
THE APPLICATION OF COASTAL OIL & GAS CORPORATION FOR NEW FIELD DESIGNATIONS AND RULES FOR THE (PROPOSED) BOB WEST, S. (L 1-6) FIELD; BOB WEST, S. (L 7-12) FIELD AND BOB WEST, S. (L 13-20) FIELD, STARR COUNTY, TEXAS

Heard by: Margaret Allen, Technical Hearings Examiner

Procedural history

Application received: June 22, 2001

Hearing held: August 1, 2001

Appearances

James Cowden
Terry Payne

Representing
Coastal Oil & Gas Corporation/El Paso Production
Oil & Gas Company

EXAMINER'S REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Coastal Oil & Gas filed this application to have the Luera State Gas Unit "A" Well No. 5, between 11,150 and 12,570 feet, designated as the discovery well for a field to be known as Bob West, S. (L 7-12) Field. It is also seeking to have the interval between 12,600 and 13,410 feet in the same well, designated as the Bob West, S. (L 13-20) Field. El Paso Production Oil & Gas Company has acquired Coastal Oil & Gas and is proposing the following field rules:

1. Respective designated intervals as shown on the log of the Coastal Oil & Gas (now El Paso Production) Luera State Gas Unit "A" Lease Well No. 5;
2. well spacing of 467-933 feet; and
3. allocation based 5% per well and 95% on deliverability

The statewide density requiring 40 acre drilling units would remain in effect and there would be no rule prescribing proration units. El Paso was unable to get a test rate on the sandstones labeled L 1 through L 6 and is withdrawing that part of the application.

DISCUSSION OF THE EVIDENCE

The Luera wells in the Bob West, S. area are two to three miles south of the Bob West fields. The eight Bob West fields contained a total of twenty different pay sections, in about the same lower Wilcox section as is being developed in the Bob West, S. field area. The sandstones in the Bob West, S. area have lower permeabilities and deliverabilities as those in the Bob West area.

There are inactive wellbores between the Bob West and Bob West, S. areas and mapping also shows fault separation. The Luera, M.G. et al Well No. 1 was the first well drilled into the Bob West,

S. sandstones and it has produced from the L-21 since 1985. It produced under the field name Falcon Dam (Wilcox G-2) Field, but this field was consolidated into the Bob West, S (L 21-25) Field. Well No. 1 recently perforated sandstones within the new field intervals that El Paso is proposing today and commingled their production with that from the Bob West, S. (L 21-25) Field.

The discovery well of the Bob West, S. (L 21-25) Field, which approved under Docket No. 04-0228173 on June 5, 2001, was the Luera Lease Well No. 4. The designated interval for this field is between 13,490 and 14,241 feet (measured depth) in the Luera No. 4. The proposed discovery well for the two new applied-for fields, the Luera State Gas Unit "A" Lease Well No. 5 was completed in June of 2001, and eventually perforated in a number of lower Wilcox sandstones. The well was first perforated in the Bob West, S. (L 21-25) Field with perforations between 13,555 and 13,810 feet (true vertical depth).

A bridge plug was set above the L-21 sand in the Luera State Gas Unit "A" Lease Well No. 5 and the well was perforated in two different sandstones between 12,756 and 13,220 feet (TVD). This set of perforations was tested on June 17, 2001, at a maximum producing rate of 752 MCF/D. The static bottom-hole pressure was 7986 psi, indicating a gradient for this area of about 0.65 psi per foot.

A bridge plug was set above the L 13 and the well perforated in another three sandstones between 11,889 and 12,415 feet (TVD). This set was tested on July 3, at a maximum producing rate of 2112 MCF/D. The static bottom-hole pressure was measured at 7830 psi, indicating a similar pressure gradient. El Paso then isolated the existing perforations and perforated the L 5 sandstone. This completion was capable of less than 20 MCF/D and produced considerable water. El Paso therefore withdrew its request for new field designation in the L 1 through L 6 section.

Both proposed fields produce dry gas and water from low permeability reservoirs at low flowing tubing pressures. The gas analyses from the two proposed fields show about 5% CO₂ and 0.2% nitrogen and similar hydrocarbon gas gravities. El Paso is actively developing the Bob West, S area and hopes to find more production within the L 7 to L20 intervals.

Commingled production from the two proposed new fields and the Bob West, S. (L 21-25) Field in Well No. 5 is 4 to 5 MMCF per day. The applicant is requesting a Rule 10 exception to produce all of these perforated lower Wilcox sandstones together. The specific sandstones perforated in Well No. 5 include the L 9, L 18, L 21, and L 22. The L 21 has been produced since 1985, but temporarily isolated perforations in the L 21 sandstone of Well No. 5 indicate good production at 3 MMCF/D with flowing tubing pressure of 6000 psi.

