

November 8, 2000

OIL AND GAS DOCKET NO. 04-0225962

THE APPLICATION OF FREEDOM ENERGY INC. TO CONSOLIDATE VARIOUS T.-C.-B. FIELDS INTO A NEW FIELD TO BE KNOWN AS THE T.-C.-B. (CONSOLIDATED) FIELD AND TO ADOPT OPERATING RULES AND REGULATIONS FOR THE T-C-B (CONSOLIDATED) FIELD, JIM WELLS COUNTY, TEXAS

Heard by: Margaret Allen, Technical Hearings Examiner

Procedural history

Application received: August 31, 2000

Hearing held: November 7, 2000

Appearances

	Representing
Kerry A. Pollard	Freedom Energy Inc.
Tim George	Exxon Mobil Corp.

EXAMINER'S REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Freedom Energy is seeking standing to have the following T.-C.-B. fields consolidated into a new field to be known as the T-C-B (Consolidated) Field:

Tijerina-Canales-Blucher	89945 001
Tijerina-Canales-Blucher (Carl)	89945 033
T.-C.-B. (Conrad)	89945 055
T.C.B. (Corgey West)	89945 058
T.-C.-B. (Stevens)	89945 275
T.-C.-B. (Stewart 6900)	89945 286
T.-C.-B. (20-I-03, W)	89945 390
T.-C.-B. (21-A1)	89945 396
Tijerina-Canales-Blucher (21-B)	89945 418
T.-C.-B. (21-B4, W)	89945 440
Tijerina-Canales-Blucher (6650)	89945 506
TCB (6520)	89945 510
Tijerina-Canales-Blucher (6800)	89945 517
T.-C.-B. (6900 Charles)	89945 528
T.C.B. (6900 Charles, N.)	89945 530

T.-C.-B. (7000 Charles)	89945 539
T-C-B (6850 Corgey)	89945 545
T.-C.-B (7100 Jones)	89945 561
Tijerina-Canales-Blucher (7125)	89945 572
T.-C.-B. (7130 Franz)	89945 583
Zone 21-B Trend	99880 380

All Wildcat intervals between the above listed fields.

Exxon Mobil is in support of the application, but requested that the Zone 21-B Trend Field not be consolidated into the proposed new field. Exxon Mobil wants to establish a separate administrative Rule 10 procedure to allow wells to be downhole commingled in both the Zone 21-B Trend Field and the new consolidated field. The applicant agreed to Exxon Mobil's suggestion and proposed the field rule 3 summarized below. Freedom Energy is proposing that special field rules for the existing fields to be consolidated be rescinded and that permanent field rules be adopted for the new field. The proposed rules are summarized as follows:

1. Top of the designated interval shown at 6500 feet on the log of Well No. 61 and base shown at 7200 feet on the log of Well No. 70, both on the Texaco, Inc. H.C. De Tijerina Lease;
2. well spacing of 330-660 feet, with no prescribed proration unit size;
3. administrative approval of Rule 10 exceptions, without additional evidence, for wells in the proposed T.-C.-B. (Consolidated) Field and the Zone 21-B Trend Fields, provided:
 - a. the applicant send notice to the operator of (1) each tract that is both adjacent to the lease or pooled unit for which the applicant proposes the Rule 10 Exception and within 1200 feet from the well proposed for commingling and (2) each tract that is 467 feet or less from the location of the well proposed for commingling; and
 - b. No protest is received within 21 days or there are written waivers; and
4. allocation based 5% per well and 95% on deliverability.

Freedom Energy also requested that the allocation formula for the newly consolidated field be suspended. No notice was given of the request to suspend the allocation formula and the examiner declines to recommend such suspension. The Oil & Gas Division requested the name of the consolidated field be T.-C.-B. (Upper Frio Cons.) Field to fit into the established sequence of field names and associated numbers.

DISCUSSION OF THE EVIDENCE

Freedom Energy wants to recomplete wells in the upper Frio Formation in the T.C.B. area to recover any reserves remaining in each of the various sandstones. These sandstones are no longer economic to produce by themselves and their remaining reserves will be recovered only if wells can

be completed in multiple sands.

