

The environmental risks of fracking in Eagle Plains

By PETER ION
Special to the Star

The absence of any big game in the vicinity of Eagle Plains on the Dempster Highway on a recent weekend likely had more to do with the duration of the hunting season than any exploratory activities undertaken by Northern Cross.

There is little doubt, however, that any actual hydraulic fracturing activity is not going to bring them back to the area in great numbers.

Members of the legislature's select committee travelling the territory this winter to gauge local feedback on the risks and benefits of fracking will have an unenviable task in separating fact from fiction. Heresay from heresy.

Based upon the U.S. (and most recently the U.K.) experiences, hydraulic fracturing is a deeply polarizing issue. It brings out the very best and the very worst in some people.

Jessica Ernst's one-woman (plus Toronto legal team) crusade against Encana, which allegedly contaminated her rural water wells at her Rosebud homestead in southern Alberta, is due to reach the high courts this autumn.

It has earned her recognition, and an award as an International Woman of Courage.

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THE NATURAL RELATIONSHIP – Bears scavenge upon the discarded gut piles from the caribou harvested during Whitehorse photographer Atsushi Sugimoto's recent expedition north of Eagle Plains. This natural predator-prey relationship would likely be impacted directly by human exploration and resource extraction in the area.

Less well-documented within the public domain is the true number of sub-surface "communications" episodes, in which pressurized injections of fracking fluid at one location are sensed at a distant inactive wellbore.

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(The Earth's obliquity, eccentricity and orbital elipsis introduces natural variation that cannot be ignored amidst the mounting case for anthropogenic origins of global warming.)

Likewise, cosmogenic isotopes, originating from beyond the planet's influence, and their subsequent decay, allow us to deduce erosion rates and that, for example, placer development can be linked to warming phases within the recent climate record.

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major human incursions into their home ranges.

Proposed fracking along the Dempster Highway may turn out to be inconsequential to the Porcupine herd.

Extended and extensive baseline

monitoring in the proposed exploration zones, especially associated with noise and groundwater pollution risks, should be made public without delay.

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The ex-CEO of Chesapeake Energy, Aubrey McLendon, currently under investigation by the SEC (for securing over a billion US dollars in personal loans using his stake in the company's wells as collateral) earned himself his own notoriety, courtesy of *Forbes Magazine*, as America's Most Reckless Billionaire.

The relatively short history of fracking is building its own archive of *David and Goliath* stories.

Today's landmark report by the IPCC has finally put a figure, of 95 per cent, on the degree of certainty of any human influence on climate change.

All statisticians know the significance of this percentage. The last of the holdout skeptics should be reading these reports closely now.

A copy of this report, and a transcript of Andrew Nikkiforuk's recent Yukon Beringia Interpretive Centre presentation, should be required reading to all fracking select committee members and participants in public fora.

Nikkiforuk's recent Alberta experience describing the hydro-carbon extractives sector "retirement party", to the sound of the bottom of barrels being scraped, should be a salutary message to all Yukoners.

Transmission line leakages of methane average out at five per cent; seven per cent of all wellbores are known to be leaking.

Maximum leakage rates from specific wells have hit nine per cent. Rarely have single-digit percentages been more worrisome.

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Despite low to zero levels of commercial sector interest in the recent territorial government oil and gas rights dispositions process, and the expiry last month of most of the permits held by Northern Cross Yukon at Eagle Plains, several permits remain valid.

Commercial interest in the shale subsurface is unlikely to diminish, despite the generally underwhelming results drawn from drilling of the CANOL and related shales in the N.W.T. recently.

Indeed, it will most likely ramp up should the proposed Yukon Energy LNG backup generator project pass environmental and utility board review.

The expiry of fixed-term price supply contracts on fuel feedstock could have repercussions in terms of seeking out alternative supply lines from within the territory.

Science and (of course) economics should be the co-drivers for all the risk-benefit decisions at the committee over the weeks ahead, be they convened in the potential gas-play zones of the Liard Basin, the Whitehorse Trough or the Old Crow Flats.

The evidential record exists in the strata. Dr Duane Froese's recent presentations across the territory reminded us of the importance of chemical signatures.

Oxygen isotopes provide insight into the extent of the glacial maxima in the recent geological record.

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No doubt there are a few climate change deniers who will use this to further their argument. That truly would be scraping the bottom of the barrel.

And so it is today. Isotopic fingerprinting serves to tell us the difference between biogenic and thermogenic methane, critical to determining the cause of any contamination in fracking zone.

Flaring the gas may help reduce the carbon equivalency of releases to air in drilling operations.

And if the territory is to experience fracking activity, at the very least there should be mandatory "green completion" practices written into legislation.

If necessary, this could be incentivized through the compliance carbon offset markets, with all risk borne by the operator. (Methane could be "valued" anywhere between 33 and 110 times higher than CO₂, depending on your chosen time horizon.)

With mining proposals in the territory now environmentally-mitigated by financial bonding for all post-closure cleanup costs, oil and gas sector operators should be forced to look at the Norwegian model, of national Sovereign Wealth Funds, to deliver benefits to all taxpayers.

In the 29 years since I first logged caribou movements in the Selwyn Mountains, there is strong evidence that northern species exhibit resilience and adaptive capacity to

herd.

Extended and extensive baseline

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Photos by ATSUSHI SUGIMOTO

A TRADITIONAL ACTIVITY – Photographer Atsushi Sugimoto made a recent expedition as part of a First Nation caribou hunt on the Dempster Highway just north of the Eagle Plains area. Here, a First Nation member prepares a bull caribou after the kill – a traditional harvesting activity that would be put under additional pressure as a result of exploration activity.