

**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:**

**CASE NO. 11353  
Order No. R-10470-A**

**APPLICATION OF THE NEW MEXICO OIL  
CONSERVATION DIVISION TO AMEND  
RULE 303 OF ITS GENERAL RULES  
AND REGULATIONS PERTAINING TO  
DOWNHOLE COMMINGLING.**

**ORDER OF THE COMMISSION**

**BY THE COMMISSION:**

This cause came on for hearing at 9:00 a.m. on August 3, 1995, and January 18 and February 15, 1996, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission"

NOW, on this 12th day of March, 1996, the Commission, a quorum being present, having considered the testimony presented and the exhibits received at said hearing, 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.

(2) Case No. 11353 was originally heard on August 3, 1995, at which time the Division proposed relatively minor changes to Rule No. 303 of its General Rules and Regulations pertaining to downhole commingling. Among other things, the Division's proposed amendments included a provision to allow administrative approval of downhole commingling applications in those instances where the interest ownership between the zones is not common, and a provision whereby the applicant, in cases where there is diversity of ownership between the zones to be commingled, be required to notify in writing all interest owners of the proposed commingling.

(3) The oil and gas industry of New Mexico, represented by the New Mexico Oil & Gas Association, Meridian Oil Inc., Conoco Inc., and Amoco Production Company (collectively the "Committee"), appeared at the hearing and supported the Division's proposed rule changes and presented extensive evidence and testimony with regards to the further amendment of Rule 303.

(4) Due to the comprehensive nature of the Committee's proposed amendments, the Commission deemed it necessary to require further discussion between the Division, the Committee and industry prior to considering the Committee's proposed amendments.

(5) By Interim Commission Order No. R-10470, entered in Case No. 11353 on September 28, 1995, the Commission adopted the amendments to Rule 303 as proposed by the Division and continued Case No. 11353 so as to allow additional evidence and testimony to be provided in the consideration of the Committee's proposed amendments.

(6) Subsequent to the August 3rd hearing, and at the request of the Division Director, the Committee composed and sent out an industry questionnaire in order to solicit opinions and comments regarding the Committee's proposed amendments.

(7) This case was again heard on January 18, 1996, at which time appearances were made on behalf of the Committee, Enron Oil & Gas Company, Pogo Producing Company and Santa Fe Energy Resources, Inc. The Committee and Enron Oil & Gas Company provided evidence and testimony at this hearing.

(8) The case was continued to the Commission hearing on February 15, 1996 to allow the Committee an opportunity to receive and tabulate the results of the industry survey.

(9) Based upon the evidence and testimony presented at the January 18th hearing and subsequent discussions with the Committee, the Division, on or about January 31, 1996, drafted proposed amendments to Rule 303.

(10) The Division's draft amendments were distributed to the Committee, the Commission, and various other parties involved in Case No. 11353 prior to the February 15th hearing. In addition, the draft amendments were made available to all parties attending the February 15th hearing.

(11) Among other things, the Division recommends the adoption of the following amendments to Rule No. 303 at this time:

- a) amend Part (1)(a)(i) to increase the total combined daily oil production limit so as to allow wells which produce at a total combined oil rate which does not exceed the top unit allowable for the shallowest producing horizon to qualify for administrative approval of downhole commingling;
- b) amend Part (1)(a)(iii) to allow any individual zone to produce water in excess of the top unit allowable for the shallowest producing horizon, provided however, total water production from all zones does not exceed twice the top unit allowable for the shallowest producing horizon;
- c) amend Part (1)(b)(i) to relax the requirement that a gas zone be uneconomic to produce in order to qualify for downhole commingling. "Marginal" is being proposed to replace "not economically producible";
- d) amend Part (1)(b)(v) to relax the current 50 percent pressure differential criteria by requiring that the highest pressured commingled zone does not exceed the original reservoir pressure of any other commingled zone in the wellbore, adjusted to a common datum;
- e) amend Part (1)(b)(ii) by allowing cross-flow between commingled zones provided that fluids will be compatible, the formations will not be damaged, the cross-flowed production will ultimately be recovered, and the allocation formula will still be reliable.

(12) The Committee originally sought to eliminate the current requirement within Rule 303(D) that offset operators be notified of a downhole commingling application.

(13) The results of the industry survey indicates that the majority of companies responding oppose eliminating the provision requiring offset operator notification, therefore, this requirement should be retained.

(14) In order to consolidate the information required to obtain approval for downhole commingling, and in order to facilitate approval thereof, the Division further recommends adoption of the downhole commingling form proposed by the Committee. The Division further recommends that this form be submitted to the Bureau of Land Management and the Commissioner of Public Lands for their approval and be designated Form C-107-A, Application for Downhole Commingling.

