

## OFFICE OF GENERAL COUNSEL

OIL AND GAS DOCKET NO. 04-0273694

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THE APPLICATION OF DEVON ENERGY PRODUCTION COMPANY L.P. TO AMEND  
THE FIELD RULES FOR THE AGUA DULCE (CONSOLIDATED FRIO) FIELD, NUECES  
COUNTY, TEXAS

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**Heard by:** Andres J. Trevino, P.E., Technical Examiner  
Michael Crnich, Hearings Examiner

**Hearing Date:** January 25, 2012

**Appearances:**

Brian R. Sullivan, P.E.  
Mark Durkee  
Darryl Linton  
Andrews Bryant  
George Mullen

**Representing:**

Devon Energy Production Company L.P.

### EXAMINER'S REPORT AND RECOMMENDATION

#### STATEMENT OF THE CASE

Field rules for the Agua Dulce (Consolidated Frio) Field were last amended by Order No. 04-0204176A, effective March 28, 1994. The rules in effect for the field are summarized as follows:

1. Designation of the field as the correlative interval from 4,090 to 6,800 feet as shown on the type log of the Pennzoil - Driscoll Well No. A-7;
2. 467'-0' well spacing, 40 acre standard drilling units;
3. Allocation based on 95% deliverability and 5% per well.

Devon Energy Production Company L.P. requests that the rules be amended as follows:

1. Designation of the field as the correlative interval from 4,090 to 6,800 feet as shown on the type log of the Pennzoil - Driscoll Well No. A-7; (No Change)
2. 330'-0' well spacing;
3. 40 acre oil and gas units, optional 20 acre units with no diagonal limits, no filing of P-15s and proration unit plats;
4. Allocation based on 95% deliverability and 5% per well (No Change).

Devon also requests that the allocation formula for the field remain suspended.

This application was unopposed, and the examiners recommend that the field rules for the Agua Dulce (Consolidated Frio) Field be amended as requested.

### **DISCUSSION OF EVIDENCE**

The first wells discovered production in the Agua Dulce field in 1928. The reservoirs were produced as a large retrograde condensate cycling project. The Agua Dulce (Consolidated Frio) Field was formed in 1994 with the consolidation of the 156 Agua Dulce fields and is classified as an associated gas field. A total of 282 gas wells and 10 oil wells are listed on the current proration schedule for the field. Only 183 gas wells and 5 oil wells are active producers. Devon currently operates 179 gas wells and one oil well. There are an additional 11 other operators in the field. The allocation formula has been suspended since 1994.

The designated interval for this field will not be changed. The interval from 4,090 to 6,800 feet as shown on the type log of the Pennzoil - Driscoll Well No. A-7 includes numerous Frio sands that have been produced to various stages of depletion. Formation pressure data shows many small individual sands exist within the designated interval that contain near virgin pressures while sands above and below are depleted. In the northern end of the field, wells will target multiple stacked Frio sand reservoirs. The stacked sands will be individually perforated and fracked and produced with other perforated and fracked sands. In the southern end of the field, wells will target the frackable series of sands. The frackable sands will be fracked together and produced as one sand body.

The Agua Dulce (Consolidated Frio) Field is described as a large structural closure on the down thrown side of a large down-to-the-coast Vicksburg fault system. The field consists of multiple stacked Frio aged oil and gas reservoirs. These sandstone reservoirs were originally deposited within a fluvial deltaic environment. The individual reservoirs are described as channels, bars, splays, and levees and are often limited in size. Individual sand bodies have been identified as small as 25, 19, and 12 acres in size. Within each

major sand body there are numerous lenticular and discontinuous sand stringers that may not correlate from well to well. Devon believes that the addition of a 20 acre optional density and the 330 -0 feet well spacing is necessary to maximize recovery from the field. This spacing will allow flexibility in drilling infill wells. The rules proposed for the Agua Dulce (Consolidated Frio) Field are similar to rules governing the nearby Stratton (Consolidated) Field which has similar rock properties as the Agua Dulce (Consolidated Frio) Field. Devon has identified 40 additional locations they may drill with the amended field rules approved.

This interval is composed of multiple lenticular accumulations of hydrocarbons. A two factor allocation formula is therefore appropriate for the field. Devon requests that the allocation formula remain based on 95% deliverability and 5% per well and that the allocation formula remain suspended as there remains a 100% demand for all gas produced from the field. Devon requests elimination of the requirement to file individual proration plats as there will be no between-well spacing and acreage is not part of the allocation formula.

#### **FINDINGS OF FACT**

1. Notice of this hearing was given to all persons entitled to notice at least ten days prior to the date of hearing.
2. The Agua Dulce (Consolidated Frio) Field was formed in 1994 with the consolidation of 156 Agua Dulce fields as an associated gas field.
3. Rules governing the field provide for 467'-0' well spacing, 40 acre density and 95% deliverability and 5% per well allocation.
4. A total of 282 gas wells and 10 oil wells are listed on the current proration schedule for the field. Only 183 gas wells and 5 oil wells are active producers.
5. The Agua Dulce (Consolidated Frio) Field is composed of a thick series of Frio Sands deposited within a fluvial deltaic environment. The individual reservoirs are described as channels, bars, splays and levees are often limited in size. Minor sand bodies don't correlate from well to well.
6. Wells in the field have drainage areas which vary significantly. Development with optional 20 acre density is necessary to maximize recovery from the field.
  - a. Individual sand bodies have been identified as small as 25 to 12 acres in size.
  - b. Within each major sand body there are numerous lenticular and discontinuous sand stringers that may not correlate from well to well.

- c. Pressure data shows some wells are draining less than 40 acres.
7. The correlative interval from 4,090 to 6,800 feet as shown on the type log of the Pennzoil - Driscoll Well No. A-7 includes numerous stacked Frio sands.
8. Well spacing of 330-0 feet will allow the recovery of additional reserves through flexible well spacing and infill drilling into isolated undrained sand bodies.
9. The rules proposed for the Agua Dulce (Consolidated Frio) Field are similar to rules governing the Stratton (Consolidated) field in the area.
10. The Agua Dulce (Consolidated Frio) Field is composed of multiple stacked sands with lenticular and isolated accumulations of hydrocarbons. A two-factor allocation formula based on 5% per well and 95% deliverability is appropriate for the field and remains unchanged.
11. The allocation formula should remain suspended as there is 100% market demand for the gas from the field.

#### **CONCLUSIONS OF LAW**

1. Proper notice of this hearing was issued.
2. All things have been accomplished or have occurred to give the Commission jurisdiction in this matter.
3. Amending the field rules for the Agua Dulce (Consolidated Frio) Field is necessary to prevent waste and protect correlative rights.

#### **RECOMMENDATION**

Based on the above findings and conclusions of law, the examiners recommend that the field rules for the Agua Dulce (Consolidated Frio) Field be amended as requested by Devon Energy Production Company L.P.

Respectfully submitted,

Andres J. Trevino, P.E.  
Technical Examiner

Michael Crnich  
Hearings Examiner