

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

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

**CASE NO. 10531  
Order No. R-9717**

**APPLICATION OF SOUTHLAND ROYALTY  
COMPANY FOR AN UNORTHODOX GAS WELL  
LOCATION AND DOWNHOLE COMMINGLING,  
SAN JUAN COUNTY, NEW MEXICO.**

**ORDER OF THE DIVISION**

**BY THE DIVISION:**

This cause came on for hearing at 8:15 a.m. on August 20, 1992, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 8th day of September, 1992, 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) The applicant, Southland Royalty Company, seeks approval to downhole commingle Fulcher Kutz-Pictured Cliffs and Basin-Fruitland Coal Gas Pool production within the wellbore of its proposed Hanks Well No. 501 to be drilled at an unorthodox gas well location 1800 feet from the North line and 790 feet from the West line (Unit E) of Section 12, Township 27 North, Range 10 West, NMPM, San Juan County, New Mexico. The W/2 of Section 12, forming a standard 320-acre gas spacing and proration unit for the Basin-Fruitland Coal Gas Pool, and the NW/4 of Section 12, forming a standard 160-acre gas spacing and proration unit for the Fulcher Kutz-Pictured Cliffs Gas Pool, are to be dedicated to the subject well.

(3) The proposed well is located within the boundaries of both the Basin-Fruitland Coal Gas Pool and the Fulcher-Kutz Pictured Cliffs Gas Pool. The proposed location is standard with respect to the setback requirements for both pools, however, the location is unorthodox for the Basin-Fruitland Coal Gas Pool inasmuch as the Special Rules and Regulations for said pool as promulgated by Division Order No. R-8768 require that wells be located in either the NE/4 or SW/4 of the section.

(4) Within Section 12, the applicant currently operates the Hanks Well No. 500, located in Unit G, which is completed and producing from the Basin-Fruitland Coal Gas Pool and which has dedicated thereto a standard 320-acre proration unit comprising the E/2 of Section 12.

(5) In addition, the applicant currently operates the Hanks Well No. 3, located in Unit M, which is currently completed in and producing from the Fulcher Kutz-Pictured Cliffs Gas Pool and which has dedicated thereto a standard 160-acre proration unit comprising the SW/4 of Section 12.

(6) The NW/4 of Section 12 has also been previously developed in the Fulcher Kutz-Pictured Cliffs Gas Pool by the applicant's Hanks Well No. 1 located in Unit D. The Hanks Well No. 1 was plugged and abandoned March 19, 1988.

(7) According to applicant's evidence and testimony, the Hanks Well No. 1 was prematurely abandoned due to mechanical problems within the wellbore.

(8) 500 MMCF of additional recoverable gas reserves remain in the Pictured Cliffs formation underlying the NW/4 of Section 12.

(9) The additional gas reserves in the Pictured Cliffs formation are not sufficient to justify the drilling of a new well to recover these reserves only.

(10) In this area of the basin, the applicant expects only marginal gas production from the Basin-Fruitland Coal Gas Pool.

(11) The applicant also expects only marginal gas production from the Fulcher Kutz-Pictured Cliffs Gas Pool.

(12) The geologic evidence pertaining to the Basin-Fruitland Coal Gas Pool indicates that the proposed well should efficiently drain the coal gas reserves underlying the W/2 of Section 12.

(13) The majority of the affected offsetting acreage has been developed on pattern within the Basin-Fruitland Coal Gas Pool and, therefore, approval of the proposed unorthodox location should not have an adverse effect on coal gas development adjacent to Section 12.

(14) A representative of McKenzie Methane (McKenzie), the offset operator to the west of the proposed unorthodox location, appeared at the hearing and presented a statement of position.

(15) According to McKenzie's statement of position, it does not object to the proposed unorthodox location, but is concerned that the applicant may drill an additional coal gas well within the SW/4 of Section 12 in the future.

(16) Applicant testified that it had no intention at this time to drill an additional coal gas well within the SW/4 of Section 12.

(17) The Special Rules and Regulations for the Basin-Fruitland Coal Gas Pool do not provide for infill drilling of standard 320-acre proration units. According to Division policy, any such request by the applicant would necessarily require a public hearing before a Division examiner with notice to offset operators.

(18) McKenzie would have ample opportunity to appear at such hearing and present evidence and testimony in opposition to such application.

(19) No other offset operator and/or interest owner appeared at the hearing in opposition to the application.

(20) Further evidence by the applicant indicates that the ownership among the Basin-Fruitland Coal and Fulcher Kutz-Pictured Cliffs Gas Pools underlying, respectively, the W/2 and NW/4 of Section 12 is common.

(21) Approval of the proposed unorthodox well location and downhole commingling will afford the applicant the opportunity to produce its just and equitable share of the gas in the Basin-Fruitland Coal Gas Pool, will allow the applicant the opportunity to economically recover remaining gas reserves in the Fulcher Kutz-Pictured Cliffs Gas Pool, thereby preventing waste, will prevent the economic loss caused by the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells and will not violate correlative rights.

(22) Due to the nature of the Basin-Fruitland Coal Gas production, straight allocation of gas volumes from both zones is not appropriate. The applicant therefore seeks the adoption of a monthly allocation formula, as shown on Exhibit "A" attached hereto and made a part hereof.

(23) The applicant should conduct a production test on the Pictured Cliffs zone, subsequent to completion of the well, of sufficient duration to yield an accurate initial producing rate to be utilized in conjunction with the allocation formula.

