

A Submission To The Newfoundland Hydraulic Fracturing Review Panel

By D. Messervy, PhD.

Topics of Concern:

1. Potential Impacts on Surface Water
2. Potential Impacts on Ground Water
3. Wellbore Integrity
4. Seismicity and Geological Risks
5. Site Restoration
6. Socio-Economic Impacts

The following comments are specifically based on concerns regarding the current considerations of Hydraulic Fracturing in the Port au Port Bay on Newfoundland's west coast, but also are of concern for the larger picture of any oil exploration in the Gulf of Saint Lawrence.

On a personal note, although I am presently employed out of the province, I maintain my permanent home in Barachoix Brook, in Bay St. George, and will shortly be returning to live in Newfoundland permanently. As a scientist and an instructor in the field of Engineering, may I say at the outset that I am definitely not opposed to economic development and industrial activity. However, I also teach Environmental Responsibility. I am reasonably informed on the practice of hydraulic fracturing since I am currently teaching in the province of New Brunswick where, as I am sure you are aware, hydraulic fracturing is a contentious issue. My concerns are not for the process, but rather the location..this is definitely not a "one size fits all".

Concern #1: Potential Impacts on Surface Water

Here the concern is not only the contamination of the ponds on the Port au Port peninsula, of which there are few, and would undoubtedly be first used to provide the extensive amount of fresh water needed for the fracturing fluids, but also the likelihood that they would ultimately be used to store the wastewater.

The primary concern is the bay itself. The Black Spruce Exploration Corp. which is petitioning to use hydraulic fracturing on the West Coast is proposing to do so in the Port au Port Bay. To date most hydraulic fracturing activities have been on land, not in a bay where the usual problems with leakage and contamination could be catastrophic. That bay is already suffering from oil contamination from leaking old pipes left at Shoal Point from previous drilling activities. Fishermen are already reporting the loss of a once lucrative scallop population in the bay, with shells coming up empty.

No industrial activity of this type is ever 100% free of accidents and spills; fracture fluids and fossil fuels do not bode well for marine life. Ocean tides and currents have a tendency to ignore political boundaries. Fossil fuel contamination in the waters off the west coast of Newfoundland can migrate to the shores of the other provinces on the Gulf of Saint Lawrence...this issue is of concern to people beyond Newfoundland.

Concern #2: Potential Impacts on Ground Water

The shorelines of Bay St. George contain an abundance of pristine groundwater. After years of endangering the health of the local citizens by the use of questionable surface water as the sources of municipal drinking water, the towns of Stephenville and Kippens are now using the fabulous ground water in the water tables below their towns. In consideration of the fractured nature of the geology surrounding the Port au Port Bay, there can be no guarantee that fracking in the bay cannot ultimately contaminate the local water tables. The benefits of tapping the meagre amount of fossil fuel in this area is not worth the potential risks.

Concern #3: Wellbore Integrity

Statistics show that any well can occasionally leak, and a given percent of those hydraulically fractured fail. Given the nature of the geology in the Port au Port area the potential for leakage is magnified.

Concern #4: Seismicity and Geological Risks

Studies conducted in various countries (Scotland , New Zealand) found that marine invertebrates suffered significant body malformations after being exposed to noise. The Gulf of Saint Lawrence is home to vast resources of marine life, especially whales which have their own form of sonar. Should we risk destroying these creatures permanently in order to retrieve a resource which will shortly be exhausted?

With regard to Geology, numerous studies have reported the high degree of fracturing in the Port au Port topography. This has been evidenced by the local people in natural oil seepage into surface waters. Clearly one would not be fracturing for natural gas in this area.

Concern #5: Site Restoration

How does one restore extinct marine life in the ocean? Judging by the refuse left on Shoal Point by previous exploration activities, this does not leave one with a great deal of confidence. Exploration companies move on quickly.

Concern #6: Socio-Economic Impacts

The big question here is “who makes the money”. The exploration companies and possible the NL government may see some financial return here, but , like any mining resource, it is short lived. The local people may see some temporary gains from employment, but the possible destruction of the fishery in the area would be devastating. The risk of damage to marine life and the contamination of the ocean

waters is far too great to justify the short term gains that would be realized from extraction of the oil in this area.

One last note: In light of the current glut of fossil fuel on the market and the downturn of the fortunes of the oil patch in Alberta, why is Newfoundland so focused on chasing the relatively small amount of fossil fuel in this area? At a time when the world is awakening to the harm we are doing to the planet from greenhouse gases produced from fossil fuels, and people like Bill Gates and Elon Musk are investing billions in alternate forms of green energy, the government of Newfoundland should be shifting its focus to a future where solar power (and water power) are the main interests.

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