



RAILROAD COMMISSION OF TEXAS

HEARINGS DIVISION

OIL AND GAS DOCKET NO. 03-0295780

THE APPLICATION OF UNIT PETROLEUM COMPANY TO AMEND FIELD RULES FOR THE VILLAGE MILLS DEEP (WX. CONS.) FIELD, HARDIN COUNTY, TEXAS

HEARD BY: Karl Caldwell – Technical Examiner
John Dodson – Hearings Examiner

HEARING DATE: April 7, 2015
CONFERENCE DATE: June 9, 2015

APPEARANCES: **REPRESENTING:**

APPLICANT:

Kelli Kenney Unit Petroleum Company
Frank Muser, PE

EXAMINERS' REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Unit Petroleum Company ("Unit Petroleum") requests to renumber and amend the field rules for the Village Mills Deep (Wx. Cons.) Field, Hardin County, Texas. The current field rules are summarized as follows:

1. The entire correlative interval from 8,870' to 15,500' as shown on the Baker Hughes High Definition Induction log of the Sanchez Oil & Gas Corporation, Gulf West Lease Well No. 2, (API No. 42-199-33053), Hardin County, Texas e designated as the Village Mills Deep (Wx Cons.) Field.
2. An allocation formula based on 95% deliverability and 5% per well. The allocation formula is currently suspended in the field.

Unit Petroleum proposes the following field rule amendments:

- Rule 1: no change;
- Rule 2: for both vertical and horizontal wells, well spacing 330 feet from any property, lease, or subdivision line; 330 feet between horizontal wells and 0 feet between a horizontal well and a vertical well on the same lease in the same field;
- Rule 3: 80 acre proration units with 40 acre optional units; and
- Rule 4: for horizontal wells: an off-lease penetration point provision, a 50 foot box rule, a stacked lateral horizontal drainhole rule.

Unit Petroleum also requests that the gas allocation formula remain suspended in the field. The application is unopposed and the Examiners recommend approval of the application.

DISCUSSION OF THE EVIDENCE

Field rules were adopted for the Village Mills Deep (Wx Cons.) Field in Final Order No. 03-0352940, effective September 11, 2007. Unit Petroleum is requesting to amend and renumber the current field rules to add field rules that pertain to horizontal wells, as well as amending the proration unit density to provide for 80 acre units with optional 40 acre units.

The correlative interval adopted for the subject field is greater than 6,000 vertical feet and contains multiple sands layered between shale intervals, with structural entrapment by faulting. As a result, there are numerous sands throughout the correlative interval, and the majority of wells completed in the field require hydraulic fracture stimulation. Within the correlative interval for the field, Unit Petroleum identified the Wilcox sand interval, the Outpost sand interval, the Wilcox 10600 interval, the Dempsey sand interval, and the Green sand interval as potentially productive intervals.

Unit Petroleum filed the completion paperwork for the BP America Fee GU, Well No. 2H on March 10, 2015. Unit propose to adopt field rules related horizontal well development in the field, including an off-lease penetration point provision, a 50 foot box rule, and a stacked lateral rule, as well as no minimum well spacing between vertical and horizontal wells completed on the same lease, in the same field. The proposed stacked lateral rule adopts similar language introduced in a similar field recently in which the stacked laterals for a given stacked lateral well must be within a rectangular area, with a maximum width of the rectangle being 700 feet, and the length of which is

the greatest distance between the first and last take point on any of the stacked laterals within this rectangle.

The April 2015 proration schedule lists ten producing wells and two inactive wells in the field. Unit Petroleum's BP America Fee GU, Well No. 2H is not listed on the schedule. Therefore, at the current time there are a total of eleven producing wells in the field, all operated by Unit Petroleum. Cumulative production from the field is 362,918 BO and 11.7 Bcf of gas. The field is currently under Statewide density rules of 40 acres. A gas volumetric calculation for the BS Duff GU, Well No.1 indicates the well is draining approximately 88 acres. A gas volumetric calculation for the BS Duff GU, Well No. 1 indicates the well is draining approximately 90 acres. Based on this data, Unit Petroleum proposes to adopt 80 acre units, with optional 40 acre units.

The Village Mills Deep (Wx Cons.) Field is currently under Statewide spacing rules. Micro-seismic information coupled with computer simulation modeling using logs from the BP America A No. 76 well showed the predicted fracture half-length is less than 267 feet for the BP Fee GU, Well No. 2H. As a result, Unit Petroleum proposes adopting, for both vertical and horizontal wells, well spacing of 330 feet from any property, lease, or subdivision line; 330 feet between horizontal wells, and 0 feet between a horizontal well and a vertical well on the same lease in the same field.

The allocation formula for the field was suspended in Final Order No. 04-0252597, as long as there is a 100% market for all of the gas produced from the subject field. Unit Petroleum requests that the allocation remain suspended while there is a 100% market for all the gas.

FINDINGS OF FACT

1. Notice of this hearing was provided to all operators in the field at least ten (10) days prior to the date of the hearing and no protests were received.
2. Unit Petroleum is currently the only operator in the field.
3. Field rules for the Village Mills Deep (Wx Cons.) Field were adopted in Final Order No. 03-0352940, effective September 11, 2007.
4. The field is currently under Statewide spacing and density rules.
5. Unit Petroleum's BP America Fee GU, Well No. 2H is not listed on the April 2015 proration schedule.
6. Unit Petroleum filed the completion paperwork for the BP America Fee GU, Well No. 2H on March 10, 2015.

7. The drainage radius for the BS Duff GU, Well No. 1 is 88 acres, while the drainage radius for the BS Duff GU, Well No. 1 is 90 acres.
8. Micro-seismic data, well logs, and computer modeling predicted the fracture half-length to be less than 267 feet from the hydraulic fracture stimulation of the BP Fee America GU, Well No. 2H.
9. There are multiple sand intervals within the correlative interval for the field that may be productive.
10. A single horizontal well cannot effectively drain the entire 6,680 vertical foot correlative interval for the field.

CONCLUSIONS OF LAW

1. Proper notice was issued as required by all applicable statutes and regulatory codes.
2. All things have occurred and been accomplished to give the Commission jurisdiction in this matter.
3. Amending the field rules for the Village Mills Deep (Wx Cons.) Field will prevent waste.

EXAMINERS' RECOMMENDATION

Based on the above findings of fact and conclusions of law, the Examiners recommend that the Commission amend the field rules for the Village Mills Deep (Wx Cons.) Field.

Respectfully submitted,



Karl Caldwell
Technical Examiner



John Dodson
Hearings Examiner