1) porosity is 11 percent; (2) permeability is 27 millidarcies; (3) water saturation is 35 percent; and (4) net effective oil pay thickness is 10 to 35 feet.

The Vaughn (Queen) Field was discovered on April 20, 1971, at a depth of 1,098 feet. The Vaughn (Queen) Field produces from the Yates and Queen City Sand Formations. Cumulative production from the field is 485,436 BO. About 40 wells have been drilled in the field, and 6 are currently producing. Both fields have field rules establishing 10 acre standard proration units. The Vaughn (Queen) Field has the following average reservoir properties: (1) porosity is 18.4 percent; (2) permeability is 14 millidarcies; and (3) net effective oil pay thickness is 10 feet.

The Vaughn (Queen) Field overlies the Vaughn Field. The structural trapping mechanism for the field is an anticline. Water injection into the Vaughn Field beginning in the late 1980s increased production from the field and arrested the decline. Similar results were seen in the Vaughn (Queen) Field. In many cases, operators, including Saga, have re-entered wells completed in the Queen City Formation and deepened them for recompletion in the San Andres Formation.

Saga proposes a correlative interval for the Vaughn Consolidated Field 732 feet to 2,000 feet, based on the log of the Shannon Estate B Lease, Well No. 35 (API No. 42-105-35209). The correlative interval runs from the top of the Yates Formation to the base of the San Andres Formation, and includes the Yates, Queen City, Grayburg, and San Andres Formations.

The proposed 10-acre standard and 5-acre optional proration units for the consolidated field are consistent with the established unit sizes for the existing fields. Further, lease line spacing of 330 feet is appropriate for a 10-acre unit. Eliminating the between well spacing requirement is appropriate to provide operators flexibility in siting new wells in a field that has extensively developed. Exceptions to Rule 37 are often required for new wells. A capacity allowable for the field under Statewide Rule 48 is appropriate because most wells in the field produce about 1 BO per day, and the field has and will continue to be developed with secondary recovery techniques.

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. The Vaughn Field was discovered on September 17, 1947, at a depth of 1,445 feet.

   a. The Vaughn Field produces from the San Andres Formation.

   b. Nearly 300 wells have been drilled in the field, and 81 wells are currently producing.

   c. Cumulative production from the field is 13,804,827 BO.

3. The Vaughn (Queen) Field was discovered on April 20, 1971, at a depth of 1,098 feet.

   a. The Vaughn (Queen) Field produces from the Yates and Queen City Sand Formations.

   b. Cumulative production from the field is 485,436 BO.

   c. About 40 wells have been drilled in the field, and 6 are currently producing.

4. The Vaughn (Queen) Field overlies the Vaughn Field, and the structural trapping mechanism for both fields is an anticline.

5. Water injection into the Vaughn and Vaughn (Queen) Fields beginning in the late 1980s increased production from the fields and arrested the decline.

6. Saga proposes a correlative interval for the Vaughn Consolidated Field 732 feet to 2,000 feet, based on the log of the Shannon Estate B Lease, Well No. 35 (API No. 42-105-35209). The correlative interval runs from the top of the Yates Formation to the base of the San Andres Formation, and includes the Yates, Queen City, Grayburg, and San Andres Formations.

7. The proposed 10-acre standard and 5-acre optional proration units for the consolidated field are consistent with the established unit sizes for the existing fields.

8. Lease line spacing of 330 feet is appropriate for a 10-acre unit.

9. Eliminating the between well spacing requirement is appropriate to provide operators flexibility in siting new wells in a field that has extensively developed.

10. A capacity allowable for the field under Statewide Rule 48 is appropriate because most wells in the field produce about 1 BO per day, and the field has and will continue to be developed with secondary recovery techniques.

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. The requested field consolidation and field rules will prevent waste, protect correlative rights, and promote the orderly development of the field.

RECOMMENDATION

Based on the above findings of fact and conclusions of law, the Examiners recommend the Vaughn Field (ID No. 93264 001) and the Vaughn (Queen) Field (ID No. 93264 400) be consolidated into the Vaughn (Consolidated) Field, (ID No. 93264 150), and the field rules be adopted for the Vaughn (Consolidated) Field as requested by Saga.

Respectfully submitted,

Paul Dubois
Technical Examiner

John Dodson
Hearings Examiner