

BEFORE THE OIL AND GAS CONSERVATION COMMISSION  
OF THE STATE OF COLORADO

IN THE MATTER OF ALLEGED VIOLATIONS OF THE RULES ) CAUSE NO. 1V  
AND REGULATIONS OF THE COLORADO OIL AND GAS )  
CONSERVATION COMMISSION BY **ENCANA OIL & GAS** ) DOCKET NO. 0507-OV-06  
**USA INC.**, GARFIELD COUNTY, COLORADO )

NOTICE OF HEARING

On January 30, 2003, Wright Water Engineers ("WWE") on behalf of EnCana Oil & Gas (USA) Inc. ("EnCana") collected water samples from a water well located in the NW¼ NW¼ of Section 10, Township 7 South, Range 92 West, 6<sup>th</sup> P.M. The well was constructed on February 12, 1997 for Michael Dietrich under Colorado Division of Water Resources Permit No. 29972 as a domestic water well. This well is hereinafter referred to as the "former Dietrich water well". The sampling was conducted as part of a baseline water quality study performed prior to gas well drilling. The results of the laboratory analysis showed the quality of the water from the former Dietrich water well was similar to other Wasatch Formation water wells in the area and methane gas was not detected in the sample.

Between April 30, 2003 and March 30, 2004 five (5) gas wells were drilled by EnCana on the P3 well pad located in the SE¼ SE¼ of Section 3, Township 7 South, Range 92 West, 6<sup>th</sup> P.M. The nearest gas well on the P3 well pad is approximately 860 feet northwest of the former Dietrich water well.

On April 8, 2004 the former Dietrich water well was sampled by Cordilleran Compliance Services ("Cordilleran") on behalf of EnCana as part of the West Divide Creek Seep investigation. The result of the laboratory analysis showed dissolved methane to be present in the well at the concentration of 6.5 milligrams per liter (mg/l). The former Dietrich water well was also sampled by Colorado Oil and Gas Conservation Commission ("COGCC") staff on April 8, 2004. Methane was detected in this sample at a concentration of 10 mg/l. Additional sampling was planned to determine the source of the methane in the former Dietrich water well.

On April 15, 2004 a gas sample was collected by Cordilleran from the former Dietrich water well for compositional and stable isotopic analysis to determine the source of the gas. A gas sample was collected by COGCC staff from the former Dietrich water well for compositional and stable isotopic analysis on April 19, 2004. The analytical results from both samples were similar. In addition to methane, the results of the compositional analysis showed the presence of ethane, propane, n-butane, iso-butane, n-pentane, iso-pentane, and hexanes. These heavier hydrocarbon gases are indicative of thermogenic gas. Analysis of the stable isotopes of carbon indicated the methane was a mixture of gas from thermogenic and biogenic sources which made it difficult to determine the source of the gas without further analysis.

In June 2004 EnCana purchased the Dietrich property and water well.

On July 22, 2004 a free gas sample was collected by Cordilleran from the former Dietrich water well for compositional and stable isotopic analysis. In addition to methane, the results of the compositional analysis showed the presence of ethane, propane, n-butane, iso-butane, n-pentane, iso-pentane, and hexanes as in the April 2004 samples, but the stable isotopes of carbon showed conclusively that the methane was of thermogenic origin and very similar to the gas produced from Williams Fork Formation wells in the area.

The compositional and isotopic sampling was repeated for conformation purposes by Cordilleran on September 21, 2004. The analytical results confirmed the findings of the previous tests, that the gas in the former Dietrich water well was of thermogenic origin and very similar to gas produced from the Williams Fork Formation in the area.

On September 22, 2004, COGCC staff inspected the P3 well pad located in the SE¼ SE¼ of Section 3, Township 7 South, Range 92 West, 6<sup>th</sup> P.M., as part of the investigation of the causes of the elevated methane concentrations observed at the former Dietrich water well. Staff observed bubbles coming up around the outside of the wellhead of the Magic 10-2 Well. COGCC staff measured the pressure on the bradenhead access of each of the five (5) wells on the P3 well pad and found three (3) of the five (5) wells had significant bradenhead pressure. COGCC staff immediately notified EnCana of the bubbles and pressures, and discussed a remedial action plan to address them.

