

## Why Encana refutes U.S. EPA Pavillion groundwater report

**Denver, Colorado (December 12, 2011)** – Encana Oil & Gas (USA) Inc., a subsidiary of Encana Corporation, strongly disagrees with the U.S. Environmental Protection Agency’s (EPA) preliminary conclusions in its draft report related to the groundwater study in the Pavillion natural gas field of Wyoming. The EPA’s data from existing domestic water wells aligns with all previous testing done by Encana in the area and shows no impacts from oil and gas development. Of most concern, many of the EPA’s findings from its recent deep monitoring wells, including those related to any potential connection between hydraulic fracturing and Pavillion groundwater quality, are conjecture, not factual and only serve to trigger undue alarm.

Encana is especially disappointed that the EPA released its draft report, outlining preliminary findings, before subjecting it to qualified, third-party, scientific verification. This precipitous action runs counter to the cooperative approach that Encana and other state, federal and local participants in the Pavillion Working Group took in working alongside the EPA in its investigation for more than three years.

“These preliminary conclusions do not stand up to the rigor of a non-partisan, scientific-based review and that is of paramount importance to every natural gas producing community, every citizen and business that relies on natural gas and every industry worker,” said Eric Marsh, Encana’s Executive Vice-President, Natural Gas Economy & Senior Vice-President, USA Division. “Safe and responsible natural gas development is vital to North America’s energy security, and hydraulic fracturing is an important, necessary and safe part of natural gas development.”

Numerous discrepancies exist in the EPA’s approach, data and analysis. A few of these discrepancies are:

- The EPA report ignores well-known historical realities with respect to the Pavillion field’s unique geology and hydrology. (See [BACKGROUND](#) below)
- The EPA drilled two deep monitoring wells (depth range: 783 – 981 feet) into a natural gas reservoir and found components of natural gas, which is an entirely expected result. The results in the EPA deep wells are radically different than those in the domestic water wells (typically less than 300 feet deep), thereby showing no connection. Natural gas developers didn’t put the natural gas at the bottom of the EPA’s deep monitoring wells, nature did.
- There is unacceptable inconsistency between EPA labs’ analysis for numerous organic compounds reported to have been found in the EPA deep monitoring wells. Data is not repeatable and the sample sets used to develop these preliminary opinions are inadequate.
- Several of the man-made chemicals detected in the EPA deep wells have never been detected in any of the other wells sampled. They were, however, detected in many of the quality control (blank) samples – which are ultra purified water samples commonly used in testing to ensure no contamination from field sampling procedures. These two observations suggest a more likely connection to what it found is due to the problems associated with EPA methodology in the drilling and sampling of these two wells.
- The EPA’s reported results of all four phases of its domestic water well tests do not exceed federal or state drinking water quality standards for any constituent related to oil and gas development.

Conclusions drawn by the EPA are irresponsible given the limited number of sampling events on the EPA deep wells and the number of anomalies seen in the data. At the same time, the EPA repeatedly attempts to link limited instances of localized shallow groundwater contamination from historical production pit locations to its broader investigation. In 2005, Encana identified and self-reported these pit locations and entered them into a voluntary remediation program administered by the State of Wyoming.

Given the numerous flaws contained in this report, Encana believes genuine, qualified third-party review is essential. Unfortunately, Encana does not believe that the EPA has subjected any of its data to a qualified, truly independent third party for peer review. We urge EPA and other government officials to ensure that such an independent review is made.

Encana employs a collaborative stakeholder engagement practice to address stakeholder concerns, including hydraulic fracturing. Since some of the residents of Pavillion first expressed concerns about potential impacts from natural gas development on their drinking water, Encana has taken their concerns very seriously.

“We have and continue to work extensively with Wyoming regulators and independent laboratories to determine whether natural gas development is affecting the community’s water quality. To date, all studies found no connection. We care about the impacts of energy development on the environment and we are committed to working to ensure our operations do not impact groundwater,” Marsh said.

## **BACKGROUND**

### **Pavillion, Water and Natural Gas**

Pavillion is a farming and ranching community located in Fremont County, Wyoming with a population of about 175 residents. Drilling natural gas wells began in the Pavillion area in 1960. Encana acquired the Pavillion asset through a corporate acquisition of Tom Brown, Inc. in 2004. From 2004 to 2007 Encana drilled 44 wells. After drilling its last Pavillion well in 2007, Encana has not invested in growing production from this mature field where about 125 wells currently produce about 10 million cubic feet of natural gas per day – less than 0.3 percent of Encana’s daily production.

In 2005 a local resident complained of issues regarding the quality of the drinking water in Pavillion. Encana conducted seven rounds of tests between 2005 and 2007. The company sought the expertise of independent laboratories and the Wyoming Department of Environmental Quality (WDEQ).

In 2008 a small group of Pavillion citizens and environmental activists asked the U.S. Environmental Protection Agency (EPA) to conduct a further investigation into water quality issues in the area. Encana immediately began working closely with the EPA and in 2010 became part of a voluntary working group with the WDEQ, the Wyoming Oil and Gas Conservation Commission (WOGCC), Wyoming Geologic Survey (WGS), Wyoming State Engineer’s Office (SEO) and the federal Bureau of Land Management. The group consulted with the Wind River Environmental Quality Commission and the Northern Arapaho and Eastern Shoshone Tribes. As part of its ongoing commitment to the community, Encana contributed to the cost of supplying local residents with drinking water while further study was pursued. The EPA conducted three tests, releasing reports in August 2009, August 2010 and again in December 2011. Since the working group’s inception, the group has asked the EPA to consider all potential sources and reasons for the poor water quality in Pavillion, including agriculture, septic systems, and bacterial activity in the drinking water, but that has not occurred to date.

As far back as the 1880s, U.S. Geological Survey (USGS) reported about poor water quality in Pavillion. More recent USGS reports dating back to 1959 have documented Pavillion water as unsatisfactory for domestic use due to high concentrations of naturally occurring sulfate, total dissolved solids and pH levels which commonly exceed state and federal drinking water standards.

Pavillion is a shallow natural gas field. Naturally occurring methane (natural gas) exists throughout the subsurface geology, filling channel sands from millions of years ago. This natural gas is commonly known to have been present in groundwater from domestic wells for decades, dating back to well before any natural gas drilling started. Pavillion is unusual in that commercial natural gas is present at depths as shallow as 1,100 feet because there is no cap rock forming a barrier between the deeper natural gas and shallow intervals. Therefore, over the geologic ages, this has allowed the upward migration of deeper natural gas to shallow depths. The natural accumulations of gas and water are in discontinuous (unconnected) sand pockets. At the same time, this geology does not allow water to move from one area to another because the discontinuous sand pockets are not regionally connected. Therefore, this area does not have a large continuous aquifer.

In 2005 Encana self-disclosed to the State of Wyoming that the company wanted to evaluate some historical production pits that Encana inherited as part of the Pavillion field acquisition. Under the direction of the state, Encana is voluntarily remediating these pits, where testing has found limited, isolated and well defined impact that has had no affect on local drinking water.

### **Encana Corporation**

Encana is a leading North American natural gas producer that is focused on growing its strong portfolio of resource plays producing natural gas and natural gas liquids in key basins from northeast British Columbia to east Texas and Louisiana. By partnering with employees, community organizations and other businesses, Encana contributes to the strength and sustainability of the communities where it operates. Encana common shares trade on the Toronto and New York stock exchanges under the symbol ECA.

Further information on Encana Corporation is available on the company's website, [www.encana.com](http://www.encana.com), or by contacting:

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