The oil world is “looking up” to the northern hemisphere

Surging demand for technology metals and enough battery-hype to resurrect Alessandro Volta has inadvertently distracted us somewhat from the recent struggles of the oil world. On November 6, 2015, the Obama government rejected the proposed Keystone XL pipeline. This pipeline would have connected the oil sands of Alberta with Nebraska and the northern United States. However Canadian Prime Minister Justin Trudeau has been busy approving new pipelines, and President-elect Donald Trump is keen to revive the Keystone project post-democrat, creating a strong entry point for the would-be investor as markets show signs of recovery.

Hemisphere Energy Corporation (TSXV: HME) (“Hemisphere Energy”) could stand to benefit from Trump’s plan to revive the Keystone project. The deposit sits on two southern-Alberta projects, Atlee Buffalo and Jenner, some 40 kilometers north-east of the famous Dinosaur Provincial Park and the badlands, the source of the bulk of our dinosaur expertise. These core areas provide long-term, stable production and development where Hemisphere targets low to medium risk drilling opportunities for production and reserve growth.

Vertical wells proved the Atlee Buffalo properties in southern Alberta in the 1970’s and 1980’s but previous recovery efforts failed, with less than 4% recovered from the 66 million BOE from the Mannville F and G pools. Hemisphere has used a combination of horizontal drilling and waterflooding to successfully extract up to 70 barrels of 100% oil daily; the new techniques have, in fact, boosted well-pressure by three times and stabilised production so that cost-effective reserves can continue to build up.

Canada has a highly sophisticated energy industry and 99% of

Canadian oil exports are sent to the United States. Canada is in fact the United States' largest supplier of oil. The Alberta oil sands have the third largest oil reserves in the world, after Venezuela and Saudi Arabia. The Alberta Energy Regulator (AER) estimates the remaining established reserves of conventional crude oil in Alberta to be 1.8 billion barrels, representing about one-third of Canada's remaining conventional reserves.

The price of oil has been in trouble for some years; as global stockpiles reached their highest ever levels, the price of a barrel was within spitting distance of $20 per barrel. Alberta's more northern sand-based dinosaur-juice market only becomes financially viable when barrel prices are above $30-40; this is due to the difficulties involved with extracting from what are essentially tar-sands.

Starting in 2010, total crude oil production in Alberta reversed the downward trend that was the norm since the early 1970s. In 2010 and 2011, light-medium crude oil production began to increase because of increased, mainly horizontal, drilling activity with the introduction of multistage hydraulic fracturing technology.

Hemisphere's Attlee Buffalo property offers much cleaner and easier extraction since the company put their money on horizontal drilling methods. Production costs became as low as $10 per barrel due to the lower sand content of the resulting extraction thereby reducing the processing time required to achieve oil. Notably, there is no need for hydraulic fracturing at either site, meaning that production costs can be maintained at low levels.

Since 2012, Hemisphere has achieved a smooth and impressive 388% growth in reserves, and all in all, there seems to be a consensus among analysts that 2016 saw the bottom of the depressed stage of the industry cycle and from now on things will start looking up.

OPEC and Saudi Arabia show the world who's the boss

Oil production will not be cut, as there was no formal revision of the 30 barrels a day limit that was set in December 2011. OPEC, the Organization of Petroleum Exporting Countries, managed to surprise everyone, going further than anybody had truly expected in its adoption of a rather unlikely free-market inspired approach.

Indeed, the Organization made a rather explicit decision to shift away from cartel pricing and policies, entrusting the restoration of equilibrium in the oil market to supply and demand forces, affecting only minor price adjustments. The market responded accordingly and the already fast dropping oil prices, already at their lowest since 2010, were allowed to accelerate their descent such that the Brent to USD$ 70/barrel the descent to the point that the WTi (west Texas Intermediate) fell back below USD$ 70/barrel – Brent crude hit USD$ 72. It was only a month ago that OPEC considered price of USD$ 80-90 too low. These values are well below the OPEC desired minimum of USD$ 100/barrel. But if the Saudis will persevere in their strategy, there will be no way to reverse the trend soon. Venezuela, Iran and Russia (non OPEC, but attends summits as observer) were among the countries most interested in achieving production cuts to boost prices; however, there is a sense that the Saudis want to maintain crude oil prices at 80-90 dollars per barrel for one or maybe even two years.

