

**THE APPLICATION OF STROUD PETROLEUM, INC., FOR FIELD RULES FOR THE ORE CITY (TRAVIS PEAK) FIELD, UPSHUR COUNTY, TEXAS**

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**Heard by:** Margaret Allen, Technical Hearings Examiner

**Procedural history**

Application received: October 15, 2003

Hearing held: November 6, 2003

**Appearances**

Philip Whitworth  
Scott D. Stroud

Representing  
Stroud Petroleum, Inc.

**EXAMINER'S REPORT AND RECOMMENDATION**

**STATEMENT OF THE CASE**

Stroud Petroleum, Inc., ("Stroud") is seeking to expand the designated interval for the Ore City (Travis Peak) Field to one between 7933' and 9672', as shown on the log of its Oberlin Lease Well No. 2. Because this includes multiple reservoirs, a two-factor allocation formula based 95% on deliverability and 5% per well, is also proposed.

**DISCUSSION OF THE EVIDENCE**

The Ore City (Travis Peak) Field was discovered in April, 2003, with the completion of Stroud's Oberlin Lease Well No. 1. This well was drilled through the Travis Peak and found gas-bearing sandstones in the lower Travis Peak. Mechanical problems prevented completion in the lower Travis Peak and the well was eventually perforated in a sandstone near the top of the Travis Peak, from 8440' to 8490'. The initial potential was 11 BOPD and 341 MCF/D. Oil wells are very unusual in the Travis Peak in Upshur County. This well apparently discovered an isolated sandstone that is oil-bearing. Cumulative oil production is 2376 BO and current production is less than 10 BOPD.

Stroud skidded the drilling rig over and drilled a second well, the Oberlin No. 2. The Oberlin No. 2 was perforated between 9567' and 9662' and tested at an AOF rate of 315 MCF/D, at a gas/liquid ratio of 22,692 cubic feet per barrel. Cumulative production for the first two months is 11,106 MCF and 485 BC. Even though both gas wells and oil wells produce from the proposed designated interval, it is not necessary to assign 49(b) allowables to the gas wells. The oil produced from the Oberlin No. 1 is from a isolated sandstone stringer and restricting the gas production from gas wells completed in different Travis Peak sandstones will not increase oil recovery.

There are other prospective sandstones in the Travis Peak formation that is shown between 7993' and 9672' on the log of the Oberlin Well No. 2. Expanding the correlative interval for the field will encourage the development of these smaller sandstones. Increasing the designated interval so that

multiple sandstones may be perforated together will also lower the economic limit of each completion and recover more gas from the Travis Peak. No cross flow will occur while the wells are being produced. Analyses of the water produced from the different sandstones completed in the Oberlin No. 1 and No. 2 shows it to be compatible.

There are multiple reservoirs within the proposed correlative interval and state statutes require a two-factor allocation formula for such a field. A formula based 5% per well and 95% on deliverability for gas wells and 5% per well and 95% on potential for oil wells will satisfy this requirement. Stroud testified that there is a market for all of the gas from the Oberlin wells and requested that the allocation formula be suspended.

There are no other producing Travis Peak wells within 2-1/2 miles of the Oberlin wells. The interval initially perforated in the Oberlin No. 2 has 65' of gross pay at 7% porosity and 40% water saturation. The bottomhole pressure in the Oberlin No. 2 is 4200 psi and the recoverable gas-in-place from 40 acres is calculated to be 720 MMCF, assuming 70% recovery. As an example, Stroud showed one unperforated sandstone with 30' of gross pay at 7% porosity and 50% water saturation. The calculated recoverable reserves for this sandstone are 198 MMCF, assuming 50% recovery, and are not enough to support a separate completion. Allowing multiple sandstones to be downhole commingled will result in the recovery of reserves that would not otherwise be recovered.

This area has been known to have marginal gas reserves in the Travis Peak formation. Stroud believes that technological changes in fracture stimulation and regulatory changes allowing large commingled intervals can make these reserves economic. If daily production of about 1 MMCF can be established, as many as 10 new wells may be drilled in this area within the next few years.

#### **FINDINGS OF FACT**

1. Notice of this hearing was given to all operators in the field on October 21, 2003.
2. The discovery well, Stroud Petroleum's Oberlin Lease Well No. 1, encountered several gas-bearing sandstones in the Travis Peak, but was eventually perforated in a sandstone near the top of the Travis Peak because of mechanical problems.
3. In April, 2003, the discovery well's initial potential was 11 BOPD and 341 MCF/D, from perforations between 8440' and 8990', and the well is now producing less than 10 BOPD.
4. The second well in the field, Stroud's Oberlin No. 2 was completed as a gas well, between 9567' and 9662', and is now producing about 200 MCF/D.
5. The ultimate recovery of the perforated sandstone in the Oberlin No. 2 is estimated to be 720 MMCF, but at least one additional Travis Peak sandstone with an estimated 200 MMCF of reserves remains behind pipe.
6. Downhole commingling reserves from the small sandstones in the Travis Peak will encourage their development and lower the economic limit of each sandstone.

7. The Travis Peak formation is shown between 7933' and 9672' in the log of the Stroud Petroleum Oberlin Lease Well No. 2.
8. The proposed designated interval of the Ore City (Travis Peak) Field contains multiple gas reservoirs not in communication with the oil reservoir where the Oberlin No. 1 is producing.
  - a. The Oberlin No. 1 is completed near the top of the Travis Peak.
  - b. The Travis Peak comprises numerous sandstones separated by shale.
9. Restricting gas wells to an allowable under Statewide Rule 49(b) is not necessary to prevent waste in the oil reservoir.
10. The proposed designated interval includes several sandstones that are not in natural communication and state statutes require a two-factor allocation formula for fields with multiple reservoirs.
11. Allocation based 5% per well and 95% on a gas well's deliverability or an oil well's potential is close to the statewide allocation formula and will satisfy statutory requirements.
12. There is a market for 100% of the gas produced by the applicant, the only operator in the Ore City (Travis Peak) Field.

#### **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 designated interval and allocation formula rules will prevent waste, protect correlative rights and promote orderly development of the field.
4. The subject field meets all the criteria established for suspension of the allocation formula under Statewide Rule 31(j).
5. Classification of the Ore City (Travis Peak) gas field as associated, prorated will not cause waste and will protect correlative rights and promote conservation.

#### **EXAMINER'S RECOMMENDATION**

Based on the above findings and conclusions, the examiner recommends that the requested field

rules for the Ore City (Travis Peak) Field be approved and that the field be classified as associated but prorated. The allocation formula should also be suspended, as per the attached order.

Respectfully submitted,

Margaret Allen  
Technical Hearings Examiner

Date of Commission Action: November 25, 2003.