



COLORADO

Oil & Gas Conservation
Commission

Department of Natural Resources

1120 Lincoln Street, Suite 801
Denver, CO 80203

December 21, 2015

VIA EMAIL

Mr. Ken Carlson
Colorado Water Watch
Colorado State University

RE: Sand Creek Monitoring Well Investigation

Dear Mr. Carlson,

Thank you for notifying the Colorado Oil and Gas Conservation Commission (COGCC) of the presence of dissolved gas in the recently installed [REDACTED] ("Sand Creek MW") located in the southeast quarter, southeast quarter, Section [REDACTED], Township [REDACTED], Range [REDACTED] near the intersection of Weld County Roads [REDACTED]. As you are aware, COGCC Staff and the Colorado Water Watch collected additional water samples from the monitoring well on December 11, 2015 to confirm the presence of the dissolved gas and develop obtain additional analyses of the gas, if confirmed.

Laboratory results of the gas in the water samples collected from the monitoring well show that it contains methane, ethane, propane, butanes, pentanes and hexanes, all of which are indicative of a thermogenic origin for the gases. In addition, the stable isotope analyses performed on the dissolved gas confirm that the gases are thermogenic in origin. The initial laboratory results are attached to this letter.

Based on the analytical data COGCC will investigate the impact, focusing on identifying and stopping the source of thermogenic gas. Our investigation also will seek to determine whether methane is migrating through groundwater, and whether domestic water wells in the area have been affected. Specific actions may include:

- Engineering review of construction, production, and closure records for oil and gas wells in the vicinity of the [REDACTED] MW;
- Physical integrity testing of oil and gas wells in the vicinity of the [REDACTED] MW;
- Collecting and analyzing samples of produced gas from oil and gas wells in the vicinity of the [REDACTED] MW;
- Continued monitoring of the [REDACTED] MW;
- Testing other water wells in the vicinity of the [REDACTED] MW, including domestic water wells

P 303.894.2100 F 303.894.2109 www.colorado.gov/cogcc

Commissioners: Thomas L. Compton - Chairman, Richard Alward, John H. Benton, DeAnn Craig,

James W. Hawkins, Tommy Holton, Andrew L. Spielman, Mike King, Dr. Larry Wolk

John W. Hickenlooper, Governor | Mike King, Executive Director, DNR | Matthew J. Lepore, Director



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COGCC will open a project file and all information collected during the investigation will be available to you, the land owner, and the general public. Additionally, if any oil and gas wells are found to lack integrity or are otherwise identified as a source of the dissolved gases found in the [REDACTED] MW, COGCC will require the wells to be plugged or repaired to prevent further impacts.

If you have any questions regarding COGCC's investigation into this matter please contact me at 970-461-2970, or Greg Deranleau, COGCC's Environmental Manager at 303-894-2100, ext. 5153.

Sincerely,



Richard R. Allison, P.G.
Environmental Protection Specialist, Northeast Colorado

c: [REDACTED]
Curtis Rueter, Noble Energy, Inc.
Greg Deranleau, COGCC Environmental Manager
Matthew J. Lepore, COGCC Director

Attachments: ESC Lab Sciences, Analytical Report
Dolan Integration Group, Stable Isotope Analytical Report