



RAILROAD COMMISSION OF TEXAS

HEARINGS DIVISION

OIL AND GAS DOCKET NO. 08-0290788

THE APPLICATION OF BHP BILLITON PET (TXLA) CO. TO AMEND FIELD RULES FOR THE PHANTOM (WOLFCAMP) FIELD, CULBERSON, LOVING, REEVES, WARD AND WINKLER COUNTIES, TEXAS

HEARD BY: Brian Fancher, P.G. – Technical Examiner
Marshall F. Enquist – Legal Examiner

HEARING DATE: September 10, 2014 & May 14, 2015
RECORD CLOSED: May 14, 2015
SUBMISSION DATE: June 30, 2015
CONFERENCE DATE: July 14, 2015

APPEARANCES:

REPRESENTING:

APPLICANT:

Flip Whitworth
Tim Smith
Peter Corbeil
Guy Aldrid
Keith Sprague

BHP Billiton PET (TXLA) Co.

PROTESTANT:

Robert Hatter
Dan Gutierrez

Texas General Land Office

INTERVENOR:

John Hicks

OXY USA Inc. / OXY USA WTP /
Occidental Permian Ltd.

Sandra Bolz Buch

Chevron U.S.A., Inc.

OBSERVOR:

Ana Maria Marsland Griffith	Anadarko E&P
Bill Hayenga	Energen Resources Corp.
Bryan Lauer	Cimarex Energy Company / Arrington Oil & Gas Op., LLC

EXAMINERS' REPORT AND RECOMMENDATION**STATEMENT OF THE CASE**

The existing special field rules for the Phantom (Wolfcamp) Field provide the following:¹

1. A designated correlative interval that defines the field from 9,515 feet to 12,447 feet, as shown on the log of the Petrohawk Operating Company – Oxy Fee “24” Lease, Well No. 1 (API No. 42-389-32637), Section 24, Block C18, PSL Survey (A-2150), Reeves County, Texas;
2. 467’ minimum property, lease, or subdivision line spacing with no minimum between well spacing requirement; 200’ first and last take-points; No Perf Zones (“NPZs”); 50’ sub-surface box rule; and off-lease penetration points;
3. 320-acre proration units for oil and gas wells with 40-acre tolerance that may be divided and distributed for oil wells on the same lease, or for the last oil well on a lease, and 10% tolerance for each gas well; optional 40-acre proration units; no maximum diagonal; Form P-15s for acreage credit; and additional assignable acreage to horizontal wells based on a specialized table;
4. Allocation based on 5% per well acreage and 95% deliverability for gas wells; Allowable based on multiplying the number of acres assigned to the oil well times 9.0 barrels;
5. Tubing requirement exceptions for oil wells;
6. Exceptions to filing oil potential tests;
7. Stacked lateral provisions.

Dated August 13, 2014, the captioned docket’s Notice of Hearing (“NOH”) indicates that BHP Billiton PET (TXLA) Co. (“BHP”) seeks to amend the above mentioned field rules, and proposes the following:

¹ See O&G Final Order 08-0277363 – Governing special field rules for the subject field.

1. No change;
2. 330'- 0' well spacing with 100' first and last take points
3. Removing the existing horizontal well acreage table and replacing it with the formula: $A=(L \times 0.107) + 320$ -acres, where A is the calculated area assignable, if available, to a horizontal drainhole for proration purposes rounded up to the next whole number evenly divisible by 40-acres, and L is the horizontal drainhole distance between the first and last take points;
4. No change to gas wells; The existing maximum daily oil allowable shall be calculated using 13.0 barrels per acre instead of the existing 9.0 barrels per acre;
5. No change;
6. No change;
7. No change.

By letter dated September 3, 2014, Chevron submitted its protest against the subject application. Chevron later conditionally withdrew its protest to the subject application, by letter dated September 5, 2014, so long as BHP eliminates its request for 100' first and last take points. BHP withdrew its request to adopt 100' first and last take points by letter dated September 5th.

At the September 10th hearing, representatives of the Texas General Land Office initially appeared in protest of the subject application. Mr. Robert Hatter appeared on behalf of the GLO, and indicated that the GLO is opposed to the subject application for the following reasons: (1) it is adverse to BHP's proposed horizontal acreage amendments mentioned in Field Rule 3 above; (2) the GLO owns a significant amount of mineral acreage in the subject counties; (3) some of its mineral acreage in the subject counties is unleased; and (4) it did not receive notice of the subject application.² Subsequently, however, the GLO withdrew its protest against the subject application.³

On September 22, 2014, representatives on behalf of BHP submitted nine (9) late-filed exhibits (BHP Exh. Nos. 16-24). By letter dated April 10, 2015, BHP's counsel submitted a letter to the Examiners requesting that a Status Conference be held with regard to the subject application on May 14, 2015. In response, a letter ruling was issued on April 13th granting BHP's April 10th request.

At the May 14th Status Conference, BHP put on 25 additional exhibits and roughly 168 minutes of testimony in support of its position. Subsequently, and after full consideration of the record evidence, the Examiners stated that they would only recommend approval of the following: (1) amending the existing leaseline spacing from 467 feet to 330 feet; and (2)

² Dialogue at 2:23 of audio recording.

³ Audio recording at 6:25.

amending the existing maximum allowable from 9.0 barrels to 13.0 barrels per allocated acre to each producing oil well. Furthermore, the Examiners stated that they would not recommend approval of BHP's requested Field Rule No. 3, due to a lack of sufficient evidence. In response, BHP's counsel stated that it did not consider the Examiners' recommendations as adverse to the subject application.

