

Finding the middle ground



GREEN VERSUS UNCONTROLLED GROWTH: The idyllic natural splendour of the Athabasca River and the environment-altering development taking place in Alberta's tarsands are in stark contrast yet may be moving toward mutually beneficial goals.

The gap between environmentalism and the mining industry has historically been a chasm on the scale of the Grand Canyon; will technology, a desire for a greater global market share and a mutual goal of making Canada a world leader in environmentalism bring the two sides closer together?

by **TANYA LAING MOORE**

The tarsands—more accurately known as bituminous sands—of northern Alberta have always received their share of attention, and for good reason. The heavy crude oil that can be extracted from the sands in Alberta is estimated at 174 billion barrels—the world's second largest reserve after Saudi Arabia. At a time when oil-based products are increasing in value to unprecedented levels, the potential revenue from the tarsands is staggering. But it comes at a price.



Rick George is the president and CEO of **Suncor Energy**, one of the original companies involved with the development of Alberta's oilsands. In an address to the World Heavy Oil Congress in March 2008, he outlined some of the reasons the sands have always required innovative thinking in order to tap those reserves.

"Oilsands may be a hydrocarbon," said George, "but you can't use it as a lubricant—quite the opposite: it contains minerals nearly as abrasive as diamonds. You can't pump it—at least not without some serious technology. It's as hard as a hockey puck in its natural state. And you can't burn it as a fuel—countless forest fires over the millennia have failed to ignite it. The fact is, by itself, the oilsands are worthless. It has no value other than the value we create."

Creating that value is what makes the oilsands such an intriguing and often contro-

versial project. Technologies such as hot water extraction in the 1920s as well as hydrotransport and truck-and-shovel mining in the '90s have helped to obtain the bitumen from the sand, though the costs of extracting the crude are higher than with conventional oil—especially when almost three times as much energy is required to extract the bitumen. The costs aren't simply economic; according to environmental groups such as ForestEthics, the oil comes with an ecological price tag as well.

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The environmental costs

Tzeporah Berman, the strategic director and founder of **ForestEthics**, said that development in the tarsands is something the group pays strict attention to.

"We're very concerned about the rapid pace of development of the tarsands and also of the social and environmental costs,"



Tzeporah Berman forest from the impact of the tarsands (as well as) to respect aboriginal rights in the region."

Berman believes that Canada has an opportunity to be a leader in terms of climate change and CO2 emissions but that cannot happen as long as the tarsands development continues apace. In fact, Berman said the tarsands are quickly becoming the single greatest source of greenhouse gas emissions in the country, raising concerns about global warming as well as the long-term effects on the surrounding forest, water and wildlife.

"We're very concerned about . . . the implications of the toxic flow back out from the tarsands and how that's affecting wild rivers and local communities," said Berman. "The idea that we have 51 square kilometres of toxic ponds in Alberta and that no one really knows what the long-term implications are and how to clean them up is horrifying to me."

However, Berman recognized that the industry is placing increased importance on carbon-capturing technologies and reclamation, a notion supported by Suncor.

"Nothing better illustrates the need for more co-operation, innovation and technology than the environmental challenges our industry now faces," said George. "How we



WATER MONITOR: As part of its effort to be more environmentally conscious, Suncor does water testing to measure pollution.

handle our environmental challenges—and the infrastructure investments that go into addressing these issues—is just as important to building and preserving value as up-graders or pipelines or refineries. We ignore these environmental challenges—and opportunities—at our peril."

To that end, Suncor has joined with 14 Canadian and international companies to propose "a large-scale application of carbon capture and storage technology." The company is also increasing its focus on technology that will reduce SO2 emissions by 95 per cent, as well as mobile mining technology to replace the truck-and-shovel system, which will reduce noise pollution as well as greenhouse gas emissions.

Brad Bellows, the media spokesperson for **Suncor**, elaborated on George's comments.

"We do recognize that while we've had some past successes, it's key that we build on the successes in terms of mitigating environmental impacts from the industry," said Bellows. "That would be on all fronts—air, land and water."

Bellows underlined that continuing work surrounding energy efficiency is important for the industry in terms of the bottom line as well as from the perspective of having a social licence to operate. And with many experts agreeing that advancements in environmentally friendly technology may give Canadian mining exports an edge on the global market, there does seem to be a common purpose for environmentalists and industry to reduce emissions.

"The possibilities are limited only by the strength of our imagination"

"From Suncor's point of view, it's an opportunity for a double win," he said. "Energy loss is essentially a cost. It takes natural gas typically to make energy, so more efficient operations can actually lower our costs as well as lowering greenhouse gas emissions. We have made some strides on an intensity basis of emissions per barrel. We've cut those by about 50 per cent since the 1990 baseline of the Kyoto Protocol. But, over the same period, the absolute emissions—Suncor's and the industry's—have gone up because the industry has expanded, so the challenges remain there."

Creating a dialogue

Those challenges have resulted in a call to action from George, Suncor Energy and the industry.

"The status quo is not an option," said George. "We can—and we must—do better. Again, that's why we need to start thinking more creatively about potential solutions. You know, Suncor was recently recognized for the work we've done with the Alberta Conservation Association on conservation offsets—investments that help protect valuable boreal forest habitat in northern Alberta. While I'm very proud of that initiative, I believe we need an even more innovative approach to this issue. Perhaps it's time to start thinking beyond localized areas or corners of a province when it comes to conservation offsets for land impacted by development. Instead, how about a no-net-loss approach to habitat protection . . . The possibilities are limited only by the strength of our imagination."

Berman said the industry's recognition of the environmental impacts and taking steps toward mitigating the damage done and dialogue between the two sides may be what bring the two sides to common ground.

"Canada is full of people who are creative and committed to ensuring that we create a sustainable economy," said Berman. "One of the problems is that the people who know the technology best, who work in the mining industry and in the oil and gas industry, are not having the conversation about how to retool the operations and make them more responsible and how to create a more sustainable industry. I don't see the people who work in this industry as the enemy. I see them as potentially one of the most important resources in figuring out a responsible future for Canada on this issue. What I'm hoping for is that we move quickly from positions as adversaries to working together . . . to find a responsible solution."