

THE APPLICATION OF FASKEN OIL AND RANCH, LTD. TO ADOPT FIELD RULES FOR THE WELLKAT (SILURIAN) FIELD, TERRY COUNTY, TEXAS

Heard by: Richard D. Atkins, P.E. - Technical Examiner

Date of Hearing: June 6, 2008

Appearances:

Jim Cowden
Carl Brown
Stonnie Pollock
Jimmy Carlile

Representing:

Fasken Oil and Ranch, Ltd.

EXAMINER'S REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Fasken Oil and Ranch, Ltd. requests that field rules be adopted for the Wellkat (Silurian) Field. The proposed rules are summarized as follows:

1. Designation of the field as the correlative interval from 13,181 feet to 13,205 feet as shown on the log of the Taylor "26" Lease Well No. 1 (API No. 42-445-32171);
2. 933'-1,867' well spacing;
3. 160 acre density;
4. Allocation based on 100 percent acreage.

This application was unopposed and the examiner recommends that the rules proposed by Fasken Oil and Ranch, Ltd. be adopted on a permanent basis for the Wellkat (Silurian) Field.

DISCUSSION OF EVIDENCE

The Wellkat (Silurian) Field was discovered in August 2007 by completion of the

Fasken Oil and Ranch, Ltd., Taylor "26" Lease Well No. 1 through perforations from 13,184 feet to 13,196 feet measured depth. The well potentialized flowing for 218 BOPD, 16 MCFGPD and 0 BWPD. The oil gravity was 38.3 degree API and the GOR was 73 cubic feet per barrel. The bottomhole pressure was 5,297 psia and the bottomhole temperature was 183 degree F.

The top allowable in the field is 1,000 BOPD, with an allowable gas-oil ratio of 2,000 cubic feet per barrel. Fasken is the only operator in the field and there is only 1 active oil well carried on the proration schedule. Cumulative production through March 2008 from the field is 33.3 MBO and 18.8 MBW. Since there is no gas pipeline connection, the produced gas has been flared.

Fasken recommends that the correlative interval from 13,181 feet to 13,205 feet as shown on the log of the Taylor "26" Lease Well No. 1 (API No. 42-445-32171), Section 26, Block DD, J. H. Gibson/J. L. Graham Survey, Terry County, Texas, be designated as a single reservoir for proration purposes and be designated as the Wellkat (Silurian) Field.

The Silurian formation is composed of a section of fractured dolomite with a fairly uniform matrix porosity of 3 percent. The average permeability is 49.5 millidarcies, the average water saturation is 40 percent and the net pay thickness is 21 feet. A strong water drive is the primary drive mechanism for the reservoir and Fasken computed a recovery factor of 38 percent. Using this recovery factor, Fasken calculated a volumetric estimated ultimate recovery of 167,000 BO on a 160 acre proration unit.

Fasken also ran a pressure buildup test on the Taylor "26" Lease Well No. 1. The well was flowed for 30 hours at a rate of 118 BOPD. The well was then shut-in and a pressure buildup analysis was performed. The analysis showed a radius of investigation of 1,643 feet and a drainage area of approximately 195 acres.

Since the Wellkat (Silurian) Field has a strong water drive, it will exhibit a hyperbolic decline, as seen in the nearby Comanche (Fusselman) and Tokio fields. Fasken used a hyperbolic decline curve analysis and calculated an estimated ultimate recovery of 163,000 BO for the Taylor "26" Lease Well No. 1.

Based on the above analysis, Fasken requests 933'-1,867' well spacing and 160 acre density to allow for future infill development. Fasken also requests that the allocation formula be based on 100 percent acreage.

FINDINGS OF FACT

1. Notice of this hearing was given to all persons entitled to notice and no

protests were received.

2. The Wellkat (Silurian) Field was discovered in August 2007 by completion of the Fasken Oil and Ranch, Ltd., Taylor "26" Lease Well No. 1 through perforations from 13,184 feet to 13,196 feet measured depth. The well potentialized flowing for 218 BOPD, 16 MCFGPD and 0 BWPD.
3. The top allowable in the field is 1,000 BOPD, with an allowable gas-oil ratio of 2,000 cubic feet per barrel. Cumulative production through March 2008 from the field is 33.3 MBO and 18.8 MBW.
4. Fasken recommends that the correlative interval from 13,181 feet to 13,205 feet as shown on the log of the Taylor "26" Lease Well No. 1 (API No. 42-445-32171), Section 26, Block DD, J. H. Gibson/J. L. Graham Survey, Terry County, Texas, be designated as a single reservoir for proration purposes and be designated as the Wellkat (Silurian) Field.
5. Fasken is the only operator in the field and there is only 1 active oil well carried on the proration schedule.
6. The Silurian formation is composed of a section of fractured dolomite with a fairly uniform matrix porosity of 3 percent. A strong water drive is the primary drive mechanism for the reservoir and Fasken computed a recovery factor of 38 percent.
7. Using the 38 percent recovery factor, Fasken calculated a volumetric estimated ultimate recovery of 167,000 BO for a 160 acre proration unit.
8. A pressure buildup analysis showed a radius of investigation of 1,643 feet and a drainage area of approximately 195 acres.
9. Fasken used a hyperbolic decline curve analysis and calculated an estimated ultimate recovery of 163,000 BO for the Taylor "26" Lease Well No. 1.
10. Based on the above analysis, Fasken requests 933'-1,867' well spacing and 160 acre density to allow for future infill development.
11. Allocation based on 100 percent acreage is a reasonable formula which will protect correlative rights and meet statutory requirements.

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 Rules for the Wellkat (Silurian) Field as proposed by Fasken Oil and Ranch, Ltd. 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 examiner recommends that Field Rules be adopted for the Wellkat (Silurian) Field as proposed by Fasken Oil and Ranch, Ltd.

Respectfully submitted,

Richard D. Atkins, P.E.
Technical Examiner