The Saudi strategy is clear; the Kingdom is using oil as a geopolitical weapon because at these prices, several of its OPEC competitors/foes will suffer: Vladimir Putin's Russia,

which has been struggling under financial US and EU sanctions; Venezuela, which under President Nicolas Maduro, has been facing a worrying financial and currency crisis and of course Iran, the most important and dangerous player, from Saudi Arabia's perspective, in the Middle East chessboard. Iran, had demanded production cuts to help it stop the hemorrhaging of its State coffers as it too faces the burden of international sanctions. The Saudis have market share on their side with a daily production of 9.7 million barrels, representing nearly a third of the OPEC total of 30.5 million. The Kingdom wants to achieve an overall margin squeeze in order to emerge as the winner in the medium to long term by further increasing its share of global production and while 'ruining' some of its competitors. If the mood in Tehran, Moscow and Caracas isn't especially cheerful today, oil tycoons in Houston and Calgary are also not very pleased.

OPEC and the shale oil and tar sands producers of North America could find full agreement in restoring the USD$ 100/barrel oil price floor; both committed to resist the collapse of oil prices. OPEC, however, has become very concerned by the seeming success of shale oil, which would certainly continue to experience long-term growth, eventually reducing the Organization's market share by a couple of million barrels a day within a few years, despite growing demand of 1 million barrels day, on average, per year. Shale oil producers in the USA had at first welcomed the price challenge with Saudi Arabia. Last September when oil prices started to drop more dramatically, the US's largest shale oil operators saw the lower prices as putting pressure on domestic competitors, dissuading newcomers, while 'bragging' about their ability to reduce costs and even accelerate, rather than slow down, the extraction of crude oil. However, nobody, it seems had expected oil to drop below USD$ 70. At this price, only the Saudis are laughing. The shale oil producers such as Continental Resources – the largest producer in North Dakota – has been left exposed to the risk of a possible further drop

in oil prices because the Company had expected OPEC to push for cuts in order to push oil prices back up to at least USD$ 90 in the short term. Others like EOG Resources stated that they could still be profitable even if oil fell to USD$ 40; similarly, Chesapeake Energy raised its production target of 0.7% as costs of production fall. Yet the Saudis are not convinced by the American optimism.

OPEC Secretary General Abdullah al-Badri, last October 29, said he was convinced that 50% of American shale oil was already “out of business” and that the companies involved would soon close down because they bear much higher costs than OPEC producers. OPEC countries, moreover, are less concerned about the profitability of the wells than they are about the stability of their State budget or current accounts. Extraction costs are a secondary consideration and the Saudis are the best equipped to survive this ‘game’; if it can keep the price of a barrel at USD$ 70 or below, it will slow US production and possibly eliminate the political debate over the Keystone XL Pipeline, given that at such prices, it would not serve anybody’s interests.

At yesterday’s meeting, then, the Saudi minister did not want to contemplate making any cuts whatsoever to production, defying even the most optimistic predictions. Strategic interests and regional rivalries have doubtless influenced the “price war”, reflecting the virtual war that has been played out in the Syrian battlefield between Saudi Arabia and Syrian President Bashar al-Asad’s allies Iran and Russia. The outcome of the summit will have irritated several ayatollahs in the Islamic Republic. With oil prices continuing to fall and the growing burden of years of international economic sanctions, Iran’s coffers have become increasingly empty. Nevertheless, Iranian leaders share the same desire to slow down North American oil production as the Saudis, not wanting to lose market share in the face of growth in the US, the highest in recent years.

The goal would be to force Americans to curb production founded on shale oil. Iran is also aiming to hurt Canadian oil producers in the very Albertan backyard of Prime Minister Harper, who has been pursuing – inexplicably – an even 'tougher' foreign policy against it than the United States. The Alberta tar sands and shale oil are no longer competitive under 80 dollars a barrel (between 60 and 70 according to other calculations) and with low prices many manufacturers would risk bankruptcy. The fact that Canada initiated a cut in diplomatic relations with Iran in 2012 has worsened relations and made dialogue difficult. The oil tycoons in Calgary may want to have a little chat with Mr. Harper…As for Iran, the lower oil prices may add pressure on the 'Conservatives' to allow President Rowhani, a pragmatist, to make more concessions in nuclear talks with the US in order to reduce the pressure from sanctions. The lower oil prices also hurt jihadists of the Islamic State (selling Iraqi and Syrian oil on the black market obtaining at least USD$ 2 million per day).

