



RAILROAD COMMISSION OF TEXAS

OFFICE OF GENERAL COUNSEL

April 13, 2006

OIL AND GAS DOCKET NO. 04-0246631

APPLICATION OF CABOT OIL & GAS CORPORATION TO CONSOLIDATE VARIOUS MCCAMPBELL FIELDS INTO THE PROPOSED MCCAMPBELL (DEEP FRIO CONS.) FIELD AND ADOPT FIELD RULES FOR THE MCCAMPBELL (DEEP FRIO CONS.) FIELD, ARANSAS AND SAN PATRICIO COUNTIES, TEXAS

HEARD BY: Thomas H. Richter, P.E.
DATE OF HEARING: March 31, 2006

APPEARANCES:
Dale E. Miller

REPRESENTING:
Cabot Oil & Gas Corp

EXAMINER'S REPORT AND RECOMMENDATION STATEMENT OF THE CASE

This is the unopposed application of Cabot Oil & Gas for the Commission to consider consolidation of the eight various McCampbell Fields: McCampbell (Frio J-3), McCampbell (Frio P), McCampbell (Frio P, Lower), McCampbell (Frio P, Middle), McCampbell (Frio P, Upper), McCampbell, North (P-2), McCampbell (Q-Sand), McCampbell (Lwr Q Sand) and any Wildcat accumulations into one common field to be known as the McCampbell (Deep Frio Cons.) Field. It is proposed that the following special field rules be adopted:

1. The entire combined correlative interval from 8,830' ss to 13,980' ss as shown on the McCampbell Field Deep Frio Consolidation Structural Cross-Section displaying the well logs of the Tenneco Oil Co., W. G. McCampbell Jr Well No. 1 (API No. 42-409-30043); the Walter O&G Corp, Grant Well No. 1 (Now the Cabot Oil & Gas Corporation, Grant "A" Well No. 1) (API No. 42-007-30848) and the Midwest Oil, Molly Stewart et al Well No. 1 (API No. 42-407-30854), Aransas and San Patricio Counties, Texas should be designated as the McCampbell (Deep Frio Cons.) Field.
2. Minimum well spacing of 467' (leaseline) and no between well spacing and only 40 acre drilling units;

3. An allocation formula based on 95% deliverability and 5% per well¹ for gas wells and exempt classification for any oil wells. It is proposed that the allocation formula for gas wells be suspended.

The examiner recommends approval of the application.

DISCUSSION OF THE EVIDENCE

The eight fields include one Oil Field, three Gas Fields and three Associated Fields. The first McCampbell Field was discovered in 1969. There are only two producing oil wells in the subject fields and one injection well. There are 12 producing gas wells. Two of the fields have no producing wells. The McCampbell, North (P-2) Field has special field rules that provide for minimum well spacing of 467'/1200' and 320 acre density. The McCampbell (Frio P) Field has special field rules that provide for minimum well spacing of 933'/1867' and 160 acre density. The remaining fields are governed pursuant to Statewide Rules. The multi-well gas fields have the allocation formula suspended.

The entire combined correlative interval from 8,830' ss to 13,980' ss as shown on the McCampbell Field Deep Frio Consolidation Structural Cross-Section displaying the well logs of the Tenneco Oil Co., W. G. McCampbell Jr Well No. 1 (API No. 42-409-30043); the Walter O&G Corp, Grant Well No. 1 (Now the Cabot Oil & Gas Corporation, Grant "A" Well No. 1) (API No. 42-007-30848) and the Midwest Oil, Molly Stewart etal Well No. 1 (API No. 42-407-30854), Aransas and San Patricio Counties, Texas should be designated as the McCampbell (Deep Frio Cons.) Field. The entire gross interval is a series of stacked Frio Formation Sands of similar reservoir characteristics.

Consolidation of the subject fields will provide for the recovery of reserves that otherwise would go unrecovered. The fields to be consolidated are both oil and gas. All the fields are intermingled as these are a series of various stacked Frio Formation sands that are heterogeneous (porosity, permeability and thickness) and are lenticular from well to well over short distances. Many of the sand stringers are not stand alone economic producing sands. Completion costs will be reduced. There are numerous potentially productive horizons to be produced, but without the consolidation of the fields and the freedom to produce multiple reservoirs simultaneously, reserves could be left in the ground, un-recovered, as the economics may not justify individual completions. The expanded correlative interval will allow completion of wellbores in all of the productive sand accumulations during initial completion operations. The cost of drilling, completing and stimulating a wellbore drilled for the deepest reservoir of the correlative interval is approximately \$4,500,000. Downhole commingling the production from all reservoirs during the initial completion will reduce capital expenditures by approximately \$195,000 per three zones. By reducing capital expenditures, the recovery factor for each well will increase, thereby allowing for recovery of additional reserves and minimizing waste. In addition, by allowing multiple reservoirs to be simultaneously produced,

¹ The Notice of Hearing proposed a 100% AOF allowable for gas wells, however, a two-factor allocation formula is required pursuant to State Statutes.

the economic limit is lowered for each of the individual reservoirs thereby enhancing recovery and preventing waste of recoverable reserves.

Among the oil fields being considered for consolidation, as of December 1, 2005, 5 wells have produced less than 50 MBO, 1 has produced between 50 and 100 MBO and 2 have produced more than 100 MBO. Among the fields being considered for consolidation, as of January 1, 2006, the most prolific was the McCampbell (Q Sand) Field which has cumulatively produced 339,905 Bbls. The Oil fields are in the final stage of development, and there are still remaining oil reserves left to secure but nothing to necessitate SWR 49B restrictions on the gas fields. The oil fields all appear to be in the salvage stage of depletion.

