Battlement Mesa Oil and Gas Committee
Meeting with Antero Resources
October 21, 2009

Committee Members Present: Chairman Bill Nelson, Robert McCurdy, Don Mumma, Frances Rose, Lynn Shore
Antero Employees Present: Vice president-Production Kevin Kistrom, Jerry Alberts, Jon Black, Rick Blankenship, Kelly Bruchez, Lars Inman, Mark Kachmar, Bill Pierini
Also in Attendance: Approximately twenty-five members of the Battlement Mesa Community, whose questions and the answers that were engendered are incorporated in the Minutes. The community members were asked to save their questions for the end of each presentation.

Meeting Topics: Continuation and Review of Environmental Program carried over from the October 7 meeting and Presentation of Emergency Response and Pad Security Plan.

Continuation information - Lars Inman reviewed the information presented at Meeting Number 7 on the Environmental Program (See Web Site for Minutes from the Oct. 7 meeting.). When he finished, Jerry Alberts proceeded with further information on Surface Water Resource Protection Overview. "Down-hole" drilling and completion practices protect near surface aquifers through the use of steel casing and cement which are well-bore configurations used to Protect the Groundwater (Meeting Number 6 on 9/16/09 on BMSA Web Site at **battlementmesacolorado.com**.)

Jerry Alberts then continued with his presentation. Surface water resources are protected through the Best Management Practices that prevent spills and storm water and erosion control. These practices are regulated by GarCo, State and Federal agencies. To protect against spills, fabric is placed under frac tanks to keep water from percolating into soil. Then a secondary containment metal container with a plastic liner is placed around the storage tanks with lining. There is a berm lined with gravel around the storage tanks. For storm-water and erosion control, perimeter berms with erosion blankets are placed around pads for secondary containment. These keep spill and storm-water from escaping. Top soil is stockpiled. Later it will be seeded. Hay bales to keep the soil from eroding are placed further out from the pad perimeter berm. Also used in storm-water management are straw wattles and erosion blankets placed further out to prevent sediment from leaving the site. Each well site will have/has a mapped out plan that shows how/where to install the storm-water and erosion prevention best practices, as well as a storm-water contractor work order.
Rick Blankenship proceeded with his presentation on noise. He had a list of noise levels and what caused them. All in attendance were asked to be silent for ten seconds. The noise level heard in the "silence" of the Activity Center he stated was approximately 42 decibels with some spiking when machinery in the background made a clunking sound. The decibels he described ranged from ten decibels that would be in a "dead" recording studio to 20 decibels of a whisper heard at five feet to 60-70 decibels in a department store to an idling car at 70 decibels at ten feet. He pointed out that 45 decibels is the norm for everyday noise. He then pointed out that COGCC standards are 80 decibels, at 350 feet, during drilling operations (in the daytime and 75 at night) and no more than 55 decibels at the same feet during the production process. (These points were addressed during the presentation, as well as during the question and answer period.) Mr. Blankenship pointed out that spikes in "noise" can be someone dropping a tool, or a car revving its engine; so if people hear a louder noise, it can be caused by one of these "spikes". The Antero/BMC Surface Use Agreement addresses noise mitigation. The points made are: No centralized compression in the PUD; Any wellhead compression housed, with high level of noise suppression equipment – sound blankets are placed on and around the drill floor and on equipment to suppress sound. Hay bales are placed around corners of the pad to mitigate noise. An aerial map was shown (can be seen on BMSA Web Site) with the decibels at different locations –

from 100 to 650 feet from the well pad. This data was taken from both actual readings at the Watson Ranch Pad to computer models.
Jon Black discussed mitigation strategies on dust as outlined in the Surface Use Agreement (SUA). These points include Soiltac an/or liquid dust suppressants will be used; access roads and pads will be graveled; Road brushing and road washing will be done as needed; Long-term development provides for buried water lines to minimize truck traffic; Working with the County and other industry companies in an effort to pave selected roads (e.g. CR 302 and 308).
He then went on to speak about SUA light mitigation strategies. Points covered in the SUA are Pad-specific considerations; Rig orientd to direct light away from nearby residents; Low density sodium lighting to be used; Lights to be directed downward; Rigs to be shrouded on three sides; Safety, of course, will govern in all cases.(A company was hired by Antero to do a model for light placement at M well site. This can be found on the BMSA Web Site.)
Noxious Weed Control was the next topic covered. Gas companies' management plans are governed by COGCC, SUA and GarCo Rules. The Antero/BMC SUA includes a "Reclamation Plan". The SUA will be posted on the BMAC Website. The Noxious Weed Management Program has four parts: Integrated Weed Management Approach – Spraying with herbicides; Mowing (e.g. tumbleweed prior to seeding), Bio controls (e.g. bindweed) Re-vegetation of disturbed areas. Treatment-Spring: treatment of biannual/annual weeds species such as scotch thistle and kochia etc. Treatment-Fall: treatment of creeping perennials such as knapweed and thistle; and Bare Ground: treatment of pads excluding all vegetation growth for fire mitigation. Many of these activities help to enlarge habitat for mule deer and elk.These points are done throughout the Piance Basin, as well as Battlement Mesa.
The SUA also addresses pad landscaping. There will be landscaping design down by *Designworkshop* on four critical pads – C, D, L, M which are the most visible within the community. Berms and trees will be used to shield pads and pad facilities from view. Antero will pursue implementation of landscape design prior to drilling where feasible. Antero will be responsible for maintaining the landscaping. Noxious weed management plans will be integrated into the pad landscaping maintenance. (Plans can be viewed on the BMSA WebSite.)

