



RAILROAD COMMISSION OF TEXAS

HEARINGS DIVISION

OIL AND GAS DOCKET NO. 03-0285037

THE APPLICATION OF CENTURY EXPLORATION HOUSTON, LLC TO CONSOLIDATE VARIOUS VAN METER FIELDS AND TO ADOPT FIELD RULES FOR THE PROPOSED VAN METER (YEGUA CONS.) FIELD, HARDIN AND JASPER COUNTIES, TEXAS

HEARD BY: Richard D. Atkins, P.E. - Technical Examiner
Laura Miles-Valdez - Legal Examiner

DATE OF HEARING: November 8, 2013

APPEARANCES: REPRESENTING:

APPLICANT:

Frank J. Muser
Jessica Risien

Century Exploration Houston, LLC

EXAMINERS' REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Century Exploration Houston, LLC ("Century") requests that various Van Meter fields be consolidated into a new field to be known as the Van Meter (Yegua Cons.) Field (ID No. 93119 400). The fields proposed for consolidation are as follows:

<u>FIELD NAME</u>	<u>FIELD NUMBER</u>
Van Meter (Yegua EY Cons.)	93133 600
Van Meter (Yegua EY-9)	93133 750
Van Meter, East (Cook Mountain)	93137 250
Van Meter, East (Yegua EY)	93137 600

Century also requests that the following Field Rules be adopted for the consolidated field:

1. Designated interval from 8,797 feet to 10,910 feet as shown on the log of the Century Exploration Houston, LLC - MVP A-364 Lease, Well No. 2 (API No. 42-241-30809);

2. 467'-0' well spacing with special provisions for "take points", 100' lease line spacing for the first and last take points, 50' "box" rule and "off-lease" penetration point for horizontal drainhole wells;
3. 320 acre gas units with optional 40 acre density, 40 acre oil units and the filing of Form P-15 without proration unit plats;
4. Allocation based on 95% acres and 5% per well with AOF status;
5. Special provisions for "stacked laterals" in horizontal drainhole wells.

The application was unopposed and the examiners recommend approval of the field consolidation and Field Rules for the Van Meter (Yegua Cons.) Field, as requested by Century.

DISCUSSION OF THE EVIDENCE

The subject fields were discovered beginning in February 2008. There are four producing gas wells and three producing oil wells carried on the proration schedules. Century is the only operator in the fields. The oil field and one gas field operate under Statewide Field Rules and two gas fields operate under Field Rules that provide for 933'-1867' well spacing and 320 acre gas units. The subject fields are geographically intermingled and there are no other fields contained within the proposed correlative interval. Some of the wells have produced from several different fields. Cumulative production from the fields through October 2013 is 13.7 BCFG and 518.0 MBO.

Century proposes that the correlative interval from 8,797 feet to 10,910 feet as shown on the log of the Century Exploration Houston, LLC - MVP A-364 Lease, Well No. 2 (API No. 42-241-30809), Lawrence & Creecy Survey, A-364, Jasper County, Texas, be considered a single field known as the Van Meter (Yegua Cons.) Field. The correlative interval includes Yegua Sand formations that produce under a depletion drive mechanism. The reservoir and fluid properties in all the fields are similar and Century did not anticipate any crossflow between the commingled formations.

Century is developing the consolidated field with horizontal drainhole wells and requests that Field Rules be adopted to promote the efficient and effective development of the remaining hydrocarbons. Century proposes 467'-0' well spacing with special provisions for "take points", 100' lease line spacing for the first and last take points, 50' "box" rule and "off-lease" penetration point for horizontal drainhole wells. Similar Field Rules have been adopted in other tight reservoirs, including the Eagle Ford, Wolfcamp, Bone Spring, Cotton Valley and Barnett Shale formations.

Century requests that a Field Rule be adopted which includes language relevant to the measurement of distances to lease lines for horizontal drainhole wells. Century's proposed rule specifies that, for purposes of lease line spacing, the nearest "take point" in a horizontal well be used. This take-point could be a perforation in a horizontal well that is cased and cemented, an external casing packer in a cased well, or any open-hole section in an uncased well.