Unique cost structure and 'low environmental footprint' provides a real rising star for unconventional oil recovery

American Sands Energy Corp. ('AMSE', OTCBB: AMSE), an oil

sands exploration and development company, based in Utah. recently presented a new Project Feasibility Study, featuring updated capital and operating costs as well as a new Mine Plan. The revised studies suggest that AMSE's costs are below those of other tar sand or unconventional oil projects. Indeed, AMSE would need about USD$ 75 million to lead it to production with 'per barrel' production costs expected in the range of USD$ 15,000/barrel in CAPEX up front. This is half the price of the average Canadian oil sand extraction costs, which range from of a low of about USD$ 30,000/barrel to a high of USD$ 100,000/barrel. At such costs, AMSE's oil is 'bargain basement' priced. Moreover, AMSE will not have to re-invest in the resource, which is what a drilling operation has to do.

A conventional oil company has to continuously drill new wells to continue to use a deposit, running the risk of coming up with dry holes, which makes AMSE much more convenient and attractive.The costs are very competitive in relation to other unconventional projects while having the distinct advantage of a much lower environmental impact because there are no tailing ponds given the production focus being directed toward reclamation sand. AMSE's low costs and lower environmental risk profile should allow production to begin in 2016. The highlights from the feasibility reports include:

- CAPEX estimates of USD$ 15,000 per flowing barrel at peak production.
- Operating costs averaging under USD$40 per barrel of heavy oil (for the first four years of production).
- Up 9,000 barrels per day production capacity.

AMSE's oil sands are of the 'oil wet' variety as opposed to what is more common in Canada: the 'water wet sands', which makes AMSE's oil sands easier to process because the oil impregnated sandstone is free of any water content. This results in a mining process whereby the sandstone is impregnated placed in a solvent solution that washes the

bitumen away from the sand. The bitumen, then, is cleaned up from remnants of the solvents in order to be delivered to the market. The sand that is left over in the process is clean and ready to go back into the ground. This explains why AMSE's production timeline is so fast and why production is expected to reach a rate of 5,000 bpd by 2016.

AMSE features a unique cost structure and its low environmental footprint in the context of the oil sands industry. This means that, compared to others in the oil sands space, AMSE is "much cheaper on a per barrel basis, much cheaper on a CAPEX basis and far less risky on an environmental basis because its process does not produce any dirty water. The recent debate over the Keystone XL pipeline reflects the costs and risks faced by AMSE's tar sands competitors in Alberta. The exploitation of new unconventional oil resources in Alberta has brought great wealth to Canada; however, the process is so expensive that the current USD$ 80/barrel oil price is a threat to the long term viability of the very expensive production from the 'oil sands'. The Canadian province of Alberta has been credited with having the world's third largest oil reserves, 97% of which are trapped in the oil sands: as yet barely exploited but dirty and demanding huge investments for its production. Apart from toxic emissions (apart from CO2), their extraction destroys the landscape when it pasty liquid is extracted in open-pit mines.

Rising oil prices since the late 1990's and especially since 2008 made their development viable; it also helped to develop new oil extraction technology such as steam injection into the soil to soften and fluidize the bitumen in situ (and not by mining), are in operation. Yet, this process alone accounts for USD$ 50/barrel. This is a very expensive cost and one that AMSE avoids by virtue of the nature of its much different oil sands resource. Alberta may have the largest unconventional oil deposit in the world (certainly in North America) but the

development costs also make it less profitable for companies to exploit. Utah's oil sands are more profitable. The sands are saturated with oil rather than water – as in Alberta. This means that there is simply more oil per granule of sand with far fewer environmental risks than in Alberta or as some might say more 'bang for the buck'.

Canada's anti-Russian rhetoric counterintuitive for US approval of Keystone XL pipeline

What do climate change, US President Obama, Canadian Prime Minister Harper, Russian President Vladimir Putin and the Russia-Ukraine crisis have in common? Not much at first glance. Barack Obama is far more charming than Harper and Putin could run rings around them in a chess match (geopolitical and the actual game) all the while emitting less carbon dioxide. No, the answer may lie somewhere between Alberta and Texas, in argument to approve or cancel the proposed Keystone XL pipeline ('the Keystone'). The pipeline should extend almost 2,700 km Keystone XL from Hardisty, Alberta proposed by the TransCanada Company to deliver synthetic oil and diluted bitumen from the oil sands of Athabasca, in the northeast of the Alberta to multiple destinations in the United States, including refineries in Illinois and to Cushing, Oklahoma. The decision on Keystone ultimately rests on President Obama, who said he would approve the project only if it does not significantly increase emissions of greenhouse gas emissions. The pipeline has

received full support from the Canadian government but it has been the subject of intense debate in the United States.

