



RAILROAD COMMISSION OF TEXAS

HEARINGS DIVISION

OIL AND GAS DOCKET NO. 01-0280224

THE APPLICATION OF ANADARKO E&P ONSHORE LLC TO ADOPT FIELD RULES FOR THE AMMANN (BUDA) FIELD, DIMMIT, MAVERICK AND WEBB COUNTIES, TEXAS

HEARD BY: Brian Fancher - Technical Examiner
Terry Johnson - Legal Examiner

EXAMINERS' REPORT PREPARED BY: Richard D. Atkins, P.E. - Technical Examiner

DATE OF HEARING: February 5, 2013

APPEARANCES:

REPRESENTING:

APPLICANT:

Ana Maria Marsland-Griffith
David Christian

Anadarko E&P Onshore LLC

EXAMINERS' REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

The Ammann (Buda) Field currently operates under Statewide Field Rules. Anadarko E&P Onshore LLC ("Anadarko") requests that Field Rules be adopted, as shown below:

1. Designated correlative interval from 5,800 feet to 5,940 feet as shown on the log of the Opco, Inc. - W.C. Ammann Lease, Well No. 1 (API No. 42-127-31065), formerly known as the Hercules Exploration, Inc. - W.C. Ammann Lease, Well No. 1;
2. 330'-0' well spacing with special provisions for "take points", 100' leaseline spacing for the first and last take points, a 33' "box rule" and "off-lease" penetration point in horizontal drainhole wells;
3. 40 acre oil units;

4. Allocation based on 100% acres with a top oil allowable based on the 1965 Yardstick Allowable of 102 barrels of oil per day.

Anadarko also requests 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.

The application is unopposed and the examiners recommend that Field Rules be adopted for the Ammann (Buda) Field, as proposed by Anadarko.

DISCUSSION OF THE EVIDENCE

The Ammann (Buda) Field was discovered in January 1977 at an average depth of 5,900 feet. There is currently no producing wells carried on the proration schedule and the field operates under Statewide Rules. Cumulative production from the field through February 2013 is 1.7 MBO and 10 MCFG.

There is currently no defined correlative interval for the field. Anadarko requests that the field be defined as the correlative interval from 5,800 feet to 5,940 feet as shown on the log of the Opco, Inc. - W.C. Ammann Lease, Well No. 1 (API No. 42-127-31065), formerly known as the Hercules Exploration, Inc. - W.C. Ammann Lease, Well No. 1, Section 55, I&GN RR Co. Survey, A-344, Dimmit County, Texas. The interval includes the entire Buda formation that is located stratigraphically between the Eagle Ford and Del Rio formations.

Anadarko is drilling horizontal drainhole wells in the Briscoe Ranch (Eagleford) Field and sometimes, due to geological factors, penetrates the Ammann (Buda) Field. To handle this situation, the Commission has previously approved blanket authority for exception to Statewide Rule 10 to commingle both fields. Anadarko requests the same Field Rules that have been adopted in the Briscoe Ranch (Eagleford) Field, which will promote the efficient and effective development of the remaining hydrocarbons. Anadarko requests 330'-0' well spacing with special provisions for "take points", 100' leaseline spacing for the first and last take points, a 33' "box rule" and "off-lease" penetration point in horizontal drainhole wells. Anadarko argues that the proposed 0' between well spacing is necessary to allow the drilling of horizontal drainhole wells, which may have to be placed very near vertical wells in some cases. Similar rules have been adopted in other tight reservoirs, including the Eagle Ford, Wolfcamp, Bone Springs, Cotton Valley and Barnett Shale formations.

Anadarko requests that a Field Rule be adopted which includes language relevant to the measurement of distances to lease lines for horizontal drainhole wells. Anadarko'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. 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-point in a horizontal drainhole well be used.

By allowing a 100' leaseline spacing for the first and last take points, an additional 230 feet of the reservoir is exposed to the horizontal lateral and drained. These reserves would go unrecovered if the 100' leaseline spacing for the first and last take points is not approved. Anadarko also proposes a 33' "box rule" for horizontal drainhole wells that would allow drainholes to deviate 33 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. Anadarko 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 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 300 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.

Anadarko proposes that the field remain on 40 acre density provided by Statewide Rules and allocation be based on 100% acres with a top oil allowable based on the 1965 Yardstick Allowable of 102 barrels of oil per day. Anadarko also requests 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.

FINDINGS OF FACT

1. Notice of this application and hearing was provided to all persons entitled to notice at least ten (10) days prior to the date of the hearing.
2. The Ammann (Buda) Field was discovered in January 1977 at an average depth of 5,900 feet. There is currently no producing wells carried on the proration schedule and the field operates under Statewide Rules.
3. The Ammann (Buda) Field should be defined as the correlative interval from 5,800 feet to 5,940 feet as shown on the log of the Opc, Inc. - W.C. Ammann Lease, Well No. 1 (API No. 42-127-31065), formerly known as the

Hercules Exploration, Inc. - W.C. Ammann Lease, Well No. 1, Section 55, I&GN RR Co. Survey, A-344, Dimmit County, Texas. The interval includes the entire Buda formation that is located stratigraphically between the Eagle Ford and Del Rio 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-point in a horizontal well should be used.
5. A Field Rule providing for 330'-0' well spacing with a special provision for 100' leaseline spacing for the first and last take points is appropriate for the Ammann (Buda) Field.
 - a. The proposed 0' between well spacing is necessary to allow the drilling of horizontal wells, which may have to be placed very near vertical wells in some cases.
 - b. By allowing a 100' leaseline spacing for the first and last take points, an additional 230 feet of the reservoir is exposed to the horizontal lateral and drained. These reserves would go unrecovered if the 100' leaseline spacing for the first and last take points is not approved.
6. The proposed 33' "box rule" is necessary to allow operators reasonable minor deviations from the wellbore track that has been permitted.
7. 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.
8. Similar rules have been adopted in other tight reservoirs, including the Eagle Ford, Wolfcamp, Bone Springs, Cotton Valley and Barnett Shale formations.

9. Allocation based on 100% acres with a top oil allowable based on the 1965 Yardstick Allowable of 102 barrels of oil per day is appropriate for the Ammann (Buda) Field.
10. The filing of Form P-15 to designate the number of acres to be assigned to each well for proration purposes with no proration plats will eliminate unnecessary paperwork.

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. Adoption of Field Rules for the Ammann (Buda) Field is necessary to prevent waste, protect correlative rights and promote development of the field.

RECOMMENDATION

Based on the above findings of fact and conclusions of law, the examiners recommend that the Commission adopt Field Rules for the Ammann (Buda) Field, as requested by Anadarko E&P Onshore LLC.

Respectfully submitted,



Richard D. Atkins, P.E.
Technical Examiner



Terry Johnson
Legal Examiner