

To: COGCC Commissioners

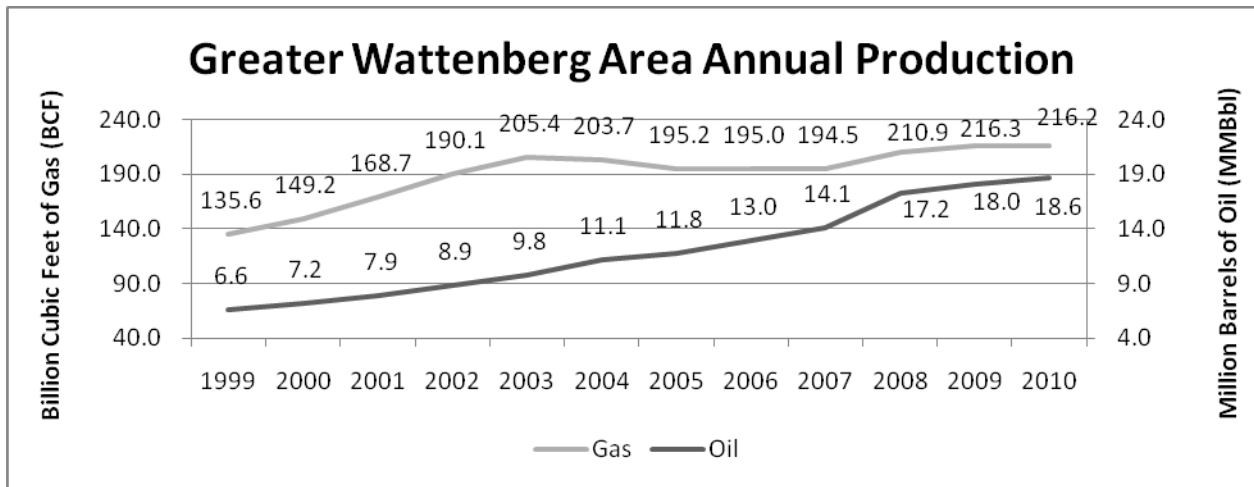
From: Thom Kerr, Permit and Technical Services Manager

Date: May 11, 2011

Re: Proposed Rule 318A Amendments – Identification, Explanation and Rationale

INTRODUCTION

Since the initial Wattenberg Field discovery in 1970, development has increased and continues to provide new oil and gas resources benefitting the state with jobs and significant revenue. Rule 318A was adopted in April 1998, and last modified in 2005. The following chart displays oil and gas production growth in the Wattenberg Area over the last twelve years, while the current Rule 318A has been in place. This area will account for approximately two thirds of the estimated state total of over thirty million barrels of oil in 2010.



2010 data is incomplete at this time

Year	Oil Produced (Bbl)	Oil Sold (Bbl)	Gas Produced (MCF)	Gas Sold (MCF)	Well Completions
1999	6,637,659	6,547,699	135,590,421	134,153,571	12,298
2000	7,207,822	7,073,811	149,189,909	147,712,440	12,648
2001	7,942,524	7,837,015	168,705,087	167,251,332	13,088
2002	8,862,192	8,756,246	190,066,770	188,405,761	13,571
2003	9,832,689	9,726,901	205,413,003	203,710,550	14,181
2004	11,140,412	10,993,540	203,682,297	202,086,546	14,930
2005	11,796,667	11,630,840	195,152,580	193,266,767	15,735
2006	12,972,853	12,745,500	194,972,580	192,469,371	16,587
2007	14,142,040	13,768,407	194,538,192	191,138,333	17,656
2008	17,221,917	17,261,352	210,883,225	207,183,526	18,883
2009	18,049,439	17,829,866	216,326,334	213,605,680	19,886
2010	18,646,313	18,528,203	216,172,135	213,660,589	20,880

Rule 318A, also referred to as The Greater Wattenberg Area (GWA) Rule, covers eighty one townships, twenty nine hundred square miles, in Weld, Boulder, Broomfield and Adams counties. The rule was initiated to limit the number of locations for wells, and facilitate operator access to all Cretaceous formations, without need to secure Commission approval for proposed departures from the statewide setback rules of Rule 318.a. This was driven by the complex nature of the tight sands of the GWA. Rule 318A was last modified to provide for additional infill and boundary wells. Since the last amendment, market demand has driven even more intensive development.

New technologies and practices have been developed that allow for even greater recovery of the hydrocarbon resources. When infill wells are drilled the completions are encountering original initial pressures in the objective formations. With the Niobrara discoveries in northern Weld County using horizontal drilling it has initiated a focus on the Niobrara in the GWA area where the resource is known to be productive. Test wells in GWA show that this technology is successful and will provide access to undeveloped, bypassed oil and gas resources.

GWA operators find themselves needing to seek Commission approval for well location exceptions, due to the limitation of number of wells, with increasing frequency. Recent months have seen a significant increase in hearing applications, and this trend is expected to continue without modification of Rule 318A. The proposed rule amendments are expected to eliminate the bulk of the well location exception requests and implement additional environmental reporting requirements.

These proposed amendments were developed with industry input and discussed with Weld County officials and representatives of homebuilder and environmental groups. The remainder of this memo will identify and explain the substance of and rationale behind the proposed amendments. The discussion is organized by amendment number as identified in Attachment A. Attachment B provides the full text of the proposed rule as amended. Additionally, there is an attachment that provides an example of the well locations and wellbore spacing units.