(15) The Division's proposed amendments are generally consistent with the Committee's recommendations and the results of the industry survey.

(16) No interested party appeared at the hearing and presented evidence and testimony in opposition to the any of the amendments to Rule 303 as proposed by the Division.

(17) Approval of the proposed amendments to Rule 303 will allow the recovery of oil and gas reserves from pools and/or reservoirs which may not otherwise be economically recoverable, thereby preventing waste, and will not violate correlative rights.

(18) The amendments to Division Rule No. 303 should be adopted as shown on Exhibit "A" attached hereto.

**IT IS THEREFORE ORDERED THAT:**

(1) Division Rule 303 is hereby amended, compiled, recodified and adopted as shown on Exhibit "A" attached hereto and made a part of this order.

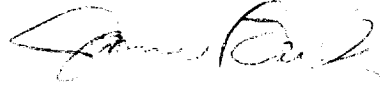
(2) Rule 303 as amended, shall be effective as of the date of this order.

(3) Division Form C-107-A, Application for Downhole Commingling, shown as Exhibit "B" attached hereto, is hereby adopted for industry use in filing applications for downhole commingling.

(4) Jurisdiction is hereby 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 hereinabove designated.

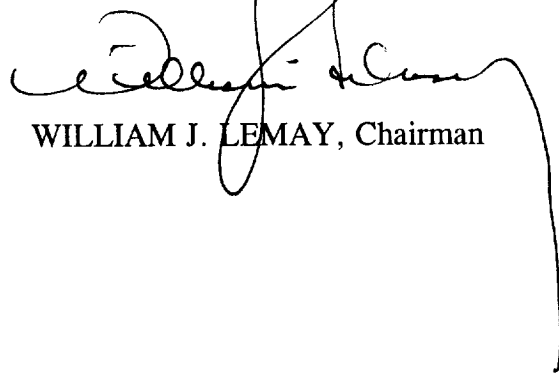
STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION



JAMI BAILEY, Member



WILLIAM W. WEISS, Member



WILLIAM J. LEMAY, Chairman

S E A L

EXHIBIT "A"  
CASE NO. 11353  
ORDER NO. R-10470-A

303.C. DOWNHOLE COMMINGLING

(1) The Director of the Division shall have the authority to grant an exception to Rule 303-A to permit the downhole commingling of multiple producing zones in existing or proposed wells when the following facts exist and the following conditions are met:

(a) For Wells Involving Oil Zones:

- i) The total combined daily oil or casinghead gas production from the zones before commingling does not exceed the top allowable rate for the shallowest producing horizon;
- ii) The operator utilizes a method of production which results in the efficient recovery of oil and gas reserves from the respective producing formations;
- iii) Total water production from all commingled zones does not exceed twice the oil limit as described in (i) above;
- iv) The fluids from each zone are compatible with the fluids from the other(s), and combining the fluids will not result in the formation of precipitates which might damage any of the reservoirs;
- v) The commingling will not jeopardize the efficiency of present or future secondary recovery operations in any of the zones to be commingled.

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(b) For Wells Involving A Gas Zone:

- i) That the commingling is necessary in order to allow the recovery of gas reserves from marginal producing zones. (In determining whether a zone or zones should be classified as marginal for the purpose of this rule, the Division may consider economic factors such as drilling and operating costs, and engineering and geologic factors such as producing rates,

reserve calculations, decline rates, proration status, geologic data, etc.);

- ii) The bottomhole pressure of the highest pressured commingled zone does not exceed the original reservoir pressure of any other commingled zone in the wellbore, adjusted to a common datum. Such bottomhole pressure shall be determined by downhole measurement for each zone capable of flowing;
- iii) The commingling will not result in the permanent loss of reserves due to cross-flow in the wellbore;
- iv) That any zone which is producing from fluid-sensitive formations, which may be subject to damage from water or other produced liquids, is protected from contact from such liquids produced from other zones in the well;
- v) The fluids from each zone are compatible with the fluids from the other(s), and combining the fluids will not result in the formation of precipitates which might damage any of the reservoirs.

