

**STATE OF NEW MEXICO
ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION**

**IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION FOR THE PURPOSE OF
CONSIDERING:**

**APPLICATION OF MEWBOURNE OIL
COMPANY FOR AN UNORTHODOX
GAS WELL LOCATION AND A NON-
STANDARD GAS PRORATION UNIT,
EDDY COUNTY, NEW MEXICO.**

**DE NOVO
CASE NO. 11723**

**APPLICATION OF FASKEN OIL AND
RANCH, LTD. FOR A NON-STANDARD
GAS PRORATION AND SPACING
UNIT AND AN UNORTHODOX GAS
WELL LOCATION, EDDY COUNTY,
NEW MEXICO.**

**DE NOVO
CASE NO. 11755**

**APPLICATION OF TEXACO EXPLOR-
ATION AND PRODUCTION INC. FOR
CLARIFICATION, OR IN THE ALTER-
NATIVE, AN EXCEPTION TO THE
SPECIAL POOL RULES AND REGULA-
TIONS FOR THE CATCLAW DRAW-
MORROW GAS POOL, EDDY COUNTY,
NEW MEXICO.**

CASE NO. 11868

*See Also Order No.
R-10872
R-10872-A
R-10872-C*

ORDER NO. R-10872-B

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on October 30, 1997 at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission."

NOW, on this 11th day of December, 1997, the Commission, a quorum being present, having considered the record and being fully advised in the premises,

FINDS THAT:

(1) Due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

CASE NO. 11723 - De Novo

CASE NO. 11755 - De Novo

CASE NO. 11868

Order No. R-10872-B

Page -2-

(2) In Case 11723, Mewbourne Oil Company ("Mewbourne") seeks approval of a non-standard 297.88 acre gas spacing and proration unit in the Catclaw Draw-Morrow Gas Pool comprised of Lots 29-32 and the SW/4 (S/2 equivalent) of Section 1, Township 21 South, Range 25 East, NMPM, Eddy County, New Mexico to be dedicated to a well to be drilled at an unorthodox gas well location 660 feet from the South line and 2310 feet from the East line (Unit W) of Section 1.

(3) In Case 11755, Fasken Oil and Ranch, Ltd. ("Fasken") seeks approval of the above-described non-standard gas spacing and proration unit, for a well to be drilled at an unorthodox gas well location 2080 feet from the South line and 750 feet from the West line (Unit T) of Section 1.

(4) In Case 11868, Texaco Exploration and Production Inc. ("Texaco") seeks clarification of the rules for the Catclaw Draw-Morrow Gas Pool regarding second wells on gas proration units in the Catclaw Draw-Morrow Gas Pool, or in the alternative, an exception to Division rules for its E. J. Levers "NCT-1" Well Nos. 1 and 2, located in Units N and F, respectively, of Section 12, Township 21 South, Range 25 East, NMPM, Eddy County, New Mexico to allow both wells to produce simultaneously.

(5) At the time of the hearing, Case Nos. 11723 (de novo); 11755 (de novo) and 11868 were consolidated for the purpose of presenting testimony. Since these cases involve the same acreage and subject matter, one order should be entered for all three.

(6) Sections 1 and 12 are within the Catclaw Draw-Morrow Gas Pool, a pool created in 1971 and prorated in 1974 by Order No. R-4707. The pool is governed by Special Pool Rules and Regulations adopted by Order No. R-4157 that requires 640 acre units, with wells to be no closer than 1650 feet to the unit's outer boundary and no closer than 330 feet to a quarter-quarter section line. Prorationing in the pool was suspended by Commission Order No. R-10328, dated March 27, 1995, and wells in the pool are allowed to produce at capacity.

(7) Order No. R-4157-D dated August 26, 1981, found that wells in the Catclaw Draw-Morrow Gas Pool were only capable of draining 320 acres, and the pool has been effectively developed on 320-acre spacing.