Only a few of the fields in the proposed new consolidated field are still active, and most of these wells in these fields can be considered salvage. There are eight active wells in the Tijerina-Canales-Blucher Field, five in the Tijerina-Canales-Blucher (Carl) Field, four in the T.-C.-B. (21-B4, W) Field, five in the T.-C.-B. (7000 Charles) Field; and one each in the T.-C.-B. (6900 Charles); T.C.B. (Stewart 6900); T.C.B. (6900 Charles, N.); and T.C.B. (Corgey West) Fields. The average daily production from these completions is less than 100 MCF. Numerous shut-in wells remain on the proration schedules of these still-active fields and of the TCB (6520) Field, the T.-C.-B. (21-A1) Field and T.-C.-B. (Conrad) Field. The rest of the fields proposed for consolidation have no wells now, but their previous production was from the same correlative interval as the proposed designated interval of the consolidated field. Most of the active and inactive wells are operated by Freedom Energy or Exxon Mobil. Aroc (Texas) and Kerr-McGee are the only other operators of active wells.

The producing interval in the Zone 21-B Trend Field is within the overall upper Frio interval of the consolidated field, and Freedom Energy originally requested that this field be included within the new consolidated field. The Zone 21-B Trend Field produces from a unitized interval which therefor has slightly different ownership from the un-unitized Upper Frio fields above and below. Because of this different mineral interest ownership, Exxon requested that the Zone 21-B Trend Field not be included within the new field. However, the field does not form a separate reservoir and wells carried in other fields produce from the same correlative interval as those in the Zone 21-B Trend Field.

Exxon believes that it may be able to increase recovery by downhole commingling wells in the Zone 21-B Trend Field with other upper Frio reservoirs. Exxon Mobil recommends the proposed Field Rule 3 as a method to allow downhole commingling after notice, where there is different mineral interest ownership. After downhole commingling, the combined production will be assigned to the Zone 21-B Trend Field.

Nine of the twenty fields to be consolidated have had special field rules adopted. The density rule in eight of these fields calls for 40 acre proration units and all of these have minimum lease line spacing of 467 feet. Three of these eight fields require wells on the same lease to be 1200 feet apart and the other five have 933' between-well spacing. The T.-C.-B. (6900 Charles) Field has 320 acre proration units with 1320-2640' well spacing.

Freedom Energy has requested well spacing of 330-660 feet to aid in recompleting and downhole-commingling wells without unnecessary Rule 37 exceptions. There are many wells in this area, producing from deeper formations as well as from the various upper Frio sandstones. Many of these wells are less than 900 feet from existing wellbores now in other fields, and relatively small spacing will allow as many of the existing wellbores to be used for recompletions as possible. The applicant believes that a rule specifying proration unit density is unnecessary. Almost all of the wells were drilled on 40 acre density but it may be difficult to draw 40-acre proration units around existing and recompleted wells without double assignment of acreage.

Freedom Energy developed a composite log to show as many of the productive upper Frio sandstones as possible in the proposed consolidated field. The top of the proposed designated

interval is shown at 6500 feet on the log of the H.C. Tinjerina Lease Well No. 61 and the base is shown at 7200 feet on the log of the H.C. Tijerina Lease Well No. 70. Because of the multiple reservoirs included within the proposed designated interval, a two factor allocation formula is necessary. An allocation formula based 5% per well and 95% on deliverability is close to the allocation formulae that wells in the various fields are now operating under, and will satisfy statutory requirements.

The applicant would prefer that the allocation formula be suspended for the new T.-C.-B. (Upper Frio Cons.) Field, as it believes there is a market for all of the gas that can be produced from wells in this field. However, Freedom Energy has not yet completed the necessary forms nor informed the operators of all of the wells to be in the T.-C.-B. (Upper Frio Cons.) Field of its request.

The applicant believes that approval of this application may result in the recovery of as much as 7.3 BCF of incremental recovery. The current economic limit is about 100 to 250 MCF/D per completion. If three sandstones can be downhole commingled, the economic limit per completion will be reduced to 33 MCF/D. Assuming an exponential decline rate of 10%, an additional 730 MMCF can be recovered per well. Freedom Energy estimated that ten wells can be downhole commingled in this fashion, increasing the incremental recovery to 7.3 BCF.

