



COLORADO

Oil & Gas Conservation
Commission

Department of Natural Resources

1120 Lincoln Street, Suite 801
Denver, CO 80203

March 27, 2019

Debra and Daniel Sauer
2763 County Road 41
Hudson, CO 80642

Re: COGCC Complaint #200446018

Discovery of Dissolved Thermogenic Methane in Domestic Well Water
Division of Water Resources Well Permit #308702-A, Receipt #3689531
NE¼ NE¼ Section 20, Township 1 North, Range 65 West
Weld County

Dear Mr. and Mrs. Sauer,

On July 6, 2018, the Colorado Oil and Gas Conservation Commission (COGCC) received your complaint regarding the discovery of dissolved thermogenic gas in your domestic water well. The results of the COGCC investigation in response to your complaint can be found by clicking on the "Complaints" link on the COGCC website (<http://www.cogcc.state.co.us/complaints.html>) and searching under the COGCC document ID number (200445962) assigned to your complaint. Specific actions taken are described below.

Upon receipt of your complaint, COGCC required companies operating oil & gas wells located within a 0.75-mile radius of investigation (ROI) centered on your water well to provide your residence with an alternate water supply. They responded by engaging Boulder Water to install a temporary system with two aboveground water tanks piped into your residence. Boulder Water maintained the temporary system and delivered water to it.

COGCC also required the companies operating within the ROI to submit detailed information on the construction and operational history of their oil & gas wells. COGCC engineering staff reviewed that information, but did not identify any well integrity issues. Mechanical Integrity Tests (MITs) were performed, under COGCC supervision, on those wells. The MIT results did not identify integrity issues with any of the subject oil & gas wells.

P 303.894.2100 F 303.894.2109 www.colorado.gov/cogcc

Commissioners: John H. Benton - Chair, Howard Boigon - Co-Vice Chair, Tommy Holton - Co-Vice Chair,
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The oil & gas well closest to your domestic water well, K.P. Kaufman Company Maul #20-2 (API 05-123-12420), was plugged and abandoned under plans reviewed and approved by the COGCC. Prior to abandoning that well, COGCC required K.P. Kaufman to run cased-hole geophysical logs. Those logs, run under COGCC supervision and reviewed by COGCC engineering staff, did not identify any anomalies that would indicate pathways for natural gas to escape from that well.

COGCC required operators of oil & gas wells within the ROI to submit production gas samples for laboratory analysis. The gas composition and stable isotope composition of the dissolved thermogenic gas in your water well did not match any of those production gas samples.

As a further precautionary measure, samples were collected from each of the 10 domestic water wells located within 0.5-miles of your well. Dissolved thermogenic gas was not detected in any of those wells.

The temporary water supply system described above has been replaced with a permanent subgrade concrete cistern. A replacement domestic water well has been constructed on your property and will supply water to the cistern. COGCC recently received laboratory analytical results for samples collected from the replacement well. Although dissolved methane was detected, it was almost entirely biogenic with only trace levels of thermogenic methane (i.e. concentrations below the minimum requirement for isotopic analysis). Please note that biogenic methane is common in ground water from the Laramie Fox Hills aquifer, the aquifer in which your replacement well is completed. COGCC has been informed that as a precautionary measure, the concrete cistern will be equipped with atomizers and a vent for the purpose of removing dissolved methane from the water before it is pumped into your house.

With the provision of a permanent water supply for your residence your complaint is being closed. If you have any questions or would like to discuss these matters further, please contact me by phone at 303-894-2100, extension 5183 or by email at chris.canfield@state.co.us.

Based on the information provided herein, COGCC staff did not identify any violations of COGCC rules that would lead to the issuance of a notice of alleged violation (NOAV) related to your complaint. If you are not satisfied with the resolution of this complaint, you may review COGCC Rule 522 b.(4) which defines your right to file a petition for review requesting the Commission hear your objections. COGCC rules are available on our website (<http://cogcc.state.co.us/reg.html#/rules>). For additional guidance regarding filing a petition for review you may contact the COGCC Hearings Manager, Mimi Larsen. Ms. Larsen can be reached at 303-894-2100, ext. 5152 or mimi.larsen@state.co.us.

Sincerely,
Colorado Oil and Gas Conservation Commission

A handwritten signature in blue ink that reads "Chris Canfield". The signature is stylized with a large, looped "P" at the end.

Chris Canfield, P.G.
Environmental Protection Specialist

cc: John Axelson, COGCC East Environmental Supervisor