Emergency Response and Pad Security Plan

Jon Black explained an "emergency" and quantified them according to corporate standards. An emergency is an unexpected event that demands immediate attention that could cause 1. Harm to people; 2. Damage to property or the environment; 3. Loss of process or profit; and 4. Possible Negative impact on corporate image and reputation.

Possible broad categories of emergencies that may occur in relation to the operations are: Gas leak, Fire/explosion; Spill/release of hazardous liquids; Injury/illness to personnel; Major property Damage; Natural events –wildfires, flooding, earth slippage; Third Party damage – machinery impact.
Emergency Response Objectives: Control/Limit effect of emergency on personnel, properties, environment; Facilitate appropriate emergency response; Ensure vital information available to emergency response personnel; Ensure compliance with all applicable laws and regulations.
The Emergency Response Principles are: Protect lives; Rescue and treat casualties; Minimize environmental impacts; Minimize damage to public, private and company property; Effectively use combined resources of Antero, mutual aid partners, government and other external services (Antero and other gas industry companies have provided an Emergency Response Trailer – worth $350,000 – that is used as a command center for emergencies is located at the Rifle Fire Department); Provide factual information to news media and other stakeholders on a timely basis; Preserve records and evidence for use in post-incident investigations; Protect shareholder value.
Emergencies are classified into three categories: Minor emergency – can be satisfactorily handled by company personnel; Public safety is not threatened. Serious Emergency – is one that has implications beyond the control of the local personnel. There is a potential or actual threat to public safety. Major

Emergency – is an incident having major safety, environmental, governmental, economic or public welfare implications. Public health/safety has been or is threatened.
Antero uses The Incident Command System (ICS). It is a standardized, on-scene, all-hazard incident management concept this in use in the US plus other countries and was put in place in the 1980's. ICS helps to ensure the safety of responders and others; the achievement of tactical objectives; there is an efficient use of resources. Federal level of rules are also integrated into the ICS. (The ICS commander and support and emergency response procedures (ERP) are found on the BMSA Web Site.) The ERP is a fluid document and is reviewed annually and training in emergency exercises is conducted.
Public Water Intakes: If a liquid release threatens the Colorado River as a public water supply, Antero and the Garfield County Emergency Management Agency (GCEMA) will coordinate their activities. OSHA will be notified according, to their rules, when accidents occur.
Besides the Emergency Response Trailer which is equipped with a variety of tools, equipment and supplies for spills and releases primarily, but also can be used as a mobile command post each well pad has the same provisions. These range from flashlights to Sanitation and Decontamination Items.
GARCO has developed a Community Wildfire Prevention Plan. When the Antero presenter pointed out that GARCO does not consider Battlement Mesa was not a HIGH RISK for FIRE there was an outcry from those in the audience. The explanation was that HIGH RISSKS is determined by accessibility to the area and to the location of water supplies. GarCo agrees that fuel and slope can cause problems but there has to be a "trigger" such as cigarette butts, children playing with matches and/or lightening strikes – these were the causes of the major fires that affected this area over the years. Antero is working closely with the Grand Valley Fire District. The GVFD will have maps of the sites of the well pads so that if there were an emergency, the GVFD would know where the problem is located.
Well Site and Facility Security is very important. Access Control, video surveillance, intrusion detection and alarms, monitoring of alarm system, critical point monitoring are important aspects of the security consideration that Antero follows. There is fencing of the areas at the well pad, locks on the gauges and valves. Through computers there is remote accessibility for each of the well sites. Any or all of the sites can be shut down at any time by the company. Telemetry on the well pads allow for and surveillance and quick response to problems. There are daily physical checks and maintenance of logs, records, and databases. Remote Camera Systems can provide 24 hour facility surveillance.
Responses to questions: Antero has been an entity since 2003; an earlier company led to Antero; eight senior managers have been in the Rockies for 20 years. Frontier will be the contractor for drilling; it must have insurance; companies that have many problems and are not responsible cannot keep their insurance and soon go out of business. The contractors must answer to Antero and to OSHA.
GarCo requires a specific plan for a well area; the fire department has to review and approve the plan.
Pipelines swaths for water and product will be dug; the pipeline swath will be no wider than 50 feet, "collapsing" to 25 feet; there will be two 12 inch water lines and one 12 inch gas line the corridors for the roads and pipelines are already laid out in the SUA; the SUA allows for construction of short distance roads and pipelines.
Suggestions were made for some sort of alarm system, sprinkler systems be used at each well site.
Meeting Number Eight: Emergency Response and Pad Security Plan.

Next Oil and Gas meeting with Antero will be at 1:30 p.m., on November 4, 2009, at the Activity Center. The topic will be on Post Drilling and Completion Operations and Interim Reclamation. Attendees should focus their questions on the topic for the meeting.