



Steve Bonnell, AMEC Environment and Infrastructure  
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Mr. Bonnell,

I attended the Strategic Environmental Assessment for the Western Newfoundland and Labrador Offshore Area meeting in Rocky Harbour in November, and am writing to express my concerns about the prospect of offshore or onshore oil exploration along the coast of Gros Morne National Park.

This project has the potential to harm the onshore and offshore environment, to compromise existing long-term sustainable industries, to damage Gros Morne's aesthetic and biological resources, and to split already-struggling communities into factions.

It is impossible to explore for oil without some environmental damage, despite the carefully produced oil company videos that talk about sites being returned to their "original state". There will be spills of oil and fracking fluid, either on site or during transport, and much of that transport will be within Gros Morne National Park. If there are fracking fluid ponds, they will attract wildlife, and there will be contamination and deaths of migrating waterfowl and other species. Offshore pollution could harm the fishery and wildlife, and onshore pollution could damage tourism. Brand image is the key to tourism marketing, and if the Gros Morne National Park area becomes an oil exploration or extraction site, it will lose its reputation for wildness and unspoiled scenery. No amount of clever advertising will attract visitors to Newfoundland to see oil rigs. Is a short-term low-employment oil industry worth pursuing if it might damage long-term sustainable existing industries?

The use of flow stimulation in the form of hydraulic fracturing itself is highly questionable. The shales and limestone conglomerates of the coastal lowland are already highly faulted, one of the reasons that it has not been economical to extract oil from them in the past. Even though fracking will be done at depth, there is still a chance that oil will be released at the surface, either at sea or on land. Because of the danger to groundwater resources, some provinces and states have placed moratoria on its use. Oil companies excited by the potential of this technique to release oil and gas from previously uneconomical sources have gone to great lengths to try to assure the public that it is not harmful. Recently, however, Penn State University, University of Texas, and State University of New York have all withdrawn well-publicized positive studies that were compromised by unethical payments from oil corporations that supported fracking. Can

we risk the reduction or destruction of the nearshore fishery and damage to seabird and marine mammal populations by oil leaks caused by fracking?

Reports have come in from around the world of severe pollution of groundwater after fracking, and perhaps worse, of minor earthquakes triggered by hydraulic fracturing (for example, 38 minor earthquakes attributed to fracking—in an area with no prior records of earthquakes—in a report by the B.C. Oil and Gas Commission in 2012). Gros Morne's rocks are highly faulted and fractured, and there are 46 km of cliffs between 550 and 700 metres high, many with wide stress cracks along the cliff-tops. The Lookout Hills at the mouth of Bonne Bay has the largest sagging slope (sackung) in North America, where a 7 km section of cliff 2 km wide has slumped 50 to 100 m downslope (about a billion tonnes of rock) at some point during the last 12, 000 years. Gros Morne may not be in a contemporary earthquake zone, but because of the large number of over-steepened cliffs along the glacial troughs it is an extremely active avalanche zone. Is it safe for a junior exploration company to employ hydraulic fracturing at Sally's Cove only 7 km from cliff-lined Western Brook Pond, where boat tours carry more than 24-thousand tourists per summer? This is also less than 20 km from the sagging slope on the Lookout Hills. Both Trout River and Chimney Cove, just south of the park boundary—also proposed sites for drilling and fracking—are within a few kilometres of many kilometres of coastal cliffs and another 1.6 km long sagging slope along the edge of Mount Saint Gregory, just 3.3 km from Chimney Cove. Please see the photograph below from the south rim of Western Brook Pond to see why this could be so dangerous:



*Stress crack at top of 700 metre-high cliff about 8 km from Sally's Cove, a proposed oil exploration site that will employ fracking.*

The fishery and tourism are long-established sustainable industries along this coast. They both have their problems because of seasonality and unpredictability, but they sustain communities and are compatible with each other. Communities in the park area are thriving, unlike many other communities to the north and south, because the park draws about 180,000 visitors to the area each year. Gros Morne National Park is the most important tourism destination in the province and is used again and again in Newfoundland and Labrador's advertising as a symbol of unspoiled natural beauty, and the integration of culture and landscape. Gros Morne has been designated a UNESCO World Heritage Site because of this scenic beauty and biological and geological diversity, one of only eleven natural sites in Canada to receive this designation. A process is now being worked out to reassess World Heritage Status on a ten-year basis. The presence of oil and gas exploration nearby is one of the major threats. Should oil exploration be allowed to compromise this province's most important natural scenic resource and tourism generator?