Century also proposes a 50' "box rule" for horizontal drainhole wells that would allow drainholes to deviate 50 feet from either side of their permitted track without the necessity of obtaining a Statewide Rule 37 exception. As drilled wells for which all points are located within the "box" would be considered in compliance with their drilling permits.

In some cases, it is beneficial to penetrate the reservoir off lease, while still having "take points" no closer to lease lines than allowed under the field rules. Century requests that Field Rules for the subject field provide for an "off-lease" penetration point. Statewide Rule 86 requires that the penetration point of a horizontal drainhole well be on the lease. In this field, a well generally requires approximately 600 feet of horizontal displacement to make the 90 degree turn from vertical to horizontal. If the penetration point is required to be on the lease, then the first point of production would be about 600 feet from the lease line. The proposed rule will allow approximately 500 feet of additional producing drainhole, which will result in the recovery of additional reserves. The Commission has adopted similar rules allowing offsite penetration points in other fields, after the operator has given notice to the mineral owners of the off-lease tract on which the penetration point is to be located and received no protest.

The Yegua Sand formations are low permeability sandstone reservoirs that require fracture stimulation and have a solution gas drive as the primary drive mechanism. Century is requesting that the first and last take points of a lateral be as close as 100' to lease lines. The Yegua Sand reservoirs have oriented fractures and most of the drainage is along the fracture orientation with little contribution from the matrix in a perpendicular direction. A wellbore can be presumed to be drilled to encounter the maximum number of fractures and, therefore, be perpendicular to the fracture direction. The end points of such a lateral will not drain over 100' from the matrix in a direction perpendicular to fracture direction. The 100' leaseline spacing for the first and last take points will result in the additional recovery of reserves.

Century also requests that a Field Rule be adopted to accommodate the drilling of stacked lateral horizontal drainhole wells. The gross thickness of the field interval is over 2,100 feet. Century believes that several separate laterals may be necessary to effectively develop the reservoir with horizontal drainhole wells. The rule would allow stacked horizontal laterals within the field correlative interval that are drilled from different surface locations to be considered a single well for regulatory purposes. Similar stacked lateral rules have already been adopted in Bone Spring, Granite Wash, Wolfcamp and Cotton Valley fields, as well as in the Newark, East (Barnett Shale) Field.

Century requests 320 acre gas units with optional 40 acre density and 40 acre oil units. For purposes of the assignment of additional acreage pursuant to Statewide Rule 86, it is proposed that the distance between the first and last take points in a horizontal drainhole well be used. Century proposes that proration unit plats not be required for individual wells, but that Form P-15 be filed to designate the number of acres to be assigned to each well with no maximum diagonal limitation. Century requests that the consolidated field be classified as associated-prorated, allocation based on 95% acres and 5% per well and that the gas allocation formula be suspended, as there is a 100% market demand for all of the gas produced from the field. Century also requests a top oil allowable based on the 1965 Yardstick Allowable of 212 barrels of oil per day.

FINDINGS OF FACT

1. Notice of this hearing was provided to all persons entitled to notice at least ten (10) days prior to the date of the hearing and no protests were received.
2. The subject fields were discovered beginning in February 2008.
 - a. There are four producing gas wells and three producing oil wells carried on the proration schedules.
 - b. Century Exploration Houston, LLC ("Century") is the only operator in the fields.
 - c. The oil field and one gas field operate under Statewide Field Rules and two gas fields operate under Field Rules that provide for 933'-1867' well spacing and 320 acre gas units.
 - d. The subject fields are geographically intermingled and there are no other fields contained within the proposed correlative interval.
 - e. Some of the wells have produced from several different fields.
3. The Van Meter (Yegua Cons.) Field should be designated as the correlative interval from 8,797 feet to 10,910 feet as shown on the log of the Century Exploration Houston, LLC - MVP A-364 Lease, Well No. 2 (API No. 42-241-30809), Lawrence & Creecy Survey, A-364, Jasper County, Texas.
 - a. The correlative interval includes Yegua Sand formations that produce under a depletion drive mechanism.
 - b. The reservoir and fluid properties in all the fields are similar and Century did not anticipate any crossflow between the commingled formations.