Ultimately, the subject application is unopposed. The examiners recommend that the application be approved, as modified by BHP and the Examiners.

DISCUSSION OF THE EVIDENCE

Mr. Tim Smith testified as an expert in petroleum engineering on behalf of BHP in the captioned docket. Mr. Smith is a consulting Petroleum Engineer. Messrs. Peter Corbeil and Keith Sprague also testified on behalf of BHP. Messrs. Corbeil and Sprague are employed at BHP as a Reservoir Engineering Manager and a Geoscience Manager, respectively.

330' Lease Line Spacing

The subject field was discovered in 1986. It wasn't until 21 years later that the field's first horizontal well was drilled. Since September 2007, development of the Phantom (Wolfcamp) has improved in two major ways – (1) horizontal drilling and (2) the addition of the Wolfcamp Formation to the subject field's correlative interval.

Mr. Smith testified that the Wolfcamp Formation consists of ultra-low permeability rock-type. At the September 10th Status Conference, BHP presented two analytical studies composed of calculated drainage areas for two horizontal wells completed in the subject field.⁴ In summary, Mr. Smith testified that BHP's Johnson 42 Lease, Well No. 1H and Sigler State 57-T2-22 Lease, Well No. 1H exhibit ½-drainage lengths of no more than 250 feet perpendicular to the center of each wellbore, respectively (½-drainage length is the estimated distance that a hydraulic fracture will extend from one side of the wellbore). In other words, the two mentioned horizontal wells do not drain more than 250' feet from the well after hydrofrac stimulation when measured perpendicularly from the center of the wellbore.

At the May 14th Status Conference, BHP presented additional well drainage calculations on four more horizontal wells. In summary, BHP estimated that the ½-drainage length of the four mentioned wells does not exceed 290 feet.⁵ As a result, BHP contests that because its mentioned analytical studies indicate that fracs do not propagate more than 300 feet on one side of a horizontal wellbore (*i.e.*, ½-drainage length), then the lease-line spacing from 467 feet to 330 feet is necessary.

⁴ BHP Exh No. 33

⁵ BHP Exh Nos. 40-43.

13.0 Barrels Per Acre Maximum Allowable

The subject field's existing maximum daily oil allowable is based on a specialized formula that states: *The maximum daily oil allowable for each well in the subject field shall be determined by multiplying the number of acres in its proration unit by 9.0 barrels per acre.*

In the immediate docket, BHP seeks to change the maximum daily oil allowable from 9.0 barrels per acre to 13.0 barrels per acre. Mr. Smith testified that BHP is in the process of drilling longer horizontal wells where the lateral portions extend beyond 8,000 feet. Furthermore, the result of downspacing the subject field's minimum lease line distance from 467 feet to 330 feet will allow one additional well to be drilled per 640-acre section.

Mr. Corbeil testified that it is BHP's practice to drill up to eight horizontal wells, simultaneously, from a single well pad. Subsequently, BHP will stimulate the eight newly drilled horizontal wells by hydraulic fracturing (*i.e.*, zipper-frac). Mr. Corbeil testified that due to the extended lateral lengths of future horizontal wells, combined with BHP's completion methods, BHP anticipates initial production rates beyond the existing 9.0 barrels per acre. Therefore, in an effort to alleviate future concerns of overproduction, BHP seeks to increase the maximum daily oil allowable from 9.0 barrels per acre to 13.0 barrels per acre.

FINDINGS OF FACT

1. BHP Billiton PET (TXLA) Co. ("BHP") seeks to amend the existing special field rules for the Phantom (Wolfcamp) Field ("subject field"), Culberson, Loving, Reeves, and Ward Counties, Texas ("the subject application").
2. All operators in the Field were provided the subject application's Notice of Hearing dated October 21, 2014.
3. The subject application is unopposed.
4. The current special field rules that govern the Field are memorialized in writing as seen in Oil & Gas Final Order No. 08-0277363.
5. BHP requests that the subject field's existing field rules be amended to include:
 - a. 330' lease line spacing
 - b. Maximum daily oil allowable based on 13.0 barrels per acre. Each well's respective acreage-amount is based on that which is allocated to the well for proration purposes.
6. The subject field was discovered in July 1986.

7. BHP demonstrated that six horizontal wells completed in the subject field do not drain further than 300 feet from the wellbore, when measured at a perpendicular distance from the center of the wellbore.
8. BHP is in the process of drilling horizontal wells that extend beyond 8,000 feet.
9. BHP incorporates “zipper-fracs” as a stimulation method in completing its horizontal wells in the subject field.
10. Increasing the existing maximum daily oil allowable from 9.0 barrels per acre to 13.0 barrels per acre is appropriate due to the high production rates anticipated from horizontal wells completed in the Wolfcamp Formation in the subject field.

CONCLUSIONS OF LAW

1. Resolution of the subject application is a matter committed to the jurisdiction of the Railroad Commission of Texas – Tex. Nat. Res. Code §81.051.
2. Legally sufficient notice has been provided to all affected persons.
3. Amending the special field rules for the Phantom (Wolfcamp) Field, as proposed by BHP Billiton PET (TXLA) Co. (“BHP”) and modified by the Examiners, will prevent waste and protect correlative rights.

EXAMINERS’ RECOMMENDATION

Based on the above findings of fact and conclusions of law, the examiners recommend that the special field rules for the Phantom (Wolfcamp) Field be amended, as ultimately proposed by BHP Billiton PET (TXLA) Co. (“BHP”) and modified by the Examiners.

Respectfully submitted,



Brian Fancher, P.G.
Technical Examiner



Marshall F. Enquist
Legal Examiner