

## Nick Kusnetz

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**From:** Currie, Graham <Graham.Currie@bcogc.ca>  
**Sent:** Thursday, November 03, 2011 1:25 PM  
**To:** Nick Kusnetz  
**Subject:** RE: Safety Advisory 2010-03 Communication During Fracture Stimulation

Nick - I did get that info (see below) and thanks for your interest in the BC Oil and Gas Commission's Safety Advisory - communications during hydraulic fracturing stimulation.

Through modernized regulations and oversight by the Commission, British Columbia is a province that continues to make strides in establishing the safest standards possible for today's oil and gas sector.

Protection of both the environmental and the public is our primary priority, and we continue to advance our actions to increase awareness of B.C.'s oil and gas technology and operations.

Our progress will involve the launch of an online registry in January 2012, which will provide more details about the hydraulic fracturing process and will make it mandatory for industry to disclose details about the additives used during their extraction process. You can view the recent announcement about our plans [here](#).

Below, please find the information available on the incidents you requested. As Ken indicated when speaking with you, this information is currently reported to the Commission on a voluntary basis. Sorry, but we can not disclose the name of the operator.

Please be aware, with multi-well pads, some level of communication between adjacent horizontal wellbores is common due to the size of the fractures and close spacing of the laterals. The safety advisory was issued to ensure worker safety, and to notify drilling contractors of the possibility of intersection of over-pressured fractures within target formations in areas where hydraulic fracturing is being used.

Thanks again for your inquiry and please let us know if we can be of more help.

1. Location: Dawson Creek  
Time Period: 2009  
Horizontal distance between wellbores: 428m  
Kick volume: NA  
Comments: None
2. Location: Dawson Creek  
Time Period: 2009  
Horizontal distance between wellbores: 400m  
Kick volume: NA  
Comments: None
3. Location: Dawson Creek  
Time Period: 2010  
Horizontal distance between wellbores: 50m  
Kick volume: Filled adjacent wellbore with mud  
Comments: Drilling intersected deleted fracture
4. Location: Dawson Creek  
Time Period: 2010  
Horizontal distance between wellbores: 670m  
Kick volume: 80m3  
Comments: No gas to surface

5. Location: Grande Prairie/Leland (Alberta)  
Time Period: na  
Horizontal distance between wellbores: na  
Kick volume: Filled up intersected wellbore  
Comments: General comments from the operator rep was events of this type have happened frequently in the past.
6. Location: Dawson/Tupper  
Time Period: Dec. 2009  
Horizontal distance between wellbores: 715m  
Kick volume: NA  
Comments: None
7. Location: Dawson/Tupper  
Time Period: Feb 2009  
Horizontal distance between wellbores: 670m  
Kick volume: NA  
Comments: Drillstring got stuck and had to sidetrack lateral
8. Location: Dawson/Tupper  
Time Period: May 2, 2010  
Horizontal distance between wellbores: 555m  
Kick volume: NA  
Comments: None
9. Location: Dawson/Tupper  
Time Period: May 3, 2010  
Horizontal distance between wellbores: 490m  
Kick volume: NA  
Comments: None
10. Location: Montney - Groundbirch  
Time Period: na  
Horizontal distance between wellbores: 650m  
Kick volume: NA  
Comments: None
11. Location: Montney - Groundbirch  
Time Period: na  
Horizontal distance between wellbores: 400m  
Kick volume: NA  
Comments: None
12. Location: Montney - Groundbirch  
Time Period: na  
Horizontal distance between wellbores: 600m  
Kick volume: 35 m3  
Comments: Drilling rig intersected a hydraulic fracture from an offset well where the completion had already been placed.
13. Location: Horn River Basin  
Time Period: 2009  
Horizontal distance between wellbores: 600m  
Kick volume: 20 m3  
Comments: The operator issued a safety bulletin to all HRB operators.
14. Location: Horn River Basin  
Time Period: 2009  
Horizontal distance between wellbores: na  
Kick volume: Less than 20 m3/caught early

Comments: The operator had unofficial reports from other HRB operators having done the same in the HRB.

15. Location: NW Alberta - Glacier  
Time Period: Oct. 2009  
Horizontal distance between wellbores: na  
Kick volume: Controlled kick, volume na  
Comments:

16. Location: Dawson Creek - Sunrise  
Time Period: Apr. 2009  
Horizontal distance between wellbores: na  
Kick volume: NA  
Comments: Fracture was already in place and then drilled through. Determination of intersection from pressure loss during drilling and drilling samples of frac sand.

17. Location: Dawson Creek - Sunrise  
Time Period: Sep. 2009  
Horizontal distance between wellbores: 440m  
Kick volume: NA  
Comments: Unable to frac leg 2 due to frac connecting to leg 1. Determined by pressure gauge in leg 1.

18. Location: Dawson Creek - Sunrise  
Time Period: Mar. 2010  
Horizontal distance between wellbores: 715m  
Kick volume: NA  
Comments: Producing well stopped producing during offset well stimulation. Connection between wells was not confirmed with well samples.

19. Location: Dawson Creek - Sunrise  
Time Period: Apr. 2010  
Horizontal distance between wellbores: 710m  
Kick volume: NA  
Comments: Frac In stimulated well killed production in the producing well. Confirmed by fluid samples in the producing well.

In addition - since issuing the Safety Advisory 1 ½ years ago, six similar incidents were reported dealing with stimulation to a new well - there was no communication with drilling wells:

1. Location: Dawson Creek - Swan  
Time Period: July 2011  
Horizontal distance between wellbores: 600m/300m  
Kick volume: NA  
Comments: Slight communication observed with two producing wellbores located on the same multi-well pad.

2. Location: Dawson Creek - Sunrise  
Time Period: Aug 2011  
Horizontal distance between wellbores: 300m  
Kick volume: NA  
Comments: Some communication resulting in fluid accumulation in the receiving wellbore.

3. Location: Dawson Creek - Swan  
Time Period: Aug. 2011  
Horizontal distance between wellbores: 530m  
Kick volume: NA  
Comments: Observed pressure response in receiving well.

4. Location: Dawson Creek - Swan  
Time Period: Sep. 2011

Horizontal distance between wellbores: 380m  
Kick volume: NA  
Comments: Observed pressure response in receiving well.

5. Location: Dawson Creek - Swan  
Time Period: May 2010  
Horizontal distance between wellbores: 410m  
Kick volume: NA  
Comments: None.

6. Location: Montney - Brassey  
Time Period: July 2010  
Horizontal distance between wellbores: 400m  
Kick volume: NA  
Comments: Observed pressure response in receiving well.



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