

PETROLEUM INTELLIGENCE WEEKLY®

Vol. 55, No. 41



October 17, 2016

Special Reprint of *Petroleum Intelligence Weekly* for Cenovus. Copyright © 2016 Energy Intelligence.
Unauthorized access or electronic forwarding, even for internal use, is prohibited.

Cenovus Makes Case for Cheaper, Cleaner Oil Sands

After a tough few years for Canada's oil sands, the chief executive of leading producer Cenovus, Brian Ferguson, spoke to PIW about how the sector has adapted to remain competitive at lower oil prices, and the challenges it faces in terms of reducing emissions and maintaining its social license to operate.

Q. What is the general state of the oil sands industry two years into this oil price downturn?

A. Oil sands I think has really demonstrated its resilience. At Cenovus, we've reduced our operating costs by 30% — our operating costs, cash operating costs in the oil sands today are less than C\$10 per barrel. To cover all of my operating costs, transportation costs, royalties, I can do that at about \$35/bbl WTI equivalent. Obviously you have to translate that back to Canadian dollars and make quality adjustments, but at \$35/bbl WTI, we cover all of our costs at a project level. As a corporation I can cover all my capital, my dividend, all my capital costs and operating costs and generate free cash flow in the \$45-\$50/bbl range for WTI. And we want to reduce our costs by another 10%-15% over the course of 2017.

Q. But don't costs come down every time there is a downturn?

A. It's a dynamic industry and the thing that I think is really an advantage for the oil sands — whether its mining or what we do, steam-assisted gravity drainage (SAGD) in situ, we have a tremendous amount of infrastructure in place. We design our plants to keep them full and to run them flat for 30 years. [There's] round numbers \$20 billion in infrastructure in place that I can take advantage of and now it's all about taking a real manufacturing mindset. About 80%-85% of our costs are fixed, so the higher the throughput, the lower the unit costs and the more reliable they are. The one thing is that we absolutely need to mention is [amid] all the cost reductions we've done, two things never get sacrificed — the first thing is safety and the second is environment. Those are two things we just don't compromise on.

Q. What has the industry done to adapt? And what more can be done?

A. The oil sands industry today is about 2.3 million barrels per day, and there will be roughly another 500,000 b/d added over the next two or three years as new projects are completed — we're about 100,000 b/d of that increase, so we are continuing to increase supply from the oil sands and we are very focused on continuing to improve efficiencies.

Q. What specific cost-cutting steps have you taken at Cenovus?

A. First thing, we reorganized the company and have gone to a full functional model which has allowed us to eliminate any redundancy and overlap. It's meant that by reducing capital spend and reorganizing the company, we have reduced our head count by about a third — so there's over 1,900 people that have left the organization. We have continued to focus on some of the real business basics like supply chain — it's not just about driving cost reductions through pricing advantage it's about standardization, it's about aggregation and there's a lot of money to be saved there. We have 400,000 b/d of production and need to take advantage of that along our supply chains. For example, we have fewer suppliers as well. We've also taken the opportunity here to fundamentally redesign a lot of our business processes. We've redesigned facilities. Our well pads, for example, which are a significant component of our sustaining capital, we have redesigned those and reduced the scale so that we have saved between 25%-40% on well pad costs, and there is more room to go. We've done a lot of work around reservoir management, where we're looking at drilling longer reach wells. We're now regularly drilling in the oil sands longer than a kilometer underground. Where you used to drill 700-800 meters, we're now drilling 1,200 meters, and we're going to be doing a 1,600-meter well. The thing that is exciting about these things is they're sustainable. At least two-thirds of this cost improvement is sustainable even if we see prices back up in the \$65/bbl price range, because we have fundamentally changed the way we're working.

Q. What prices are now needed for new oil sands developments to be viable?

A. We have some brownfield expansions we're doing for example at Christina Lake and to generate an after tax rate of return that exceeds our cost of capital, [the price we need] is about \$45/bbl WTI equivalent. New projects — as I expect there will be a volatile price environment, we've got to be able to have a robust business model in the \$55/bbl WTI range.

Q. Following Opec's decision at its recent Algiers meeting, are you now rethinking your outlook for oil prices in the short or long term?