Because the park highway (Route 430) runs along the shore on the coastal lowland, the establishment of drilling rigs offshore or onshore (in park enclave communities or north and south of the park boundary) would severely reduce the scenic value of the area because there is no way to hide them from sight. The stunted coastal trees are certainly not tall enough to provide a visual barrier. Noise, smell, gas flaring, light pollution at night, and increased traffic (especially of heavy equipment convoys and tankers for oil and waste liquids) would also tarnish the visitor experience in the park.

Any oil obtained from shales in the park area will neither be processed nor sold in this province, but will be shipped to the mainland or to the USA. Since there will be no direct long-term benefit other than a small number of low-paying jobs for local residents, should oil exploration companies be allowed to pit residents against each other by making unfounded and misleading promises designed to break communities into factions?

It is very worrisome that there do not seem to be any policies or regulations for the use of fracking in exploratory wells. The source of water to be used for fracking also raises questions. In recent years, summers have become warmer and drier, and some communities have been having difficulties maintaining their surface water supplies. Most communities here use surface sources rather than wells, but surface sources can be polluted by contaminated groundwater that seeps into them. Most coastal ponds are small and shallow, so they may not provide enough water for the process. If seawater is used, it will be even more difficult to process to remove contaminants and salt after it is used for fracking. Waste fracking fluids contain proprietary mixes of chemicals, and some are contaminated with a range of toxic hydrocarbons (e.g., benzene, toluene, ethylbenzene, and xylene) and highly dangerous hexavalent nickel. Since the shales of the lowlands are underlain by granite, there is also the possibility of radon contamination of any fluid that is recovered after fracking. Local residents have been assured that the waste fracking

fluid will not be released into the ocean, but will be shipped to Nova Scotia for decontamination. Nova Scotia, however has recently put a moratorium on the processing of fracking fluids by municipal water-treatment facilities. We have not yet been told how much fluid will have to be transported and what increased traffic load that will put on the road system and on the provincial ferry system. Are the regulations around the cleanup of fracking fluids sufficient? How will road transport of fluids affect the transportation system in western Newfoundland? Is there anywhere willing to process the fluids?

If exploration and extraction proceed, the increased road traffic will require improvements to Route 430 through Gros Morne National Park. Based on current traffic load, all of the bridges through the park are nearing the end of their functional lives. They would all have to be upgraded to take increased traffic. The narrow twisting section of the highway along the north shore of Bonne Bay is dangerous even at existing traffic levels. Because of the Long Range Mountains, there is no alternative route for a road, so this would put pressure on Parks Canada to widen or twin the existing section of the highway. This would be an extremely expensive and environmentally damaging undertaking. Many of the steep slopes beside the highway are already undercut and unstable (there was a slide along Deer Arm in the mid 1970s that destroyed a section of the highway, and there are frequent smaller slumps), so the only way to widen the road would be to dump fill into Bonne Bay. The damage caused to the bay by this sort of highway construction in the 1970s has still not been remediated. Who should be responsible for the increased road hazard, potentially massive construction costs, and environmental damage—the existing residents and industries, or the companies that will benefit from exploration and extraction?

Finally, the real question that must be asked if oil exploration and extraction go ahead is: If there are problems, who stands to lose most—is it we who live and work in western Newfoundland, or is it the here today-gone tomorrow oil exploration companies? Perhaps what we need is a moratorium on exploration, and especially on fracking, at least until some of these questions can be answered. The resource will not disappear if we leave it alone.

Thank you for your time, I hope that the SEA will incorporate these concerns into the policies and regulations that govern oil and gas exploration in western Newfoundland and Labrador.

Sincerely,

Michael Burzynski