

**PROPOSED RULE CHANGES
TO
RULE 303 - DOWNHOLE COMMINGLING
DRAFT DATED 2/22/00**

303 SEGREGATION OF PRODUCTION FROM POOLS

303.A. SEGREGATION REQUIRED

(1) Each pool shall be produced as a single common source of supply and wells therein shall be completed, cased, maintained, and operated so as to prevent communication, within the wellbore, with any other specific pool or horizon, and the production therefrom shall at all times be actually segregated, and the commingling or confusion of such production, before marketing, with production from any other pool or pools is strictly prohibited.

303.B SURFACE COMMINGLING

(no change)

303.C DOWNHOLE COMMINGLING

(1) The Division may grant an exception to Rule 303.A to permit the commingling of multiple producing pools in existing or proposed wellbores when the following conditions are met:

- (a) the fluids from each pool are compatible and combining the fluids will not result in damage to any of the pools;
- (b) the commingling will not jeopardize the efficiency of present or future secondary recovery operations in any of the pools to be commingled.
- (c) the bottom perforation of the lower zone is within 150% of the depth of the top perforation in the upper zone and the lower zone must be at or below normal pressure with normal pressure assumed to be 0.433 psi per foot of depth. If the pools to be commingled are not within this vertical interval, then evidence will be required to demonstrate that commingling will not result in shut-in or flowing wellbore pressures in excess of the fracture parting pressure of any commingled pool. The fracture parting pressure shall be assumed to be 0.65 psi per foot of depth unless the applicant submits other measured or calculated pressure data acceptable to the Division.
- (d) the commingling will not result in the permanent loss of reserves due to cross-flow in the wellbore;

(e) fluid-sensitive formations which may be subject to damage from water or other produced liquids shall be protected from contact from such liquids produced from other pools in the well;

(f) If any of the pools being commingled is prorated, or the well's production has been restricted by Division order in any manner, the allocated production from each producing pool in the commingled wellbore shall not exceed the top oil or gas allowable rate for a well in that pool or rate restriction applicable to such well;

(g) the commingling will not reduce the value of the total remaining production; and

(h) correlative rights will not be impaired.

(2) The Division Director may rescind authority to commingle production in a wellbore and require the pools to be produced separately if, in the Director's opinion, waste or reservoir damage is resulting, correlative rights are being impaired or the efficiency of any secondary recovery project is being impaired, or if any changes or conditions renders the installation no longer eligible for downhole commingling.

(3) When the conditions set forth in Rule 303.C(1) are satisfied, the Division may approve a request to downhole commingle production in one of the following ways:

(a) **Individual Exceptions:** Application to downhole commingle wellbores located outside of an area not subject to a downhole commingling order issued in a "reference case" and not within a pre-approved pool or area shall be filed on Division Form C-107-A with the Division Director.

(i) The Division Director may administratively approve a Form C-107-A application, in the absence of a valid objection filed within 20-days after receipt of the application by the Division if, in the Director's opinion, waste will not occur and correlative rights will not be impaired.

(ii) in those instances where the ownership or percentages between the pools to be commingled is not identical, applicant shall send a copy of Form C-107-A to all interest owners in the spacing unit by certified mail (return receipt).

- (iii) applicant shall send copies of Form C-107-A to the Commissioner of Public Lands for the State of New Mexico for wells in spacing units containing state lands or the Bureau of Land Management for wells in spacing units containing federal lands.
- (iv) In those instances where notice to interest owners is not required, the Division staff shall be provided a minimum of 15 days after receipt of an administrative application for processing an approval or denial.
- (v) The Division Director, at the Director's discretion, may set any administratively filed Form C-107-A application for hearing.

