

Field Orders Chronological History

December 17, 1996

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Provisional Drilling Unit Order for Shallow Gas Wells in the Early Grove Gas Field of Scott and Washington Counties. Ordered September 1, 1983 by the Virginia Oil and Gas Conservation Board

- Conventional Gas Wells producing from depths shallower than the base of the Mississippian.
- Spacing between wells to be 1,200'.
- Boundaries of the units shall conform to existing property boundaries or pre-existing unit boundary lines.
- Units are to be more or less 80 acre units and be of uniform size and shape.
- Wells cannot be located closer than 500' from the boundary of the Unit.
- Order was to remain in effect until such time information was available to determine the ultimate spacing of the field.
- The following orders were issued by the OGCB and VGOB which modified the original order.
 - OGCB 2-88
 - VGOB 92-0721-0233
 - VGOB 93-0817-0397
 - VGOB 93-0921-0404
 - VGOB 93-1019-0410
 - VGOB 94-0621-0449

Provisional Drilling Unit Order for Shallow Oil Wells in Lee County.
Ordered July 27, 1983, by the Virginia Oil and Gas Conservation Board

- The order pertained to shallow oil wells drilled down to the Mid-Ordovician Unconformity or the Dot Formation.
- Spacing was ordered to be no closer than 1,000' from any existing well or proposed well.
- Units were to conform to existing property lines or pre-existing unit boundaries.
- Units were to contain more or less 20 acres.
- Wells were not to be located less than 350' from the unit boundary.

No orders has been issued for this provisional order.

Provisional Drilling Unit Order for Deep Oil Wells in Lee County.
Ordered July 27, 1983 by the Oil and Gas Conservation Board.

- The order pertained to deep wells drilled below the Mid-Ordovician Unconformity.
- Spcing was ordered to be no closer than 1,320' from any existing well or proposed well.
- Units were to conform to existing property lines or pre-existing unit boundaries.
- Units were to contain more or less 40 acres.
- Wells were not to be located less than 500' from the unit boundary.

No orders has been issued for this provisional order.

Provisional Drilling Unit, Well Spacing and Allowable Production Orders
for the William M. Kegley Farm, Robinson District, Pulaski County.
Ordered April 5, 1985, by the Virginia Oil and Conservation Board.

- The order pertained to conventional and coalbed methane production from wells to the base of the Mississippian Formations.
 - Units were to conform to existing property lines or pre-existing unit boundaries.
 - Coalbed methane shall be allowed to produce at 100%.
 - Spacing was ordered to be no closer than 1,000' from any existing or proposed well.
 - Units were to contain more or less 80 acres and be of uniform size and shape.
 - Wells were not to be located less than 700' from the unit boundary.
- No orders has been issued for this provisional order.

Establishment of the Valley Coal Methane Field. Ordered December 12, 1985 by the Oil and Gas Conservation Board.

- Order for wells drilled in the counties of Montgomery and Pulaski and the City of Radford for coalbed methane.
- Order did not set field boundaries.
- Order allowed production at 100% of open flow.

Order Establishing Drilling Units for the Knox and Stones River Formations in Lee County. Ordered March 16, 1989 by the Virginia Oil and Gas Conservation Board. Docket # OGCB 15-89

- The order pertained to only those wells drilled to the Knox or Stones River Formations.
- Spacing was order to be no closer than 1,765' from any other well completed or permitted in the same pool.
- Units were to be of uniform size and shape taking into considerations topography and property lines.
- One well per unit
- Wells were not to be located less than 350' from the unit boundary.

- Designated the area as the Rose Hill Field.

Since 1989 only one unit was formed by order of the OGCB. Order #OGCB 16-89 was issued March 16, 1989.

Order Establishing Drilling Units for the Early Grove Gas and Oil Field of Washington and Scott Counties. Ordered March 16, 1989, by the Virginia Oil and Gas Conservation Board. OGCB 2-88

- The order pertained to wells drilled and designed to explore or produce from the Price and Little Valley Formations.
- Spacing was ordered to be no closer than 1,800' from any existing or proposed well.
- Units were to be of uniform size and shape taking under consideration topography and property lines.
- Units were to be 90 acres with + or - 15% tolerance.
- Wells were not to be located less than 500' from the unit boundary.

- One well per unit.

OGCB 2-88 modified the previous provisional order of 9/1/83. As previously mentioned the VGOB has modified this field a total of five times since this order. Neither the provisional order or the OGCB 2-88 Order defined the field. The Field since then has been certificated by the SCC.

