RAILROAD COMMISSION OF TEXAS

HEARINGS DIVISION

OIL & GAS DOCKET NO. 7C-0304314

THE APPLICATION OF BANNER OPERATING, LLC TO CONSOLIDATE THE JUNE ANN (CISCO) FIELD AND THE JUNE ANN (STARKEY-CANYON) FIELD INTO THE PROPOSED JUNE ANN (PENNSYLVANIAN) FIELD, AND TO ADOPT PERMANENT FIELD RULES FOR THE JUNE ANN (PENNSYLVANIAN) FIELD, IRION AND TOM GREEN COUNTIES, TEXAS

HEARD BY: Paul Dubois – Technical Examiner
Jennifer N. Cook – Administrative Law Judge

HEARING DATE: June 16, 2017

CONFERENCE DATE: August 15 , 2017

APPEARANCES:

APPLICANT:	**REPRESENTING:**
Keith B. Masters, P.E. Sam Hamilton	Banner Operating, LLC

EXAMINERS' REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Banner Operating, LLC (hereinafter "Banner") requests to consolidate the June Ann (Cisco) and the June Ann (Starkey-Canyon) Fields into a new field known as the June Ann (Pennsylvanian) Field. Banner requests that the following rules be adopted for the June Ann (Pennsylvanian) Field:

1. Designation of the June Ann (Pennsylvanian) Field as the correlative interval from 5,512' to 7,158' as shown on the Compensated Density Neutron Microlog log of the Energy From Texas Turner Ranch T.D. 24 Lease Well No. 3 (API No. 42-451-32490);

2. Minimum lease line spacing of 467' and minimum between well spacing of 0';

3. 320 acre gas units, maximum diagonal of 6,500', with 10% tolerance, 40 acre optional units, maximum diagonal of 2,100'; and 80 acre oil units, maximum

diagonal of 3,250', with 20 acre tolerance, 40 acre optional units, maximum diagonal of 2,100';

4. Associated Prorated classification, with gas allocation based on 90% deliverability and 10% acreage; and Maximum Efficient Rate Allowable of 300 BOPD, with oil allocation based on 90% per well and 10% acreage;

5. Net Gas-Oil Ratio of 10,000:1; exception to Statewide Rule 49(a) for all wells in the June Ann (Pennsylvanian) Field.

In addition, Banner proposes that the allocation formula for the consolidated gas field be suspended, and that the field rules be made permanent. The Administrative Law Judge and Technical Examiner ("Examiners") recommend approval of the proposed field consolidation, and adoption of the proposed field rules and suspension of the allocation formula for the June Ann (Pennsylvanian) Field.

DISCUSSION OF THE EVIDENCE

The June Ann (Cisco No. 3 SD) Field (ID No. 47684 050) was discovered in July 2006 at a depth of 6,208'. The June Ann (Cisco No. 6 SD) Field (ID No. 47684 075) was discovered in July 2006 at a depth of 6,155'. These two fields were consolidated into the June Ann (Cisco) Field (ID No. 47864 025) and permanent field rules were established in Oil & Gas Docket No. 7C-0273988 by Final Order dated March 20, 2012. The permanent field rules established in that case, which have not been subsequently amended, are as follows:

1. Designated Interval: the correlative interval from 5,512' to 6,298' as shown on the Compensated Density Neutron Microlog log of the Energy From Texas Turner Ranch T.D. 24 Lease Well No. 3 (API No. 42-451-32490);

2. Minimum lease line spacing of 467' and minimum between well spacing of 933';

3. 320 acre gas units, maximum diagonal of 6,500', with 10% tolerance, 40 acre optional units, maximum diagonal of 2,100'; and 80 acre oil units, maximum diagonal of 3,250', with 20 acre tolerance, 40 acre optional units, maximum diagonal of 2,100';

4. Associated Prorated classification, with gas allocation based on 90% deliverability and 10% acreage; and a 1965 yardstick oil allowable, with oil allocation based on 90% per well and 10% acreage.

In addition, the gas allocation formula was suspended.

A total of 20 wells have produced to date from the June Ann (Cisco) Field. Cumulative production through March 2017 is 300 MBO and 8.2 BCF. There are 8 oil wells and 5 gas wells on the June 2017 proration schedule.

The June Ann (Starkey-Canyon SD) Field (ID No. 47864 100) was originally discovered in January 2007 at a depth of 6,569'. Temporary field rules were established in Oil & Gas Docket No. 7C-0273987 by Final Order dated March 20, 2012. The Temporary Field Rules established in that docket (which, with the exception of the designated interval were identical to the permanent field rules for the June Ann (Cisco) Field) were as follows:

1. Designated Interval: the correlative interval from 6,298' to 7,158' as shown on the Compensated Density Neutron Microlog log of the Energy From Texas Turner Ranch T.D. 24 Lease Well No. 3 (API No. 42-451-32490);

2. Minimum lease line spacing of 467' and minimum between well spacing of 933';

3. 320 acre gas units, maximum diagonal of 6,500', with 10% tolerance, 40 acre optional units, maximum diagonal of 2,100'; and 80 acre oil units, maximum diagonal of 3,250', with 20 acre tolerance, 40 acre optional units, maximum diagonal of 2,100';

4. Associated Prorated classification, with gas allocation based on 90% deliverability and 10% acreage; and 1965 yardstick oil allowable, with oil allocation based on 90% per well and 10% acreage.

