



Code § 45.1-361.20.C from coal seams below the Tiller seam.

- b. With respect to certain lands lying to the west of the Subject Lands (herein "Nora Coalbed Methane Gas Field"), the Oil and Gas Conservation Board, by its Order dated March 20, 1989 (herein "Nora Field Rules") established 60-acre drilling units (with a tolerance of 15 percent (15%)) for wells drilled therein to explore and/or produce coalbed methane from the Raven, Jawbone, Upper Horsepen, Middle Horsepen, Warcreek, Beckley, Lower Horsepen, Pocahontas No. 8, Poachontas No. 4, Pocahontas No. 3, Pocahontas No. 1, and other associated formations.
  - c. To provide for the orderly exploration, development and production of coalbed methane gas from all Pennsylvanian coal seams below drainage, including but not limited to the Jawbone 1, Tiller, Upper Horsepen, Middle Horsepen, Warcreek, Lower Horsepen, Pocahontas No. 8, Pocahontas No. 6, Pocahontas No. 5, Pocahontas No. 4, Pocahontas No. 3, Pocahontas No. 1, and to include various unnamed seams and associated strata down to the red and green shales ("Subject Formation") underlying the Subject Lands, the Board, pursuant to Va. Code § 45.1-361.20, on its own motion brought on for consideration the establishment of a coalbed methane gas field, drilling units therein and rules pertaining thereto for Subject Lands.
  - d. The Board heard testimony from geologists and reservoir engineers regarding surface topography, results of cores drilled to assess coal seam thickness and coal depths, permeability, relationship of multiple wells to spacing; surface impacts, effect of lowered reservoir pressures on desorption of the gas and the resulting increased production, location of fault lines marking the edge of the coal seam and thus the boundary of the coalbed methane gas pool, accelerated recovery (time) versus additional recovery (time + production), comparison of models of development for Subject Lands with production history and well spacing employed in the Oakwood I and II Coalbed Methane Gas Fields and the Nora Coalbed Methane Gas Field, the nature and characteristics of the pool, and the maximum area which may be efficiently and economically drained by one well. Having heard the testimony, the Board is of the opinion that the establishment of permanent drilling regulations and establishment of unit sizes for Subject Lands is necessary to prevent the types of waste prohibited by statute, to ensure to the extent possible the greatest ultimate recovery of coalbed methane gas, to avoid the drilling of unnecessary wells, and to protect or assist in protecting the correlative rights of all persons in the Subject Formation in the Subject Lands.
  - e. With one well per 60-acre drilling unit, it is estimated that 55% of the reserves within a typical drilling unit will be produced over the 30-year life of the well. For this reason, the Board finds it unnecessary at this time to establish maximum allowable production for the wells drilled in the Middle Ridge I Coalbed Methane Gas Field. However, the Board will periodically reassess its finding based on actual production within the Middle Ridge I Field, and if and when it becomes necessary to protect correlative rights of owners/claimants to the coalbed methane gas, the Board will amend this order to establish maximum allowable production.
5. **Legal Authority:** Va. Code § 45.1-361.1 *et seq.*, and such regulations as are promulgated pursuant to law.
6. **Board Decision:** The following relief in this cause be and hereby is granted by the Virginia Gas and Oil Board. More specifically this Order hereby:

- a. Establishes the Middle Ridge I Coalbed Methane Gas Field for the Subject Formations as being the Subject Lands described as:

