

Meeting Minutes of the Administration of Oil and Gas Committee of the  
North Carolina Mining and Energy Commission  
September 26, 2013

**1. Preliminary Matters** - Chairman Charles Holbrook

Chairman Holbrook called the meeting of the Administration of Oil and Gas Committee to order at 10:08 am in the Ground Floor Hearing Room of the Archdale Building in Raleigh, NC. Chairman Holbrook read the relevant excerpt of the State Government Ethics Act, and asked Commission Members to consider whether or not they had conflicts of interest with respect to any items on the agenda. No conflicts were reported.

The following persons were in attendance for all or part of the meeting:

**Committee Members Present**

Charles Holbrook (Chairman)  
Dr. Kenneth Taylor  
Ivan "Tex" Gilmore  
Dr. Ray Covington  
Dr. Vikram Rao  
Jane Raymond Lewis (by phone)  
Charles Taylor

**Attorney General's Office**

Jennie Hauser

**DENR Staff Members**

Layla Cummings, DENR Secretary's Office  
Tracy Davis, DEMLR Division Director  
Katherine Marciniak, DEMLR  
Ryan Channell, DEMLR  
Rosalind Harris, DEMLR

**Others in Attendance**

Refer to the attached meeting sign-in sheets.

**2. Background and Introductions**

Chairman Charles Holbrook welcomed everyone attending the meeting. He also invited members of the public to sign up to formally address the Committee.

**3. Review and approval of minutes from the September 5, 2013 meeting**

Dr. Ray Covington motioned to approve the September 5, 2013 minutes and Mr. Ivan Gilmore seconded. The motion passed.

**4. Presentation of Well Pad Containment Systems- D.A. Nolt, Inc. (See attached presentation)**

Chairman Holbrook discussed well containment systems and how this technology could be utilized to minimize impacts to fresh water resulting from surface spills and introduced Mr. Robert Thrush. Mr. Thrush thanked the Committee for the opportunity to discuss the D.A. Nolt, Inc. containment system and introduced Mr. Dave Nolt, President and CEO and Mr. Rich O'Brien, Executive Vice President of D.A. Nolt, Inc. Mr. O'Brien discussed the well containment system and how it is used to

retain fresh water at a well pad site. The containment system is a subsurface system that has the capacity to contain all fluids from the surface area of a well pad. The containment system is compartmentalized and utilizes manholes to sample and transport water from the various compartments. The system is composed of approximately 55% drainage stone and the remaining volume is retained for fluids. Based on four inches of rainfall per month for a period of one year, the D.A. Nolt, Inc. well containment system could capture seven million gallons of fresh water for use during drilling and hydraulic fracturing operations. The membrane used is between 40 and 80 mils thick, includes a leak detection system and remains installed for the life of the well pad. Compared to temporary liners used on the surface during drilling and hydraulic fracturing operations the D.A. Nolt, Inc. containment system would pay for itself after the installation of two wells on one well pad. The well containment system would also reduce the number of temporary liners shipped to landfills and a certain number of trucks transporting water.

**5. Discussion of Well Closure Rules-** Ryan Channell (see attached handout)

Mr. Channell presented the revised well closure rules based on recommendations made at the September 5, 2013 meeting of the Committee and amendments received from Commissioner Lewis-Raymond. The Committee discussed the following topics and/or revisions during the meeting:

- Addition of terms to Well Construction rule set: plug and abandon, plug-back, mechanical bridge plug, kick-off point, shut-in, and master valve;
- All content changes made by Commissioner Lewis-Raymond were accepted and outstanding questions addressed by staff;
- The rule set reference a number of forms, currently there are no forms drafted. Staff is compiling a list of required forms to generate;
- Items (1), (2), and (3) under (i) were removed;
- The Committee discussed the time allowable for temporary well closure and the shut-in status under (a)(2) and that the 4 year total might not be adequate due to hardships such as lack of infrastructure and market price. The Committee added a new subparagraph (3) which allows a permittee to apply for a variance for an extension of the prescribed time period.
  - “An extension may be granted beyond the four years for reasons such as economic conditions or lack of infrastructure.”

Commissioner Rao made a motion to move the rule set to the Rules Committee for review once the language and edits discussed are incorporated. Commissioner Covington seconded; all were in favor.

**6. Discussion of Drilling Blocks-** Dr. Kenneth Taylor (see attached presentation and handout)

Dr. Taylor presented research to the Committee on the drilling site layouts and processes in Ohio and Colorado. He reviewed the current definitions related to the drilling layouts found in 15A NCAC 05D. The Committee discussed the following topics during the presentation:

- Redefining terms inconsistently used, i.e. production unit vs. drilling unit;
- Spacing of the surface location of wells is typically 20 feet;
- In Ohio, spacing rules are dependent on total depth of the well. Drilling units are approved during the application review;
- In Colorado, drilling unit requests are submitted to the Oil and Gas Commission for approval and issuance of a drilling unit order;

- The size of the drilling unit should be large enough to allow for multi well development on one wellpad minimizing the surface disturbance. Most states work on a square mile, 640 acre, system due to township and range mapping;

The Committee directed staff to begin drafting well spacing rules that would allow for an area to be set, but would allow the operator to set the geometry of the drilling block/unit. Staff was directed to use Arkansas, Colorado, and Ohio as a starting point.

**7. Next Steps** - Chairman Charles Holbrook

Chairman Holbrook discussed the white paper that he wrote on “Establishing Efficient Gas-Oil Ratios” (see attached handout). The Committee is recommending that the MEC request that the legislature remove this item from S.L. 2012-143 because setting a gas-oil ratio only relates to conventional resources; in NC we only know of unconventional gas resources.

**8. Public Comment**- Chairman Charles Holbrook

No one from the public requested to address the Committee.

**9. Closing Comments**- Chairman Charles Holbrook

**10. The Committee adjourned the meeting at 12:16 pm.**

**DEMLR Staff contact for this Committee: Ryan Channell – NCDENR.**