

**OIL AND GAS DOCKET NO. 04-0230459**

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**THE APPLICATION OF EL PASO PRODUCTION OIL & GAS CO. FOR A NEW FIELD DESIGNATION AND OPERATING RULES, (PROPOSED) MONTE CHRISTO, N. (VICKSBURG L) FIELD, HIDALGO COUNTY, TEXAS**

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**Heard by:** Margaret Allen, Technical Hearings Examiner

**Procedural history**

Application received: January 18, 2002  
Hearing held: February 6, 2002

**Appearances**

	Representing
James Cowden	El Paso Production Oil & Gas Co.
Terry Payne	

**EXAMINER'S REPORT AND RECOMMENDATION**

**STATEMENT OF THE CASE**

El Paso Production Oil & Gas Co. is seeking to have its Stalker Lease Well No. 3, designated the discovery well for a new Vicksburg field, the Monte Cristo, N. (Vicksburg L) Field. El Paso is proposing the following rules for the new field:

1. Designated interval from 14,295' to 14,750' as shown on the log of the Stalker Lease Well No. 3;
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.

**DISCUSSION OF THE EVIDENCE**

In January of 2002, El Paso selectively perforated its Stalker Lease Well No. 3 in the L sandstones of the lower Vicksburg Formation, from 14,604 to 14658', and from 14,684 to 14,750'. Daily production was estimated to be 5 MMCF. These perforations were then isolated and new perforations were added selectively between 14,295' and 14,440'. A G-1 test run January 21, 2002, indicated a top rate of 1662 MCF/D from the upper perforations. The plug between the sets of perforations was drilled out and on February 28, 2002, the calculated AOF from the commingled perforations was 20 MMCF/D.

On January 28, 2002, commingled production was 26.5 MMCF/D, at a flowing tubing pressure of 11,300 psi. By January 31, production had increased to 40 MMCF though the flowing tubing pressure had decreased to 7500 psi. Cumulative production is 173 MMCF and 239 BC, with no water.

The initial bottom-hole pressure was calculated to be 13,562 psi. This bottom-hole pressure gradient of 0.94 psi per foot of depth is typical of virgin pressure in this area. The produced gas contains 93% methane with traces of nitrogen and carbon dioxide, and is expected to be similar in all of the L sandstones.

The closest well is 846 feet north and is completed at 8000' in the Monte Cristo, N. (Frio F-12) Field. There is no production comparable to the L sands within 2-1/2 miles of the discovery well. Two other wells penetrated the L sandstones in this fault block, but are downdip from the discovery well. The downdip wells were completed in stratigraphically lower sandstones.

El Paso has several wells just to the west that are producing from North Monte Cristo fields in the Vicksburg S and T sandstones. These S and T fields are separated from the Stalker Well No. 3, by a major down-to-the-coast normal fault with 1000 to 2000' of throw. The producing L sandstones are younger and stratigraphically shallower than the S and T sandstones, but produce across the fault from about the same depths. The subject field produces from a southwest dipping structure wedged between the major northeast-trending fault and a smaller, intersecting northwest-trending fault.

Coastal is very actively developing the Vicksburg Formation in this area. There are numerous Vicksburg wells in the North Monte Cristo area, carried in several different fields. The Vicksburg is highly faulted in general, creating numerous separate reservoirs. Most of the Vicksburg sandstones are shaly and have low permeability. The L sandstones may qualify as having been tight formations prior to hydraulic fracture stimulation, but their production to date has been surprisingly good.

The Vicksburg L sand extends from 14,295 to 14,750 feet in the Stalker Well No. 3. This proposed designated interval includes multiple sandstones. As the interval probably contains multiple reservoirs, a two-factor allocation formula is required for statutory reasons. The requested formula, based 5% per well and 95% on deliverability, is close to the Statewide allocation formula and is common for Vicksburg fields in South Texas.

The nearby North Monte Cristo fields have the same spacing and allocation rules as are proposed for the subject field. Lease-line spacing of 467 feet and between-well spacing of 933 feet is standard for 40-acre units, though Coastal is not asking that 40 acres be adopted as a special field rule. Between-well spacing of 933 feet will also facilitate drilling in this area of multiple targets.

### **FINDINGS OF FACT**

1. Notice of this hearing was given to all operators in the proposed Monte Cristo, N. (Vicksburg L) Field, and to all offset operators to the discovery Striker Lease on January 28, 2002.
2. The discovery well for the proposed new field is El Paso's Stalker Lease Well No. 3.
3. The Vicksburg L sand, between 14,295' and 14,750' in the Stalker No. 3, is a previously undiscovered reservoir and entitled to be treated as a new field.
  - a. The Stalker No. 3 was first perforated from 14,604' to 14,658', and from 14,684' to 14,750' in the L sandstones of the lower Vicksburg Formation; daily production was

estimated to be 5 MMCF.

- b. These perforations were then isolated and new perforations were added selectively between 14,295' and 14,440'; the top rate tested was 1662 MCF/D.
  - c. The plug between the sets of perforations was drilled out and the calculated AOF from the commingled perforations was 20 MMCF/D.
  - d. There is no comparable Vicksburg L sandstone production within this fault block.
  - e. The bottom-hole pressure of 13,562 psi, shows a pressure gradient of 0.94 psi per foot and indicates virgin pressure for this area and depth.
4. Between-well spacing of 933 feet is standard for 40 acre development and will facilitate drilling in this multi-target area.
  5. No special field rule regarding well density is necessary and the field can be prorated under the Statewide density rule.
  6. Because of the multiple reservoirs in the proposed new field, a two-factor allocation formula is required for statutory reasons.
  7. Allocation based 5% per well and 95% on deliverability is the same one found in most other North Monte Christo Vicksburg fields and will protect correlative rights.

#### **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 designated interval in the discovery well for the Vicksburg L is entitled to be considered a new field discovery as it produces from a reservoir that has not been produced before.
4. The requested designated interval, well spacing and allocation formula will prevent waste and protect correlative rights within the proposed new field.

#### **EXAMINER'S RECOMMENDATION**

Based on the above findings and conclusions, the examiner recommends that the Stalker Lease Well No. 3, within the proposed designated interval, be considered the discovery well for the Monte Christo, N. (Vicksburg L) Field and that the requested rules be approved.

Respectfully submitted,

Margaret Allen  
Technical Hearings Examiner

Date of Commission Action: February 21, 2002