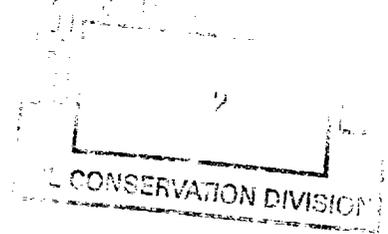


BEFORE THE NEW MEXICO OIL CONSERVATION DIVISION

APPLICATION OF POGO PRODUCING COMPANY  
TO (A) ABOLISH THE SOUTH RED TANK-  
DELAWARE POOL AND EXPAND THE WEST RED  
TANK-DELAWARE POOL, (B) APPROVE DOWNHOLE  
COMMINGLING IN SIX (6) WELLS, AND  
(C) APPROVE SPECIAL ADMINISTRATIVE DOWNHOLE  
COMMINGLING RULES FOR THE WEST RED  
TANK-DELAWARE AND RED TANK-BONE  
SPRING POOLS, LEA COUNTY, NEW MEXICO.



NO. 11398

APPLICATION

Pogo Producing Company, for its application, states:

1. Applicant is a leasehold working interest owner and operator in the West Red Tank-Delaware Pool, which encompasses the following described acreage:

Township 22 South, Range 32 East, N.M.P.M.

Section 14: NE $\frac{1}{4}$ , S $\frac{1}{2}$

Section 22: SE $\frac{1}{4}$

Section 23: NW $\frac{1}{4}$ , S $\frac{1}{2}$

Section 26: W $\frac{1}{2}$

Section 27: NE $\frac{1}{4}$ , S $\frac{1}{2}$

Section 28: E $\frac{1}{2}$

Section 34: N $\frac{1}{2}$

Section 35: N $\frac{1}{2}$

Applicant is also a leasehold working interest owner and operator in the Red Tank-Bone Spring Pool, which encompasses the following described acreage:

Township 22 South, Range 32 East, N.M.P.M.

Section 23: N $\frac{1}{2}$ , SE $\frac{1}{4}$

Section 24: SW $\frac{1}{4}$

Section 25: W $\frac{1}{2}$

Section 26: NE¼, W¼

Section 27: SE¼

Section 35: NW¼

Section 36: N¼

Applicant is also a leasehold working interest owner in the South Red Tank-Delaware Pool, which encompasses the following described acreage:

Township 22 South, Range 32 East, N.M.P.M.

Section 25: SW¼

Section 36: NW¼

All three pools are oil pools. Development in the Pools is ongoing, and the boundaries of the Pools continue to expand.

2. Wells completed in the South Red Tank-Delaware Pool and the West Red Tank-Delaware Pool produce from the same reservoir, and thus said Pools should be combined into one pool. As a result, Applicant requests the Division to abolish the South Red Tank-Delaware Pool and add the acreage currently contained therein to the West Red Tank-Delaware Pool.

3. The Red Tank-Bone Spring Pool underlies part of the West Red Tank-Delaware Pool. Many wells producing from the Bone Spring Pool are capable of producing from the Delaware Pool, and vice versa.

4. The deepest perforations in the Bone Spring Pool (the First Bone Spring Sand) are 10,000 feet subsurface. Thus, Division Rule 303(C)(1)(a)(i), (iii) would permit

administrative approval of downhole commingling for the subject pools provided that combined oil production from both zones does not exceed 70 barrels per day and neither zone produces more than 70 barrels of water.

5. There are existing wells in the subject area which are candidates for downhole commingling, but have combined production in excess of 70 barrels of oil per day and water production from one zone greater than 70 barrels per day. As a result, downhole commingling for said wells cannot currently be approved administratively. Furthermore, applicant anticipates that this problem will arise in wells to be drilled or reworked in the future.