Among the gas fields being considered for consolidation, as of September 1, 2005, there are 21 gas well completions, 6 of the completions produced less than 500,000 MCF; 4 of the completions produced between 500,001 MCF and 1 BCF; 5 of the completions produced between 1 and 2 BCF; 3 of the completions produced between 2 and 5 BCF; and 3 of the completions produced more than 5 BCF. Among the six recognized gas fields being considered for consolidation as of January 1, 2006, 2 fields have a cumulative production less than 5 BCF; 2 fields have a cumulative production between 5 and 10 BCF; and 2 fields have a cumulative production of more than 10 BCF; the total cumulative production from all six fields is 38.1 BCF. Because of the maturity level of the fields, and to be able to economically recover the remaining recoverable reserves, flexibility is needed to downhole commingle the production to increase the economic viability of completing the wells and also to provide additional incentive to drill development wells.

The minimum lease line spacing of 467' will provide flexibility in locating wells in the field. Elimination of between well spacing is necessary to utilize existing wellbores in completing in various zones. Proration unit designation is not required in a field area that is near final depletion and the acreage assignable to a well is not representative of the area to be drained and acreage is not a factor in the proposed allocation formula.

The McCampbell (Deep Frio Cons.) Field should be classified as Associated-Prorated and not subject to 49(b) allocation. An allocation formula for gas wells based on 95% deliverability and 5% per well meets the statutory requirements of a multi-factor allocation formula. The allocation formula should be suspended as there is market for 100% of the produced gas. For oil well(s) that are completed, the allowable allocation should be exempt from allowable limitation.

FINDINGS OF FACT

1. Notice of this hearing was sent to all operators in the subject field at least ten (10) days prior to the subject hearing.
2. There was no protest at the call of the hearing.
3. The eight fields to be consolidated are: McCampbell (Frio J-3), McCampbell (Frio P),

- McC Campbell (Frio P, Lower), McC Campbell (Frio P, Middle), McC Campbell (Frio P, Upper), McC Campbell, North (P-2), McC Campbell (Q-Sand), McC Campbell (Lwr Q Sand) Field.
- a. The first McC Campbell Field was discovered in 1969.
 - b. There are only two producing oil wells in the subject fields and one injection well and 12 producing gas wells. Two of the fields have no producing wells.
 - c. The McC Campbell, North (P-2) Field has special field rules that provide for minimum well spacing of 467'/1200' and 320 acre density. The McC Campbell (Frio P) Field has special field rules that provide for minimum well spacing of 933'/1867' and 160 acre density. The remaining fields are governed pursuant to Statewide Rules.
 - d. The multi-well gas fields have the allocation formula suspended.
4. The entire combined correlative interval from 8,830' ss to 13,980' ss as shown on the McC Campbell Field Deep Frio Consolidation Structural Cross-Section displaying the well logs of the Tenneco Oil Co., W. G. McC Campbell Jr Well No. 1 (API No. 42-409-30043); the Walter O&G Corp, Grant Well No. 1 (Now the Cabot Oil & Gas Corporation, Grant "A" Well No. 1) (API No. 42-007-30848) and the Midwest Oil, Molly Stewart et al Well No. 1 (API No. 42-407-30854), Aransas and San Patricio Counties, Texas should be designated as the McC Campbell (Deep Frio Cons.) Field.
5. Consolidation of the subject fields will provide for the recovery of reserves that otherwise would go unrecovered.
- a. The fields to be consolidated are both oil and gas and all the fields are intermingled as these are a series of various stacked Frio and Vicksburg Formation sands that are heterogeneous (porosity, permeability and thickness) and are lenticular from well to well over short distances.
 - b. Many of the sand stringers are not stand alone economic producing sands.
 - c. Completion costs will be reduced and there are numerous potentially productive horizons to be produced, but without the consolidation of the fields and the freedom to produce multiple reservoirs simultaneously, reserves could be left in the ground, un-recovered, as the economics may not justify individual completions.
7. The minimum lease line spacing of 467' will provide flexibility in locating wells in the field.
8. The McC Campbell (Deep Frio Cons.) Field should be classified as Associated-Prorated and not subject to 49(b) allocation.

- a. An allocation formula for gas wells based on 95% deliverability and 5% per well meets the statutory requirements of a multi-factor allocation formula.
- b. The allocation formula should be suspended as there is market for 100% of the produced gas.
- c. For oil well(s) that are completed, the allowable allocation should be exempt from allowable limitation.

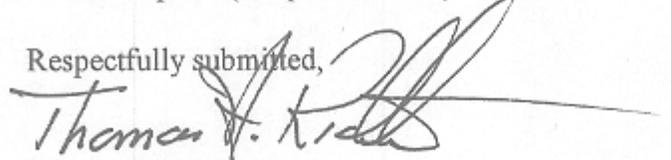
CONCLUSIONS OF LAW

1. Proper notice was given to all parties as set out in the provisions of all applicable codes and regulatory statutes.
2. All things have occurred and been accomplished to give the Commission jurisdiction in this matter.
3. Consideration for consolidation of fields and field rules, a determination of the effectiveness of the rules and appropriate actions is a matter within the Commission jurisdiction.
4. Adoption of the proposed consolidation of fields and adoption of the proposed field rules will prevent waste, foster conservation and protect correlative rights.

EXAMINER'S RECOMMENDATION

Based on the above findings and conclusions of law, the examiner recommends approval of the proposed field consolidation and field rules for the McCampbell (Deep Frio Cons.) Field.

Respectfully submitted,



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Technical Examiner
Office of General Counsel