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The Fracks are Alright

Fracking risk 'negligible' according to industry study James Waterman
Staff Writer

There is very little risk from the use of hydraulic fracturing for extracting shale gas, according to a new study.

Responding to public concerns about the use of hydraulic fracturing for extracting shale gas, the western Canadian oil and gas industry has undertaken a scientific study to examine the potential risks of the practice.

“Tremendous natural gas resource potential has been identified in shale basins in Western Canada,” said Scott Hillier of ConocoPhillips, part of the team leading the project, which was funded by the Science and Community Environmental Knowledge Fund (SCEK) and the Alberta Upstream Petroleum Research Fund (AUPRF) and managed by the Petroleum Technology Alliance Canada (PTAC).

“Producing natural gas from these areas has become economically feasible principally due to technological advancements in horizontal drilling, innovative earth imaging and the use of hydraulic fracturing,” he continued.

“While hydraulic fracturing of oil and gas wells has been safely used since the 1950’s, there has been limited scientific evaluation of the potential risks to the environment.”

A key concern for both the public and industry is the protection of drinking water from contamination related to fracturing activities.

The project team conducted a technological assessment of the current fracturing methods, as well as research into pathways available to fracturing fluids during injection, in preparation for examining the potential risks. They also analyzed the chemicals used for fracturing and examined incident reports related to fracturing.

Finally, surveys of best management practices, geological reviews of shale gas basins in Canada and present regulations were also performed.

The work resulted in a report titled *The Modern Practices of Hydraulic Fracturing: A Focus on Canadian Resources*.

“The report examines the risk of groundwater contamination from hydraulic fracturing and presents the results of a highly technical analysis in layman’s terms,” said Hillier.

“The report details the research conducted by ALL Consulting that demonstrates the risk of groundwater contamination from hydraulic fracturing is negligible, and that the promise of clean, abundant energy from shale gas can be realized,” he added.

“The study was conducted so more knowledge regarding hydraulic fracturing and the risks associated with the practice could be available for both regulators and the public.”

The study was conducted from March 2011 to June 2012.

“In order to assess the potential risks to groundwater associated with hydraulic fracturing, the researchers identified and analyzed the pathways through which contamination could theoretically occur,” said Hillier.

The pathways included vertical fracturing that occur naturally or during fracturing, poor well construction and migration of fracturing fluids.

“The analysis in this report considered only the subsurface pathways that would potentially result from the hydraulic fracturing operations, and not those events that may occur in other phases of oil and gas development,” said Hillier.

“Analysis of each of these pathways demonstrates that it is highly improbable that fracture fluids or reservoir fluids would migrate from the production zone to a fresh water source as a result of hydraulic fracturing,” he added.

The pathways were examined based on public concerns.

“Many public concerns have been voiced in the media,” said Hillier. “And these concerns were recognized as part of the study’s scope development. Information was also solicited from oil and natural gas operators and the study’s proponents as to the issues and concerns they felt need further analysis.”

The scope of the project was designed to address the majority of issues related to fracturing and groundwater contamination as expressed by the public and the industry regulators.

“Companies need to plan and collect as much data as possible about their site conditions and then implement the practices best suited for those conditions to reduce the incidents where mitigation might be required,” said Hillier, discussing the key learnings from the project.

“The first and best approach is prevention.”

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