(b) Exceptions for wells located in pre-approved pools or areas:

Applications to downhole commingle wellbores within pools or areas which have been established by the Division as "pre-approved pools or areas" pursuant to Rule 303.C(4)(b) shall be filed on Form C-103 (Sundry Notice of Intent) at the appropriate Division District Office. In addition to the information required by Form C-103, the applicant shall include:

- (i) Division order number which established pre-approved pool or area.
- (ii) names of pools to be commingled;
- (iii) perforated intervals;
- (iv) allocation method and supporting data;
- (v) a statement that the commingling will not reduce the value of the total remaining production;
- (vi) in those instances where the ownership or percentages between the pools to be commingled is not identical, a statement attesting that applicant sent notice to all interest owners in the spacing unit by certified mail

(return receipt) of its intent to apply for downhole commingling and no objection was received within 20 days of sending this notice; and

- (vii) a copy of the Division Form C-103 shall be sent to the Commissioner of Public Lands for the State of New Mexico for wells in spacing units containing state lands or the Bureau of Land Management for wells in spacing units containing federal lands using Sundry Notice Form 3160-5.

The supervisor of the appropriate Division District Office may approve the proposed downhole commingling following receipt of Form C-103.

(c) **Exceptions for wells located in areas subject to a downhole commingling order issued in a "reference case":** Applications to downhole commingle wellbores within an area subject to a Division order which excepted any of the criteria required by Rule 303.D or by Division Form C-107-A shall be filed with the supervisor of the appropriate Division District Office and, except for the place of filing, shall be in accordance with the requirements of the applicable order issued in that "reference case".

(4) Applications for establishing a "reference case" or for pre-approval of downhole commingling on an area-wide or pool-wide basis:

(a) **Reference cases:** If sufficient data exists for a lease, pool, formation, geographical 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.C or set forth in Division Form C-107-A 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. Cases involving exceptions to the specific criteria required by Rule 303.C or by Division Form C-107-A may be approved by the Division after notice sent to all interest owners in the affected spacing units by certified mail (return receipt) and based on evidence that such approval would adequately satisfy the conditions of Rule 303.C(1)

(b) **Pre-approval of downhole commingling on a pool-wide or area-wide basis:** If sufficient data exists between two or more pools or within a geographical area for multiple formations or pools which have previously

been commingled or are proposed to be commingled, the Division, upon its own motion or by the application from an operator, may establish downhole commingling on a pool-wide or area-wide basis either administratively or by hearing:

- (i) Applications for pre-approval shall include all of the data required by Division Form C-107-A, a list of the names and address of all operators in the pool, all previous orders authorizing downhole commingling for the pools or areas sought, a map showing the location of all wells in the pool or area and indicating which wells have been approved for downhole commingling.
- (ii) Applications for pre-approval of downhole commingling on a pool wide or area wide basis may be approved by the Division after notice sent to operators in the affected area or pool by certified mail (return receipt) and based on evidence that such approval would adequately satisfy the conditions of Rule 303.C
- (iii) Upon approval of certain pools or areas for downhole commingling, subsequent applications for approval to downhole commingle wells within those pools or areas may be obtained by filing a Division Sundry Notice (Form C-103) in accordance with the procedure set forth in Rule 303.C(4)(b)

(c) The Division will maintain and continually update a list of pre-approved pools as set forth in Rule 303.C(6).

(5) Pre-approved pools and areas:

Downhole commingling is hereby approved within the described pool combinations or geographical areas set forth in Exhibit "A", provided, however, that the operator shall file Form C-103 (Sundry Notice of Intent) with the appropriate Division District office in accordance with the procedure set forth in Rule 303.D(3)(b).

**PROPOSED RULE CHANGES
TO
RULE 303 - DOWNHOLE COMMINGLING
DRAFT DATED 1/14/00**

303 SEGREGATION OF PRODUCTION FROM POOLS

303.A. SEGREGATION REQUIRED

(1) Each pool shall be produced as a single common source of supply and wells therein shall be completed, cased, maintained, and operated so as to prevent communication, within the wellbore, with any other specific pool or horizon, and the production therefrom shall at all times be actually segregated, and the commingling or confusion of such production, before marketing, with production from any other pool or pools is strictly prohibited.

