

OIL AND GAS DOCKET NO. 7C-0258185

THE APPLICATION OF LAYLINE PETROLEUM I, LLC TO AMEND THE FIELD RULES FOR THE I.A.B., NE. (PENN. 5150) FIELD, COKE COUNTY, TEXAS

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

Date of Hearing: August 13, 2008

Appearances:

Philip Whitworth
Mukul Sharma

Representing:

Layline Petroleum I, LLC

EXAMINER'S REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Field rules for the I.A.B., NE. (Penn. 5150) Field were adopted on April 4, 1962 in Docket No. 7-47,997. The rules are summarized as follows:

1. 467'-1,200' well spacing;
2. 80 acre oil units with a maximum diagonal of 3,500 feet;
3. 100 percent acreage allocation;
4. Surface casing requirements;
5. Production units (Rescinded by Order No. 7-56303);
6. Oil metering.

Layline Petroleum I, LLC requests that the field rules be amended to provide for a correlative interval, 467'-600' well spacing and 40 acre oil units. This application was unopposed and the examiner recommends that the field rules for the I.A.B., NE. (Penn. 5150) Field be amended as proposed by Layline.

DISCUSSION OF EVIDENCE

The I.A.B., NE. (Penn. 5150) Field was discovered in June 1961. The field was developed on 80 acre spacing over approximately 4 years. In May 1966, the 4,800 acre

field was unitized and water injection was initiated. The field had a minimal waterflood response, mainly due to casing integrity problems and poor injection well placement. Water injection was discontinued in October 1983 after injection of 12.3 MMBW. Layline is the current unit operator and there are nine producing wells, one injection well and two shut-in wells contained within the unit. Cumulative production from the field is 3.1 MMBO and 6.9 BCFG.

Layline requests that the correlative interval from 4,984 feet to 5,054 feet as shown on the Schlumberger Induction - Electric log of the Standard Oil Company of Texas - Mary G. Hays Lease, Well No. 1, (API No. 42-081-01015), be designated as a single reservoir for proration purposes and be designated as the I.A.B., NE. (Penn. 5150) Field.

The I.A.B., NE. (Penn. 5150) field is composed of three Pennsylvanian sand members, the Red, Green and Blue sands. The top sand is found at an average depth of 5,000 feet and typical completions are selected perms and large volume frac jobs. The average matrix porosity is 11 percent and the average water saturation is 35 percent. Declining fluid rates and low water cuts indicate solution gas drive as the primary drive mechanism for the reservoir.

Layline provided drainage area calculations for six plugged wells in the unit area. The drainage areas range from 19 acres up to a maximum of 37 acres. The average drainage area was calculated to be approximately 30 acres. Layline will be actively developing the unit interval by drilling forty-acre infill wells and implementing a five spot waterflood injection pattern. Layline estimated a primary recovery factor of 17% and a secondary recovery factor of 10 percent. The total expected recovery factor for the unit is 27 percent of the OOIP.

Recently, Layline Petroleum I, LLC has drilled six replacement wells that would be considered 40 acre offset locations. The new wells have potential between 20 and 180 BOPD with less than a 25 percent water cut. This infill well performance clearly demonstrates the viability of 40 acre spacing. As a result, Layline requests that the field rules be amended to provide for 467'-600' well spacing and 40 acre oil units

FINDINGS OF FACT

1. Notice of this hearing was given to all persons entitled to notice and no protests were received.
2. The I.A.B., NE. (Penn. 5150) Field was discovered in June 1961 at an average depth of 5,000 feet. Cumulative production from the field is 3.1 MMBO and 6.9 BCFG.
3. Field rules for the I.A.B., NE. (Penn. 5150) Field were adopted on April 4, 1962 in Docket No. 7-47,997. The rules provide for 467'-1,200' well spacing, 80 acre oil units with a maximum diagonal of 3,500 feet and 100 percent

acreage allocation.

4. In May 1966, the 4,800 acre field was unitized and water injection was initiated. The field had a minimal waterflood response, mainly due to casing integrity problems and poor injection well placement. Water injection was discontinued in October 1983 after injection of 12.3 MMBW.
5. Layline is the current unit operator and there are nine producing wells, one injection well and two shut-in wells contained within the unit.
6. The I.A.B., NE. (Penn. 5150) field is composed of three Pennsylvanian sand members, the Red, Green and Blue sands.
7. Layline requests that the correlative interval from 4,984 feet to 5,054 feet as shown on the Schlumberger Induction - Electric log of the Standard Oil Company of Texas - Mary G. Hays Lease, Well No. 1, (API No. 42-081-01015), be designated as a single reservoir for proration purposes and be designated as the I.A.B., NE. (Penn. 5150) Field.
8. Declining fluid rates and low water cuts indicate solution gas drive as the primary drive mechanism for the reservoir.
9. Layline provided drainage area calculations for six plugged wells in the unit area. The drainage areas range from 19 acres up to a maximum of 37 acres. The average drainage area was calculated to be approximately 30 acres.
10. Recently, Layline Petroleum I, LLC has drilled six replacement wells that would be considered 40 acre offset locations. The new wells have potential between 20 and 180 BOPD with less than a 25% water cut. This infill well performance clearly demonstrates the viability of 40 acre spacing.
11. Layline will be actively developing the unit interval by drilling forty-acre infill wells and implementing a five spot waterflood injection pattern. As a result, Layline requests that the fields rules be amended to provide for 467'-600' well spacing and 40 acre oil units.
12. Layline estimated a primary recovery factor of 17% and a secondary recovery factor of 10 percent. The total expected recovery factor for the unit is 27 percent of the OOIP.

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. Amending the field rules for the I.A.B., NE. (Penn. 5150) Field as proposed by Layline Petroleum I, LLC 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 the Field Rules for the I.A.B., NE. (Penn. 5150) Field be amended as proposed by Layline Petroleum I, LLC.

Respectfully submitted,

Richard D. Atkins, P.E.
Technical Examiner