STATE OF COLORADO
OIL & GAS
CONSERVATION COMMISSION

DEPARTMENT OF NATURAL RESOURCES
Bill Ritter, Jr., Governor
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Denver, CO 80203
Phone: (303) 894-2100
FAX: (303) 894-2109
www.cogcc.state.co.us

April 3, 2009

Renee McClure
21000 HWY 52
Hudson, Colorado 80642

RE: Stable Isotope and Gas Composition Analytical Results for Your Water Well
(Permit #2042460)
Section 4 – Township 1 North – Range 65 West
Weld County, Colorado; Complaint No. 200207912

Dear Ms. McClure:

On March 25, 2009 Terracon Inc. of Wheat Ridge, Colorado (Terracon), under direction of the Colorado Oil and Gas Conservation Commission (COGCC), sampled your water well and submitted these samples for laboratory analysis. The purpose of this water sampling was to determine if natural gas drilling and production activities in your area might have impacted your well water. The COGCC has not yet received the results of the general water quality samples collected from your well. We anticipate receiving those results within the next few weeks and will submit those results under another cover letter. Because you observed that gas from your water well could be ignited, the COGCC collected a sample of gas from your water well for compositional analysis and submitted to Isotech Laboratories, Inc. (Isotech) in Champaign, Illinois. A discussion of these sample results and a copy of the Isotech report is enclosed.

GAS COMPOSITION

The gas produced from the oil/gas wells around your home is "thermogenic" methane. Thermogenic methane gas is formed by the thermal breakdown of organic material in rocks resulting from high temperatures created by deep burial. With the methane are other higher carbon number compounds ("heaver") such as propane (C3), iso-butane (iC4), normal butane (nC4), iso-pentane (iC5), normal pentane (nC5), and hexane (C6). Biogenic methane gas occurs in most near-surface environments and is a principal product of the decomposition of buried organic material. In Weld County many of the coal zones in the Laramie/Fox Hills aquifer, in which your water well is completed, contain biogenic methane gas.

Laboratory results of the gas sample collected from your water well show that methane (75.33 percent) and ethane (0.066 percent) were detected along with nitrogen (22.74 percent), oxygen (1.14 percent), argon (0.38 percent), and carbon dioxide (0.34 percent). The nitrogen, oxygen, argon, and carbon dioxide are components of air and the presence of methane (C1) with ethane (C2) is typical of the naturally occurring biogenic gas in the Laramie/Fox Hills aquifer. No

"heaver" carbon compounds (those C3 through C6 gasses discussed above) are present that would indicate the presence of thermogenic gas.

Isotopic Analysis of Methane

- The deuterium/hydrogen isotope ratio for the methane in the water sample from your water well is –277.0 parts per mil (‰).
- The carbon-13/carbon-12 isotope ratio for the methane in the water sample from your water well is -72.15 ‰.

Isotopic Cross-Plot

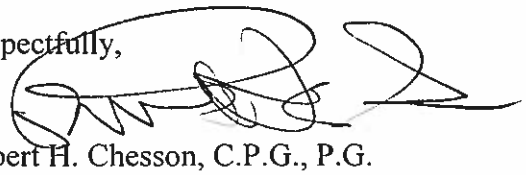
I have included a cross-plot of the stable methane isotopes for your water well sample to help discuss the sample results for your well. On the cross-plot you will notice the area near the top right corner as defined a "Thermogenic Gas". This is the area of the cross-plot that the natural gas produced by the gas wells in the Denver Basin and where the production gas sample plot. Your well plots in the area to the left defined as "Sub-surface/ Near Surface Microbial Gas" which is methane gas of a biogenic origin.

CONCLUSION

Based on the analysis of the gas content and stable isotopes of methane for the gas from your water well, the methane gas present is the product of natural bacteriological activity and unrelated to any oil & gas activities in your area.

The additional water quality sample results for your well are anticipated to be finished within the next few weeks. As discussed above, the COGCC will send you those sample results under a separate cove letter. If you have any questions or would like to discuss these matters further, please contact me at the COGCC in Denver via e-mail (robert.chesson@state.co.us) or by phone at 303-894-2100, extension 5112.

Respectfully,



Robert H. Chesson, C.P.G., P.G.
Environmental Protection Specialist

Enclosures

cc: Dave Neslin – COGCC w/o enclosures
Debbie Baldwin – COGCC w/o enclosures
Mikel Cox – Noble Energy
Paul Schneider – Kerr McGee/Anadarko

ISOTECH
ISOTECH LABORATORIES INC

ANALYSIS REPORT

Lab #:	159187	Job #:	11202
Sample Name/Number:	McClure Water Well		
Company:	Colorado Oil & Gas Conservation		
Date Sampled:	3/25/2009		
Container:	Dissolved Gas Bottle		
Field/Site Name:			
Location:	Hudson, CO		
Formation/Depth:			
Sampling Point:			
Date Received:	3/26/2009	Date Reported:	4/01/2009

Component	Chemical mol. %	Chemical Air Free vol. %	Delta 13C per mil	Delta D per mil	Delta 15N per mil
Carbon Monoxide					
Hydrogen Sulfide	nd	nd			
Helium	nd	nd			
Hydrogen	nd	nd			
Argon	0.38	0.35			
Oxygen	1.14				
Nitrogen	22.74	19.55			
Carbon Dioxide	0.34	0.36			
Methane	75.33	79.67	-72.15	-277.0	
Ethane	0.066	0.070	-46.58		
Ethylene	nd	nd			
Propane	nd	nd			
Iso-butane	nd	nd			
N-butane	nd	nd			
Iso-pentane	nd	nd			
N-pentane	nd	nd			
Hexanes +	nd	nd			

Total BTU/cu.ft. dry @ 60deg F & 14.7psia, calculated: 765

Specific gravity, calculated: 0.661

Remarks:

Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.43

nd = not detected. na = not analyzed. Isotopic composition of carbon is relative to VPDB. Isotopic composition of hydrogen is relative to VSMOW. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100 percent. Mol. % is approximately equal to vol. %

Typical Compositional Ranges of Methanes - McClure