(8) In suspending prorationing in the Catclaw Draw-Morrow Gas Pool, the Commission only suspended the assignment of allowables to the wells. All other rules, regulations and policies governing this pool, including authorization for a second well on each 640-acre spacing unit in the Catclaw Draw-Morrow Gas Pool, remain in effect.

CASE NO. 11723 - De Novo

CASE NO. 11755 - De Novo

CASE NO. 11868

Order No. R-10872-B

Page -3-

(9) Section 1 is comprised of 863.62 acres. The middle one-third of the section is federal land which is unleased due to a federal environmental wildlife study and cannot be included in the well unit. As a result, approval of the non-standard gas spacing and proration unit is proper and necessary to prevent waste, and should be approved.

(10) All working interest owners in the S/2 of Section 1 are subject to an A.A.P.L. Model Form Operating Agreement - 1956, dated April 1, 1970 ("Operating Agreement"). Mewbourne is the largest working interest owner in the S/2 of Section 1 containing 297.88 acres. Summary of unit ownership is as follows:

Mewbourne Oil Company	43.29470%
Fasken Land and Minerals, Ltd.	30.95951%
Matador Petroleum Corporation	17.93116%
Devon Energy Corporation	<u>7.81463%</u>
	100.00000%

(11) Mewbourne presented geologic and engineering evidence which showed that:

- (a) The primary objective of both the Fasken and Mewbourne proposed locations in Section 1 is the Morrow Zone.
- (b) The primary Morrow Zone is the Middle Morrow, the main producing zone in Texaco's Levers Well No. 2. A net isopach of the Middle Morrow pay sand trends in a north/northeast - south/southwest direction.
- (c) Mewbourne's proposed location is located within the same producing pod as the Texaco Levers Well No. 2.
- (d) Although there is evidence of faulting in the Morrow, it does not adversely affect Middle Morrow gas production.
- (e) Development of the pool occurred primarily in the early 1970's and early 1980's. The Texaco Levers Well No. 2, in Unit F of Section 12, was completed on January 13, 1996, and has produced 2.2 billion cubic feet of gas from the Middle Morrow at rates averaging 4 million cubic feet of gas per day.
- (f) There is no commercial Morrow production in the Catclaw Draw-Morrow Gas Pool north of Texaco's Levers Well No. 2.

- (g) Drilling as close to commercial production as possible reduces dry holes risk and is the main reason for Mewbourne's request for a well location 660 feet from the South line of Section 1.
- (h) The gas in place figures for Sections 1 and 12 are calculated as follows:

	<u>Section 1</u>	<u>Section 12</u>	<u>Total</u>
1/13/96	1.80 BCF	3.95 BCF	5.75 BCF
10/1/97	1.11 BCF	2.44 BCF	3.55 BCF

- (i) Drainage is non-radial, along the trend of the Morrow reservoir. The Texaco Levers Well No. 2 is not draining from the south or southwest because of competing wells located in those directions. The Levers Well No. 2 is not draining reserves northwest of Section 12 because dry holes control limits the Middle Morrow productive limits in that direction.
- (12) Fasken presented geologic and engineering evidence which showed that:
- (a) 3-D seismic data shows a major north/south Morrow cutting fault which separates the Fasken location and Texaco wells on the west side of this fault from the Mewbourne location on the east side of this fault. Mewbourne's location is on the down thrown side of this fault.
- (b) No Morrow sands will communicate or drain across this fault.
- (c) The Mewbourne location is at a structural disadvantage in the Morrow because both the Upper and Lower Morrow sands become wet in lower structural positions.
- (d) Lower Morrow channel sands trend north-northwest to south-southwest, have a very good permeability, drain long distances, and become wet down dip.
- (e) Middle Morrow marine influenced sands trend east-northeast to west-southwest, range from very good to very poor permeability, do not correlate in a north-south direction and did not drain effectively in a north-south direction one half mile distance between the Texaco's Levers #1 and #2 wells in Section 12.

