

## Return to Written Question

THE HONOURABLE ROBERT R. MCLEOD  
PREMIER

### **Horizontal Fracturing Emissions, Fluids And Inspections**

Mr. Speaker, I have a Return to Written Question asked by Mr. O'Reilly of the Minister Responsible for the Office of the Regulator of Oil and Gas Operations on June 29, 2016 regarding horizontal fracturing emissions, fluids and inspections.

Mr. Speaker as there is no ministerial portfolio known as Minister Responsible for the Office of the Regulator of Oil and Gas Operations I am exercising my prerogative as Premier and taking it upon myself to provide a response to Mr. O'Reilly's questions. For future reference, I would suggest that questions concerning the operations of the Office of the Regulator should be directed to the Minister of Industry, Tourism and Investment as the Minister responsible for the *Oil and Gas Operations Act*.

#### **1. The quantity of greenhouse gas emissions due to flaring and for how many days flaring occurred**

The Regulator is now able to supply the information requested. Section 67 of the *Oil and Gas Drilling and Production Regulations* prohibits flaring unless it is authorized by the Regulator, or necessary in an emergency situation. ConocoPhillips received authorization from the National Energy Board, the oil and gas regulator before devolution, to flare from the E-76 and P-20 wells, the two wells that were horizontally fractured.

Flaring can be necessary when there is no infrastructure to transport produced gases to market, including gases produced from the testing of a well. It also reduces the greenhouse gas potency of methane, which is up to twenty-five times more potent than carbon dioxide as a greenhouse gas.

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**Dodo Canyon E-76:**

Flaring occurred at the Dodo Canyon E-76 well from March 2, 2014 to March 20, 2014 (18 days).

The total volume flared was 1,595 E<sup>3</sup>m<sup>3</sup>, which resulted in flaring direct Co<sub>2e</sub> (carbon dioxide equivalent) emissions of 4,074 tonnes.

**Mirror Lake P-20:**

Flaring occurred at the Mirror Lake P-20 well from March 17, 2014 to April 4, 2014 (18 days).

The total volume flared was 1,628 E<sup>3</sup>m<sup>3</sup>, which resulted in flaring direct Co<sub>2e</sub> emissions of 4,156 tonnes.

**2. The total volume of fracking fluid used, fracking fluids recovered and fracking fluids left in the ground.**

OROGO is a participant in FracFocus.ca, as was the National Energy Board at the time the E-76 and P-20 wells were drilled. The water volume and hydraulic fracture fluid composition for each well was reported to FracFocus.ca.

**Dodo Canyon E-76:**

The total load fluid (fluid injected into the well) for the Dodo Canyon E-76 well was 6,586 m<sup>3</sup>. The load fluid consisted of 15% HCl acid, fracture water (fracking fluid) and fresh water. 96.5% of the load fluid, or 6,355.5 m<sup>3</sup>, was fracking fluid. The total load fluid recovered was 1,780 m<sup>3</sup>.

The fracturing occurred in the targeted petroleum producing zone at a depth of 1790m (about 5873 feet) from the surface.

**Mirror Lake P-20:**

The total load fluid for the Mirror Lake P-20 well was 7,920 m<sup>3</sup>. The load fluid consisted of 15% HCl acid, fracture water (fracking fluid) and fresh water. 95.5% of the load fluid, or 7,563.6 m<sup>3</sup>, was fracking fluid. The total load fluid recovered was 1,857 m<sup>3</sup>.

The fracturing occurred in the targeted petroleum producing zone at a depth of 2019m (about 6624 feet) from the surface.

**3. Activities carried out to monitor the condition of well casings including details and results of any plan for the continuous monitoring of well casing integrity and measures to detect leakage.**

Mirror Lake P-20 and Dodo Canyon E-76 were drilled and completed under the regulation of the National Energy Board, prior to April 1, 2014. Section 39 of the *Canada Oil and Gas Drilling and Production Regulations* then in effect for these wells, contain specific requirements for the design of well casings, including the requirement that they be “designed so that the anticipated conditions, forces and stresses that may be placed on them are withstood... and that the integrity of... potable water zones, is protected”.

Further, section 43 requires an operator to “ensure that the casing is pressure-tested to the value required to confirm its integrity for maximum anticipated operating pressure”.

The same requirements are mirrored in the territorial *Oil and Gas Drilling and Production Regulations*.

When the wells came under the jurisdiction of the GNWT Regulator of oil and gas operations on April 1, 2014, they were already shut in.

Between January and March 2016, ConocoPhillips abandoned (permanently plugged and cut and capped) these two wells, along with two other petroleum wells and three groundwater monitoring wells regulated by the GNWT Regulator of oil and gas operations. These activities were authorized by the Chief Conservation Officer and were monitored and inspected by staff of the Office of the Regulator of Oil and Gas Operations (OROGO). During the approximately two months of abandonment operations and subsequent follow-up, OROGO conducted four inspections over a total of 8 days and one non-inspection site visit.

Section 57 of the *Oil and Gas Drilling and Production Regulations* requires that operators monitor and inspect suspended wells. No such requirement is in place for wells that have been abandoned in accordance with the regulations. However, section 57 of the regulations puts an ongoing responsibility on an operator to ensure that a well is left in a condition that prevents leakage.

Likewise, there is no legislated mandate for the Regulator to continuously monitor or inspect wells that have been abandoned in accordance with the regulations. However, OROGO has recently launched a voluntary program, Well Watch, which encourages local land users to contact OROGO directly if they notice any changes in the status of old abandoned wells. OROGO will follow up with the community, conduct any necessary inspections and identify the organization responsible for any repair work.

**4. Any results from the annual surface and ground water monitoring, indicating changes to the ground water and surface water quality, as a result of the ConocoPhillips horizontal fracturing program.**

The *Sahtu Dene and Métis Comprehensive Land Claim Agreement* gives the Sahtu Land and Water Board (SLWB) primary responsibility for regulating land and water use, and conserving land and water resources in the Sahtu Settlement Area. ConocoPhillips' surface and ground water monitoring reports are submitted to the SLWB, as a condition of the water licence associated with the project. These annual reports are available on the SLWB's public registry at:  
<http://www.mvlwb.ca/Boards/slwb/SitePages/search.aspx?app=S14L1-003>.

**5. What monitoring and inspection takes place to verify the contents of the surface and ground water monitoring plan reports submitted annually by ConocoPhillips.**

Surface and groundwater monitoring reports are a requirement of the ConocoPhillips' water licence, issued by the SLWB. Monitoring and inspection activities are carried out by the Department of Environment and Natural Resources.

Please be advised there is no Ministerial portfolio known as Minister Responsible for the Office of the Regulator of Oil and Gas Operations and for future reference I would suggest that questions concerning the operation of that office be directed to the Minister of Industry, Tourism and Investment, as the Minister responsible for the *Oil and Gas Operations Act*.

Thank you, Mr. Speaker.