On September 28, 2004, COGCC staff issued a Notice of Alleged Violation ("NOAV") to EnCana for failure to adequately cement one or more of the wells on the P3 well pad as evidenced by the observed bubbles. The NOAV cited Rule 209, which requires that gas and water strata be sealed to prevent contamination and the intermingling of their contents, Rule 324.A.a. which requires an operator to prevent the unauthorized discharge of gas and to prevent significant adverse environmental impact to water resources, and Rule 327., which requires operators to prevent the uncontrolled blowing of gas. The NOAV required abatement which included running a variety of logs and surveys on the wells to identify the source of the bubbles and where cement integrity was lacking. The information would be used to determine the most effective way to conduct remedial cementing on the wells and isolate the gas bearing zones. The abatement plan required gathering compositional and isotopic gas data to compare to the gas found in the nearby former Dietrich water well. The abatement plan further required that the wells be remediated to eliminate the leaking bubbles and required venting of the bradenheads to reduce the likelihood of contamination while remediating the wells. Three (3) separate deadlines were set for the different phases of abatement. Remediation of the bubbles was to have

been accomplished by November 28, 2004.

On October 1, 2004, EnCana's contractor Environmental Services Network Rocky Mountain ("ESN") measured bradenhead pressure on all five (5) gas wells on the P3 well pad. In addition, it collected bradenhead gas samples from four (4) of the five (5) wells. There was no gas flow from the bradenhead of the Magic 10-1A Well so it was not sampled. The analytical results confirmed the similarity of the gas from wells on the P3 well pad and gas present in the former Dietrich water well.

On October 4, 2004 ESN identified three (3) small gas seeps on the east side of the former Dietrich property. The analytical results for the gas samples from the seeps show the gas is similar to the gas sampled from wells on the P3 pad, but the seep gases have been altered by bacterial oxidation.

On October 6, 2004 ESN collected soil gas samples with probes from three (3) feet below the ground surface ("bgs") adjacent to each gas well on the P3 well pad. The samples were analyzed for stable isotopes and composition. The analytical results showed the soil gases from the P3 well pad are similar to bradenhead gas and Williams Fork Formation gas produced by gas wells in the area, but the gases have been altered by bacterial oxidation.

On October 6 and 25, 2004 EnCana ran temperature surveys on the Magic 10-1 Well which showed a cooling anomaly at 880 feet bgs indicative of gas flow just below the surface casing shoe. During testing of flow rates from the bradenheads of the wells on the P3 well pad it was determined that the Magic 10-1 Well was the only well on the pad that would not completely blow down and it sustained a flow rate of approximately 40 thousand cubic feet per day ("mcfpd") for several weeks until remediated. The bradenhead on the Magic 10-1 Well would build up to approximately 250 pounds per square inch gage ("psig") prior to remediation.

On October 8, 2004 COGCC staff issued a NOAV to EnCana for impacting the former Dietrich water well with gas from the Williams Fork Formation. The NOAV cited Rule 209. which states special precautions shall be taken while drilling wells to guard against the contamination of fresh water by gas and that all oil, gas, and water strata above the producing horizon shall be sealed or separated in order to prevent the intermingling of their contents, Rule 324.A.a. which states the operator shall take precautions to prevent significant adverse environmental impact to water resources and prevent the unauthorized discharge of gas, and Rule 906.a and b., which state that impacts resulting from releases shall be investigated and cleaned up as soon as practicable and that any release of any size which impacts or threatens to impact any waters of the state, residence or occupied structure shall be verbally reported to the Director as soon as practicable after discovery. The NOAV required EnCana to submit a Site Investigation and Remediation Work Plan, Form 27 to further address the well impact. The Form 27 submittal deadline was October 29, 2004.

On October 29, 2004 EnCana submitted the Site investigation and Remediation Work Plan, Form 27 designed to further investigate, monitor and mitigate the water well impact.

On November 9, 2004 EnCana performed a remedial squeeze on the Magic 10-1 Well at a depth of 840 feet bgs which eliminated the temperature survey anomaly just below the surface casing shoe. The repairs were verified by a temperature survey and cement bond log run by EnCana on November 17, 2004. The remedial cement squeeze completed abatement of the September 28, 2004 NOAV which was written to address gas well conditions at the P3 pad. Abatement has not been completed on the second NOAV which was written to address the impact to the former Dietrich water well. Monitoring and mitigation contained in the Site Investigation and Remediation Work Plan, Form 27 is ongoing.

