

## **Battlement Mesa Oil and Gas Committee**

### **Minutes 12/15/09 Meeting**

**Members present:** Chairman Bill Nelson, Chuck Hall, Robert McCurdy, Don Mumma, Frances Rose, and Lynn Shore

**Antero representatives:** Kevin Kilstrom, Jerry Alberts, John Black, Rick Blankenship, Lars Inman, Robert Mueller, Brian Wade, Dave Stricklin

**Others in attendance:** Steve Rippy and Bob Arrington

The members of the Oil and Gas Committee had a list of prepared questions and concerns from members of the community and from committee members that they then asked of the Antero representatives.

The first question was “What is the status of Antero’s application to the County and its Comprehensive Drilling Plan for the COGCC?” The answer was that there have been some informal meetings with the County but no formal application has been submitted. Antero has received good information from the community meetings and from the process of gathering maps, etc. The company will submit the applications during the first quarter of 2010.

Items for clarification/addition to attorney’s list: What about *cuttings*? Since there will be no pits, there will be no cuttings.

More information needed on injection wells proposed for elimination of flowback liquids: Preferred injection target is in the Iles formation. This is below the potable aquifer. Injection wells will be used when not frac’ing. EPA controls all rules on injections wells. Antero asserted that there is no danger of frac’ing fluids getting into the aquifer. Depending on the number of wells – there is a 2- 3,000 gallons (maximum). Electronically, Antero will listen to the cracking and watch the frac’ing in the well. If there is a problem with the cement, the company sees it right away and can shut it down. The injection well is deeper than the same-well borehole. Injection wells are connected wells so that it will flow back so that the fluid won’t have to be trucked away. The water that is used is cleaned up and reused.

Antero was asked about the possibility of remote frac’ing using buried pipelines. Shallow wells would need pipe that could handle 6-7,000 PSI. Deeper wells (Mancos formation) need pipes that can handle up to 10,000 PSI. Fast rates of movement (treating pressures) can be in 5½ inch pipes. For every foot in pipe length there is more of a pressure drop; every fitting on the pipes equals more pressure drop; so the further away from the well head to the frac’ing the more of a drop in pressure. If there were a leak, there would be more problems; there would be safety concerns for long distance frac’ing. Everything with high pressure needs to be on site where employees could handle problems. The distance for remote frac’ing would be no more than a half-mile from the

well site. 450 PSI is the minimum for gas carrying pipes; 250 PSI is the top number for water pipes; therefore, water pipes can't be used to transport gas.

Bill Nelson pointed out that at the Best Management Practices conference a BLM speaker indicated 3 to 4 miles for remote frac'ing. Kevin Kilstrom stated that this could create possible safety issues. John Black believes that frac'ing companies need to be able to inspect the gas transmission lines [and lines that long would have to be buried].

Antero reps were asked about remote frac'ing just for well pads A,B,C & D: The response was that close proximity may allow for some frac'ing pipe, but safety is always an issue. Antero will do the numbers to see if it is feasible. If this were to happen, roads might have to be shut down if there is remote frac'ing. Antero doesn't want to take any additional risks than those already connected to drilling. Rick Blankenship has looked into sound barriers for the noise issues that may arise from the wells so close to the dwellings.

Commitment on scheduled dates for installation of landscaping on selected drilling sites: Antero will follow the SUA with BMC to get the landscaping done. The permitting process has to be done before work can start.

Is there a firm commitment on use of electric grid for drilling equipment: Rick Blankenship has spoken to Xcel and Holy Cross. The maximum capacity for this local area grid is 11 megawatts. This area uses 5 megawatts. The two companies counseled that this is a limited amount of power. Antero can't be on the grid if it causes black out or brown outs. Antero would be using 6 megawatts if 2 rigs are running. Buried 3-phase grid wire is near M L&N – Antero possibly could hook up to the grid for pads M, L & N. When pulling pipe, 3 megawatts are used. At the present time, this may be feasible, but if more people moved into the area, it wouldn't be feasible.

Better clarification on use of compressors is needed: At well sites – if necessary, wellhead compressors will be used. These are 3 to 10 horsepower compressors, has the noise level of a lawn mower; noise attenuation will be used when needed. The more reasonable idea is to use more suction to pull the gas into the transmission lines

Air quality testing on one well - before, during and after drilling: The testing was suggested by GarCo's Jim Rada. Antero will check with Rada to see what he envisioned. GarCo Public Health's Paul Reaser had spoken to the O&G Com about an EPA Grant. GarCo went to 8 different sites and did air quality monitoring. Antero is helping to pay for a study on the air quality at Jim Rada's request. When an earlier monitoring had been done (two years ago) processes at well sites were different. No "green" completion is used to lower the venting of natural gas. Because of new equipment and methods, the gas that used to be flared is now sold. Antero believes that new equipment will be developed to adjust the drilling process to the new COGCC Rules.

Notification to community prior to moving rigs: Antero will look into what can be done – possible signs, letters, etc.

Antero plans to contribute to the community once drilling starts at \$250,000 per year for four years. They were asked if they would be amenable to considering making their payments to the

Metropolitan District instead of BMSA, if the latter agrees to the change. If payment is made to the community via the District it would not be subject to income taxes. We will speak to our lawyers about the ethics and legality of such an arrangement. Antero will talk to their people.

When asked about contributing \$500,000 for a new roof for the Activity Center, Antero Reps stated that they were not saying yes or no. Drilling has to start so that money will be coming in from the area. Antero makes contributions to well site communities when they can.

Will BMSA need a paid well site inspector? If needed, one could be paid out of the Antero contribution to the community.

What is the possibility of approaching Exxon for a contribution to the community? That is between EXXON and the community. Antero has a contract, but EXXON still has an agreement with BMC.

What about a binding agreement with fines and fixes between Antero and BMSA? Antero said it was not interested in adding another legal document to the situation. They feel that the CDP is tantamount to a contract with the community. The CDP is being made a part of the permitting process. When it comes to air and water quality, the residents' recourse is to call GarCo or COGCC. Jim Rada and Judy Meisner are very good at checking into citizens' concerns. Any concerns about the actions covered by the SUA should be addressed with BMC.

Antero reps were asked about the possibility of additional wells to be drilled in the PUD over and above the number in the SUA. The BMC would have to agree to that, which is not very probable. Other sites had been looked at, but were no longer viable.

Area residents are concerned about possible fire problems. Antero discussed this with the Fire District, but the FD is not concerned about fire problems since there are so many safeguards and "firebreaks" around each well site. FD is more concerned about hazardous waste – such as possible diesel spills. Even then, all the berms around the wells would keep any spills contained. Antero is in the process of modeling a Probable Case Scenario (not Worst Case Scenario) for well sites.

In response to the concern that some area residents have about high-pressure gas lines under high power electric lines, Antero reps stated that all of these lines are grounded. Water lines use polyethylene lines; gas lines are made of steel. There is a cathartic protection so that the steel won't be corroded. Testing and grounding is done for the lines.