The perforations in the L 5 sandstone are still open in Well No. 5, but because they are contributing so little to the commingled production, El Paso plans to designate the L 5 as a stray wildcat zone as part of the Rule 10 exception. If significant production is later established from a well completed in the L 1 through L 6, El Paso will obtain a new field designation for this interval.

There are shale breaks within the correlative intervals proposed for the two new fields, causing separate lenticular reservoirs within each proposed field. Because of the multiple reservoirs, a two-factor allocation formula is required by statute in each field. An allocation formula based 5% per well and 95% on deliverability is close to the Statewide allocation formula, while satisfying the statutory requirement for two factors.

The Bob West, S. (L 21-15) Field does not have a special density rule and El Paso is requesting

none for either proposed new field. The Bob West, S. (L 21-15) Field does have between-well spacing of 933 feet. Spacing rules for the proposed new fields that allow wells to be as close as 933 feet, will make it easier to commingle wells between and among the Bob West, S. fields.

FINDINGS OF FACT

1. Notice of this hearing was given to all operators in the proposed Bob West, S. (L 7-12) and (L 13-20) Fields and to all offset operators to the discovery tract on July 10, 2001.
2. The Luera State Gas Unit "A" Well No. 5 is the discovery well for the proposed new fields, both of which are located in the lower Wilcox section of Starr County.
3. The proposed designated interval for the Bob West, S. (L 7-12) Field, in the Luera State Gas Unit "A" Lease Well No. 5, is a new field not previously produced.
 - a. The well was perforated between 11,889 and 12,415 feet (true vertical depth) and tested on June 17, at a maximum producing rate of 2112 MCF/D.
 - b. The static bottom-hole pressure was 7830 psi, indicating a virgin pressure gradient.
 - c. The lenticular sandstones between 11,150 and 12,570 feet, have similar rock and fluid properties and can be treated as a single interval for a field to be known as the Bob West, S. (L 7-12) Field.
4. The proposed designated interval for the Bob West, S. (L 13-20) Field in the Luera State Gas Unit "A" Lease Well No. 5, is a new field not previously produced.
 - a. A set of perforations between 12,756 and 13,220 feet (true vertical depth) were tested on July 3, at a maximum producing rate of 752 MCF/D.
 - b. The static bottom-hole pressure was measured at 7986 psi, indicating a virgin pressure gradient.
 - c. The lenticular productive sandstones 12,600 and 13,410 feet, can be treated as a single interval for a field to be known as the Bob West, S. (L 13-20) Field.
5. Older producing wells completed in intervals comparable to the proposed designated intervals, that are within 2-1/2 miles of the Luera State Gas Unit "A" Lease Well No. 5, are separated at these depths by faults.
6. Commingled production from all of the perforations in the Luera State Gas Unit "A" Lease Well No. 5 is about 4 to 5 MMCF per day, indicating that it is not economic to complete these sandstones separately.
7. A rule 10 exception to produce the Bob West, S. (L 13-20); Bob West, S. (L 7-12); and Bob West, S. (L 21-25) Fields together in the Luera State Gas Unit "A" Lease Well No. 5 is pending.
8. Additional wells have been proposed in the same Wilcox sands in the area of the Luera State Gas Unit "A" Lease Well No. 5.

9. The Bob West, S. (L 21-25) Field has 933-foot between-well spacing and similar spacing for the proposed new fields will facilitate recompletions and commingling among the various Bob West, S. fields.
10. There are separate reservoir lenses within each designated interval for the proposed Bob West, S. (L 7-12) and (L 13-20) Fields and statutes require two-factor allocation formulae for such fields.
11. Allocation based 5% per well and 95% on deliverability will protect correlative rights and satisfy statutory requirements.

CONCLUSIONS OF LAW

1. Proper notice was given as required by statute.
2. All things have been done or occurred to give the Railroad Commission jurisdiction to resolve this matter.
3. The El Paso Luera State Gas Unit "A" Lease Well No. 5, in the lower Wilcox sandstones between 11,150 and 12,570 feet, is entitled to be considered a new field discovery interval as it produces from reservoirs that have not been produced before.
4. The El Paso Luera State Gas Unit "A" Lease Well No. 5, in the lower Wilcox sandstones between 12,600 and 13,410 feet, is entitled to be considered a new field discovery interval as it produces from reservoirs that have not been produced before.
5. The requested designated intervals, well spacing and allocation formula will prevent waste, protect correlative rights within the fields, and satisfy statutory requirements.

EXAMINER'S RECOMMENDATION

Based on the above findings and conclusions, the examiner recommends that the El Paso Luera State Gas Unit "A" Lease Well No. 5, between 11,150 and 12,570 feet, be considered the discovery well for a new field to be known as the Bob West, S. (L 7-12) Field. The interval between 12,600 and 13,410 feet in the same well should be considered the discovery well for a new field to be known as the Bob West, S. (L 13-20) Field. The requested rules for the newly-designated fields should be approved.

Respectfully submitted,

Margaret Allen
Technical Hearings Examiner