Beginning at the point where the Big A Mountain, Honaker, Vansant and Keen Mountain Quads intersect being at a latitude of 82.00'00" and longitude of 37.07'30", with a coordinate of N 307,141.00, E 979,810.00, thence N 88°10'33" W 785.39' to a point with a coordinate of N 307,166.00, E 979,025.00, thence S 2° 03'26" W 33,398.52' to a point with a coordinate of N 273,789.00, E 977,826.00, thence S 86° 38'49" E 752.28' to a point with a coordinate of N 273,745.00, E 978,577.00, thence S 88° 02'59" E 8,844.12' to a point with a coordinate of N 273,444.00, E 987,416.00, thence N 2° 04'38" E 1,600.05' to a point with a coordinate of N 275,043.00, E 987,474.00, thence S 87° 57'26" E 1,599.01' to a point with a coordinate of N 274,986.00, E 989,072.00, thence N 2° 04'38" E 1,600.05' to a point with a coordinate of N 276,585.00, E 989,130.00, thence S 87° 56'24" E 3,199.06' to a point with a coordinate of N 276,470.00, E 992,327.00, thence N 2° 02'30" E 1,600.01' to a point with a coordinate of N 278,069.00, E 992,384.00, thence S 87° 56'24" E 3,199.06' to a point with a coordinate of N 277,954.00, E 995,581.00, thence N 2° 04'38" E 1,600.05' to a point with a coordinate of N 279,553.00, E 995,639.00, thence S 87° 55'17" E 1,599.05' to a point with a coordinate of N 279,495.00, E 997,237.00, thence N 2° 02'30" E 1,600.05' to a point with a coordinate of N 281,094.00, E 997,294.00, thence S 87° 56'24" E 3,199.07' to a point with a coordinate of N 280,979.00, E 1,000,491.00, thence N 2° 04'38" E 1,600.05' to a point with a coordinate of N 282,578.00, E 1,000,549.00, thence S 87° 56'24" E 3,199.07' to a point with a coordinate of N 282,463.00, E 1,003,746.00, thence N 2° 02'30" E 1,600.02' to a point with a coordinate of N 284,062.00, E 1,003,803.00, thence S 87° 56'24" E 3,199.07' to a point with a coordinate of N 283,947.00, E 1,007,000.00, thence N 2° 04'38" E 1,600.05' to a point with a coordinate of N 285,546.00, E 1,007,058.00 thence S 87° 56'44" E 4,798.08' to a point with a coordinate of N 285,374.00, E 1,011,853.00, thence N 2° 02'34" E 1,599.02' to a point with a coordinate of N 286,972.00, E 1,011,910.00, thence N 87° 56'34" E 3,649.35' to a point with a coordinate of N 286,841.00, E 1,015,557.00, which is at the edge of the Honaker and Richlands quadrangles, thence S 87° 57'23" E 1,149.73' to a point with a coordinate of N 286,800.00, E 1,016,706.00, thence N 2° 02'30" E 1,600.02' to a point with a coordinate of N 288,399.00, E 1,016,763.00, thence S 87° 56'24" E 3,199.07' to a point with a coordinate of N 288,284.00, E 1,019,960.00 thence N 2° 04'38" E 1,600.05' to a point with a coordinate of N 289,883.00, E 1,020,018.00 thence S 87° 56'24" E 3,199.07' to a point with a coordinate of N 289,768.00, E 1,023,215.00, thence N 2° 02'30" E 1,600.02' to a point with a coordinate of N 291,367.00, E 1,023,272.00 thence S 87° 56'44" E 4,798.08' to a point with a coordinate of N 291,195.00, E 1,028,067.00, thence N 2° 04'43" E 1,599.05' to a point with a coordinate of N 292,793.00, E 1,028,125.00, thence S 87° 57'28" E 3,199.03' to a point with a coordinate of N 292,679.00, E 1,031,322.00, thence N 2° 02'34" E 1,599.01' to a point with a coordinate of N 294,277.00, E 1,031,379.00, thence S 87° 57'28" E 3,199.03' to a point with a coordinate of N 294,163.00, E 1,034,576.00, thence N 2° 04'43" E 1,599.05' to a point with a coordinate of N 295,761.00, E 1,034,634.00, thence S 87° 57'26" E 1,599.02' to a point with a coordinate of N 295,704.00, E 1,036,232.00, thence N 2° 04'38" E 1,600.05' to a point with a coordinate of N 297,303.00, E 1,036,290.00, thence S 87° 56'44" E 4,798.08' to a point with a coordinate of N 297,131.00, E 1,041,085.00, thence N 2° 02'34" E 1,599.02' to a point with a coordinate of N 298,729.00, E 1,041,142.00, thence S 87° 56'56" E 6,398.10' to a point with a coordinate of N 298,500.00, E 1,047,536.00, thence N 2° 04'43" E 1,599.05' to a point with a coordinate of N 300,098.00, E 1,047,594.00, thence S 87° 57'28" E 3,199.03' to a point with a coordinate of N 299,984.00, E 1,050,791.00,

thence S 2° 02'34" E 1,599.02' to a point with a coordinate of N 301,582.00, E 1,050,848.00, thence S 87° 52'57" E 1,705.16' to a point with a coordinate of N 301,519.00, E 1,052,552.00, which is the edge of the Richlands quadrangle, thence N 2° 03'48" E 2,832.84' to a point with a coordinate of N 304,350.00, E 1,052,654.00, which is the corner of the Richlands and Jewell Ridge quadrangle, thence N 87° 41'40" W 36,441.50' to a point with a coordinate of N 305,816.00, E 1,016,242.00, which is the corner of the Honaker, Richlands, Keen Mountain, and Jewell Ridge quadrangles, thence N 87° 55'02" W 36,456.09' thence back to the point of beginning containing approximately 31,668 acres.

