Alberta

Fracking for shale gas, oil and coal bed methane are new industries to Alberta, although the province is more advanced than other areas in Canada. While industry representatives like to point out that fracking has occurred for 50 years in the province – the Alberta Energy regulator states that 171,000 wells have been fractured since the 1950s – multi-stage, horizontal fracking presents new challenges.

According to the Alberta Geological Survey (AGS), there are 15 prospective shale gas formations in the province. The AGS estimates that five of these formations (Duvernay, Muskwa, Basal Banff/Exshaw, North Nordegg, and the Wilrich) may contain up to 1,291 trillion cubic feet (TcF) of shale gas. Alberta Energy reports that the province could contain an additional 500 TcF of coalbed methane (CBM). CBM, like tight and shale gas, is an unconventional gas. CBM wells can be drilled horizontally and fracking is often used to access gas trapped in coal seams. CBM typically uses less fracking fluid than shale gas since wells are not as deep. But because fracking occurs close to the surface, there is greater risk for contaminating drinking water supplies. Alberta’s Energy Resources Conservation Board acknowledged that Crew Energy and GasFrac Energy Services contaminated water sources by fracking the water table in Grande Prairie in September 2011.

The first commercial CBM well was drilled in 2001. According to an Albertan Environment webpage, “Over 17,000 CBM wells have been drilled or re-completed in the province as of March 2010 since coalbed methane production commenced several years ago. However, only a portion of these wells have recorded some production.”

Horizontal drilling and multi-stage fracking have also resulted in a conventional oil boom with an increase of 14 per cent in production from 2011 to 2012. For example, fracking in Cochrane and Goldenkey Oil’s proposed project for Lethbridge – which, if approved, could begin in early 2014 – are for oil. There are also estimates of 423.6 billion barrels of shale oil in the province.

The proposed Lethbridge project is about 70 kilometres away from a fracking fight involving members of the Blood (or Kainai) First Nation, Murphy Oil and Bowood Energy. In 2010, the Blood Reserve’s Chief and Council signed a $50 million deal with the energy companies. But there wasn’t agreement on the deal as many in the community opposed it. Three Indigenous women – Lois Frank, Elle-Maija Apiniskim Tailfeathers and Jill Crop Eared – were arrested when they blocked fracking trucks from accessing their land. More than one year later charges against the women were stayed.

Farmers and landowners are up in arms over the impact fracking is having on their drinking water, crops and farms. Landowner Jessica Ernst launched a lawsuit against Encana, Alberta Environment and the Energy Resources Conservation Board over contamination of her well water. In October 2013, an Alberta Court ruled that the Alberta Energy Regulator is immune to private legal claims. Ernst vowed to appeal the ruling and will continue her lawsuit against Encana.
There are a growing number of stories from landowners of the impacts fracking is having on drinking water as well as their dairy and cattle farms. The Alberta Association of Municipal Districts and Counties passed Resolution 2-13S in the spring of 2013 citing concerns about the impact fracking has on drinking water, changes in land formations, and increased seismic activity. The association called on the Alberta government to report on the impacts of seismic activity, require mapping of all aquifers, and “protect surface and groundwater supply by imposing a minimum wellbore casing depth below aquifer zones.”

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