A. The short answer is no. I can't run my business on what Opec may or may not do and Opec has a history of cheating. It's not bad news, but I don't know if it's good news yet. Certainly what I
(continued on page 2)

Cenovus *(continued from page 1)*

expect is continuing volatility — if they are going to effectively restrict supply, then that will be good for pricing since we are oversupplied — not by an awful lot, but we've been oversupplied for two years. But the approach we're taking is that we've got to be able to compete with the marginal barrel of supply that's coming out of the US, out of the US shales. So I don't need to compete with other oil sands players. I've got to compete with marginal barrels of supply. I've got to have a cost structure that is industry leading in North America — not just the oil sands.

Q. Has Opec's "market forces" strategy permanently damaged the oil sands industry?

A. I think the events of the last two years on the supply side and pricing has had a dramatic impact around the globe on oil — it isn't just the oil sands. I think there are many things [in] the oil sands [that] will surprise people positively as we go forward. Two things are a big advantage for the oil sands. We effectively have no exploration risk — I've got 143 billion bbl of oil in place on Cenovus lands and I have effectively no decline. When you look at tight oil, they have a big first year decline — somewhere between 60%-80%, so very different business fundamentals. And then you look offshore, where there is exploration risk. We don't have that in the oil sands, so there's actually some things about our business model I think are actually competitive advantages. There used to be the perception that the oil sands were the marginal barrel of supply, and I certainly don't believe that is the case.

Q. Do you see investment in the oil sands rebounding if prices recover?

A. The pace of investment is going to be much slower than it previously has been. Obviously there is a lot of sustaining capital, but new projects? I think we'll be much slower in expansion. My analogy is that you hear people talk about the 'core of the core' in US shale. In the oil sands, the core of the core is when you've got high quality assets — you've got a good reservoir and you've got good sands. Then you can compete. Just like in the US there is the marginal reservoir and some of the plays aren't as good as the Permian for example. But if you are in lesser quality in tight oil in the US or lesser quality in the oil sands, then it's certainly going to be more challenging.

Q. How do you see oil sands competing with tight oil and shales over the next 10 years?

A. From 2010 to 2014, the technological advance that drove and made tight oil in the US economic is the same kind of technological advance that I think you are going to see in the oil sands over the next five years. We didn't nearly move as quickly on technology because everything was commercial and prices were high. But high prices did what high prices should do — they stimulated new investment, new technology in the shales. Low prices are doing the same thing in the oil sands right now. We're on the cusp of a real step change.

Q. The majors seem to be rethinking their positions in the oil sands, with Total deterred by climate and high price issues, but Exxon focusing on "cleaning up" its production. Do you see this changing? Is it going to become more of a "local" industry?

A. Every company has a different corporate strategy, and it will depend on what assets you have in your portfolio and where you choose to allocate capital to those projects. One of the things that has hampered not just foreign investment in the oil sands has been our inability to get market access. We haven't had a new pipeline built in Canada since 2010, so I think the market access and the very slow pace of approvals in Canada is what is negative to foreign investment.

Q. What opportunities are emerging in the low price environment?

A. Technology is the one thing that will have a significant impact both on cost and environmental performance and it's my view that generally speaking what's good for our costs is also good for the environment. Anything we can do to reduce our energy intensity, for example, also reduces our costs and emissions. They are not in conflict, they're very much aligned.

Q. There have been significant changes in the oil industry's attitude toward climate change. How important is this to maintaining its social license?

A. We've got to be able to compete on cost and on carbon. Oil is an incredible energy source — it's abundant and affordable. To me, it makes no sense to try to leapfrog over that fantastic resource, since you would have to go completely to renewables. We've got to be able to compete with all energy — whether it's solar or wind, tight oil — on both cost and carbon. This is important — clearly climate change is top of mind for Canadians. I think the oil and gas industry embracing that challenge to be part of a low carbon future is essential.

Q. Cenovus has a strong record as an environmental innovator and pace setter — how has that helped create more social license for the company?

A. Starting first and foremost in the local communities in which we operate. We have to have regulatory approval from the province, from the federal government, and local stakeholders — whether it's First Nations or other local communities — have an opportunity for input. That's always been a core value for us. There is a statement that I really believe in, that we live by is — that the communities where we operate have to be better off because Cenovus is there. That's a core value for us as a company.

Q. Is this more cooperative stance going to be enough, or have attitudes hardened too much among opponents — in other words, is it too late?