   In addition, the gas allocation formula was suspended.

The temporary field rules established in 2012 were amended in Oil & Gas Docket No. 7C-0300778 by Final Order dated April 4, 2017 to provide for a fieldwide maximum efficient rate ("MER") allowable of 300 barrels of oil per day, a fieldwide net gas-oil ratio ("GOR") of 10,000 standard cubic feet of casinghead gas per barrel of oil, and an exception to Statewide Rule 49(a) for all wells in the Field.

A total of 21 wells have produced to date from the June Ann (Starkey-Canyon SD) Field. Cumulative production (through March 2017) is 357 MBO and 2.1 BCF. There are 19 oil wells and 1 gas well on the June 2017 proration schedule

Banner's proposal in the present case is a vertical consolidation of the two existing fields. The proposed designated interval is from the top of the Pennsylvanian at the top of the existing June Ann (Cisco) Field, to the base of the Strawn Sands at is the base of the existing June Ann (Starkey-Canyon SD) Field.

No Statewide Rule 10 exceptions have been previously granted with respect to the existing fields which Banner proposes to consolidate. Banner proposes the consolidation to prevent waste (which will be facilitated through the ability to produce the two existing intervals until a single economic limit is reached), and to promote continued development of the field area (through improved economic performance of wells commingled upon initial completion).

There are no known factors which would indicate that commingling of the Cisco and Canyon sands should not be authorized. Ownership of the minerals is the same with respect to the entire proposed vertically consolidated interval. Banner presented evidence that the fluids from the existing field intervals are compatible. Although there may be potential for cross-flow in existing wells where depletion has occurred, there are operational procedures which can be employed to mitigate it. All of the productive horizons within the proposed consolidated interval produce volumetrically. Should cross flow occur, it would not be expected to negatively impact ultimate recovery.

To demonstrate the benefit of commingling production from the Cisco and Canyon in existing wells, Banner presented an analysis of the potential impact thereof on the ultimate recovery from the Turner Ranch TD 43 No. 1 well. This well was completed in the Canyon in 2007, and produced 10,630 STBO and 105,550 MCFG prior to being recompleted to the Cisco in 2011. The projected ultimate recovery from the Cisco is 78,440 STBO and 287,420 MCFG. If the Canyon and Cisco were to be commingled in this well, it is projected that a total of 98,060 STBO and 519,580 MCFG would be recovered. Commingling would therefore result in incremental recovery of 7,380 STBO and 106,100 MCFG on the basis of the effective reduction of the economic limit alone.

Banner presented evidence of the potential for commingling the Cisco and Canyon Formations in two additional existing wells: the Teague 9 No. 12 well and the Turner Ranch TD 27 No. 1 well. Similar potential is believed to exist in a number of other wells. The benefit of commingling production from the Cisco and Canyon in future wells derives from the different geologic characteristics of the Cisco and Canyon intervals.

Production from the June Ann (Cisco) Field occurs from a combination of channel and fan deposits with localized accumulations which are approximately 10' to 30' feet thick. The geologic uncertainty which is inherent to this depositional environment makes it difficult, from an economic perspective, to justify drilling for the Cisco only.

Production from the June Ann (Starkey-Canyon SD) occurs from highly lenticular turbidite fan deposits. The Canyon is a more certain drilling target; however, in many cases, wells drilled and produced from the Canyon only will not produce sufficient reserves to recoup drilling costs.

The ability to produce all productive Cisco and Canyon Formation sands contemporaneously would mitigate the risks associated with separate development of the two existing fields, and encourage further development.

With the exception of the requested provision for minimum between well spacing of 0', the proposed spacing, density, and allocation rules are identical to the existing Field Rules in both of the existing fields. The proposed fieldwide MER, net GOR, and exception to Statewide Rule 49(a) have all been previously adopted for the existing June Ann (Starkey-Canyon SD) Field.

The field rules for the existing fields have been the subject of previous Oil & Gas Dockets, and were adopted based on evidence presented therein. There are no changed conditions in that regard; however, the establishment of a vertically consolidated field will create a situation wherein adoption of minimum between well spacing of 0' would be desirable.

Upon consolidation, certain of the existing wells would violate the existing between well spacing provision (933' between wells). Adoption of minimum between well spacing of 0' would eliminate this problem. In addition, adoption of minimum between well spacing of 0' would provide operators in the field with the flexibility to produce the various horizons encountered as future wells are drilled from closely spaced but separate wellbores should then-current conditions dictate. Finally, although horizontal drilling is not contemplated at this time, adoption of minimum between well spacing of 0' would provide the required flexibility to locate horizontal wells amongst the vertical wells which have already been drilled as well as those which will be drilled in the future.

