THE APPLICATION OF ECHO PRODUCTION, INC. TO CONSOLIDATE VARIOUS CONLEY FIELDS INTO THE CONLEY (CONS.) FIELD AND TO ADOPT FIELD RULES FOR THE CONLEY (CONS.) FIELD, HARDEMAN COUNTY, TEXAS

HEARD BY: Richard D. Atkins, P.E.

DATE OF HEARING: March 17, 2009

APPEARANCES: REPRESENTING:

Jim Cowden Echo Production, Inc.

Ken Seligman

EXAMINER'S REPORT AND RECOMMENDATION STATEMENT OF THE CASE

Echo Production, Inc. ("Echo") requests to consolidate three Conley Fields into a new field to be known as the Conley (Cons.) Field. The three fields proposed for consolidation are as follows:

FIELD NAME	FIELD NUMBER
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Conley (Ellenburger)	20116 332
Conley (Miss.)	20116 498
Conley (Osage)	20116 664

Echo requests that the following rules be adopted for the new field:

- Designation of the field as the correlative interval from 7,740 feet to 8,272 feet, as shown on the log of the Shell Oil Company C. G. Conley Lease, Well No. 5 (API No. 42-197-00166);
- 2. 330'-330' well spacing for vertical wells, 330' with no between well spacing between horizontal and vertical wells and horizontal and horizontal wells and special provisions for "take points" in horizontal wells;
- 3. 80 acre oil units with optional 40 acre density;
- 4. Allocation based on 100% acreage.

At the hearing, Echo also requested exceptions to Statewide Rule 10 for all wells in

the Conley (Cons.) and Conley (Palo Pinto) Fields. This application was unprotested and the examiner recommends approval of Echo's request for field consolidation, field rules and Statewide Rule 10 exceptions.

DISCUSSION OF THE EVIDENCE

The three Conley fields were discovered beginning in March 1959. All three fields are oil fields and operate under 660'-1,200' well spacing and 80 acre density. The fields are geographically intermingled and there are no other fields contained within the proposed correlative interval. Echo is the only operator in the three fields and most of the wells have been commingled in all three fields. However, approximately 50% of the wells never received Rule 10 exceptions.

Echo is proposing to consolidate the three Conley Fields into the Conley (Cons.) Field. The proposed designated interval for the consolidated field is from 7,740 feet to 8,272 feet, as shown on the log of the Shell Oil Company - C. G. Conley Lease, Well No. 5 (API No. 42-197-00166), located in Section 81, Block H, W&NW RR Co. Survey, Hardeman County, Texas.

The three Conley fields are located on a classic anticlinal dome structure. The Mississippian and Osage reservoirs are composed of carbonate limestone and the Ellenburger reservoir is composed of dolomite. The primary drive mechanism for each reservoir is depletion drive with limited water drive support. The zones have limited permeability and require hydraulic fracturing in order to produce. Echo believes that the reservoirs are in communication and have undergone pressure equalization, as a result of naturally occurring fractures and induced hydraulic fractures.

Echo has already drilled two horizontal wells and will be actively developing the field by drilling additional infill horizontal wells. Minimum well spacing of 330'-330' for vertical wells, 330' with no between well spacing between horizontal and vertical wells and horizontal and horizontal wells and 80 acre oil units with optional 40 acre density will provide flexibility in locating wells for future development in the Conley area.

Echo provided drainage area calculations for eight wells in the Conley (Miss.) field. The drainage areas range from 15 acres up to a maximum of 76 acres. The average drainage area was calculated to be approximately 48 acres. All of the wells will drain less than 80 acres and two of the eight wells will drain less than 40 acres.

The Palo Pinto reservoir occurs at an average depth of 5,300 feet and is productive over most of the Conley (Cons.) Field area. Echo requests Statewide Rule 10 exceptions for each well in the Conley (Cons.) and Conley (Palo Pinto) Fields, as separate completions in the Palo Pinto interval would not be commercial. These zones have produced on a commingled basis since 1968 with no detrimental results. In addition, completing wells in both of the productive intervals at the same time will reduce the economic limit for each interval and provide for the additional recovery of hydrocarbons. Echo estimates that an

additional 42,000 BO can be recovered from the Palo Pinto interval by a commingled well.

FINDINGS OF FACT

- Notice of this hearing was given to all persons entitled to notice and there were no protests.
- The three Conley fields were discovered beginning in March 1959. All three fields are oil fields and operate under 660'-1,200' well spacing and 80 acre density.
- 3. Echo is the only operator in the three fields and most of the wells have been commingled in all three fields.
- 4. Echo is proposing to consolidate the three Conley Fields into the Conley (Cons.) Field.
- 5. The designated interval for the consolidated field is from 7,740 feet to 8,272 feet, as shown on the log of the Shell Oil Company C. G. Conley Lease, Well No. 5 (API No. 42-197-00166), located in Section 81, Block H, W&NW RR Co. Survey, Hardeman County, Texas.
- 6. The fields are geographically intermingled and there are no other fields contained within the proposed correlative interval.
- 7. The three Conley fields are located on a classic anticlinal dome structure. The Mississippian and Osage reservoirs are composed of carbonate limestone and the Ellenburger reservoir is composed of dolomite.
- 8. The primary drive mechanism for each reservoir is depletion drive with limited water drive support.
- 9. Echo will be actively developing the field by drilling additional infill horizontal wells. Minimum well spacing of 330'-330' for vertical wells, 330' with no between well spacing between horizontal and vertical wells and horizontal and horizontal wells and 80 acre oil units with optional 40 acre density will provide flexibility in locating wells for future development in the Conley area.
- 10. The drainage areas on eight existing wells range from 15 acres up to a maximum of 76 acres. The average drainage area was calculated to be approximately 48 acres. All of the wells will drain less than 80 acres and two of the eight wells will drain less than 40 acres.
- 11. Downhole commingling production from the Conley (Cons.) and Conley (Palo

Pinto) Fields will reduce the economic limit for each interval and provide for the additional recovery of hydrocarbons. Echo estimates that an additional 42,000 BO can be recovered from the Palo Pinto interval by a commingled well.

CONCLUSIONS OF LAW

- 1. Proper notice of this hearing was given to all persons legally entitled to notice.
- 2. All things have occurred or been accomplished to give the Railroad Commission jurisdiction in this matter.
- 3. Consolidation of the fields and the proposed field rules will prevent waste, protect correlative rights and satisfy statutory requirements.
- 4. Approval of the requested Rule 10 exceptions for all wells in the Conley (Cons.) and Conley (Palo Pinto) Fields will prevent waste and will not harm correlative rights.

EXAMINER'S RECOMMENDATION

Based on the above findings of fact and conclusions of law, the examiner recommends that the Commission consolidate the three Conley Fields into the new field, the Conley (Cons.) Field, adopt Field Rules for the Conley (Cons.) Field and approve the Statewide Rule 10 exceptions.

Respectfully submitted,

Richard D. Atkins, P.E. Technical Hearings Examiner