

## Things Potential Canadian 'Oil' Investors Should Know

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In a world that seems to have an insatiable appetite for cheap energy, especially energy for transportation based on refined oil products, it is tempting to invest in the Canadian oil production industry as a sure-fire means of reaping strong investment returns due to historic high profits reported by the oil industry in the past couple of years. Before you invest your savings in this industry, we would like to bring some facts to your attention about major 'oil' production in the northern Alberta (and to a lesser extent, Saskatchewan) 'oil sands'.

- 1) The product from the northern Alberta 'Oil Sands', also known as 'Tar Sands', is neither, nor as useful as either as a fuel stock. It is bitumen, a low oil pitch better suited to use as a sealant than as an oil feedstock. The output needs to be upgraded before it is even suitable for refining into oil products, and unless it is diluted with volatile chemical compounds, bitumen will not even flow under pressure in a pipeline. The bitumen / condensate mix product is known in the industry as 'dilbit' (for diluted bitumen), and not as 'oil'. When the oil company public relations machines refer to this material as 'oil' to consumers and investors, they are intentionally misleading their audience.
- 2) Dilbit behaves differently from oil in significant ways. [Dilbit is heavier](#) than more valued [lighter oils](#). Aged dilbit (where the lighter volatile components have evaporated off) is heavier than water, so it sinks when spilled into rivers, lake and oceans, unlike true crude oil which mostly floats on the water surface making it easier to access and recover than dilbit. Dilbit is more corrosive (acidic) and abrasive (fine sand and other particles) than conventional crude oil, so it will increase wear rates on pipelines and other equipment carrying or processing it.
- 3) Dilbit is more viscous than conventional crude oil. Therefore, [dilbit is pumped through pipelines at higher temperature and pressure than conventional crude oil](#), which [increases the risk of pressure-related failures occurring, and larger physical volumes of material escaping from a rupture in a given amount of time](#).
- 4) Dilbit is priced lower than conventional crude oils. West Texas Intermediate (WTI) is a real crude oil- the stuff of Texas legends. In the summer of 2012, the price of WTI crude oil is below US\$80 a barrel, while Western Canada Select (WCS - bitumen-based crude stock) is trading around US\$55 – a \$25 spread, or roughly 30%. [In the fall of 2012, the price of WCS fell to just \\$48 per barrel](#). As I write this (March 2013), the price of WTI is above \$90, while WCS languishes under \$69, a spread of about \$22. While the major oil companies don't release their actual operating costs to the public, it is widely believed that bitumen production is not profitable when WTI prices are below \$80/barrel without the subsidies currently received by the producers (e.g., virtually free water, natural gas at prices below world prices, laughable royalty rates for the Alberta government, and direct financial incentives and breaks from multiple levels of government). Dilbit is not worth as much as conventional crude oil to refiners, so remember that when you see 'world' oil prices rising, bitumen is not worth nearly as much.

Some credible energy commodity analysts predict that the price of WTI will fall as shale oil production in North America continues to advance. It is possible that shale oil recovery (real crude oil, not bitumen) can be profitable at WTI prices as low as \$50 per barrel. If the bitumen penalty remains at roughly \$25 a barrel, that would bring the price of WCS (upgraded bitumen) to about \$25 a barrel, a price where no one in the bitumen patch can make any profit.

Bitumen pricing is therefore not only appreciably lower (30% or more) than conventional oil, but also potentially more volatile.

- 5) There are multiple risk factors on the horizon for the Alberta bitumen production industry.
  - a. A recent spate of oil pipeline failures – causing significant spills – is highlighting the age of the existing infrastructure. More frequent failures are to be expected as dilbit increases wear factors (abrasion, corrosion, higher temperature and pressure operation), and the pipeline companies do not appear to have effective programs for preventing, detecting or remediating spills. This will likely mean reduced overall flow due to increased downtime in the future. The real reason for the (currently stalled) Keystone XL pipeline is not to increase transmission capacity, but to replace existing capacity that is now operating past its operational lifetime.
  - b. The [Alberta oil pipeline industry track record](#) in the past five years or so (as equipment reached expected end of life) is so bad, even the pro-oil Alberta provincial government is considering setting up a provincial government commission to investigate the safety of the equipment and procedures. Such a commission will likely end up recommending expensive and intrusive remedial measures to be implemented by the industry. In the U.S., pipeline operator Enbridge has been notified of [24 separate violations related to the 2010 Kalamazoo spill, and a possible fine of \\$3.7 million](#). That's for a single event. While the amount of this fine is trivial for Enbridge, the fact that they had not taken any remedial action on a potential failure point identified in 2004 in the following 6 years is clearly a clarion call that more problems are to be expected in the future in this company's operations.
  - c. [According to polls and votes](#), the majority of First Nations and British Columbia residents are against the construction of any new pipelines to carry Alberta dilbit to the Pacific coast, particularly the Enbridge Northern Gateway project. While the Canadian federal government appears prepared to change or override its own legislation to facilitate the construction of the Enbridge Northern Gateway and Kinder Morgan twin line to Vancouver, the Canadian Constitution says that energy (including the transmission of oil via pipelines) is a provincial jurisdiction, and the [First Nations communities have the authority to prevent construction](#) over lands they control. This resistance is extending to proposals to run dilbit through old conventional oil pipelines in Ontario, and new pipelines to run parallel to existing pipe to Vancouver, B.C.

