



November 9, 2017

Mr. Matthew Lepore, Director
Colorado Oil and Gas Conservation Commission
1120 Lincoln Street, Suite 801
Denver, Colorado 80203

Re: Preliminary Comprehensive Drilling Plan Meeting with Crestone Peak Resources

Dear Director Lepore:

On November 8, 2017, I met with Jason Oakes and Jamie Jost to discuss the preliminary Crestone Peak Resources Comprehensive Drilling Plan (CDP) located in Boulder County. The Crestone Peak (Crestone) representatives requested the meeting to obtain feedback from the Colorado Department of Public Health and Environment (the Department) on the preliminary CDP and the following topics were discussed.

- Location of well sites;
- Installation of pipelines;
- Electrical equipment for drilling activities;
- Remote fracing operations;
- Odors from drilling and completion activities;
- Use of infrared camera on the well sites; and
- Plug and abandonment of existing vertical wells.

Below each topic is explained with recommendations from the Department to minimize the impacts from the oil and gas activities within the CDP area.

Location of well sites

Many citizens have commented on the preliminary location of the well sites requesting that Crestone use the Highway 52 corridor for the oil and gas locations. The Department asked about this issue and discussed the constraints with Crestone representatives. One change that will alleviate some of the resident's concerns would be using the Extraction lease location just west of the reservoir located in 2 North 69 West, Section 35. Relocating the proposed well site located in 1 North 69 West, Section 11 to the Extraction lease site just to the west of the reservoir would consolidate three well sites to the Highway 52 corridor. The Department recommends that COGCC staff and the Commission, if necessary, become involved in the surface use/lease discussions between Crestone and Extraction to overcome this issue and locate the majority of the proposed well sites to the Highway 52 corridor.



Installation of pipelines

The Department requested pipelines be installed prior to beginning drilling operations. This practice ensures the operator will utilize green completions to the fullest extent possible during flowback operations reducing emissions from the well sites.

Electrical equipment for drilling activities

Crestone Peak representatives have stated in public meetings that they intend to use electrical equipment for drilling activities. The Department supports this practice and recommends the use of electrical equipment for drilling and completions to reduce noise and emissions from the well sites.

Remote fracing operations

Crestone representatives explained that remote fracing operations are used when residents are within 1000 feet of the well site. The Department recommends using remote fracing operations to minimize impacts to the nearby residents. The CDP currently includes six well sites where Crestone would conduct fracing operations; however, the Department recommends that two central locations be used for fracing operations, assuming the Extraction lease can be used, one at Highway 52 and one in the northern part of 2N 69W. Moving these operations as far as possible from residents will reduce the impacts from noise, odors and truck traffic.

Odors from drilling and completion activities

There have been numerous odor complaints from Crestone operations in Erie; however, Crestone has worked to reduce odors by using chillers and chemicals to mask the hydrocarbon odors emulating from the drilling mud. During our meeting, Crestone representatives discussed additional measures to reduce odors including a squeegee to remove the drilling fluids from the drilling pipe as it is coming out the wellbore and using covered containers to store the drilling mud on the well site. In addition, Crestone is also investigating chemicals that neutralize the odors from the drilling muds. The Department recommends that Crestone to continue pursuing methods and practices to reduce odors throughout the life of this CDP.

Use of infrared cameras on the well sites

During the public meeting held in Boulder on October 18, 2017 Crestone representatives stated infrared cameras would be used on the well sites to look for leaks. This issue was confirmed during the CDP meeting with Crestone representatives stating that infrared cameras would be used at the wellsite during drilling, completion and production activities. The Department recommends that these leak detection activities become part of the CDP.

Plug and abandonment of vertical wells

Within the CDP area there are 95 vertical wells. With the drilling of horizontal wells a number of these vertical wells will become unprofitable for the larger oil and gas companies to continue to operate. In the past, these wells have reverted



to smaller oil and gas operators some who may not have the financial resources to comply with COGCC rules over the long term resulting in enforcement actions and fines. Too many times these operators abandon these marginal wells leaving the State of Colorado to pay for the plugging, abandonment and reclamation of these well sites. This CDP provides an opportunity to take a close look at marginal oil and gas wells within the CDP area and require the plugging, abandonment and reclamation of those well sites before they become a burden on the state.

COGCC rule 216 states, "Comprehensive Drilling Plans are intended to identify foreseeable oil and gas activities in a defined geographic area, facilitate discussions about potential impacts, and identify measures to minimize adverse impacts to public health, safety, welfare, and the environment, including wildlife resources, from such activities." Plugging and abandoning marginal wells within the CDP area will minimize the potential for impacts to environment and wildlife resources while reducing the likelihood of the state expending resources needed for other cleanup efforts. The Department recommends that COGCC staff and the Commission address the issue of plugging and abandoning marginal wells as part of the Crestone CDP process.

Conclusion

The Department has reviewed the preliminary CDP from Crestone and provided comments and recommendations; however, as the CDP matures additional comments and recommendations may be forthcoming to minimize the impacts from oil and gas operations on nearby residents. Two potentially contentious issues deal with surface use/lease negotiations between two operators and the plugging of marginal wells within the CDP area. The Department understands the legal and institutional challenges of these issues; however, the CDP process is designed to overcome these challenges and facilitate solutions for all parties.

Sincerely,

Kent Kuster

Kent Kuster
Oil and Gas Liaison
Colorado Department of Public Health and Environment

