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The changing landscape of the Canadian oil and gas sector

BY ALICIA K. QUESNEL

The fundamental landscape has changed for the Canadian oil and gas sector in the last five years. Between mid 2014 to early 2016, the price of West Texas Intermediate (WTI) crude oil dropped precipitously, from a high of more than US$100 per barrel (/bbl) to a low of less than US$30/bbl. Western Canada Select (WCS) fell to a low of just over US$16/bbl. Although there has been a slow recovery in pricing, volatility remains and the value of the stock of North American oil and gas producers has not increased commensurately. The US is Canada's largest customer. In 2018, 96 percent of Canadian crude oil was exported to the US. Now, however, not only is the US our largest competitor, it has overtaken Saudi Arabia and Russia as the largest crude oil producer in the world. The majority of Canadian crude oil production is in landlocked Alberta and we produce more crude oil than we have the capacity to export.

The effects of this changing landscape have been chilling. Foreign companies have been leaving the Canadian oil and gas sector in droves. Several large oil sands projects were cancelled or deferred in favour of much smaller projects. M&A activity is down significantly. Fewer wells are being drilled. Oilfield service companies are sending their equipment to more active areas in the US. Both debt and equity capital is scarce. The junior market, once an engine of growth in the sector, has all but disappeared. Calgary city centre, the headquarters for Canadian oil and gas companies, has vacancy rates that in 2018 were as high as 28 percent. In 2015 and 2016, and even into 2017, cabs lined up outside office towers to take home hundreds of employees laid off from a company in a single day.

Canada's pipeline capacity constraints are a result of a number of internal and external political, regulatory and social challenges that have impeded our efforts to build the necessary infrastructure required to support our production growth.

Eastern Canadian markets (including those in Ontario and Quebec) are more than 2000km to the east of Alberta and those markets are primarily supplied by

foreign oil as there is insufficient pipeline capacity to supply those markets with Western Canadian production. Nonetheless, our ability to build new capacity to those markets has been met with political and regulatory hurdles. On 21 October 2017, TC Energy, Canada's largest pipeline transmission company, withdrew its application for the construction and operation of 'Energy East', a proposed 4500km pipeline designed to carry 1.1m bbls of crude oil per day (bbls/d) from Alberta and Saskatchewan to refineries in Eastern Canada, citing substantial uncertainty over scope, timing and costs, as well as political opposition from Quebec politicians and environmentalists. In 2019, the Minnesota Court of Appeal overturned the regulator's approval of Enbridge's Line 3 Replacement project, citing the need for additional environmental analysis of a potential spill in Lake Superior. The project, announced in 2014, is designed to restore the capacity of the 50-year-old pipeline back to its original capacity of 760,000bbls/d (an increase of approximately 370,000bbls/d) and will increase access to markets in Eastern Canada and the US Mid-West. Construction was scheduled for completion in 2019, but has now been deferred to the second half of 2020.

Enbridge's 'Northern Gateway', a proposed crude oil pipeline that would have transported approximately 525,000 bbls/d of crude oil from Hardisty, Alberta to the West Coast at Kitimat, British Columbia, languished quietly amid opposition to the transportation of crude oil through British Columbia and additional crude oil tanker traffic on the northern section of the West Coast. It was effectively shelved in 2015 when the Canadian governed announced it would be imposing a crude oil tanker ban on the northern coastal waters off British Columbia.

The Trans Mountain pipeline project (Trans Mountain XL), proposed in 2013, is a twinning of the existing Trans Mountain pipeline built in 1951. It would largely be built along the same pipeline corridor as the original pipeline, stretching approximately 980km from a location near Edmonton, Alberta, west to Burnaby, British Columbia and would increase the capacity from approximately 300,000bbls/d to 890,000bbls/d. On 31 August 2019, the Canadian federal government purchased the Trans Mountain pipeline for C$4.5bn after its main proponent, Kinder Morgan Canada Limited, threatened to cancel the project. But in September 2018, shortly after the acquisition, the Canadian federal cabinet rejected the National Energy Board's recommendation to approve the project. The National Energy Board issued a reconsideration report in February 2019 and the federal cabinet approved the project on 18 June 2019. However, as of today, a new project timeline for completion has not been announced.

