

Tight Oil and Gas Drives Optimism as Oilpatch Tentatively Recovers: **Market Insights from Sproule**

By Maurice Smith, Daily Oil Bulletin, featuring Steven Golko, VP New Ventures & Strategic Advisory, Sproule

As unconventional resources, opened up over the last decade, by new drilling and fracturing technology increasingly, become conventional, it's easy to forget the stupendous size of the prize that has been unleashed by the shale and tight oil and gas revolution.

In Western Canada, the Montney and Duvernay resource plays have arisen as among the biggest beneficiaries of the technology disruption, emerging as rivals to the greatest resource plays in the U.S. where the unconventional revolution began.

Containing some 450 trillion cubic feet of natural gas, 14.5 billion bbls of natural gas liquids and 1.23 billion bbls of crude oil, the Montney is considered one of the largest known gas resources in the world, according to the National Energy Board. Add the Duvernay's 76.6 tcf of gas, 6.3 billion bbls of NGLs and 3.4 billion bbls of oil and the basins represent massive potential for development.

Unsurprisingly, they are picking up steam as prices, for liquids at least, recover from the oil price collapse of 2014. "Those are the two plays where we are seeing the most activity – that's where the bigger dollars are flowing, and it's not really that surprising because they are the two biggest plays in Canada," said **Steven Golko, Sproule** Vice President of New Ventures and Strategic Advisory.

While the oilsands get most of the ink, growth in unconventional oil and gas production has steadily increased in Western Canada, reaching almost 10 per cent of oil output as the new technologies accessing tight resources – horizontal multistage fracturing – takes hold. With major oilsands expansion thought by some to have peaked, unconventional production could be the new engine of growth in the Canadian oilpatch.

Non-oilsands capital spending, which includes the tight oil and gas sector, rebounded last year and is expected to grow in 2018 while oilsands investment continues to fall, according to Canadian Association of Petroleum Producers' figures, which forecasts \$12 billion in the oilsands compared to \$33 billion in non-oilsands capital spending.

"Increasingly we are going to see light tight oil and liquids-rich natural gas forming a key part of Alberta's energy future," **Margaret McCuaig-Boyd**, Alberta energy minister, told Reuters earlier this year.

According to Calgary-based Sproule, as more positive investment decisions get made, the industry is slowly growing more optimistic, though the sentiment is punctuated by fits and starts as setbacks such as the Trans Mountain pipeline expansion delays create potential obstacles to industry expansion.

Liquids-Rich Focus

In today's price environment, the focus remains on liquids-rich plays while gas producers remain cash flow strapped. In particular, the abundant Montney and Duvernay resource base coupled with innovative technology and process improvement continues to pique investors' interest, Golko said.

"These plays are massive. The Montney rivals some of the big U.S. plays in terms of size, both in area and in terms of the performance of the wells. The Duvernay is a bit more of an emerging version of the Montney, more typically oil-focused right now because of where oil and gas prices are, but it does have the gas leg to it as well," he said.

Sprawling across some 130,000 square kilometres of northeast British Columbia and northwest Alberta, the Montney is by and large a tight gas play with areas that are propped up by its liquid content, whereas the Duvernay of west central Alberta, a true shale formation, remains largely viewed as an oil play. "But that's really just because the gas portions haven't been developed yet, because it's not economic at today's prices," said Golko.

So large are the plays that Sproule has subdivided them into smaller regions based on their unique features. Their wide variety of makeup makes it critical to target the right region. "We have got the Montney broken up into 25-plus different areas, each of which have their own characteristics. While the Montney can be talked about as one big play, there is actually a lot of variability throughout it, in terms of performance of the wells, costs of the wells, liquid content, etc.

"A lot of that detail drives the acquisition and divestiture activity that has been occurring, figuring out which acreage is providing the best return right now and which acreage has the running room to continue producing and supporting drilling for a long time," he said.

"Right now, the areas that are providing the best returns are the areas that have the higher liquids, although that's not always the case. There are areas that simply have higher deliverability with lower costs that are providing some really good returns, on par with the higher liquid areas."

While companies operating in the Montney have got a pretty good idea of what the wells are capable of producing and what the liquid contents are, the less explored and costlier Duvernay remains more immature, he said. "There are still a lot of areas that are waiting for the initial development to give us a better indication of what the returns are going to be, and where the sweet spots are going to be outside of the two big sweet spots that currently exist; Kaybob and the East Duvernay Shale Basin."