303.B SURFACE COMMINGLING

(no change)

303.C DOWNHOLE COMMINGLING

- (1) The ~~Director of the Division shall have authority to~~ **may** grant an exception to Rule 303.A to permit the commingling of multiple producing ~~zones~~ **pools** in existing or proposed wellbores when 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) (a) the fluids from each zone pool are compatible with the fluids from the other(s); and combining the fluids will not result in the formation of precipitates which might damage to any of the reservoirs pools;

(v) (b) the commingling will not jeopardize the efficiency of present or future secondary recovery operations in any of the zones pools to be commingled.

~~(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 purposes 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 of each zone capable of flowing;~~

(c) the bottom perforation of the lower zone is within 150 % of the depth of the top perforation in the upper zone and the lower zone must be at or below normal pressure with normal pressure assumed to be 0.433 psi per foot of depth. If the pools to be commingled are not within this vertical interval, then evidence will be required to demonstrate that commingling will not result in shut-in or flowing wellbore pressures in excess of the fracture parting pressure of any commingled pool. The fracture parting pressure shall be assumed to be 0.65 psi per foot of depth unless the applicant submits other measured or calculated pressure data acceptable to the Division.

(ii) (d) the commingling will not result in the permanent loss of reserves due to cross-flow in the wellbore;

~~(iii) (c) That any zone which is producing from fluid-sensitive formations, which may be subject to damage from water or other produced liquids, is shall be protected from contact from such liquids produced from other zones pools in the well;~~

~~(iv) the fluids from each zone are compatible with the fluids from the others(s), and combining fluids will not result in the formation of precipitates which might damage any of the reservoirs.~~

~~(f) If any of the pools being commingled is prorated, or the well's production has been restricted by Division order in any manner, the allocated production from each producing pool in the commingled wellbore shall not exceed the top oil or gas allowable rate for a well in that pool or rate restriction applicable to such well;~~

~~(g) the commingling will not reduce the value of the total remaining production; and~~

~~(h) correlative rights will not be impaired.~~

~~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 No., property code, API No., identification of spacing unit lease types, the applicant shall submit the following information (which numbers below correspond to the numbers on Form C-107-A):~~

~~(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 zones;~~

~~(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;~~

- ~~(b) The original bottomhole reservoir pressure for 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;~~
- ~~(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);~~
- ~~(c) For each existing zone that is shut-in, give the date and the oil, gas and water rates of the last production;~~
- ~~(d) For each existing zone currently producing, give the date and the oil, gas and water rates of a recent (within 60 days) test;~~
- ~~(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;~~
- ~~(b) A statement that in the case where ownership is not common among those 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;~~

- ~~(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;~~
 - ~~(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 flowing 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 leases where ownership is not common;~~
- ~~(f) a notification list of all offset operators;~~
- ~~(g) any additional statements, data or documents required to support commingling.~~

(2) The Division Director may rescind authority to commingle production in a wellbore and require the pools to be produced separately, if, in the Director's opinion, waste or reservoir damage is resulting, correlative rights are being impaired or the efficiency of any secondary recovery project is being impaired, or if any changes or conditions renders the installation no longer eligible for downhole commingling.

(3) When the above conditions are satisfied, the Division may approve a request to downhole commingle production in one of the following ways:

(a) **Individual Exceptions.** Application to downhole commingle wellbores located outside of an area not subject to a downhole commingling order issued in a "reference case" and not within a pre-approved pool or area shall be filed on Division Form C-107-A with the Division Director.

(i) the Division Director may administratively approve a Form C-107-A application, in the absence of a valid objection filed within 20-days after receipt of the application by the Division if, in the Director's opinion, waste will not occur and correlative rights will not be impaired.

(ii) in those instances where the ownership or percentages between the pools to be commingled is not identical, applicant shall send a copy of

Form C-107-A to all interest owners in the spacing unit by certified mail (return receipt).

- (iii) applicant shall send copies of Form C-107-A to the Commissioner of Public Lands for the State of New Mexico for wells in spacing units containing state lands or the Bureau of Land Management for wells in spacing units containing federal lands.
- (iv) In those instances where notice to interest owners is not required, the Division staff shall be provided a minimum of 15 days after receipt of an administrative application for processing an approval or denial.
- (v) the Division Director, at the Director's discretion, may set any administratively filed Form C-107-A application for hearing.