President Obama has been under pressure from many of his voters and fellow Democrats to block the Keystone in the name of climate change prevention. Conservatives have urged for it to be completed. On Monday, ahead of a crucial week in international geopolitics as NATO and G7 leaders gather in Europe, which promises to focus on Russia and the Ukrainian crisis. Climate change and Russia have given politicians of all political convictions much political ammunition to rouse their respective constituents. Obama has fired the first round of heavy artillery; on Monday, he unveiled Monday an outline of a bold plan to reduce greenhouse gas emissions in the United States. The U.S. ambassador in Ottawa promptly urged Canada to do the same.

Obama's new strategy is targeted towards "a low carbon future, with choices of alternative energy, with greater energy efficiency, and sustainable exploitation of our oil and gas". The US ambassador to Ottawa encouraged Canada to join the United States in the fight against climate change: "The abundance of energy found in North America should not distract us from the need to improve our energy efficiency and our fight against climate change. This is not a task we can undertake individually ". Obama's new climate change initiative plans to:

- Reduce 30% of carbon emissions from U.S. power plants by 2015 compared to 2005.
- Encourage more insistently other countries to take action in the fight against climate change in the context of negotiations on a new international treaty must resume next year.

This is much easier said than done of course. As much as Obama wants to lecture Canadians about CO2 emissions, there is a huge gap between the USA and Canada. Americans consume a lot

of coal, much more than Canada and coal is the most polluting energy source; it accounts for close to 40% of all electricity generation in the United States. In Canada coal only supplies 8% of energy. Environmentalists, however, say that the U.S. is currently on track to achieve their goal of reducing emissions by 2020 (even if these will still not be as low as those in Canada), accusing Canada of not working toward achieving its planned greenhouse gas emissions, especially as far as the sands in Alberta are concerned. This extraction, say some environmentalists, is Canada's largest source of greenhouse gas emissions.

PM Stephen Harper had written to President Barack Obama in May to propose to collaborate more closely on the regulations governing GHG emissions in an attempt to obtain the approval of the controversial Keystone XL pipeline project – the very same project under threat now by Obama's new 'green' revelation. Harper reportedly offered the White House to establish common standards for the emissions of greenhouse gas (GHG) emissions in North America. Enter Ukraine and Russia:

Stephen Harper believes that Moscow poses a huge threat to world peace since it seized the Ukrainian Crimean peninsula and as pro-Russian unrest persists in eastern Ukraine. Prime Minister Harper stated that this would result in sanctions against the government of President Vladimir Putin. Harper has been the most adamant supporter of sanctions against Putin; indeed, Harper has appeared seemingly completely unaware of Russian and Ukrainian history, its complexity and intricacy, choosing to pose as 'grand strategist'. Is he is very narcissistic, an ignoramus or could he have another plan in mind? The strident anti-Russia rhetoric suggests that he predicts that an anti-Russia policy may bring benefits to Canada; indeed, the logic may well be related to the Keystone XL Pipeline.

The Harper strategy may be to promote approval of Keystone Xl weaken Putin's resolve over Ukraine, adding for good measure

the expansion of the natural gas industry in the USA leveraging on Putin's threats to cut off gas (LNG) delivery to Ukraine – and possibly Europe, raising natural gas prices worldwide. Of course, while desirable, pushing for an increase of LNG in the United States, would do very little to stop the crisis in Ukraine. The US could supply some oil but no gas to East European nations and undermine Putin. Of course, Harper's strategy has much more effect in rhetoric than reality. He wants to present the Canadian government and himself as morally superior and bolder than his G7 and NATO counterparts: the brave face of the West challenging Russian aggression. In fact, Harper has made a mockery of diplomacy and reduced Canada's diplomatic influence, even with the United States.

Barack Obama may well interpret Harper's anti-Russian barking as unconstructive in the bigger picture and even as a nuisance. This means Harper may have all but lost any diplomatic currency to push Keystone XL ahead. It would have been a better strategy for Harper and his lap dog minister of foreign affairs Baird to play Canada's traditional diplomatic role and possibly bring Obama and Putin closer rather than further apart. Europe is where the oil and gas supply calculations are being made. The argument of increasing US oil exports – which in theory could help reduce the USD$ 100/barrel oil price on which Russia relies for its budget – will not work in the short term and it fails to take into account the other geopolitical factors that are contributing to sustaining high oil prices. Finally, US oil output and reserves (said to be growing 15% per year) has increased to such an extent in the past two years that US politicians and environmentalists will not have to face a sleepless night after they put the Keystone XL to rest. And that was the calculus that Obama used to unveil his Green strategy, which will bring more political gains than losses, regardless of how loud Harper cries wolf.