



RAILROAD COMMISSION OF TEXAS

HEARINGS DIVISION

OIL AND GAS DOCKET NO. 7B-0296609

THE APPLICATION OF CINNABAR OPERATING, LLC TO GRANT A BLANKET STATEWIDE RULE 10 EXCEPTION TO ENABLE OPERATORS TO SECURE ADMINISTRATIVE APPROVAL TO DOWNHOLE COMMINGLE THE PRODUCTION FROM THE ARRIBA LIBRA (CADDO) FIELD, HAT TOP MOUNTAIN, N. (FRY SD.) FIELD AND WATTS (GARDNER SAND) FIELD, NOLAN COUNTY, TEXAS

HEARD BY: Paul Dubois – Technical Examiner
Marshall Enquist – Hearings Examiner

HEARING DATE: June 12, 2015

CONFERENCE DATE: July 14, 2015

APPEARANCES:

REPRESENTING:

Ana Maria Marsland-Griffith
Rick Johnston, P.E.

Cinnabar Operating, LLC

EXAMINER'S REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Cinnabar Operating, LLC (Cinnabar) seeks a blanket exception to Statewide Rule 10 (16 Tex. Admin. Code §3.10) allowing operators to commingle hydrocarbon production from the Arriba Libra (Caddo), Hat Top Mountain, N. (Fry Sd.), and Watts (Gardner Sand) Fields in Nolan County, Texas through a single tubular string. The application was not protested. The Examiners recommend Cinnabar's application be granted.

DISCUSSION OF EVIDENCE

Statewide Rule 10(a) provides a general prohibition against the production of hydrocarbons from different strata (*i.e.*, different commission-designated fields) through the same string of tubulars. Statewide Rule 10(b) provides for exceptions to the general prohibition if commingled production will prevent waste or promote conservation or protect correlative rights. Cinnabar is an operator of wells in the three subject fields and has obtained exceptions to commingle the three fields in seven (7) wells, and an exception to

commingle two of the fields in one well. Cinnabar anticipates the drilling and commingle production of additional wells in the future. Therefore, Cinnabar seeks a blanket exception to ease the administrative burden on operators and Commission staff.

The Hat Top Mountain, N. (Fry Sd.) Field was discovered on February 2, 1958, at a depth of 5,167 feet. The field is currently on County Regular Rules, which at the productive depth of the field prescribe 40-acre units, 467-foot lease line spacing, and 1,200-foot between well spacing. The field has demonstrated a cumulative production of 463,670 barrels of oil. There are currently three producing oil wells on the June 2015, proration schedule.

The Watts (Gardner Sand) Field was discovered on October 5, 1954, at a depth of 5,548 feet. The current field rules prescribe 40-acre units, 330-foot lease line spacing, and 933-foot between well spacing. The field has demonstrated a cumulative production of 1,962,815 barrels of oil. There are currently nine producing oil wells and one producing gas well on the June 2015, proration schedules.

The Arriba Libra (Caddo) Field was discovered on October 11, 1974, at a depth of 5,800 feet. The field is currently on County Regular Rules, which at the productive depth of the field prescribe 40-acre units, 467-foot lease line spacing, and 1,200-foot between well spacing. The field has demonstrated a cumulative production of 10,286 barrels of oil. There are currently eight producing oil wells and one gas well on the June 2015, proration schedules.

The current shut-in bottom hole pressures for the three zones are estimated to be as follows: (1) Hat Top Mountain, N. (Fry Sd.) is 984 pounds per square inch (psi); (2) Watts (Gardner Sand) is 1,90 psi; and (3) Arriba Libra (Caddo) is 2,129 psi. The Fry Sand appears to be somewhat underpressured. However, Cinnabar's expert petroleum engineer does not believe there will be crossover of fluids between zones and that pumping can effectively maintain drainage on all three zones. In addition, Cinnabar provided formation fluid sampling and analysis results to assess fluid compatibility. The analyses were performed on fluid samples from individual and combined zones. The results indicated the formation fluids from the three zones were compatible and would not result in harm to the recovery of hydrocarbon resources. None of the three fields are subject to Statewide Rule 36 with regard to hydrogen sulfide.

Cinnabar estimates that the abandonment rate for a well completed in any one of the fields to be 63.5 barrels of oil per month. For a well completed in all three fields, the per-field abandonment rate decreases to about 21.2 barrels per month. Commingling all three zones will provide for an incremental recovery of 5,082 barrels per zone, or incremental total recovery of 15,247 barrels per well. Without commingling, economic constraints would cause hydrocarbons to remain in the ground.

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 hearing.
2. The Hat Top Mountain, N. (Fry Sd.) Field was discovered on February 2, 1958, at a depth of 5,167 feet. There are currently three producing oil wells on the June 2015, proration schedule.
3. The Watts (Gardner Sand) Field was discovered on October 5, 1954, at a depth of 5,548 feet. There are currently nine producing oil wells and one producing gas well on the June 2015, proration schedules.
4. The Arriba Libra (Caddo) Field was discovered on October 11, 1974, at a depth of 5,800 feet. There are currently eight producing oil wells and one gas well on the June 2015, proration schedules.
5. Cinnabar is an operator of wells in the three subject fields and has obtained exceptions to commingle the three fields in seven (7) wells, and an exception to commingle two of the fields in one well.
6. There will be crossover of fluids between zones and that pumping can effectively maintain drainage on all three zones.
7. The formation fluids from the three zones are compatible and will not harm the recovery of hydrocarbon resources.
8. None of the three fields are subject to Statewide Rule 36 with regard to hydrogen sulfide.
9. Commingling all three zones will provide for an incremental recovery of 5,082 barrels per zone, or incremental total recovery of 15,247 barrels per well.
10. Without commingling, economic constraints would cause hydrocarbons to remain in the ground.

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 § 3.10(c)

3. The subject application will prevent waste and protect correlative rights. 16
Tex. Admin. Code § 3.10(b)

RECOMMENDATION

Based on the above findings of fact and conclusions of law, the Examiners recommend the Commission enter an order granting the application of Cinnabar Operating, LLC for a blanket exception to downhole commingle production from the Arriba Libra (Caddo) Field, Hat Top Mountain, N. (Fry Sd.) Field and Watts (Gardner Sand) Fields, Nolan County, Texas

Respectfully submitted,



Paul Dubois
Technical Examiner



Marshall Enquist
Hearings Examiner