



April 23, 2013

Certified Mail Return Receipt Requested # 7011 3500 0000 1242 0750

Mr. Fritz Woods  
19313 Ponderosa Drive  
Weston, CO 81091

RE: Potential Hazards  
Permit 192639 Receipt 0393698 and Permit 192639-A Receipt 0539849  
SENW 17 33S 66W, Las Animas County

Dear Mr. Woods:

Following a water well fire and in response to safety concerns with respect to methane venting from a water well on your neighbor's property, staff of the Colorado Oil and Gas Conservation Commission (COGCC) conducted a field visit to the Wilgus home on March 25, 2013 to collect a sample of the gas venting from the neighbor's water well after speaking with your neighbor and the local fire department and health department staff. On April 11, 2013 a group of concerned county and state workers and a representative of Pioneer Natural Resources met at the Mount San Rafael Hospital Board Room. Mary Garcia, the executive director of the bi-county health district wrote a letter summarizing the consensus of that group regarding the possible hazards at your neighbor's home from the methane venting from the Wilgus water well. I am writing to you to bring to your attention that there may be hazards associated with your wells as they are of similar depth to the nearby Wilgus water well and also were drilled through numerous coal seams.

On April 17, 2013, staff of LTE performed a survey of the flux (volume of methane per unit of time) survey in the area near the Wilgus water well. The final report of this survey is not complete yet but I will discuss preliminary results below that I observed while the survey was underway and that may be pertinent to water wells on your property. On April 19, 2013, volunteers from the Stonewall Fire Protection District safely removed the well cap on Wilgus water well as was suggested in the letter hand-delivered to Mr. Wilgus by Mary Garcia (executive director, LAHCDHD). This was done to lessen the back pressure of methane on the Wilgus water well which may have been causing migration of methane into soils around that water well.

### **WATER WELL RECORDS**

I retrieved the construction records for your water wells from the Division of Water Resources web site. Construction records for the two wells that have been drilled on your property indicate the presence of several coal seams. Inspection of geologic maps of the area around your home indicates that your wells and the neighbor's well are drilled in and completed in the Raton Formation. The closest CBM wells to your home are completed in the deeper Vermejo Formation coals and not in the shallower Raton Formation coals.

There is one coal mine recorded in the vicinity of your property but at a distance of approximately one-half mile to the northeast of your home. The location and known workings of the closest coal mine known to us is shown on Attachment 1 and was known as the Monarch Mine. There may be other mines in the area for which we do not have records. Locations of gas seeps near the Monarch Mine are also shown on

Attachment 2. A seep was detected near your home in the 2007 Raton Basin Phase 2 Baseline study and may correlate to a water well venting gas on your property and is listed as Seep 31. You did not grant access for a follow-up ground survey when requested in 2007. So at present we and you do not know the extent or nature of the gas seep near your home indicated to be present from the 2007 driving survey of the Raton Basin.

## **DISCUSSION**

Preliminary results of the soil gas flux survey at the Wilgus property indicated that methane was migrating along the trench excavated for the water pipe and power line between the well head and the cistern about 10 feet away. Flux measurements also indicated that lower amounts of gas were moving up the trench between the cistern and the southwest corner of the Wilgus home. Several soil gas flux measurements around the other sides of the Wilgus home did not detect methane, which indicates there is not a larger area soil gas seep on that property other than the water well bore close to the Wilgus home.

The amount of gas venting from the Wilgus water well does pose a fire and safety hazard and it is possible that your water wells may pose the same hazards as your wells are completed in the same coals as your neighbor's well. Methane is colorless and odorless and less dense than air so if it is seeping through soils near your home you may not know of its presence. Attempting to seal the top of your well bores may cause methane migration into the rocks and soils along the well bore as water wells are not constructed to hold gas under pressure. An odorant is added to methane supplied to homes as a safety precaution. Intentionally bring methane into a home as a fuel without addition of an odorant is an extremely unsafe practice and if you are doing so as rumored you are needlessly endangering the health and safety of your family. Methane migrations through disturbed soils along a trench dug to accommodate electric cables and water pipes between you wells and you home may occur as seen at the nearby home. Under any conditions I would recommend installation of combustible gas detectors and alarms in the home if you do not already have gas detectors and alarms as the extent and nature of the gas seep on your property detected in 2007 has not been investigated. Possible hazards associated with that 2007 seep or the possibility of methane venting from your water wells are of serious concern and we request that you allow us to investigate these safety issues in the near future. If you have any questions or would like to discuss these matters further, please contact me at 719-846-3091 or by email at [peter.gintautas@state.co.us](mailto:peter.gintautas@state.co.us).

Sincerely,  
Colorado Oil and Gas Conservation Commission

Peter Gintautas, Ph.D.  
Environmental Protection Specialist

### **Attachments**

Attachment 1 - Location map with all sample locations discussed indicated

cc: Matt Lepore, COGCC Director  
Jim Milne, COGCC Environmental Protection Manager  
Margaret Ash, COGCC Field Inspection Manager  
Steve Lindblom, COGCC Environmental Protection Supervisor  
Dave Holland, Pioneer Natural Resources  
Mary Garcia, Las Animas-Huerfano Counties District Health Department  
Jim Casias, Las Animas County Sheriff  
Lloyd Holliman, Stonewall Fire Protection District