FINDINGS OF FACT

1. Notice of this hearing was given to all operators of wells in the fields to be consolidated on October 26, 2000.
2. The following fields can be produced economically, and without causing waste, if consolidated into a single field:

Tijerina-Canales-Blucher	89945 001
Tijerina-Canales-Blucher (Carl)	89945 033
T.-C.-B. (Conrad)	89945 055
T.C.B. (Corgey West)	89945 058
T.-C.-B. (Stevens)	89945 275
T.-C.-B. (Stewart 6900)	89945 286
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T.-C.-B. (6900 Charles)	89945 528
T.C.B. (6900 Charles, N.)	89945 530
T.-C.-B. (7000 Charles)	89945 539
T-C-B (6850 Corgey)	89945 545
T.-C.-B (7100 Jones)	89945 561

Tijerina-Canales-Blucher (7125)	89945 572
T.-C.-B. (7130 Franz)	89945 583

All Wildcat intervals between the above listed fields.

3. The field rules for the following fields will no longer be applicable if they are consolidated into the new field, the T.-C.-B. (Upper Frio Consolidated) Field and can be rescinded:

Tijerina-Canales-Blucher	89945 001
T.-C.-B. (Conrad)	89945 055
T.-C.-B. (21-A1)	89945 396
Tijerina-Canales-Blucher (21-B)	89945 418
T.-C.-B. (21-B4, W)	89945 440
T.-C.-B. (6900 Charles)	89945 528
T.C.B. (6900 Charles, N.)	89945 530
T.-C.-B (7100 Jones)	89945 561

4. The Tijerina-Canales-Blucher fields were first developed in the 1940's and the upper Frio sandstones in the various designated fields are largely depleted.
5. Only eight of the twenty fields still have active wells and the average daily production from the 26 wells now in these fields is about 100 MCF per well.
6. Most of the fields were developed on 40-acre density with minimum lease line spacing of 467 feet and between-well spacing of 1200 or 933 feet.
7. Reducing the spacing to 330-660 feet will facilitate downhole commingling as many of the wells now carried in different fields are less than 933 feet apart.
8. Adopting a field rule to specify the proration unit size could hamper the recompletions as some areas may have wells clustered such that 40-acre proration units cannot be drawn around them without double assignment of acreage.
9. If three completions are commingled in a single wellbore, the economic limit can be reduced from 100 MCF per day to 33 MCF per day per completion.
10. If ten wells can be so downhole commingled, the incremental recovery may be 7.3 BCF.
11. The wells in the proposed T.-C.-B. (Upper Frio Cons.) Field produce gas from an Upper Frio section whose top is shown at 6500 feet on the log of the Texaco H.C. Tijerina Lease Well No. 61 and whose base is shown at 7200 feet on the log of the Texaco H.C. Tijerina Lease Well No. 70.
12. As this designated interval includes multiple, stratigraphic reservoirs within the Upper Frio, a two factor allocation is required for statutory reasons.
13. Allocation based 5% per well and 95% on deliverability is similar to the current allocation

formulae in most of the fields and will satisfy statutory requirements.

14. The mineral interest ownership of a completion in the Zone 21-B Trend Field (which has been unitized) would be different from the mineral interest ownership of a completion in the same wellbore in the proposed consolidated field.
15. The Zone 21-B Trend Field is within the designated interval of the proposed consolidated field and downhole commingling of completions in both fields may prevent waste by lowering the economic limit.
16. Notice of any proposed downhole commingling of completions in the Zone 21-B Trend Field with the consolidated field in the same wellbore 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. Consolidation of the requested fields will prevent waste and protect correlative rights, while encouraging conservation.
4. Freedom Energy has standing to request consolidation of the various fields into the proposed T.-C.-B. (Upper Frio Cons.) Field as it operates wells producing from within the stratigraphic interval.
5. The requested field rules for the resultant field, the T.-C.-B. (Upper Frio Cons.) Field, will prevent waste, protect correlative rights within the field, and satisfy statutory requirements.

EXAMINER'S RECOMMENDATION

Based on the above findings and conclusions, the examiner recommends that the requested field be consolidated into a new field to be known as the T.-C.-B. (Upper Frio Consolidated) Field. The field rules proposed for the resultant T.-C.-B. (Upper Frio Consolidated) Field should be adopted, with an allocation formula based 95% on deliverability and 5% per well.

Respectfully submitted,

Margaret Allen
Technical Hearings Examiner

Date of Commission Action: December 5, 2000

Exhibits

1. Area map
2. Detailed map of various wells
3. List of fields and existing rules
4. Decline curves
5. Composite log
6. Proposed rules
7. Illustrations of infill well spacing
8. Additional recovery with proposed consolidation
9. PFD from previous T-C-B field consolidation