(24) The operator should be responsible for reporting the monthly gas production from said well by utilizing the proposed allocation formula.

(25) An annual report should be submitted by the operator to both the Aztec and Santa Fe offices of the Division showing the complete computations for each month.

(26) Any condensate production from the subject well should be allocated entirely to the Pictured Cliffs interval.

(27) Any change in the method of gas allocation between the two pools should be made only after due notice and hearing.

(28) To afford the Division an opportunity to assess the potential of waste and to expeditiously order the appropriate remedial action, the operator should notify the Aztec district office of the Division any time the subject well is shut-in for seven consecutive days.

**IT IS THEREFORE ORDERED THAT:**

(1) The applicant, Southland Royalty Company, is hereby authorized to downhole commingle Fulcher Kutz-Pictured Cliffs and Basin-Fruitland Coal Gas Pool production within the wellbore of its proposed Hanks Well No. 501 to be drilled at an unorthodox coal gas well location 1800 feet from the North line and 790 feet from the West line (Unit E) of Section 12, Township 27 North, Range 10 West, NMPM, San Juan County, New Mexico.

(2) The W/2 of Section 12, forming a standard 320-acre gas spacing and proration unit for the Basin-Fruitland Coal Gas Pool, and the NW/4 of Section 12, forming a standard 160-acre gas spacing and proration unit for the Fulcher Kutz-Pictured Cliffs Gas Pool, shall be dedicated to the above-described well.

(3) The allocation of gas produced from both zones shall be in accordance with the allocation formula adopted for this well as further described in Exhibit "A" attached hereto and made a part hereof.

(4) The applicant shall conduct a production test on the Pictured Cliffs zone, subsequent to completion of the well, of sufficient duration to yield an accurate initial producing rate to be utilized in conjunction with the allocation formula.

(5) The operator is responsible for reporting the monthly gas production from the subject well to the Division utilizing the allocation formula adopted herein. An annual report shall be submitted by the operator to both the Aztec and Santa Fe offices of the Division showing the complete computations for the previous twelve month period.

(6) Condensate production from the subject well shall be allocated entirely to the Fulcher Kutz-Pictured Cliffs Gas Pool. Water production shall be reported in a manner acceptable to the supervisor of the Aztec district office of the Division.

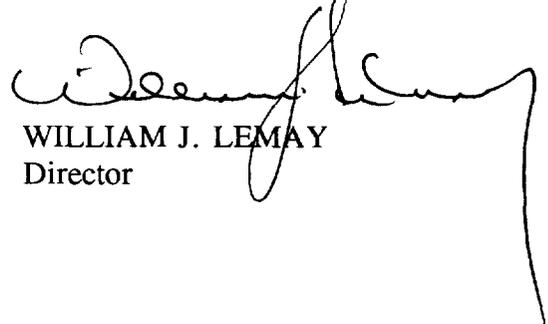
(7) Any variance in the method of gas allocation between the two pools shall be made only after due notice and hearing.

(8) The operator shall immediately notify the supervisor of the Aztec district office of the Division any time the subject well has been shut-in for seven consecutive days and shall concurrently present, to the Division, a plan for remedial action.

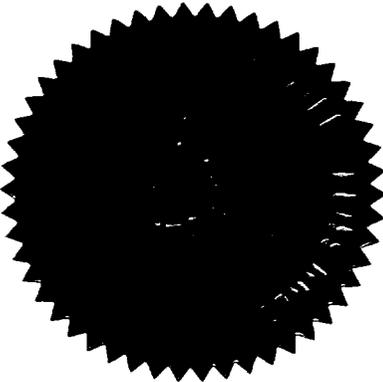
(9) Jurisdiction is hereby retained for the entry of such further orders as the Division may deem necessary.

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

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION



WILLIAM J. LEMAY  
Director



S E A L

EXHIBIT "A"  
CASE NO. 10531  
DIVISION ORDER NO. R-9717

HANKS WELL NO. 501  
MONTHLY GAS PRODUCTION ALLOCATION FORMULA

GENERAL EQUATION:  $Q_t = Q_{ftc} + Q_{pc}$

WHERE:  $Q_t$  = Total Monthly Production (MCF/Month)

$Q_{ftc}$  = Fruitland Coal (ftc) Monthly Production  
(MCF/Month)

$Q_{pc}$  = Pictured Cliffs (pc) Monthly Production  
(MCF/Month)

REARRANGING THE EQUATION TO SOLVE FOR  $Q_{ftc}$ :

$$Q_{ftc} = Q_t - Q_{pc}$$

ANY PRODUCTION RATE OVER WHAT IS CALCULATED FOR THE PICTURED CLIFFS (pc) USING THE APPLIED FORMULA IS FRUITLAND COAL (ftc) PRODUCTION.

PICTURED CLIFFS (pc) FORMATION PRODUCTION FORMULA IS:

$$Q_{pc} = Q_{pci} * e^{- (D) * (t)}$$

WHERE:  $Q_{pci}$  = Initial PC Monthly Flow Rate (Calculated from Flow Test)

D = Monthly Decline Rate: (0.00667)  
Monthly Decline Rate From Field Analogy  
Annual Decline - 8.0%

THUS:

$$Q_{pc} = Q_{pci} * e^{- (0.00667) * (t)}$$

$$Q_{ftc} = Q_t - Q_{pci} * e^{- (0.00667) * (t)}$$

Where (t) is in months