On January 3, 2005 Cordilleran sampled the former Dietrich water well for methane on behalf of EnCana. Methane was detected in the sample at a concentration of 21 mg/l.

On January 5, 2005 Dr. Anthony Gorody submitted a report to EnCana and the COGCC staff regarding the P3 well pad and the investigation of the surrounding area. Based on the compositional and isotopic analysis results, he concluded that the Magic 10-1 Well is the most likely source of the gas that has impacted the former Dietrich water well and caused the nearby surface seeps. COGCC staff agrees with Dr. Gorody's conclusions that the water well has been impacted by gas from one or more of the gas wells on the P3 well pad.

On January 11, 2005 the former Dietrich water well was sampled for dissolved methane by Cordilleran on behalf of EnCana. Methane was detected in the sample at a concentration of 7.4 mg/l.

On February 3, 2005 the former Dietrich water well was sampled for dissolved methane by Cordilleran on behalf of EnCana. Methane was detected in the sample at a concentration of 12 mg/l.

On March 28, 2005 the former Dietrich water well was sampled for methane by Cordilleran on behalf of EnCana. Methane was detected in the sample at a concentration of 1.8 mg/l. A gas sample was also collected and the analytical results indicate the gas is a mixture of thermogenic and biogenic gas.

On May 20, 2005 EnCana measured the bradenhead pressure of the wells on the P3 well pad. Bradenhead pressure on the Arbaney 3-16C Well was 120 psig. The other wells had zero bradenhead pressure.

EnCana should be found in violation of Rule 209., for failure to exercise due care in the protection of water bearing

formations and to guard against contamination of fresh water by objectionable gas, Rule 324.A.a., for failure to prevent the unauthorized discharge of gas into a water resource and Rules 906.a. and b., for failure to control and contain the release of gas immediately upon discovery and to notify the Director of a gas release which impacted the waters of the state on the Magic 10-1 Well located in the SE¼ SE¼ of Section 3, Township 7 South, Range 92 West, 6<sup>th</sup> P.M. In addition, EnCana should be required to continue to follow the Site Investigation and Remediation Work Plan, Form 27 until the impact to the former Dietrich water well and surrounding area has been mitigated, including any subsequent revisions and/or adjustments required by the COGCC staff. Further, EnCana should be assessed an appropriate fine for the above-described rule violations.

NOTICE IS HEREBY GIVEN, that the Oil and Gas Conservation Commission of the State of Colorado, pursuant to the above, has scheduled the above-entitled matter for hearing on:

Date: Monday, July 11, 2005  
Time: 10:00 a.m.  
Place: Garfield County Fairgrounds  
New Indoor Arena Meeting Facility  
1001 Railroad Avenue  
Rifle, CO 81650

In accordance with the Americans with Disabilities Act, if any party requires special accommodations as a result of a disability for this hearing, please contact Matt Walker at (303) 894-2100 ext. 139, prior to the hearing and arrangements will be made.

Pursuant to said hearing in the above-entitled matter at the time and place aforesaid, or at any adjourned meeting, the Commission will enter such orders as it deems appropriate to protect the health, safety and welfare of the public and to prevent the waste of oil and gas, either or both, in the operations of said field, and to carry out the purposes of the statute.

**In accordance with Rule 509., any interested party desiring to protest the granting of the application or to intervene on the application should file with the Commission a written protest or intervention no later than June 27, 2005, briefly stating the basis of the protest or intervention.** Such interested party shall, at the same time, serve a copy of the protest or intervention to the person filing the application. An original and nine (9) copies shall be filed with the Commission (Rule 503.f.). **Anyone who files a protest or intervention must be available to participate in a prehearing conference during the week of June 27, 2005.** Pursuant to Rule 503.e., if a party who has received notice under Rule 503.b. wishes to receive further pleadings in the above-referenced matter, that party must file a protest or intervention in accordance with these rules.

IN THE NAME OF THE STATE OF COLORADO

OIL AND GAS CONSERVATION COMMISSION  
OF THE STATE OF COLORADO

By \_\_\_\_\_  
Patricia C. Beaver, Secretary

Dated at Suite 801  
1120 Lincoln Street  
Denver, Colorado 80203