6. Applicant operates the following six (6) wells in the subject area, for which it requests approval to downhole commingle production from the Delaware Pool and the Bone Spring Pool:

<u>Well Name</u>	<u>Well Location</u>
(a) Red Tank 23 Fed. No. 1	Unit P, Section 23
(b) Red Tank 23 Fed. No. 2	Unit I, Section 23
(c) Red Tank 26 Fed. No. 1	Unit K, Section 26
(d) Covington "A" Fed. No. 2	Unit D, Section 25
(e) Covington "A" Fed. No. 8	Unit M, Section 25
(f) Covington "A" Fed. No. 18	Unit B, Section 26

7. Applicant further requests the Division to approve special administrative downhole commingling rules for the Delaware Pool and the Bone Spring Pool (insofar as it covers

the interval from the top of the Bone Spring formation to the base of the First Bone Spring Sand, as found at 10,246 feet subsurface in the Covington "A" Well No. 1 located in Unit C of Section 25). Applicant requests that administrative approval for commingling be granted if total oil production does not exceed 230 barrels per day (the depth bracket allowable for Delaware Pool production). From time to time after approval is granted to commingle production in a well, it may become necessary to amend the commingling order due to the addition of new Delaware zones in a well. As a result, the proposed rules provide for periodic adjustments of the allocation formula. Proposed special rules are attached hereto as Exhibit A (the changes to the Division's current statewide rule for oil-oil commingling are in italics).

9. Downhole commingling of production from both Pools will prevent economic waste, and will not adversely affect production from either zone.

10. The granting of this application is in the interests of conservation and the prevention of waste, and will not adversely affect correlative rights.

WHEREFORE, Applicant requests that, after hearing, the relief requested above be granted.

Respectfully submitted,

HINKLE, COX, EATON, COFFIELD  
& HENSLEY, P.L.L.C., Ltd., Co.

By:



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## EXHIBIT A

### SPECIAL DOWNHOLE COMMINGLING RULES FOR THE WEST RED TANK-DELAWARE AND RED TANK-BONE SPRING POOLS

**RULE 1:** The Director of the Division shall have the authority to grant an exception to Rule 303-A to permit the commingling in the well bore of oil-oil zones in a well when the following facts exist and the following conditions are met:

- (a) *The total combined daily oil production before commingling (as determined in accordance with Rules 2(d) and 2(e) below) does not exceed 230 barrels.*
- (b) Oil zones require artificial lift, or both zones are capable of flowing. (Special consideration may be given to an exception to this latter requirement in the case in which a particular well's characteristics may justify same; however, the commingled production must be artificially lifted if either zone required artificial lift prior to commingling.)
- (c) Neither zone produces more water than the combined oil limit as determined in paragraph (a) above. *The well operator shall provide to the Division proof that the operator has or will acquire sufficient lifting capacity to lift total produced fluids.*
- (d) The fluids from each zone are compatible with the fluids from the other, and combining the fluids will not result in the formation of precipitates which might damage either reservoir.
- (e) The total value of the crude will not be reduced by commingling.
- (f) Ownership of the zones to be commingled is common (including working, royalty, and overriding royalty interests).
- (g) The commingling will not jeopardize the efficiency of present or future secondary recovery operations in either of the zones to be commingled.

**RULE 2:** To obtain approval for downhole commingling, the operator of the well shall submit the following in DUPLICATE to the Division Director, plus one copy to the appropriate District Office of the Division:

- (a) Name and address of the operator.
- (b) Lease name, well number, well location, and name of the pools to be commingled.

EXHIBIT A  
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- (c) A plat of the area showing the acreage dedicated to the well and the ownership of all offsetting leases.
- (d) *The latest productivity test (minimum 24 hour test) on Division Form C-116 showing the amount of oil, gas, and water produced from each zone.*
- (e) A production decline curve for both zones showing that for a period of at least one year a steady rate of decline has been established for each zone which will permit a reasonable allocation of the commingled production to each zone for statistical purposes. (This requirement may be dispensed with in the case of a newly completed or recently completed well which has little or no production history. However, a complete resume of the well's completion history including description of treating, testing, etc., of each zone, and a prognostication of future production from each zone shall be submitted.)
- (f) Estimated bottomhole pressure for each artificially lifted zone. A current (within 30 days) measured bottomhole pressure for each zone capable of flowing.
- (g) A description of the fluid characteristics of each zone showing that the fluids will not be incompatible in the well-bore.
- (h) A computation showing that the value of the commingled production will not be less than the sum of the values of the individual streams.
- (i) A formula for the allocation of production to each of the commingled zones and a description of the factors or data used in determining such formula.
- (j) *A statement that, in the case of a well on federal land, the United States Bureau of Land Management, and in the case of a well on state land, the Commissioner of Public Lands, have been notified in writing of the proposed commingling.*

**RULE 3:** *When additional zones are added to a well, the operator shall request an amendment of the commingling order, and shall submit a new allocation formula in conformance with Rule 2, to be effective the date the new zone begins production.*