(continued on page 3)

Cenovus *(continued from page 2)*

A. That's one thing that is absolutely critical — getting the right groups together to have an informed discussion that is based on science and fact. One of the things we've been doing as an industry over the last several years is to determine what's the science, what are the facts. We have talked to people's minds, but what we haven't done sufficiently is talk to people's hearts, about how people feel, people's emotions about their use or consumption of oil. We've done surveys that show the majority of Canadians think the oil sands are a big economic benefit for the country, but they are also at the same time concerned about their impact on the environment. So we've got to continue to work on that. We've got a couple of examples from Cenovus. From 2004 to today we've reduced our emissions intensity per barrel by 30%. We have set a new target that by 2026 we're going to reduce our energy intensity by another third. That's critically important for what I call "public confidence" rather than "social license." We need the public to have confidence that we are doing the right thing.

Q. You mentioned earlier the question of market access. How confident are you that one pipeline to tidewater will get built?

A. The opportunity cost to Canada of not having access to tidewater has been huge. We estimate that between 2010 and 2014, the discount to Canada was about \$40 billion. I believe that we can absolutely demonstrate that, for example, the expansion of Trans Mountain — whether its [Northern] Gateway or Energy East — we can demonstrate that those pipelines are modern technology, they are brand new pipelines, that they can be built and operated safely. For example, to get to a coast, one of the things that we have to be able to demonstrate is that we can do marine safety — [and] we absolutely can do that. Trans Mountain has been operating for almost 55 years without any incident. We continue to believe that the project can be built and operated safely, and that it's in the best interests of the country for it to go ahead. The Trudeau government has established and are looking at and will be looking at the National Energy Board process to make sure. I have to get it on the record that I believe that Canada's regulatory systems today are absolutely world-class. Can we make them better? Yes. We will continue to do that. Our current government in Ottawa is very concerned about climate change and the environment, but they are also very concerned about the economy and I believe there is a recognition that both of them are interrelated — they don't compete, but are actually interrelated.

Q. What about the Canadian government's new national carbon tax?

A. I can't comment specifically on this because there's a lot more information we need to get first. But I can tell you — and we've been saying this for years — that we support a broad-based carbon tax. If you think there is an issue or concern, if you define that issue or concern properly, then you can identify the solution for it. So if the concern is emissions and the concern is the impact

that emissions have on climate change, then the thing that we should be doing is have a broad-based carbon tax that applies across the whole value chain from production through consumption — and we all have an impact on that. My own personal belief is that a carbon tax is a better system than cap-and-trade. I was one of the supporters of the Alberta Climate Leadership Plan that the provincial government here put into place last November. The reason I supported it is that it is a balanced process. There is a carbon tax across all of the economy and they are taking the proceeds from that levy — or a big part of the proceeds — and directing it into technology to address emissions.

Q. In hindsight, what should industry have done differently — both to get pipelines moving, and on broader climate change and environmental issues?

A. I think that the oil and gas industry could have started earlier on collaboration. We could have started earlier to have conversations with environmental leaders. I was one of the CEOs that sat down with a group of environmentalists — five CEOs and five environmental leaders — back in the fall of 2014 and we said "Look, how do we find common ground, how can we break this logjam?" We should have done that earlier.

Q. But how does a company engage in dialog with hard-core opponents?

A. You really have to try to understand. There's a cliché that I love — it says that before you can be understood, you have to understand. So until I can understand what your concerns are, I can't get you to understand what my concerns are. That's how you resolve any conflict, that's how you move forward on anything. Canadians have historically been very good at collaborating. Usually what it means is there's got to be some compromise on both sides. We should never, ever be afraid of sitting down and talking with our opponents — ever.

Q. And what role can technology — using solvents instead of steam, for example — play in lessening oil sands' environmental impact?

A. Solvents are the next step change for the SAGD industry. Take a look at any of the economic or environmental parameters — everything improves by 15%-30%, whether it's recovery factor, whether it's an improvement in costs, whether it's an improvement in emissions reduction. I think in the next five to 10 years, you're going to see even greater proportion of solvent [used]. The Holy Grail is actually a waterless or full solvent process. That's what generates the emissions — we burn natural gas to generate the steam and that happens in many industrial settings where you burn natural gas to use it either as a heat or to crack fluids. So that's pretty exciting — if we can find ways to address the amount of natural gas consumption through solvents or other technologies — that could have big impacts on other industries too. That's one of the biggest step changes that I see.