

THE APPLICATION OF GRAYHAWK OPERATING INC. TO ADOPT THE FIELD RULES FOR THE LARD RANCH (GRANITE WASH -C-) FIELD, ROBERTS COUNTY, TEXAS

Heard by: Andres J. Trevino, P.E. on February 5, 2007

Appearances:

R. Brandon Hussing
Doug Dashiell

Representing:

Grayhawk Operating, Inc.

EXAMINER'S REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

The Lard Ranch (Granite Wash -C-) Field currently operates under Statewide rules. Grayhawk Operating, Inc. requests that the following rules be adopted for the field :

1. Designation of the field as the correlative interval from 8,614 feet to 8,700 feet as shown on the log of the Tolbert No. 103 Well (API No. 42-393-31773);
2. 467' - 0' well spacing for vertical and horizontal wells;

This application was unopposed and the examiner recommends that the field rules for the Lard Ranch (Granite Wash -C-) Field be adopted as proposed by Grayhawk Operating, Inc.

DISCUSSION OF EVIDENCE

The Lard Ranch (Granite Wash -C-) Field was discovered as a non-associated gas field in May 1980. In 1989, the first oil well was completed in the field. There are currently one active oil well and twenty active gas wells in the field. The gas field is classified as associated and the allocation formula is suspended. The field currently operates under Statewide Rules.

Grayhawk is reactivating a declining gas field by drilling horizontal wells. It has drilled twelve horizontal and one vertical well since 2004. The Granite Wash -C- is a tight gas reservoir with permeability range of 0.1 to 0.001 millidarcies. Under current reservoir conditions, drilling and completing a vertical well is marginally economic at best.

For the vertical gas wells, ultimate recoveries range from 1 BCF to 1.5 BCF while for horizontal gas wells the estimated ultimate recoveries range from 2 BCF to 5 BCF. Grayhawk is proposing to drill horizontal wells end to end oriented to the north and south to maximize recovery from an east to west favored drainage flow pattern. The horizontal

drainholes will maximize reservoir contact and will penetrate zones of higher permeability within the Granite Wash -C- Formation which is heterogeneous, both vertically and horizontally.

FINDINGS OF FACT

1. Notice of this hearing was given to all persons entitled to notice and no protests were received.
2. The Lard Ranch (Granite Wash -C-) Field was discovered in May 1980 as a gas field and with one oil well completed in 1989. The field is associated and operates under Statewide Rules with AOF status.
3. There are currently twenty gas wells and one oil well in the field. Grayhawk has drilled one vertical well and twelve horizontal wells since 2004.
4. The Granite Wash -C- Formation is a mature, tight gas reservoir that is heterogeneous, both vertically and horizontally.
5. In order to efficiently and effectively drain the reservoir, horizontal wells must be drilled.
 - a. Estimated ultimate recoveries for vertical gas wells range from 1 to 1.5 BCF , for horizontal wells the estimated ultimate recoveries range from 2 to 5 BCF.
 - b. Grayhawk proposes to drill horizontal wells end to end oriented to the north and south to maximize recovery from an east to west favored drainage flow pattern.
 - c. Horizontal drainholes will maximize reservoir contact and will penetrate zones of higher permeability within the Granite Wash -C- Formation which is heterogeneous, both vertically and horizontally.
6. Well spacing a minimum of 467 feet from lease lines and 0 feet between wells will provide flexibility in developing this field using horizontal drainhole wells.

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. Adopting the proposed field rules for the Lard Ranch (Granite Wash -C-) Field is necessary to prevent waste, protect correlative rights and promote development of the field.

RECOMMENDATION

Based on the above findings and conclusions of law, the examiner recommends that the Commission adopt the field rules for the Lard Ranch (Granite Wash -C-) Field as proposed by Grayhawk Operating, Inc.

Respectfully submitted,

Andres J. Trevino, P.E.
Technical Examiner