4. A spacing rule which utilizes “take-points” in a horizontal well for determination of distances to lease lines will prevent waste and will not harm correlative rights.
 - a. A take-point in a horizontal well in this field may be a perforation in a horizontal well that is cased and cemented, an external casing packer in a cased well, or any open-hole section in an uncased portion of the wellbore.
 - b. Adoption of the proposed rule will allow the horizontal drainhole length on a lease to be maximized.
 - c. For purposes of assignment of additional acreage pursuant to Statewide Rule 86, the distance between the first and last take points in a horizontal drainhole well should be used.
5. The proposed 50’ “box rule” is necessary to allow operators reasonable minor deviations from the wellbore track that has been permitted.
6. Allowing an “off-lease” penetration point will result in maximum producing drainhole length, thereby increasing ultimate recovery from horizontal drainhole wells. To protect correlative rights, prior notice and opportunity to object should be given to the mineral owners of “off-lease” surface locations.
7. A 100’ leaseline spacing for the first and last take points will result in an additional recovery of reserves.
 - a. The Yegua Sand formations are low permeability sandstone reservoirs that require fracture stimulation.
 - b. The Yegua Sand reservoirs have oriented fractures and most of the drainage is along the fracture orientation with little contribution from the matrix in a perpendicular direction.
 - c. A wellbore can be presumed to be drilled to encounter the maximum number of fractures and, therefore, be perpendicular to the fracture direction.
 - d. The end points of such a lateral will not drain over 100’ from the matrix in a direction perpendicular to fracture direction.
8. The proposed “stacked lateral” rule will allow stacked horizontal laterals within the Yegua Sands correlative interval that are drilled from different surface locations to be considered a single well for regulatory purposes, which will facilitate the additional recovery of reserves.

9. Similar Field Rules have been adopted in other tight reservoirs, including the Eagle Ford, Wolfcamp, Bone Spring, Cotton Valley and Barnett Shale formations.
10. A field density of 320 acre gas units with optional 40 acre density, 40 acre oil units and classification of the consolidated field as associated-prorated with a top oil allowable based on the 1965 Yardstick Allowable of 212 barrels of oil per day is appropriate for the Van Meter (Yegua Cons.) Field.
11. Allocation based on 95% acres and 5% per well is a reasonable formula which will satisfy state statutes and protect correlative rights of mineral owners in the field.
12. Suspension of the allocation formula is appropriate, as there is a 100% market demand for all of the gas produced from the field.
13. The filing of Form P-15 to designate the number of acres to be assigned to each well for proration purposes with no proration unit plats and no maximum diagonal limitation will eliminate unnecessary paperwork.

CONCLUSIONS OF LAW

1. Proper notice of this hearing was given to all persons legally entitled to notice.
2. All things have occurred or been accomplished to give the Railroad Commission jurisdiction in this matter.
3. Consolidation of the subject fields and adopting Field Rules for the proposed Van Meter (Yegua Cons.) Field will prevent waste, protect correlative rights and promote development of the field.

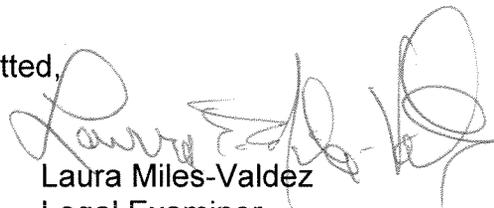
EXAMINERS' RECOMMENDATION

Based on the above findings of fact and conclusions of law, the examiners recommend that the Commission approve the field consolidation and adopt Field Rules for the proposed Van Meter (Yegua Cons.) Field, as requested by Century Exploration Houston, LLC.

Respectfully submitted,



Richard D. Atkins, P.E.
Technical Examiner



Laura Miles-Valdez
Legal Examiner