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303.D. To obtain approval for downhole commingling, the applicant shall submit Division Form C-107-A to the Division Director plus one copy to the appropriate District Office of the Division. In addition to the name and address of the operator, lease name, well number, well location, county, operator OGRID number, property code, API number and identification of spacing unit lease types, the applicant shall submit the following information:

1. The name of the pool and the pool code for each zone to be commingled;
2. The top and bottom of each commingled pay section as identified by existing or projected perforations;
3. The type of production, oil or gas, for each commingled zone;
4. The method of production, flowing or artificial lift, for each commingled zone;
- 5(a). The estimated bottomhole pressure for each artificially lifted zone. A current (within 60 days) measured bottomhole pressure for each zone capable of flowing;

5(b). The original bottomhole reservoir pressure of each gas zone to be commingled;

6. The oil gravity (degree, API) or gas BTU content for each commingled zone;

7(a). Statement that each existing zone is either currently producing or shut-in;

7(b). Statement as to whether or not each zone is marginal or expected to be marginal. The Division may require additional data to support applicant's statement as to the marginal nature of the zone(s);

7(c). For each existing zone that is shut-in, give the date and the oil, gas and water rates of the last production;

7(d). For each existing zone currently producing, give the date and the oil, gas and water rates of a recent (within 60-days) test;

7(e) For new zones with no production history, an attachment showing estimated producing rates and supporting data;

8. A fixed percentage formula for the allocation of production to each of the commingled zones, if method is applicable;

9. In those cases where the allocation formula is based upon something other than current or past production as shown in Parts 7(c) and 7(d), or is based upon some other method (i.e. changing percentages, subtraction, etc.) submit data which supports proposed allocation;

10(a). A statement as to whether all working, royalty and overriding royalty interests are common in all of the spacing units for the commingled zones;

10(b). A statement that in the case where ownership is not common among the zones to be commingled, the applicant has given notification, by certified mail, of the application to all owners (including working, royalty and overriding royalty interests) for the spacing unit for each of the commingled zones;

10(c). A statement that all offset operators have been given written notice of the proposed downhole commingling;

11(a). A statement as to whether cross-flow will occur among any of the commingled zones;

11(b). A statement that if cross-flow should occur between any of the commingled zones, the fluids will be compatible, the formations will not be damaged, cross-flowed production will be ultimately recovered, and the allocation formula will still be reliable;



12. A statement that produced fluids from all commingled zones will be compatible with each other. Applicant shall consider and address any relevant issues of potential waste and formation damage including resultant emulsions or precipitates and other factors which might result in permanent loss of reserves. The Division may require a description of fluid characteristics in areas where such data is limited;

13. A statement that the value of production will not be decreased by commingling;

14. A statement that in the case of a well on or communitized with state or federal lands, the Commissioner of Public Lands for the State of New Mexico or the United States Bureau of Land Management have been sent a completed Form C-107-A and attachments notifying them of the proposed commingling;

15. Order numbers for Division "reference cases" (See Paragraph 303.E.);

16. The following attachments shall be included with Form C-107-A:

- a) a C-102 for each zone to be commingled showing the acreage dedicated to each completion;
- b) a production curve for each zone for at least one year; (Briefly explain if this data is not available);
- c) For zones with no production history, estimated producing rates and supporting data;
- d) data to support allocation method or formula;
- e) a notification list of all working, royalty and overriding royalty interests for cases where ownership is not common;
- f) a notification list of all offset operators;
- g) any additional statements, data or documents required to support commingling.

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303.E. If sufficient data exists on a lease, pool, formation, geographic area, etc., so as to render it unnecessary to repeatedly provide such data on Form C-107-A, an operator may except any of the various criteria required under Paragraph 303.D. of this rule by establishing a "reference case". The Division, upon its own motion or by application from an operator, may establish "reference cases" either administratively or by hearing. Upon Division approval of such "reference cases" for specific criteria, subsequent applications to downhole commingle (Form C-107-A) will be required only to cite the Division order number which established such exceptions and shall not be required to submit data for those criteria.

[3-30-96]

303.F. The process and timing for approval of downhole commingling as to approval authority, common or non-common interests, Form C-107-A filing, and administrative or hearing formats shall be determined as follows:

(1) The Division Director may approve the proposed downhole commingling in the absence of a valid objection from any offset operator or any interest owner in those instances where ownership is not common in the zones to be commingled within 20 days after the receipt of the application if, in his opinion, waste will not result thereby, and correlative rights will not be violated;

(2) The Division Director, may, at his discretion, set any administratively filed Form C-107-A for hearing.

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303.G. Upon such approval, the well shall be operated in accordance with the provisions of the administrative order which authorized the commingling, and allocation of the commingled production from the well to each of the producing zones shall be in accordance with the allocation formula set forth in the order. The production from a well with commingled oil zones shall be subject to the lower of the daily gas-oil ratio limitations applicable to the reservoirs. The production attributable to an oil zone commingled with a gas zone shall be subject to the daily gas-oil ratio limitation applicable to such oil zone or pool. Wells shall be tested on a commingled basis annually, except that a well penalized for a high gas-oil ratio shall be tested semi-annually.

