

## ALLOWABLE CALCULATION

The following New Mexico Statute affects the proration formulas established by the Oil Conservation Division:

**70-2-17. Equitable allocation of allowable production; pooling; spacing.**

A. The rules, regulations or orders of the Division shall, so far as it is practicable to do so, afford to the owner of each property in a pool the opportunity to produce his just and equitable share of the oil or gas, or both, in the pool, being an amount so far as can be practically determined, and so far as such can be practicably obtained without waste, substantially in the proportion that the quantity of the recoverable oil or gas, or both, under such property bears to the total recoverable oil or gas, or both, in the pool, and for this purpose to use his just and equitable share of the reservoir energy.

Based on the premise that this statute was followed when the proration formulas were established; then, the deliverability of one well in the Basin Dakota and Blanco Mesaverde Pools represented the recoverable reserves under each proration unit.

When the infill drilling orders for these pools were approved, and the deliverabilities of the two wells were added for allowable calculations; then, the definition must have been changed to indicate that the deliverability of one well then represented the recoverable reserves under one-half of each proration unit.

The use of the existing formula does not protect correlative rights with the application of the acreage factor in the deliverability portion of the formula as shown here:

$$\text{Allowable} = (\text{AF} \times \text{F1}) + [\text{AF} \times (\text{D}_1 + \text{D}_2) \times \text{F2}]$$

I propose the use of a formula which does not use the acreage factor in the deliverability portion of the formula as follows:

$$\text{Allowable} = (\text{AF} \times \text{F1}) + [(\text{D}_1 + \text{D}_2) \times \text{F2}]$$

BEFORE EXAMINER STOGNER OIL CONSERVATION DIVISION	
DUGAN	EXHIBIT NO. 6
CASE NO.	9101

## EXAMPLES: BASIN DAKOTA GAS POOL

### ASSUMPTIONS:

1. That two wells are on a standard 320-acre proration unit with deliverabilities of 200 and 500 Mcf respectively.
2. That the acreage allocation factor,  $F_1$ , = 5188.54; and the deliverability allocation factor,  $F_2$ , = 7.087965. (These are the average factors for the Basin Dakota gas Pool for 1985.)

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By substitution in the **PRESENT FORMULA**:

#### ONE TWO-WELL UNIT:

$$\begin{aligned}\text{Allowable} &= (\text{AF} \times F_1) + [\text{AF} \times (D_1 + D_2) \times F_2] \\ &= (1.00 \times 5188.54) + [1.00 \times (200 + 500) \times 7.087965] \\ &= (5188.54) + [4961.575500] = 10150.115500 = \underline{\underline{10150 \text{ MCF}}}\end{aligned}$$

#### TWO ONE-WELL UNITS:

$$\begin{aligned}\text{Allowable}_1 &= (0.50 \times 5188.54) + (0.50 \times 200 \times 7.087965) \\ &= (2594.27) + (708.796500) = 3303.246500 = \underline{\underline{3303 \text{ MCF}}}\end{aligned}$$

$$\begin{aligned}\text{Allowable}_2 &= (0.50 \times 5188.54) + (0.50 \times 500 \times 7.087965) \\ &= (2594.27) + (1771.991250) = 4366.261250 = \underline{\underline{4366 \text{ MCF}}}\end{aligned}$$

$$\text{TOTAL} = 3303 + 4366 = \underline{\underline{7669 \text{ MCF}}}$$

$$\underline{\underline{\text{DIFFERENCE}}} = \underline{\underline{10150 - 7669}} = \underline{\underline{2481 \text{ MCF}}}$$

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By the use of the **PROPOSED FORMULA**:

#### ONE TWO-WELL UNIT:

$$\begin{aligned}\text{Allowable} &= (\text{AF} \times F_1) + [(D_1 + D_2) \times F_2] \\ &= (1.00 \times 5188.54) + [(200 + 500) \times 7.087965] \\ &= (5188.54) + [4961.575500] = 10150.115500 = \underline{\underline{10150 \text{ MCF}}}\end{aligned}$$

#### TWO ONE-WELL UNITS:

$$\begin{aligned}\text{Allowable}_1 &= (0.50 \times 5188.54) + (200 \times 7.087965) \\ &= (2594.27) + (1417.593000) = 4011.863000 = \underline{\underline{4012 \text{ MCF}}}\end{aligned}$$

$$\begin{aligned}\text{Allowable}_2 &= (0.50 \times 5188.54) + (500 \times 7.087965) \\ &= (2594.27) + (3543.982500) = 6138.252500 = \underline{\underline{6138 \text{ MCF}}}\end{aligned}$$

$$\text{TOTAL} = 4012 + 6138 = \underline{\underline{10150 \text{ MCF}}}$$

$$\underline{\underline{\text{DIFFERENCE}}} = \underline{\underline{10150 - 10150}} = \underline{\underline{0 \text{ MCF}}}$$