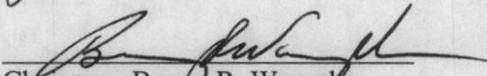
- b. Establishes the size and shape of each 60-acre drilling unit (with a tolerance of plus or minus 15%) within the Middle Ridge I Coalbed Methane Gas Field to be as depicted on Exhibit A hereto (with boundary units to contain 60 acres, more or less).
- c. Unless otherwise permitted by law or by an exception granted by the Board or by the Virginia Gas and Oil Inspector, provides that: (1) any coalbed methane gas well drilled in a drilling unit within the Middle Ridge I Coalbed Methane Gas Field shall not be located at any point within such unit which is less than 300 feet from the outside boundary of such unit, and (2) in no event shall any well drilled in the Middle Ridge I Coalbed Methane Gas Field be located closer than 600 feet to any other well completed or permitted in the same pool.
- d. When an applicant for a permit seeks a location exception as a part of its application, provides that the Virginia Gas and Oil Inspector may grant well location exceptions in any drilling unit in the Middle Ridge I Coalbed Methane Gas Field established by this Order.
- e. Provides that no more than one well shall be hereafter produced within the Middle Ridge I Coalbed Methane Gas Field in any drilling unit formed by this order.
- f. Adopts the following methods for the calculation of production and revenue and allocation of allowable costs for the production of Coalbed Methane Gas from wells located in the Middle Ridge I Coalbed Methane Gas Field:

For Frac Well Gas: Gas shall be produced from and allocated to only the 80-acre drilling unit in which the well(s) is located according to the undivided interests of each Owner/Claimant within the unit, which undivided interest shall be the ratio (expressed as a percentage) that the amount of mineral acreage within each separate tract that is within the Subject Drilling Unit, when platted on the surface, bears to the total mineral acreage, when platted on the surface, contained within the entire drilling unit in the manner set forth in the Middle Ridge I Field Rules.

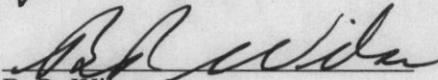
- g. Establishes coalbed methane wells heretofore permitted and drilled or permitted in the Middle Ridge I Coalbed Methane Gas Field as properly permitted wells, in each respective drilling unit for the production of coalbed methane gas, if done in accordance with applicable Board Orders, the law and regulations applicable at the time.
- h. Provides that no fracturing of coal seams shall occur within the greater of: (1) 500' from the surface or (2) within 500' of the bottom of any water well located within 1,500 feet of the coalbed methane gas well bore.

- i. Provides that the Middle Ridge I Coalbed Methane Gas Field rules established by this Order shall not be applicable to wells drilled for the production of short hole gas, unsealed gob gas, gas from additional wells authorized by Va. Code § 45.1-361.20.C, or sealed gob gas.
  - j. Provides that the order to be issued herein be made effective as of the date of hearing, October 17, 2000.
7. **Conclusion:** The relief requested is necessary to prevent or to assist in preventing the various types of waste of gas or oil prohibited by statute, or any of said wastes, and to protect or assist in protecting the correlative rights of interested parties. Therefore, all terms and provisions set forth above be and hereby ORDERED.
8. **Effective Date:** This order shall be effective as of October 17, 2000.

DONE AND EXECUTED this 29<sup>th</sup> day of January, 2001, by a majority of the Virginia Gas and Oil Board.

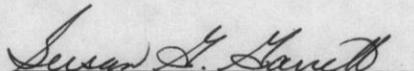
  
Chairman, Benny R. Wampler

DONE AND PERFORMED this 30<sup>th</sup> day of January, 2001, by order of the Board.

  
B. R. Wilson,  
Principal Executive to the Staff  
Virginia Gas and Oil Board

STATE OF VIRGINIA )  
COUNTY OF WISE )

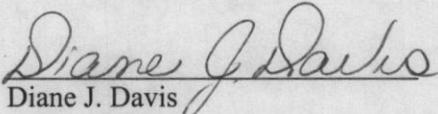
Acknowledged on this 29<sup>th</sup> day of January, 2001 personally before me a notary public in and for the Commonwealth of Virginia appeared Benny R. Wampler, being duly sworn did depose and say that he is Chairman of the Virginia Gas and Oil Board, that he executed the same and was authorized to do so.

  
Susan G. Garrett  
Notary Public

My commission expires July 31, 2002

STATE OF VIRGINIA )  
COUNTY OF WASHINGTON )

Acknowledged on this 30<sup>th</sup> day of January, 2001 personally before me a notary public in and for the Commonwealth of Virginia, appeared B. R. Wilson, being duly sworn did depose and say that he is Principal Executive to the Staff of the Virginia Gas and Oil Board, that he executed the same and was authorized to do so.

  
Diane J. Davis  
Notary Public

My commission expires September 30, 2001