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303.H. The Division Director may rescind authority to commingle production in the wellbore and require the zones to be produced separately, if, in his opinion, waste or reservoir damage is resulting thereby or the efficiency of any secondary recovery project is being impaired, or if any change of conditions renders the installation no longer eligible for downhole commingling.

[1-1-69...3-30-96]

DISTRICT I  
P.O. Box 1980, Hobbs, NM 88241-1980  
DISTRICT II  
811 South First St., Artesia, NM 88210-2835  
DISTRICT III  
1000 Rio Brazos Rd, Aztec, NM 87410-1693

State of New Mexico  
Energy, Minerals and Natural Resources Department  
OIL CONSERVATION DIVISION  
2040 S. Pacheco  
Santa Fe, New Mexico 87505-6429

Form C-107-A  
New 3-12-96

APPROVAL PROCESS:  
\_\_\_ Administrative \_\_\_ Hearing  
EXISTING WELLBORE  
\_\_\_ YES \_\_\_ NO

APPLICATION FOR DOWNHOLE COMMINGLING

Operator \_\_\_\_\_ Address \_\_\_\_\_

Lease \_\_\_\_\_ Well No. \_\_\_\_\_ Unit Ltr. - Sec - Twp - Rge \_\_\_\_\_ County \_\_\_\_\_

OGRID NO. \_\_\_\_\_ Property Code \_\_\_\_\_ API NO. \_\_\_\_\_ Spacing Unit Lease Types: (check 1 or more)  
Federal \_\_\_\_\_, State \_\_\_\_\_, (and/or) Fee \_\_\_\_\_

The following facts are submitted in support of downhole commingling:	Upper Zone	Intermediate Zone	Lower Zone
1. Pool Name and Pool Code			
2. Top and Bottom of Pay Section (Perforations)			
3. Type of production (Oil or Gas)			
4. Method of Production (Flowing or Artificial Lift)			
5. Bottomhole Pressure	a. (Current)	a.	a.
Oil Zones - Artificial Lift: Estimated Current			
Gas & Oil - Flowing: Measured Current	b. (Original)	b.	b.
All Gas Zones: Estimated Or Measured Original			
6. Oil Gravity (° API) or Gas BTU Content			
7. Producing or Shut-In?			
Production Marginal? (yes or no)			
* If Shut-In, give date and oil/gas/ water rates of last production	Date: Rates:	Date: Rates:	Date: Rates:
Note: For new zones with no production history, applicant shall be required to attach production estimates and supporting data			
* If Producing, give date and oil/gas/ water rates of recent test (within 60 days)	Date: Rates:	Date: Rates:	Date: Rates:
8. Fixed Percentage Allocation Formula -% for each zone	Oil:        %       Gas:        %	Oil:        %       Gas:        %	Oil:        %       Gas:        %

9. If allocation formula is based upon something other than current or past production, or is based upon some other method, submit attachments with supporting data and/or explaining method and providing rate projections or other required data.
10. Are all working, overriding, and royalty interests identical in all commingled zones?        Yes       No  
If not, have all working, overriding, and royalty interests been notified by certified mail?       Yes       No  
Have all offset operators been given written notice of the proposed downhole commingling?       Yes       No
11. Will cross-flow occur?       Yes       No    If yes, are fluids compatible, will the formations not be damaged, will any cross-flowed production be recovered, and will the allocation formula be reliable.       Yes       No (If No, attach explanation)
12. Are all produced fluids from all commingled zones compatible with each other?       Yes       No
13. Will the value of production be decreased by commingling?       Yes       No    (If Yes, attach explanation)
14. If this well is on, or communitized with, state or federal lands, either the Commissioner of Public Lands or the United States Bureau of Land Management has been notified in writing of this application.       Yes       No
15. NMOCD Reference Cases for Rule 303(D) Exceptions:       ORDER NO(S). \_\_\_\_\_
16. ATTACHMENTS:  
\* C-102 for each zone to be commingled showing its spacing unit and acreage dedication.  
\* Production curve for each zone for at least one year. (If not available, attach explanation.)  
\* For zones with no production history, estimated production rates and supporting data.  
\* Data to support allocation method or formula.  
\* Notification list of all offset operators.  
\* Notification list of working, overriding, and royalty interests for uncommon interest cases.  
\* Any additional statements, data, or documents required to support commingling.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

TYPE OR PRINT NAME \_\_\_\_\_ TELEPHONE NO. (       ) \_\_\_\_\_