

Bulletin 2012-02

January 23, 2012

Hydraulic Fracturing: Interwellbore Communication between Energy Wells

In recent years, there has been an increase in energy companies using horizontal wells and multistage hydraulic fracturing to stimulate the flow of oil or gas in deep formations throughout Alberta. The Energy Resources Conservation Board (ERCB) is aware that communication between a wellbore being stimulated and an offset energy wellbore that penetrates the same formation can and has occurred. Offset wellbores include wells that are being drilled or stimulated or those that are producing, suspended, or abandoned.

The ERCB fully expects licensees to maintain well control at all times so as not to impact the environment, public safety, and efficient recovery of the resource and to prevent adverse effects to offset energy wellbores. The ERCB reminds industry that it is obligated to plan safe and effective hydraulic fracturing operations and report any unintentional communication between energy wellbores.

Licensees are reminded that in maintaining well control, they are required to prevent adverse effects to offset wellbores through appropriate planning. Such appropriate planning includes the following measures:

- Assessing the risks that hydraulic fracturing may have on offset energy wellbores and how those risks are influenced by geology and the completion practices being employed. Undertaking fracture propagation modelling prior to fracturing operations may assist in determining their potential area of influence.
- Understanding the area of influence that may be impacted by well stimulation operations and identifying all wellbores, including abandoned and suspended wells that may be in close subsurface proximity.
- Notifying offset well licensees of pending hydraulic fracturing that may impact offset wellbores.
- Collaborating with offset well licensees to ensure effective control of all wells.

The ERCB expects well licensees to immediately report any instance of unintended interwell communication to the nearest ERCB Field Centre. As part of incident reviews by ERCB staff, the effectiveness of a company's hydraulic fracturing communication and well control plan will be considered. The ERCB will initiate enforcement action against any licensee in noncompliance with ERCB requirements.

The ERCB continues to monitor and assess the risk of these communication events as part of the Unconventional Oil and Gas Regulatory Framework (URF). The URF project was established to develop a new regulatory environment, review the effectiveness of current requirements in light of new technologies, and make any changes deemed necessary.

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