Order Establishing Drilling Units for the Nora Coal Bed Gas Field in Buchanan, Dickenson, Russell and Wise Counties. Ordered January 26, 1989 by the Oil and Gas Conservation Board. OGCB 9-89

- Designated the Nora Coal Bed Gas Field.
- The order pertained to wells drilled within the Field boundary and designed to explore for and /or produce coalbed gas from the Raven, Jawbone, U. Horsepen. M. Horsepen, Warcreek, Beckley, L. Horsepen, Poca #8, #4, #3, #1, and associated formations.
- Units are to be 60 acres with a + or - tolerance of 15%
- Units are to be of uniform size and shape taking under consideration topography and property lines.
- One well per unit
- Wells are not to be located closer than 300' to the unit boundary.
- Spacing was ordered to be no closer than 600' to any other well completed or permitted in the field.

The original Field boundaries were described as:

Northern Boundary - 37° 20' 00"

Southern Boundary - 36° 20' 00"

Eastern Boundary - 82° 00' 00"

Western Boundary - 82° 35' 00"

Nora Coal Bed Gas Field cont'd

The original Field order OGCB 9-89 has been modified four times since January of 1989. The first two modifications came as a result of field orders issued for the Oakwood Coalbed Methane Gas Field.

- OGCB 3-90, Oakwood Coalbed Methane Gas Field Order, modified the Nora field and included certain units on the eastern boundary of the Nora Field, including parts of the Harman, Vansant, Prater, and Grundy quadrangles.
- VGOB 93-03/17-0348 extended the western boundary of the Oakwood Field by 5, 80 acre units to the west and 20 units to the original Oakwood southern boundary, again carving areas of the Nora Field and including in the Oakwood Field.
- VGOB 89-01/26-0009-01, modified the original Nora Order to allow the Inspector to grant location exceptions.
- VGOB 93-03/17-0348-01, EREC petitioned the Board to exempt certain acreage granted under VGOB 93-03/17-0348 to be reassigned to the Nora Coal Bed Field as 60 acre units.

In the Matter of an Application to Establish the Boundaries of the
Oakwood Coalbed Gas Field and Establish Drilling Units Therein.
Ordered April 10, 1990 by the Virginia Oil and Gas Conservation Board.
OGCB 3-90

- Designated the Oakwood Coalbed Gas Field. (Commonly Oakwood I Order)
- The Order applied to all coalbed methane wells drilled and producing from all seams below the Tiller Seam including the U. Seaboard, Greasy Creek, M. Seaboard, L. Seaboard, U. Horsepen, M. Horsepen, Poca #9, #8, #7, #6, #5, #4, #3, #2, and various unnamed seams.
- Established 80 acre units more or less in the shape of a square, except the makeup drilling units which shall be of such size and shape as necessary to complete the spacing of the field (Northern Boundary).
- Wells are not to be located closer than 300' from the unit boundary.
- Spacing was ordered to be no closer than 600' to any other well completed or produced in the field.
- Granted the authority to the Inspector to grant and issue location exceptions on a case by case basis.
- Established the starting point of the Grid.
- No more than one well per unit.

Oakwood Coalbed Gas Field cont'd

- This order did not address production of coalbed methane from areas of active mining (*I.e. shorthole production, longwall panel production, active gob and sealed gob*).
- The original boundaries of the field was as follows:
 - Northern Boundary 37° 17' 30"
 - Southern Boundary 37° 07' 30"
 - Eastern Boundary 81° 52' 30"
 - Western Boundary 82° 07' 30"

Since 1990, this field order has

been modified several times by the Virginia Gas and Oil Board. Subsequent orders addressed both the expansion of the field and the means by which coalbed methane can be produced from the field. These will be explained as they occurred.

Establishment of Boundaries for the Pilgrim's Knob Gas Field and the Establishment of Drilling Units Therein. Ordered January 22, 1991 by the Virginia Gas and Oil Board. VGOB 91-01/22-0071.

- Designated and set the boundaries of the Pilgrim's Knob Field for production of conventional Gas.
- The order pertained to the production of conventional gas from the Berea Sandstone Formation using the 5' isopach map of the Berea Formation. All other wells drilled in the field would be governed by the permitting requirements of the field.
- The order established drilling units of 180 acre units with a +/- 15% tolerance. The 180 acre units shall be based upon the division of nine (9) ~~col~~^{labeled} methane units in the Oakwood Field into four (4) equal square units starting with the northeast corner of the B-23 unit in the Oakwood Field and shall traverse the area inside the Berea Formation 5' isopach map. It was further order that pre-existing voluntary units be exempted from this order.
- One well per unit.
- No well shall be drilled closer than 300' from the unit boundary.