- (f) The Fasken location will be higher and closer to the Conoco Levers #2 well in Section 2 which had a good gas show (I.P. 2.90 million cubic feet of gas per day) but watered out in the Upper Morrow "A" Sand.
- (g) The Cisco has productive potential at the Fasken location because the 3-D seismic shows a time structure with closure, an isochron thin from the 3rd Bone Springs sand to the top of the Cisco and an isochron thick from the top of the Cisco to the Middle Morrow Shale. However, the chances of success in the Cisco are 10% at best.
- (h) In order to minimize the risk involved, it is necessary to drill a well at a location in this spacing unit which can test for both Cisco and Morrow gas production.

(13) Texaco presented geological interpretations based exclusively on subsurface geology which demonstrated that:

- (a) using the same data used by Mewbourne, Texaco contended that the "green" (Middle Morrow) sand being produced in the Texaco Levers Well No. 2 was oriented such that the Fasken location was substantially better than the Mewbourne location.
- (b) if the Mewbourne location was approved, then a substantial penalty was necessary in order to keep the Mewbourne well from draining gas reserves to which it was not entitled.
- (c) Texaco recommended that the Mewbourne location be denied, but if approved, that it be subject to a 81.4% production penalty.

(14) The Mewbourne location has a higher probability of success in the Middle Morrow because of its close proximity to the Texaco Levers Well No. 2 and the north-south interpretation of the Middle Morrow Sand trend has a higher geologic probability than the alternative interpretations. Also, the proposed Fasken location has less of an opportunity to produce from the Middle Morrow than the proposed Mewbourne location and only a 10% chance of producing from Cisco formation.

(15) The Commission favors the Mewbourne proposal because in addition to the higher probability of commercial success in the Middle Morrow, Mewbourne has the largest interest in the proration unit and was the moving force in proposing a well in the S/2 of Section 1.

(16) The Mewbourne location should be penalized, however, so as not to gain an unfair competitive advantage in the reservoir. Said penalty should ignore acreage considerations because the Catclaw Draw-Morrow Gas Pool has effectively been developed on 320 acres. Said penalty should be based upon a variance from the standard pool rules set back being:

$$\frac{\text{North-South Variance}}{\text{North-South Standard}} = \text{Variance Factor}$$

$$\text{Variance Factor} = \frac{1650 - 660}{1650} = 0.60 = 60\%$$

The allowable should therefore be 40% of the productive capability of the well as measured by semiannual tests into the pipeline. Said allowable should not be less than 1 million cubic feet of gas per day, which is herein defined as the economic limit imposed on said well.

(17) In the event Mewbourne does not drill its location, Fasken should be given the opportunity to drill its location.

(18) The Commission finds that it is not necessary to grant Texaco's request for an exception to the Catclaw Draw-Morrow Gas Pool Rules, because Texaco is not in violation of those rules for the following reasons:

- (a) The Commission has the authority to adopt rules and regulations and to issue orders and to interpret those orders and rules. In addition, the Commission has continuing jurisdiction over all of its orders and rules.
- (b) On August 26, 1981, the Division issued Order No. R-4157-D which rescinded Orders R-4157, R-4157-A, R-4157-B and R-4157-C and adopted rules for this pool including:
 - Rule 5(A): 640-acre gas spacing units.
 - Rule 2(A): Initial well to be drilled not closer than 1650 feet to an outer boundary.
 - Rule 2(B): Authorizing the drilling of a second well in a 640-acre spacing unit provided that well also was not closer than 1650 feet to the outer boundary. (an "Infill well").

