#### **RULE 37 CASE NO. 0211550**

APPLICATION OF TEXAS CRUDE OPERATOR, INC. FOR AN EXCEPTION TO STATEWIDE RULE 37 TO DRILL WELL NO. 4-95 ON THE CLASSEN LEASE, IN THE MUNGERVILLE (PENNSYLVANIAN) FIELD, DAWSON COUNTY, TEXAS

**APPEARANCES:** 

FOR APPLICANT: APPLICANT:

John Soule (attorney) Texas Crude Operator, Inc.

Edwin C. Lookabaugh

Dale McCarter

FOR PROTESTANT: PROTESTANT:

Thane Akins Goodrich Petroleum Company/

Wylie G. Basham Hillon-Simon

PROCEDURAL HISTORY

Date Application Filed: February 13, 1996
Notice of Hearing: March 18, 1996
Hearing Date: April 4, 1996
Transcript Received: April 25, 1996

Heard By: Meredith Kawaguchi, Legal Examiner

Margaret Allen, Technical Examiner

PFD Circulation Date: May 17, 1996 Current Status: Protested

## **STATEMENT OF THE CASE**

Texas Crude Operator, Inc. ("Texas Crude" or "applicant") has applied to drill a first well on its Classen Lease at a Rule 37 location. Proposed Well No. 4-95 is 200' from the northeast corner of the protestant's lease, whereas applicable field rules require a distance of 467'.

Applicant maintains that the proposed location is the apex of a pinnacle reef in the Mungerville (Pennsylvanian) Field. Unless applicant is allowed to place its well at this highest structural position, approximately 5,000 barrels of attic oil will be trapped and wasted.

Goodrich Petroleum/Hillon-Simon ("protestant") is of the opinion that the proposed location is not necessary to prevent waste, because a well at a regular location on the Classen Lease will recover all of the reserves in the field which will not be recovered by the protestant's well. Also, most of the reserves from a well at the proposed Rule 37 location will come from the Hillon-Simon tract.

## **DISCUSSION OF THE EVIDENCE**

The protestant drilled its Classen 95 Well No. 1 in January of 1994. The well encountered a Pennsylvanian reef at 8588 (-5473') and has already produced 85,000 barrels of oil with no decline. The protestant's well was located by 3D seismic, and although carried in the Mungerville (Pennsylvanian) Field, appears to be separated from the rest of the field by a saddle. Texas Crude has interpreted the seismic provided to it by the protestant and believes that the highest point of this particular pinnacle reef is located 200' from Hillon-Simon's lease line on applicant's lease.

Texas Crude does not claim that it cannot receive its fair share by drilling at a regular location. Texas Crude asserts that by drilling at the highest point on the pinnacle reef it will recover an additional 4746 BO that cannot be produced by a well at a regular location on its lease. The seismic interpretation of Texas Crude indicates that the expected elevation at its proposed location is -5390' while the elevation at a regular location would be -5408'. The northeast-southwest seismic line created from the 3-D seismic across Texas Crude's acreage indicates that the proposed location is about the highest point of this line. It is difficult to be certain from seismic that there are actually 18' of structural difference between the proposed and a regular location but dip direction is more certain. The east-west seismic line created by Texas Crude from the 3D data indicates that the proposed location is very slightly downdip from the highest position on this line.

The structure map which Texas Crude created from Hillon-Simon's seismic data indicates a long, narrow ridge trending northeast-southwest. However, the seismic lines submitted by Texas Crude do not condemn all possible regular locations on Texas Crude's lease, because the apex of the reef could open to the northwest. Points of elevation equal to that of the proposed location may extend to regular locations to the northwest. This would occur if the top of the reef were flat rather than pointed. The protestant based the location of its well on such a "flat top" interpretation. No seismic data supports applicant's narrowing of the structure, and it is this narrowing which precludes the existence of regular locations at the structure's apex. The southern end of Texas Crude's structure map is supported by the dipmeter in Hillon-Simon's well though that area of the reef is several hundred feet from the proposed location.

Even if Texas Crude's structural map is correct in all details and the alleged apex is truly 18' higher than a regular location, it will not cause waste to drill at a regular location if the reservoir is not a water drive. Texas Crude admitted that this Pennsylvanian reef has only a partial water drive and Hillon-Simon's well is draining from updip of its location. When the main reef, approximately 1/2 mile to the southeast in the Mungerville (Pennsylvanian) Field was discovered, it encountered an initial pressure of 3500 psi. The original pressure in the separate Hillon-Simon reservoir was only 2400-2500 psi due to pressure depletion through the common aquifer. Pressure depletion would produce a considerable amount of the 4700 BO of alleged attic oil in the structure which Texas Crude has mapped. Gravity drainage would probably reduce the small amount of remaining attic oil to a few barrels at most. Given the uncertainties of the exact location, shape, and height of the top of the Hillon-Simon reef, it would be unreasonable to grant Texas Crude's requested location for only a few barrels of oil. The proposed location 200' from Hillon-Simon's lease line would undoubtedly drain a considerable amount of oil from the protestant's lease.

#### **FINDINGS OF FACT**

- 1. At least ten (10) days notice of hearing was sent to all designated operators, lessees of record for tracts having no designated operator, and owners of record of unleased mineral interests, for each adjacent tract and each tract nearer than 467' to the applicant's proposed wells.
- 2. Applicant has applied on Form W-1 to drill Well No. 4-95 on the Classen Lease in Dawson County, Texas.

- 3. Proposed Well No. 4-95 requires an exception to Statewide Rule 37 because the proposed location is 200' to the nearest lease line, whereas the field rules for the Mungerville (Pennsylvanian) Field require a minimum distance of 467' to the nearest lease line.
- 4. The application for a Rule 37 exception is protested by an offset operator, Goodrich Petroleum Company/Hillon-Simon.
- 5. Texas Crude failed to condemn regular locations on its tract.
  - a. There is no seismic data or well control to support applicant's depiction of the structural crest of the reef as a narrow ridge pointing northeast.
  - b. The dipmeter data taken from protestant's Well No. 95-1 supports only the dip of the southern end of the reef, which is several hundred feet from the proposed location.
  - c. The applicant failed to prove that there will be the ultimate loss of a substantial amount of hydrocarbons if the proposed well is drilled at a regular location.
    - i. The drive mechanism in the subject field is pressure depletion combined with a partial water drive.
    - ii. Pressure depletion will result in production of a considerable amount of the 4746 barrels of oil at the apex of the reef.
    - iii. Gravity drainage will reduce the amount of the remaining attic oil.

#### **CONCLUSIONS OF LAW**

- 1. Proper notice was issued timely to all persons legally entitled to notice.
- 2. All things have been done or have occurred to give the Railroad Commission jurisdiction to decide this matter.
- 3. The applicant did not prove that waste or confiscation will occur if the subject application is denied.

# **EXAMINERS' RECOMMENDATION**

The examiners recommend that Texas Crude's application to drill Well No. 4-95 on the Classen Lease at a Rule 37 location in the Mungerville (Pennsylvanian) Field be denied.

Respectfully submitted,

Meredith Kawaguchi Legal Examiner

Margaret Allen Technical Examiner

MFK/ds