TC Energy's expansion of the Keystone pipeline to increase capacity to the United States Gulf Coast (Keystone XL) from 580,000bbls/d to approximately 830,000bbls/d has a long and varied history. The original application, made in July 2008, was approved in Canada in March 2010 and in August 2011, the US State Department issued a final report indicating that Keystone XL would have a limited effect on the environment. Notwithstanding this, president Obama rejected Keystone XL in 2012 and in 2015 he vetoed a US Senate bill to construct Keystone XL. President Donald Trump issued a permit to construct the pipeline in 2017, which was struck down by the Nebraska courts. President Trump issued a new permit early in 2019; however, several injunctive proceedings were initiated to prevent construction. On 23 August 2019, the Nebraska Supreme Court upheld the state regulator's approval of the project. Unfortunately, the 2019 construction season passed without any construction being undertaken.

The current pipeline capacity constraints effectively mean that Canadian crude oil trades at a discount to crude oil produced in other regions, for reasons other than quality and distance to market. Crude oil produced in Alberta is heavier and more sour than many of the light varieties of crude oil produced in the US and around the world. So, a discount is to be expected. But in November 2018, that discount exceeded US$50/bbl, meaning that Canadian crude oil was, at one point, receiving only approximately US$20/bbl (WCS) for its crude oil, while crude oil produced in the US was receiving close to US$70/bbl (WTI). US refineries in the Mid-West and the Gulf Coast, are designed to process the type of crude oil Canada produces and they pay a premium. But if or when these refineries are inaccessible, our access to higher priced markets is limited and we see heavy discounts.

In November 2018 the Alberta government enacted crude oil curtailment legislation to take effect 1 January 2019. This action, coupled with the reopening of several US Mid-West refineries that had been down for maintenance, almost immediately reduced the size of the discount. Since January 2019, the discount has ranged from approximately US$10/bbl (sometimes lower) per barrel to US$15/

bbl. The programme has been extended until the end of 2020.

As a result of pipeline capacity constraints, producers are increasingly transporting crude oil by railcar. Transportation of crude by rail in 2012 was largely ad hoc and underdeveloped. However, the volume of crude by rail transported out of Canada reached record levels in 2018 as shippers have expended capital to build out loading and unloading terminals and railroads have expanded tracks. For those producers that have access to railcars to move their crude oil to the US Mid-West or the Gulf Coast, a slightly higher differential (in the range of US$15-17/bbl) is preferable, as it makes the transportation of crude oil by rail an economic alternative to transportation by pipeline. In November 2018, when the crude oil discount was high, the volume of crude oil transported by rail exceeded 330,400bbls/d. In February 2019, when the crude oil discount was less than US$10/bbl, the volume of crude oil transported by rail was less than 122,300bbls/d. In the spring of 2019, the crude oil discount was in the range of US$12-14/bbl and the volume of crude oil transported by rail increased to approximately US$285,100bbls/d.

Canadian oil and gas companies are adapting to the new landscape, focusing on being leaner, and becoming more efficient by adopting new technologies and ways of designing, structuring and operating projects, all while reducing greenhouse gas emissions in support of environmental sustainability. This is readily apparent in the oil sands sector, which accounted for 64 percent of Canada's oil production in 2018. In an April 2019 report entitled 'Four Years of Change', business information provider IHS Markit noted that between 2014 and 2018, the cost to construct a new oil sands project decreased by 25 percent to 33 percent, operating costs fell by more than 40 percent on average, reliability improved by up to 50 percent in some cases, and the price of oil required to cover the costs and earn a return on investment on a non-mining oil sands project was reduced from approximately US$65/bbl to the mid US$40/bbl. In its September 2018 report entitled 'Greenhouse Gas Intensity of Oil Sands Production: Today and In the Future', IHS Markit found that between 2009 and 2017, upstream oil sands GHG emissions intensity fell 21 percent and anticipated that it could continue to fall by an additional 16 to 23 percent over the coming decade.

These are very positive signs that evidence our continued commitment to high environmental standards and sustainability, and showcase the adaptability and resilience of the Canadian oil and gas sector to a landscape that has changed dramatically over a very short period of time. ■