- d. The U.S. federal government, and some state governments, are still mulling ways to prevent the import of dilbit ('dirty oil') from Canada, or at least impose a higher price on it. This is complicated by the North American Free Trade Agreement, but given past history with commodities like softwood lumber, rest assured that Congress or the state legislatures will find ways to tie this up for years. Look for countervailing duties to be applied due to Canadian government subsidies to the oil sands development over the past few decades.
- e. Even if U.S. jurisdictions overcome their reservations about pipelines full of dilbit crossing their territory, grassroots organizations are starting to appear now in opposition to these pipelines (e.g., the [Tar Sands Blockade](#), [Friends of the Earth](#)). Such opposition could delay, and ultimately prevent, the transport of dilbit to the Gulf of Mexico refinery belt, even if the pipelines are eventually constructed and permitted to carry conventional crude oil.
- f. The bitumen production zone is the [single largest emitter of greenhouse gases in North America](#), and probably in the world. The current Canadian federal government's single-minded determination to ignore this fact is causing it to be labelled as a 'rogue state' on the environmental front, even by other governments. Eventually, nations that are serious about addressing climate change (notably in Europe) will likely impose tariffs or other barriers to the import of Canadian crude oil or products refined from it.
- g. Recent expansions in the bitumen patch mean there will be increased supply of dilbit in the next few years, but it will be landlocked due to lack of transmission capacity. As a result, look for the price of dilbit to plummet in the next five years, even if the price of conventional oil (e.g., Saudi light, Brent intermediate, WTI intermediate) soar. The result: the WCS spread will increase, profits will fall (along with dividends), cost-cutting will lead to reduced maintenance and monitoring and there will be more pipeline spill events, leading to massive costs for the pipeline operators and the bitumen sector as a whole.

One possible beneficiary of this situation could be railway companies that could transport dilbit on their lines. However, [a derailment a couple of years ago which spilled chemicals into a recreational lake](#) has soured many Albertans and others on rail as a means of transporting hazardous fluids such as dilbit.

- h. Canada does not have the refining capacity to deal with dilbit. Therefore, it has to be transported to the southern U.S. oil belt to be refined. At this point, supply of dilbit exceeds what the refineries want, so the commodity is piling up in storage, putting additional pressure on prices. Given the U.S. government is trying to encourage its own oil industry (for financial and energy security reasons), it will give refinery access to U.S. crude over Canadian crude, meaning the market for Canadian dilbit is vulnerable to the whims of other jurisdictions. Despite this, the oil industry and Canadian government are betting on more pipeline capacity to resolve the issue of the existing oversupply at the U.S. end of the existing pipelines. The logic seems questionable, at best.

- i. For years, the Alberta bitumen industry has floated the idea of putting nuclear fission reactors (Chernobyl and Fukushima reactors were nuclear fission reactors, albeit of different designs) in the bitumen patch to provide process heat and electricity. These plans have been roundly rejected by residents. The Saskatchewan government has also recently raised the prospect of nuclear fission reactors for their portion of the bitumen patch. The reactors being proposed are new, unproven designs, so licensing may be a protracted process. This may also cause other stakeholders to re-open the debate regarding liability limits and insurance for nuclear reactors in Canada. The current liability limit under the federal Nuclear Liability Act is a laughable \$75 million dollars, which would not cover even the value of the real estate in a decent sized suburban neighbourhood (say roughly 300 houses), let alone any injuries or deaths resulting from a nuclear incident. Also, nuclear fission has a terrible track record in Canada as an economical energy source, or making it to promised operating lifetime without major rebuilds.
- j. The potential for shipping of liquid natural gas (LNG) from Canada to Europe and Asia will raise the price of this bitumen processing input appreciably, dramatically reducing profit margins for bitumen production. Natural gas prices in North America have started to rise in the past few months from recent low prices.
- k. Increasing water shortages for Alberta residents – a rapidly growing population – will increase pressure on the government to charge the bitumen processors to pay a rational price for water in the future. At present, the bitumen processing operations use 3 or more times as much water by volume as bitumen produced.
- l. The ‘tailing ponds’ of toxic chemicals produced from the bitumen processing are not ponds – they are industrial scale lakes of toxins and carcinogens that are open to the air and precipitation. The retaining walls are just soil that has been excavated and bulldozed to make levees or retaining walls. They leak and seep. Some are positioned on the banks of the Athabasca River. A breach of one of those walls, possibly due to something as basic as unusually heavy rains, would poison the Athabasca River and downstream lakes for decades into the future.

Even the normally tame and complacent [U.S. mainstream media are beginning to raise the issue](#).

Eventually, even retail and conservative institutional investors will learn to distinguish between conventional oil plays which will likely still have a viable economic future vs. the bitumen money pits.

For more information on the oil sands, read Andrew Nikiforuk’s book: [Tar Sands](#).

In summary, the future for the bitumen sands mega-projects is not as bright as its champions would have you believe. Do not take our word for what we have presented here; do your own due diligence on the subject before investing your money in these energy megaprojects.

[Publicly traded corporations with major investments in the bitumen projects](#).