(b) Exceptions for wells located in pre-approved pools or areas

Applications to downhole commingle wellbores within pools or areas which have been established by the Division as "pre-approved pools or areas" pursuant to Rule 303.C(4)(b) shall be filed on Form C-103 (Sundry Notice of Intent) at the appropriate Division District Office. In addition to the information required by Form C-103, the applicant shall include:

- (i) Division order number which established pre-approved pool or area;
- (ii) names of pools to be commingled;
- (iii) perforated intervals;
- (iv) allocation method and supporting data;
- (v) a statement that commingling will not reduce the value of the total remaining production;

(vi) in those instances where the ownership or percentages between the pools to be commingled is not identical, a statement attesting that applicant sent notice to all interest owners in the spacing unit by certified mail (return receipt) of its intent to apply for downhole commingling and no objection was received within 20 days of sending this notice; and

(vii) a copy of Division Form C-103 shall be sent to the Commissioner of Public Lands for the State of New Mexico for wells in spacing units containing state lands or the Bureau of Land Management for wells in spacing units containing federal lands using Sundry Notice Form 3160-5.

The supervisor of the appropriate Division District Office may approve the proposed downhole commingling following receipt of Form C-103

(c) **Exceptions for wells located in areas subject to a downhole commingling order issued in a "reference case".** Applications to downhole commingle wellbores within an area subject to a Division order which excepted any of the criteria required by Rule 303.D or by Division Form C-107-A shall be filed with the supervisor of the appropriate Division District Office and, except for the place of filing, shall be in accordance with the requirements of the applicable order issued in that "reference case".

303.E.(4) Applications for establishing a "reference case" or for pre-approval of downhole commingling on an area-wide or pool-wide basis:

(a) **Reference Cases:** If sufficient data exists on for a lease, pool, formation, geographical 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. Cases involving exceptions to the specific criteria required by Rule 303.C or by Division Form C-107-A may be approved by the Division after notice sent to all interest owners in the affected spacing units by certified mail (return receipt) and based on evidence that such approval would adequately satisfy the conditions of Rule 303.C(1).

(b) Pre-approval of downhole commingling on a pool-wide or area-wide basis: If sufficient data exists between two or more pools or within a geographical area for multiple formations or pools which have previously been commingled or are proposed to be commingled, the Division, upon its own motion or by the application from an operator, may establish downhole commingling on a pool-wide or area-wide basis either administratively or by hearing.

(i) Applications for pre-approval shall include all of the data required by Division Form C-107-A, a list of the names and address of all operators in the pool, all previous orders authorizing downhole commingling for the pools or areas sought, a map showing the location of all wells in the pool or area and indicating which wells have been approved for downhole commingling.

(ii) Applications for pre-approval of downhole commingling on a pool wide or area wide basis may be approved by the Division after notice sent to operators in the affected area or pool by certified mail (return receipt) and based on evidence that such approval would adequately satisfy the conditions of Rule 303.C

(iii) Upon approval of certain pools or areas for downhole commingling, subsequent applications for approval to downhole commingle wells within those pools or areas may be obtained by filing a Division Sundry Notice (Form C-103) in accordance with the procedure set forth in Rule 303.C(4)(b)

(c) The Division will maintain and continually update a list of Pre-approved pools as set forth in Rule 303.C(6).

(5) Pre-approved Pools and Areas:

Downhole commingling is hereby approved within the described pool combinations or geographical areas set forth in Exhibit "A", provided, however, that operator shall file Form C-103 (Sundry Notice of Intent) with the appropriate Division District office in accordance with the procedure set forth in Rule 303.D(3)(b).

~~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 owners in those instances where ownership is not common in the zones to be commingled within 20 days after 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.~~

~~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 limitation 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 limitations 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.~~

~~303.H The Division Director may rescind authority to downhole 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 in any changes of conditions renders the installation no longer eligible for downhole commingling.~~