The fieldwide MER, net GOR, and exception to Statewide Rule 49(a) for all wells in the field were adopted based on evidence presented in Oil & Gas Docket No. 7C-0300778. Although this evidence related to wells in the June Ann (Starkey-Canyon SD) Field, the nature of the producing characteristics and depletion mechanism in the June Ann (Cisco) Field are comparable to those in the June Ann (Starkey-Canyon SD) Field. Application of the MER, net GOR, and exception to Statewide Rule 49(a) within the consolidated field on a fieldwide basis is appropriate.

The allocation formulas have previously been suspended in both of the existing fields. There is no indication that there is not market demand for less than 100% of the gas produced from these fields, therefore it is appropriate to suspend the allocation formula in the consolidated field.

The field rules for the June Ann (Cisco) Field were made permanent when they were established in 2012. Although the temporary field rules for the June Ann (Starkey-Canyon SD) Field have not been formally reviewed, they are in most respects identical to the permanent June Ann (Cisco) Field Rules. It is therefore appropriate to make the field rules for the consolidated field permanent.

FINDINGS OF FACT

1. Notice of this hearing was given to all parties entitled to notice at least ten days prior to the date of the hearing. There was no protest at the call of the hearing.

2. The June Ann (Cisco No. 3 SD) Field was discovered in July 2006 at a depth of 6,208'. The June Ann (Cisco No. 6 SD) Field was discovered in July 2006 at a depth of 6,155'. These two fields were consolidated into the June Ann (Cisco) Field and Permanent Field Rules were established in Oil & Gas Docket No. 7C-0273988 by Final Order dated March 20, 2012. The consolidated field is classified as associated prorated. A total of 20 wells have produced from the Field. Cumulative

production from the Field is 300 MBO and 8.2 BCF. There are 8 oil wells and 5 gas wells on the June 2017 proration schedule.

3. The June Ann (Starkey-Canyon SD) Field was discovered in January 2007 at a depth of 6,569′. Temporary field rules were established in Oil & Gas Docket No. 7C-0273987 by Final Order dated March 20, 2012. A fieldwide MER, net GOR, and an exception to Statewide Rule 49(a) for all wells in the Field were adopted in Oil & Gas Docket No. 7C-0300778 by Final Order dated April 4, 2017. The field is classified as associated prorated. A total of 21 wells have produced from the field. Cumulative production from the field is 357 MBO and 2.1 BCF. There are 19 oil wells and 1 gas well on the June 2017 proration schedule.

4. Consolidation of the June Ann (Cisco) Field and the June Ann (Starkey-Canyon SD) Field will prevent waste and promote development.

5. There are no known factors which would indicate that commingling of the Cisco and Canyon Formation sands should not be authorized.

6. Ownership of the minerals is the same with respect to the entire proposed vertically consolidated interval.

7. The fluids from the existing field intervals are compatible.

8. Should cross flow occur, it would not be expected to negatively impact ultimate recovery.

9. The June Ann (Pennsylvanian) Field should be designated as the entire correlative interval between 5,512′ to 7,158′ as shown on the compensated density neutron microlog log of the Energy From Texas - Turner Ranch T.D. Lease Well No. 3. The interval includes the entire Cisco and entire Starkey-Canyon.

10. The field rules for the existing fields are identical (with the exception of the MER and net GOR in the June Ann (Starkey-Canyon SD) Field). These field rules are appropriate for the consolidated field, and should be adopted on a permanent basis.

11. The proposed minimum between well spacing of 0′ will eliminate spacing problems which would arise upon consolidation as to existing wells, and would provide the necessary flexibility in locating future wells.

12. The existing MER, net GOR, and exception to Statewide Rule 49(a) for wells in the June Ann (Starkey-Canyon SD) Field should be adopted for the consolidated field on a fieldwide basis.

13. The allocation formulas have previously been suspended in both of the existing fields. There is no indication that there is not market demand for less than 100%

of the gas produced from these fields, therefore it is appropriate to suspend the allocation formula in the consolidated field.

14. At the hearing, the applicant agreed on the record that a Final Order in this case is to be effective when the Master 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 §§1.43 and 1.45.

3. Consolidation of the subject field and adoption of the proposed field rules will prevent waste, foster conservation and protect correlative rights.

4. 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 on August 15, 2017.

EXAMINERS' RECOMMENDATION

Based on the above findings and conclusions of law, the examiners recommend approval of the proposed field consolidation, establishing the June Ann (Pennsylvanian) Field, adoption of the permanent field rules for the June Ann (Pennsylvanian) Field, and suspension of the allocation formula for the June Ann (Pennsylvanian) Field.

Respectfully submitted,

Paul Dubois
Technical Examiner

Jennifer N. Cook
Administrative Law Judge