Promise of LNG

The possibility of liquefied natural gas exports off the B.C. coast would, of course, reenergize the natural gas sector. Of some 20 projects proposed as recently as 2014, four serious contenders remain; LNG Canada (led by **Royal Dutch Shell Plc**) and Kitimat LNG (**Chevron Corporation** and **Woodside Petroleum Limited**) in Kitimat, **Woodfibre LNG** in Squamish, and **Kwispa LNG** on Vancouver Island.

LNG facilities would give Canadian gas access to growing international markets, supplanting the evaporation of demand from Canada's traditional customer south of the border, where shale gas continues to flood onto the market. On cost, Canadian gas is competitive, and geographically, it's closer to the growing Asian markets. "The cost to produce an mcf of gas in the Montney is on par with any shale play in the States," notes Golko.

Meanwhile, Canada's tight and shale oil and gas plays will continue to grow based on their liquids production, with or without new export facilities. "LNG really isn't going to be a massive driver for the liquids rich or the oil areas – those will get developed one way or another, and that will largely satisfy the gas demand, just with the solution gas that comes along with it," he said.

"However the dryer Montney gas areas and Duvernay gas is probably going to be pretty dependent on significant LNG exports. We probably won't see a lot of development in the dry areas until there is that significant off-take to prop up the Canadian gas price."

Infrastructure Gaps

Tight oil and gas plays are also driving activity in the midstream. Midstream operators, large and small, are capitalizing on infrastructure gaps in key resource plays that are experiencing bottlenecks and will require additional infrastructure well into the foreseeable future, Golko said.

Enbridge Inc.'s disposition of its gas gathering and processing businesses in the Montney, Peace River Arch, Horn River and Liard basins to **Brookfield Infrastructure** in a \$4.31 billion deal in July represented one major infrastructure transaction.

"A lot of the M&A activity lately has been focused around the midstream space. Investors are looking at these opportunities with a long-term view on the returns, looking at developments that last 20, 30 or 40 years. That's why you are seeing the investment coming from either overseas or, in that particular case, Brookfield which is known for real estate, or from the private markets which can be focused more on long term returns."

Specialization vs. Diversification

And while specialization has dominated exploration and development company strategy in recent years as companies have been laser focused on optimizing their portfolios, a proper balance shouldn't be underestimated, said Golko. A diversified portfolio by product and project time horizon is required to sustain organizations over the long term.

"Through the downturn a lot of the diversification we have seen has put a bit of a burden on many companies, increasing their abandonment and reclamation liabilities, increasing the amount of overhead required to service a diverse portfolio, and increasing their overall operating costs. With limited capital to be deployed, some of the minor properties, and even some of the mid-range properties, were not being developed over the last couple of years."

Recently, more companies are trying to sell off a lot of their peripheral assets, allowing the companies buying those properties to become focused and specialized on those previously neglected assets, said Golko. That being said, being specialized only works if what you are specializing in plays out the way you think it's going to play out, he added.

"If you end up specializing in natural gas and gas prices are low, it doesn't matter how good you are at it, you are going to feel the pinch. So there is still a balance to be struck in making sure that your portfolio at least has some exposure to other product types, other plays, different capital deployment timelines and different capital intensities, in order to weather the next downturn. I think transactions will continue to happen to find that balance."

New Technologies

Still, healthy growth will depend on disciplined spending, with cost cutting and technological advancement as necessary ingredients. As drilling and service activity has started to pick up, the cost reductions brought about through the downturn are starting to claw their way back, Golko said.

"I think we will continue to see pressure on those costs, but we are seeing clients at the same time start to focus more on the operating side, looking at things more structurally rather than just putting cost pressures on, trying to figure out how to fundamentally reduce their operating costs for the longer term."

One way to do that is through technology, looking at things like how they can automate some of their well sites, apply machine learning or Internet of Things solutions for their data gathering and analysis, and optimize their pumping rates through intelligent computing, he said.

"I think we will see a lot more focus on trying to reduce the fundamental operating cost structure of the operations, moving away from human intervention and pen and paper style production and engineering processes to more machine-based and intelligence-based operations. As that takes off more and more, companies will be able to streamline that aspect of their business, reducing overall operating costs. It extends the life of existing assets, it allows wells to economically produce down to lower producer rates, as well as bringing down the overall breakeven price necessary to drill an economic well."



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Steven is Vice President of New Ventures and Strategic Advisory. He is responsible for driving product innovation at Sproule and leading the Strategic Advisory practice area which leverages technology, best-in-class analysis, insights and partnerships to effectively help advise clients on mergers and acquisitions, technical due diligence, and fair market valuations. Steven is an experienced engineer in the areas of reserve evaluations and year-end evaluations, acquisitions, divestitures, security commission reports, reserve audits, and resource assessments. He has written several papers on property evaluation methodologies and best practices.

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