CASE NO. 11723 - De Novo

CASE NO. 11755 - De Novo

CASE NO. 11868

Order No. R-10872-B

Page -7-

- (c) Although gas prorationing was suspended in the Catclaw Draw-Morrow Gas Pool by Division Order No. R-10328, issued by the Commission in Case No. 11211 on March 27, 1995, that order did not rescind Order No. R-4157-D.
- (d) Rule 2(B) of the special pool rules for Catclaw Draw-Morrow Gas Pool is still in full force and effect and has been since made effective on September 1, 1981.
- (e) Texaco's E. J. Levers Federal "NCT-1" Well No. 2 was drilled in compliance with Division rules, therefore it is not necessary to (a) grant simultaneous dedication for wells in this pool, or (b) grant an exception from these rules for its E. J. Levers Federal "NCT-1" Wells No. 1 and 2 located in Section 12, Township 21 South, Range 25 East, Eddy County, New Mexico.
- (f) It is not necessary to grant an exception from these rules for its E. J. Levers Federal "NCT-1" Wells No. 1 and 2 located in Section 12, Township 21 South, Range 25 East, Eddy County, New Mexico.

(19) Mewbourne's request for a declaration that all gas production from Texaco's E. J. Levers Federal "NCT-1" Well No. 2 be declared "illegal gas" should be denied.

IT IS THEREFORE ORDERED THAT:

(1) The requests of both Fasken Land and Minerals, Ltd. and Fasken Oil and Ranch, Ltd. ("Fasken"), as the applicant in Case No. 11755 and Mewbourne Oil Company ("Mewbourne"), as the applicant in Case 11723, to establish a non-standard 297.88-acre gas spacing and proration unit for the Catclaw Draw-Morrow Gas Pool comprised of Lots 29, 30, 31 and 32 and the SW/4 (S/2 equivalent) of Irregular Section 1, Township 21 South, Range 25 East, NMPM, Eddy County, New Mexico, is hereby approved.

(2) Mewbourne's proposed unorthodox Morrow gas well location for said 297.88-acre unit being 660 feet from the South line and 2310 feet from East line (Lot 31/Unit W) of said Irregular Section 1 is hereby approved with a 60% penalty factor (40% allowable) assessed against the well's ability to produce into a pipeline and measured and adjusted semi annually and witnessed by OCD District personnel and representatives of Texaco. Said allowable shall have a lower limit of 1 million cubic feet of gas per day.

CASE NO. 11723 - De Novo

CASE NO. 11755 - De Novo

CASE NO. 11868

Order No. R-10872-B

Page -8-

(3) In the event Mewbourne does not begin drilling the well approved in paragraph 2, by April 1, 1998, Mewbourne's application is denied and Fasken's application for an unorthodox Morrow and Cisco gas well location for said 297.88-acre unit being 2080 feet from the South line and 750 feet from the West line (Unit L) of Irregular Section 1 is hereby approved without penalty. In the event the Mewbourne well is drilled, the Fasken application is hereby denied.

(4) In suspending prorationing in the Catclaw Draw-Morrow Gas Pool, the Commission only suspended the assignment of allowables to the wells. Therefore, all other rules, regulations and policies governing the pool, including authorization for a second well on each spacing or proration unit in the Catclaw Draw-Morrow Gas Pool, remain in effect. Accordingly, the application of Texaco Exploration and Production Inc. for an exception to the Special Pool Rules and Regulations for the Catclaw Draw-Morrow Gas Pool to permit it to continuously and concurrently produce its E. J. Levers Federal "NCT-1" Wells Nos. 1 and 2 on standard 632.36 acre gas spacing unit comprised on Section 12, Township 21 South, Range 25 East, NMPM, Eddy County, New Mexico is dismissed for no exception to the current rules is needed.


(5) Mewbourne's request for a declaration that all gas production from Texaco Exploration and Production, Inc. ("Texaco") E. J. Levers Federal "NCT-1" Well No. 2 be declared "illegal gas" is hereby denied.

(6) Jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinafter designated.

**STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION**


JAMI BAILEY, Member


WILLIAM W. WEISS, Member


WILLIAM J. LEMAY, Chairman

S E A L