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION

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

CASE NO. 9101  
Order No. R-8424

APPLICATION OF DUGAN PRODUCTION  
CORPORATION FOR AN EXCEPTION TO  
RULE 5(a)2(2) OF DIVISION ORDER  
NO. R-8170, AS AMENDED, SAN JUAN  
AND RIO ARRIBA COUNTIES, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on March 4, 1987, at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this 2nd day of May, 1988, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS THAT:

- (1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.
- (2) At the time of the hearing Division Case Nos. 9096, 9097, 9098, 9099, 9100, and 9101 were consolidated for the purpose of testimony.
- (3) The applicant, Dugan Production Corporation, seeks an exception to Rule 5(a)2(2) of the General Rules for the Prorated Gas Pools of New Mexico as promulgated by Division Order No. R-8170, as amended, permitting the application of a full deliverability factor in the AD portion of the allowable formula for the Basin-Dakota Pool for the four previously approved 160-acre non-standard gas spacing and proration units as described in Exhibit "A", attached hereto and made a part hereof.
- (4) In utilizing the current formula for calculating gas allocations in the Basin-Dakota Pool as contained in said Order No. R-8170, according to the testimony presented at the hearing there exists an inequity in that the gas allowable assigned to

a standard 320-acre gas proration unit (GPU) containing two wells is greater than the sum of the gas allowables assigned to two adjacent 160-acre GPU's of equal deliverability.

(5) The effect of granting the application would be to substitute a deliverability (D) factor in place of the acreage times deliverability (AD) factor contrary to the applicable pool rules, and would create other inequities in the pool.

(6) This particular variation of GPU sizes is a common phenomenon in the Basin-Dakota Pool; therefore, a pool-wide rule change would be a more appropriate approach to solving this problem rather than filing exceptions in each case such as this.

(7) Granting this application would also invite numerous applications for similar treatment and would discourage rather than encourage the formation of standard 320-acre GPU's, all of which could disrupt the allocation of gas on an equitable basis in the pool.

(8) This application should therefore be denied.

IT IS THEREFORE ORDERED THAT:

(1) The application of Dugan Production Corporation for an exception to Rule 5(a)2(2) of the General Rules for the Prorated Gas Pools of New Mexico as promulgated by Division Order No. R-8170, as amended, permitting the application of a full deliverability factor in the formula utilized in determining the allowable in the Basin-Dakota Pool for each of the four previously approved 160-acre non-standard gas spacing and proration units, as described in Exhibit "A", attached hereto and made a part hereof, is hereby denied.

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

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



STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

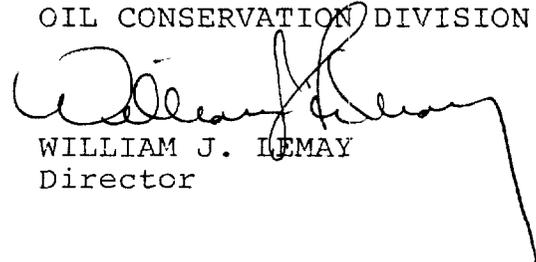
  
WILLIAM J. LEMAY  
Director

EXHIBIT "A"  
CASE NO. 9101  
ORDER NO. R-8424

- A. The SW/4 of Section 14, Township 24 North, Range 5 West, NMPM, Rio Arriba County, New Mexico, approved by Division Order No. R-5066, dated July 22, 1975, and dedicated to the applicant's A New Dawn Well No. 1 located 1470 feet from the South line and 860 feet from the West line (Unit L) of said Section 14.
  
- B. The NE/4 of Section 34, Township 27 North, Range 10 West, NMPM, San Juan County, New Mexico, authorized under the grandfathering provisions set forth by Division Order No. R-1287, as amended by R-1287-A, R-1670-C (plus its subparts), and R-8170 (plus its subparts), and dedicated to the applicant's McAdams Well No. 3 located 1650 feet from the North line and 990 feet from the East line (Unit H) of said Section 34.
  
- C. The SE/4 of Section 34, Township 27 North, Range 10 West, NMPM, San Juan County, New Mexico, authorized under the grandfathering provisions set forth by Division Order No. R-1287, as amended by R-1287-A, R-1670-C (plus its subparts), and R-8170 (plus its subparts), and dedicated to the applicant's McAdams Well No. 2 located 1110 feet from the South line and 1010 feet from the East line (Unit P) of said Section 34.
  
- D. The NW/4 of Section 34, Township 28 North, Range 13 West, NMPM, San Juan County, New Mexico, approved by Division Order No. R-4418, dated October 10, 1972, and dedicated to the applicant's Fullerton Well No. 1 located 1850 feet from the North and West lines (Unit F) of said Section 34.