Pilgrim's Knob Field Order cont'd.

- The order granted authority to the Inspector to grant location exceptions on a case by case basis.
- Minimum spacing between wells in the field shall be 1700'.

Currently no petitions have been received for the pooling of interest by the Board in this field.

Board Orders Establishing Production Units from Sealed Gob and Longwall Panel Units (Pre- Oakwood II Orders).

The following orders were issued by the Board upon application of Pocahontas Gas Partnership for production of coalbed methane gas from active mining areas in the Buchanan 1 Mine Complex.

- Sealed Gob Unit , BUN 1, VGOB 91-06/18-0127.
- Sealed Gob Unit, BUS 1, VGOB 91-06/18-0128.
- Longwall Panel Units, SLW 1 - SLW 4, VGOB 91-11/19-0158.
- Sealed Gob Unit, BUS 2, VGOB 91-11/19-0159.

- Longwall Panel Units, NELW 1 - NELW 10, VGOB 91-11/19-0160.
- Sealed Gob Unit, BUNE 1, VGOB 91-11/19-0161.

In general, each of these orders provided for a system of allocation across the established unit and not allocated on the 80 acre grid established under Oakwood 1.

Establishment of Drilling Units for the Production of Unsealed Gob Gas, Short Hole Gas, and Gas from any Additional Well Authorized by the Board. Ordered December 17, 1991 by the Virginia Gas and Oil Board. VGOB 91-11/19-0162. (Oakwood II Field Order)

The purpose of this order was to address the production of coalbed methane from areas of active mining. This order exempted those areas under a Board order for sealed gob and longwall panel units had been issued to Pocahontas Gas Partnership in the Buchanan Mine Complex.

- The order defined the terms shorthole gas, gob gas and gas from any additional well.
- The order specifically adopted a system of allocation of revenue and

costs to each unit under which longwall mining was or has occurred.

- “Grandfathered” existing or permitted wells as properly permitted wells for the purposes of the order.
- Provided that any 80 acre unit under which longwall mining is to be conducted shall be for the purposes of the order as being productive of gas and therefore shall be part of the allocation of the longwall panel.
- Allows for the drilling of wells at

Oakwood II Field Order cont'd

at any point in the 80 acre drilling units established under Oakwood I for the purposes of this order.

- Granted to the Inspector the authority to grant location exceptions and additional wells in any acre unit under this order.

In general, the order applied to all areas in which active mining was being conducted or anticipated to be conducted within the boundaries of the Oakwood Field as described in the Oakwood I Field Order.

The order provided for the allocation of royalty interest of each 80 acre unit to its proportionate share across the length of the panel.

Modification of Board Field Orders during 1992

- January 21, 1992, VGOB 92 - 01/21 - 180, Established longwall panel units SLW 5 through SLW 12 in the Buchanan Mine Complex by petition of Pocahontas Gas Partnership.
- July 12, 1992, VGOB 92 - 07/21 - 0244, Established a sealed gob unit in the VP-6 mine operated by Island Creek Coal Company and petitioned by Buchanan Production Company. The unit is designated as the SGU VP-6.

Modification of Board Field Orders during 1993

- February 16, 1993, VGOB 93 - 02/16 - 0325, Modification of OGCB 3-90, Oakwood Coalbed Methane Gas Field (Oakwood I). Modified the original order to include the "Hurricane Branch Extension". Requested by Pocahontas Gas Partnership.
- February 16, 1993, VGOB 93 - 02/16 - 0336, Modification of the Oakwood II Order, VGOB 91 - 11/19 - 0162. Modified the Oakwood II Field Order to include the Hurricane Branch Extension; modification addressed the various methods and phases of production in conjunction with mine development; prescribed the methods of revenue allocation based upon the various methods and phases of production according to mine development; authorized the Inspector to consider and grant the drilling of more than one well per unit pursuant to the provisions of Section 45.1-361.20; and stipulated that the cost of any additional wells would not be allocated to participants or carried interest owners unless the Board has granted prior approval.
- March 16, 1993, VGOB 93 - 03/16 - 0348, Modification of VGOB 93 - 02/16 - 0325 (Oakwood I) and VGOB 93 - 02/16 - 0336 (Oakwood II). Modified

1993 Modifications cont'd

both orders to extend the boundaries of the field from the southern boundary in the east to the state line (West Virginia and Virginia) and long the state line west to form the northern boundary of the field. The western boundary was extended by 5 units to the west and 20 units to the southern boundary. The order also exempted those orders which created the sealed gob units and the longwall panel units.