IDENTIFICATION AND EXPLANATION OF AMENDMENTS

1. Definition of "Horizontal Well" (100 Series Definitions). One of the drivers for recent requested well location exceptions is horizontal drilling in the Niobrara Shale. The Niobrara Formation of the GWA has been drilled since the early 1980's, and the GWA is an ideal location for horizontal drilling. The proposed amendments require a definition of "Horizontal Well". The definition is self explanatory.
2. Reduced Minimum Size Spacing Units (318A a. (4) (C)). This amendment allows wellbore spacing units to be smaller than 160 acres. The wellbore spacing unit commonly referred to as a "roving 160", has worked well, but there are occasions where it does not. These situations occur in unspaced areas, where the spacing unit may be central to two quarter-quarter sections but not to four. In these cases it makes sense to size the wellbore spacing unit at 80 acres and not 160 acres. This amendment would address this situation.

3. Flexible Horizontal Wellbore Spacing Sizes (318A a. (4) (D)). This amendment allows a horizontal wellbore spacing unit to include any quarter-quarter sections within 460 feet of the lateral wellbore in the producing formation. This will result in irregular unit boundaries along the edges of the included quarter-quarter sections along the length of the wellbore, but would allow for a more equitable sharing of oil and gas revenues by mineral interest owners, when compared to requiring the unit to be an entire section. Each horizontal well would have its own unique unit.
4. Increased Area Allowed for Infill Wells (318A e). This amendment removes the infill well area geographic restriction of 318A.e., and allows infill wells throughout the GWA. New completion techniques have made hydrocarbon resources throughout the GWA attractive targets that were not considered economic six years ago. Additionally, removing this geographic constraint allows the drilling of horizontal wells between GWA windows, without requiring Commission approved exceptions. This amendment also makes the rules uniform over the entire GWA, providing for simpler administration and easier understanding by owners and operators.
5. Water Well Sampling (318A e. (4)). By eliminating the special area of 318A.e with amendment 4 above, the entire GWA area is covered by the water well sampling requirement. The intent with this amendment is to get a water well sample in every section within GWA based on a requirement for the test with the next proposed well in the section, regardless of its drainage area.
6. Notice and Hearing Procedures (318A e. (6)). This amendment covers notice and hearing procedures for wells utilizing the wellbore spacing unit concept. Because this concept creates units across original traditional units established by early spacing orders, each well would have different mineral owners. This amendment establishes the process to inform mineral owners of the intent of an operator to create the new unit and drill a new well. The idea is to provide operators a simple method to create a wellbore spacing unit and only utilize the Commission adjudicatory process when the parties cannot agree on terms. The notification consists of a letter sent to the mineral owners in the proposed unit describing the operation and the affected lands. This notice is requires the recipient to object to the proposal within 20 days or the assumption will be that there is no objection to the proposed operation. This provision establishes a procedure and requirements of an objection, before parties proceed with a formal hearing before the Commission. Finally, if the operator fails to file an Application for Permit to Drill, Form 2, within 90 days of the expiration of the 20-day notice period, the notice will be considered withdrawn. A notice provision is included in the current rule, but this amendment clarifies the process and provides an action deadline which does not currently exist.
7. Elimination of Outdated Effectiveness Review (318A e. (7)). This amendment eliminates an effectiveness review of the GWA infill provisions that was required to be completed by March 1, 2008.
8. Elimination of Limitation of Eight Completions (318A f). This proposed amendment eliminates the restriction on the number of wellbore completions per quarter section, and thus the requirement that any increase in the number of completions beyond eight requires Commission approval. The current limitation of eight completions has driven a significant increase in the demand for Commission

hearings in recent months. With the increasing demand for horizontal wells in the GWA, this trend will continue in the absence of this amendment.

The limitation of eight wellbores commonly causes an operator to seek a well number exception because the current rule is not conducive to operator utilization of optimum infill well locations for recovery of the resource. Sometimes the drilling sequence of wells resulted in bypassed reserves, as the eight well limit would be reached before reaching each otherwise authorized infill location. The amendment provides greater flexibility for the operator to match the number and location of wells to that necessary to fully develop the resource. This amendment does not eliminate the surface use limitation imposed in the original GWA. Utilization of GWA drilling windows and twinning existing wells are still required.

9. Waste Management Plans (318A h). This amendment requires an operator filing a Oil and Gas Location Assessment, Form 2A, to file a waste management plan in accordance with Rule 907.a. The waste management plan will require the operator to describe its basic exploration and production waste handling operations at the location including: 1) storage; 2) transportation method; 3) transportation frequency; 4) disposal sites; and 5) any planned re-use and recycling. It is not intended that the waste management plan be particularly detailed and precise. It is intended to demonstrate the operator's conceptual plan for dealing with: 1) drill cuttings, produced water, and tank bottoms; 2) what the operator will do with the waste when it is generated; 3) how the operator will be transport the waste; and 4) how the waste will be disposed.

CONCLUSION

These proposed amendments to the Rule 318A, are expected to allow further, more intensive development of the GWA in a logical and cooperative manner, to the benefit of mineral owners, residents, and industry, while continuing to provide balanced, reasonable protections to surface owners and the environment. Additionally, promulgating the amendment to 318A will streamline the drilling permit process by eliminating the requirement for adjudicatory hearings thus providing an efficiency and cost savings to the COGCC and industry.