

THE APPLICATION OF DEVON ENERGY PRODUCTION CO., L.P. TO ADOPT FIELD RULE NOS. 5 AND 6 FOR THE PHANTOM (WOLFCAMP) FIELD, LOVING, REEVES WARD AND WINKLER COUNTIES, TEXAS

HEARD BY: Andres J. Trevino, P.E., Technical Examiner
Michael Crnich, Legal Examiner

HEARING DATE: April 13, 2012

APPEARANCES:

REPRESENTING:

APPLICANT:

John Soule
Wyatt Adams
David Ruder

Devon Energy Production Co., L.P.

EXAMINERS' REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Devon Energy Production Co., L.P. ("Devon") requests that Field Rules be adopted to allow a six month exception to Statewide Rule 13(b)(5)(A), which requires producing a flowing oil well through tubing, for all wells in the Phantom (Wolfcamp) Field. Devon also requests a six month exception to Statewide Rule 51(a) regarding a waiver of the 10 day rule for the filing of paperwork related to the completing of oil wells in the field. No other Field Rule changes are proposed for the field.

The application is unopposed and the examiners recommend approval of the Statewide Rule 13(b)(5)(A) and 51(a) exceptions.

DISCUSSION OF EVIDENCE

The Phantom (Wolfcamp) Field was discovered in 1983 by initially drilling vertical wells in the Bone Springs formation. The average depth of the field is 11,002 feet and there are 74 producing oil wells and 11 operators carried on the proration schedule. The majority of the wells are horizontal wells. Cumulative production from the field through March 2012 is 5.0 MMBO.

The Phantom (Wolfcamp) Field is undergoing rapid horizontal well development. It typically takes 1 to 7 days to reach initial oil, 3 to 76 days to reach peak oil and 42 to 146

days for the flowing casing pressure to drop below 300 psig. Initial flowing pressures are as high as 4,000 psi. Since snubbing operations have inherent safety risks and high costs, once surface pressures are manageable, usually less than 300 psi, the tubing can be installed. Devon opined that the average time for a typical well to recover its load water is 2 to 8 months.

Statewide Rule 13(b)(5)(A) requires flowing oil wells to be produced through tubing and the rule does not explicitly allow for exceptions. Without an exception to this rule, flowing oil wells will be required to be snubbed to run in tubing, run wire line pre-set packers or rapidly deplete or kill the well. Devon fears that killing a well may permanently damage the well's completion, as frac fluid will remain in the reservoir and may negatively impact the long term production characteristics of the well. In addition, rapid depletion of reservoir pressure has shown to cause damage to Bone Springs completions by destabilizing frac proppant and shortening propped frac wings, which will reduce a well's ultimate recovery. A six month exception is needed, as typically new oil wells have high initial rates of production, followed by a steep decline and wells perform better on restricted choke sizes, resulting in longer flowback periods to clean up.

Devon also requests that operators of oil wells be granted administratively a six month exception to the provisions of Statewide Rule 51(a) regarding the 10 day rule for filing the potential test. This will allow for the backdating of allowables on the oil wells without requiring a waiver to be secured from all field operators. While allowables are needed to cover oil and gas volumes recovered during flowback and load recovery, early-time well test results are not representative of reservoir conditions in terms of flowing pressures and volumes of substances produced. This rule will grant the Commission the authority to issue an allowable back to the initial completion date for all oil wells in the field and will prevent unnecessary shut-ins to alleviate potential overproduction issues related to completion paperwork filings.

The proposed exceptions to Statewide Rule 13(b)(5)(A) and Statewide Rule 51(a) will allow operators of flowing oil wells in this field the flexibility to run tubing and file completion paperwork, without penalties, once the pressure and production rates have declined. Commission staff in the Field Operations Section has no issues with approving the proposed rules. Similar rules have been approved in the Wolfbone (Trend Area) Field, the Eagleville (Eagleford-2) Field and the Briscoe Ranch (Eagleford) Field.

FINDINGS OF FACT

1. Notice of the hearing was given to all persons entitled to notice at least ten days prior to the date of hearing.
2. The Phantom (Wolfcamp) Field was discovered in 1983 by initially drilling vertical wells in the Bone Springs formation. The average depth of the field is 11,002 feet and there are 74 producing oil wells and 11 operators carried on the proration schedule.

3. The Phantom (Wolfcamp) Field is undergoing rapid horizontal development, as in addition to the producing wells, there are numerous permitted horizontal drilling locations in the field.
4. There are technical difficulties associated with installing tubing prior to fracture stimulation and flow back of the load water.
 - a. The Bone Spring formations contain over-pressured and normally pressured zones that are fracture stimulated with as many as 21 stages.
 - b. The fracture stimulation requires high pressures and large volumes of frac fluid and proppant that can exceed a tubing's burst strength and volume capacity.
 - c. Since snubbing operations have inherent safety risks and high costs, once surface pressures are manageable, usually less than 300 psi, the tubing can be installed.
 - d. It typically takes 2 to 8 months for wells to recover load water and establish production representing stabilized flow of native reservoir fluids. The average time for a typical well to recover its load water is about four months.
5. Statewide Rule 13(b)(5)(A) requires flowing oil wells to be produced through tubing. Currently, the rule does not explicitly allow for exceptions.
6. Statewide Rule 13(b)(5)(A) does not require flowing gas wells to be produced through tubing.
7. Without an exception to this rule, flowing oil wells will be required to be rapidly depleted or killed.
 - a. Rapid depletion of reservoir pressure has been shown to cause damage to Bone Springs completions by destabilizing frac proppant and shortening propped frac wings, which will reduce a well's ultimate recovery.
 - b. Killing a well may permanently damage the well's completion, as frac fluid will remain in the reservoir and may negatively impact the long term production characteristics of the well.

- c. A six month exception is needed as typically, new oil wells have high initial rates of production, followed by a steep decline and wells perform better on restricted choke sizes, resulting in longer flowback periods to clean up.
8. A Statewide Rule 51(a) exception will permit operators to receive an allowable extending back to the initial completion date for all oil wells in the field and will prevent unnecessary shut-ins to alleviate potential overproduction issues related to completion paperwork filings.
9. Shutting-in oil wells to make up overproduction is not necessary to prevent waste.

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 Field Rule Nos. 5 and 6 for the Phantom (Wolfcamp) Field will prevent waste, protect correlative rights and promote the orderly development of the field.

RECOMMENDATION

Based on the above findings and conclusions of law, the examiners recommend that Field Rules No. 5 & 6 for the Phantom (Wolfcamp) Field be adopted as proposed by Devon Energy Production Co., L.P.

Respectfully submitted,

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