

October 19, 2000

OIL AND GAS DOCKET NO. 7C-0226273

**THE APPLICATION OF HUNT OIL COMPANY TO AMEND FIELD RULES IN THE
AMACKER-TIPPETT (DEVONIAN) FIELD, UPTON COUNTY, TEXAS**

Heard by: Margaret Allen, Technical Hearings Examiner

Procedural history

Application received: September 29, 2000

Hearing held: October 18, 2000

Appearances

Flip Whitworth
David Luttner

Representing
Hunt Oil Company

EXAMINER'S REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

The existing rules for the Amacker-Tippett (Devonian) Field were adopted December 16, 1957, under Docket No. 7-36,863, as amended, and are summarized as follows:

1. 660-1800 foot well spacing;
2. 160 acres with a maximum diagonal of 3800 feet between the well and farthest corner of the lease;
3. allocation based 67% on acreage and 33% per well; and
4. a surface casing rule.

Hunt Oil seek the following amended rules:

1. Designated interval from 10,270 to 11,116 feet as shown on the log of the Hunt Oil Company Amacker Well No. 106-1.
2. 660-1200 foot well spacing;
3. 160 acre proration units with 80 acre optional units; and
4. allocation based 67% on acreage and 33% per well.

DISCUSSION OF THE EVIDENCE

The Amacker-Tippett (Devonian) Field was discovered in May of 1955, has both oil and gas wells, and is classified as associated, 100% AOF. Only the gas wells have special field rules and these rules specify 160 acre proration units with 660-1800 foot well spacing. Three of the field's operators have already drilled wells on 80-acre units under Rule 38 exceptions.

There are 23 gas wells in the field, operated by four different companies. The reservoir is a retrograde condensate one and the seven oil wells all have potentials less than 10 BOPD. The original reservoir pressure was 4870 psig and the gas gravity is 0.72. The average porosity is 10%, water saturation equals 20% and the gas recovery factor is estimated to be 80%. The recoverable gas in place for the entire field is estimated to be 753 BCF, and production from the gas wells to date has been 122.4 BCF and 4,100,000 barrels of condensate.

Hunt has one plugged and eleven active wells in the subject field. The cumulative production from these wells ranges from 3 BCF to 10 BCF. There has been little or no decline in these wells' production for many years and Hunt calculated that its active wells will take many more years of continued production to reach their abandonment pressure. For example, the current recovery from the best Hunt well, the V.T. Amacker No. 105-7, is 9.6 BCF, and Hunt calculated that it would take another 69 years for this well to recover its estimated ultimate recovery of 15.4 BCF. Most of Hunt's wellbores are already 40 years old and will have to be replaced before they drain all of the reservoir around them.

There are few modern logs available to help estimate the reservoir pay characteristics. Microlog analysis shows that net pay varies from 81 to 148 feet, but Hunt believes that reserves are also coming from matrix rock which does not show microlog permeability. Based on the microlog net pay, the ultimate drainage areas of the active wells range from 55 to 311 acres, assuming the wellbores last long enough. The average ultimate drainage area calculated for the current wells is 121 acres. If gas is being contributed from more rock than the net pay estimated from micrologs, the average drainage area will be less.

Hunt believes that infill drilling will be necessary to fully drain this reservoir. Between-well spacing of 1200 feet will facilitate wells being drilled or recompleted to the Devonian between the existing wells.

The field rules are old enough that no designated interval has been adopted. Hunt proposed that the interval from the top of the Devonian at 10,270 feet (measured depth) to the base of the Devonian at 11,116 feet (measured depth) in its V.T. Amacker Well No. 106-1 be used as the correlative interval for the field. The field already has a two-factor allocation formula and Hunt did not propose any changes to this rule. The casing rule is no longer in effect.

FINDINGS OF FACT

1. Notice of this hearing was given to all operators in the Amacker-Tippett (Devonian) Field on October 5, 2000.
2. The Amacker-Tippett (Devonian) Field was discovered in 1955, and the gas wells have produced 122.4 BCF and 4,100,000 barrels of condensate to date.
3. The field has 23 gas wells and 7 low-potential oil wells, and is classified as Associated, 100% AOF.
4. Only the gas wells have special field rules and these rules specify 160 acre proration units, with 660-1800 foot well spacing.
5. The recoverable gas in place for the entire field is estimated to be 753 BCF.
6. The cumulative production from Hunt's twelve wells ranges from 3 BCF to 10 BCF, and the maximum ultimate recovery of its best well has been estimated to be over 15 BCF.
7. There has been little or no decline in these wells' production for many years and Hunt expects that it will take from 8 to 69 years of continued production for these wells to reach their abandonment pressure.
8. Infill wells, drilled on optional 80-acre gas proration units, will be necessary to completely drain the reserves from this field.
 - a. The estimated ultimate drainage areas of Hunt's active wells ranges from 55 to 311 acres.
 - b. The average ultimate drainage area of Hunt's active wells is calculated to be 122 acres.
 - c. Most of the existing wellbores are already 40 years old and will probably have to be replaced to drain all of the reserves in their part of the reservoir.
9. Between well-spacing of 1200 feet will allow infill wells to be drilled or recompleted between the existing wells.

CONCLUSIONS OF LAW

1. Proper notice was given as required by statute.
2. All things have been done or occurred to give the Railroad Commission jurisdiction to resolve this matter.

- 3 The requested amendments to the field rules for the Amacker-Tippett (Devonian) Field will prevent waste, protect correlative rights within the field, and provide for orderly development of the field.

EXAMINER'S RECOMMENDATION

Based on the above findings and conclusions, the examiner recommends that the existing rules for the Amacker-Tippett (Devonian) Field be amended as requested.

Respectfully submitted,

Margaret Allen
Technical Hearings Examiner

Date of Commission action: November 9, 2000.

Exhibits

1. Location map
2. Type log
3. Gas proration schedule
4. Oil proration schedule
5. Production history
6. Wellbore schematics for Amacker 106-1
7. Reservoir data
8. Calculated drainage areas
9. Requested rule amendments