- June 22, 1993, VGOB 93 - 06/22 - 0384, Modification of the NELW 1 through NELW 10 longwall panel units. The modified order granted the right to convert existing VVH's to CBM wells in the panel units; stipulated that the cost of the additional wells could not be used in calculation of revenue; granted the Inspector the right to grant exceptions to the distance of wells from the unit boundary; and reaffirmed that the pnels were not subject to the Oakwood II Field Order requirements.
- June 22, 1993, VGOB 93 - 06/22 - 0385, Modification of the SLW 5 through SLW 12 panel units. The same modifications granted in VGOB - 06/22 -0384 was also granted to the SLW 5 through SLW 12 longwall units.

Establishment of Roaring Fork Coalbed Methane Gas Field Rules and Drilling Units for the Production of Coalbed Natural Gas Produced from Coalbeds and Rock Strata Associated Therewith. Ordered February 15, 1996 by the Virginia Gas and Oil Board. VGOB 94 - 0215 - 0435.

- Established the “Roaring Fork Coalbed Methane Gas Field”.
- Established 80 acre drilling units more or less and in the shape of a square.
- Allowed for the production of methane gas from the Pennsylvannian Age Coals from the top of the Rocky Fork, including the U. Clintwood, L. Clintwood, Blair, Lyons, and Dorchester; from the top of the Norton, including all splits to the top of the green and red shales, including but not limited to M. Norton, Yellow Creek, Edwards, Gladeville, Hagy, Splashdam, U. Banner, L. Banner, Kennedy, Raven, Jawbone, Tiller, U. Horsepen, M. Horsepen, War Creek, Beckley, L. Horsepen, POCA #8, #4, #3, and #1 and any other unnamed seam.
- No more than one well could be drilled per unit.
- Wells could not be drilled closer than 300’ from the unit boundary or boundary of the field.
- Granted authority to the Inspector to grant location exceptions on a

Roaring Fork Coalbed Gas Field cont'd

case-by-case basis.

- Board could grant increased density wells upon application and on a case-by-case basis.
- The order did not apply to wells drilled into gob areas of any mine or any conventional well.
- The field covered parts of Wise, Russell, Scott and Lee Counties and abuts the Nora Coalbed Gas Field.

The Board prior to the Roaring Fork Coalbed Methane Gas Field

Order had approved five (5) 18.03 acre provisional units which have since been plugged,

Modifications of Board Field Orders during 1994

- December 13, 1994, VGOB 94 - 12/13 - 0485, Established the SGU - VP-3 sealed gob unit located in the VP mining complex. The petition was submitted by Buchanan Production Company.

Modifications of Board Field Orders during 1995

- April 18, 1995, VGOB 95 - 04/18 - 0498, Modification of VGOB 93 - 06/22 - 0385, SLW 5 through SLW 12 long wall panel units. The 80 acre units originally contained within the longwall panels SLW 8 through SLW 12 were exempted from the longwall panel unit and reverted back to the requirements of the Oakwood I and Oakwood II Field Orders.
- October 24, 1995, VGOB 95 - 10/24 - 0526, Established a sealed gob unit designated as the VP8 - SGU 1. The unit is located in the VP mine complex and was petitioned by Buchanan Production Company.

Modifications of Board Field Orders during 1996

- June 18, 1996, VGOB 96 - 06/18 - 0545, Establishment of the Beatrice Sealed Gob. The Board upon its own motion received testimony and evidence to the establishment of the unit after DMME had been notified that the Beatrice Mine had been sealed by Consol Inc. in January of 1995. The order specified a system of allocation from the 80 acre units contained within the boundaries of the designated sealed area. The order modified both the Oakwood I and Oakwood II Field Orders, exempting the sealed gob area of the Beatrice Mine from the requirements of the two orders.
- August 20, 1996, VGOB 89 - 01/26 - 0009 - 01, Granted the authority to the Inspector to grant location exceptions on a case-by-case basis to wells drilled under the Nora Coalbed Gas Field Order.
- September 17, 1996, VGOB 93 - 03/17 - 0348 - 01, Modified the Oakwood Field to exempt out certain acreage on the western boundary of the Field and converted the acreage to 60 acre units to be included in the Nora Field.