

Shear is full steam ahead



photos courtesy Shear Diamonds

When the Jericho Diamond mine opened in 2006, it was heralded as Nunavut's first of many. There was much disappointment when owner and operator Tahera Diamond Corporation succumbed to a perfect storm of global economic turmoil, technical deficiencies and finally the warm weather that shortened the life of the winter road and hiked expenses even further.

Revamped diamond mine moves toward production

by Sara Wilson
Northern News Services
Nunavut

The revived Jericho Diamond mine is proving to be a promising asset for Shear Diamonds Ltd, as the company recovered 200 carats of diamonds from a surprising source.

Jericho, located in the Kitikmeot region of Nunavut, 350 km southwest of Cambridge Bay, reported 14 stones greater than 0.5 carats, as well as four of the largest stones, showing carats between 0.775 and 1.907.

"We've recovered our first initial parcel of diamonds from Jericho and that was 200 carats from a stockpile of material that was previously processed," said Pamela Strand, president and CEO of Shear Diamonds.

"It was a very good exercise because we've started up the recovery portion of the plant, not the entire thing, but where the diamonds are recovered because this is already-processed material."

For Strand and the rest of the Shear team,

the carat yield from the trial recovery program this past year confirms they are moving in the right direction.

"It's proof that we can recover the diamonds and secondarily that there were a significant number of diamonds that weren't recovered and that's an opportunity for Shear Diamonds right now as we move forward on our business plan," Strand said.

"It's the little mine that could, and it will."

The number of stockpiles that came with the purchase of the defunct mine was another unexpected surprise for Shear. The property has a diamond resource estimate of three million carats within the pit and that's the rock Shear plans to mine if everything lines up over the next 18 months, Strand said.

"We discovered that there were a number of stockpiles and one of them in particular was of very high grades. We've got about 18,000 tonnes and the material grades are anywhere to 10 and 15 carats per tonne so it's readily-accessible material for us to recover diamonds from."

A good opportunity for growth, according to Strand.

"It was a very nice surprise," Strand said. "It's a good opportunity because having that available material readily accessible gives us material to work in the plant with, to start up different portions and ensure that everything that needs to be fixed or maintained does."

The mine, originally operational from 2006 to 2008 by previous owners Tahera Diamond Corporation, was bought in 2010 for a price tag of \$6 million, not \$34 million as reported in other media sources.

"We bought it for about \$6 million total," Strand said. "Two million dollars of that was cash and the other \$4 million was in stock of the company. It's not a big diamond mine, it's not an Ekati or a Diavik, it's one pit one kimberlite ... It doesn't seem like a lot of money, but it did go through a bankruptcy process."

Strand knows the circumstances of Tahera's demise intimately and it was no single factor. "You could probably make a list of 50 things that went wrong, it was a proverbial perfect storm," Strand said. "2008 was the financial crisis and diamonds were sold in US dollars so you had a currency sensitivity, the diamond prices softened as a result of people not buying



Shear bought the mothballed Jericho diamond mine for approximately \$6 million - \$2 million in cash and the other \$4 million in stock.

them, they missed the winter road season and had to fly all their fuel in, and then the operational issues."

Diamonds unrecovered by previous owners also added to the mix.

"These diamonds that we recovered, the previous operators did not recover so they had very low recoveries," Strand said. "That was a problem and high mining costs."

Moving past Jericho's history, Shear is looking to the future with ambitious plans.

"We're going through an assessment period to make sure that all the components are up to our satisfaction and it's been very encouraging so far," Strand said.

"We've been hiring from the communities ... Nov. 30/Dec. 1 is our public hearing for our Type A Water license renewal and those are in Kugluktuk. We had a technical session in Cambridge Bay in June for our water license."

Communities in Cambridge Bay and Kugluktuk are part of the discussion process, as the deposit moves toward a production phase.

"Shear Diamonds has taken a very transparent approach to the process, which means we've been working with many of the regulators on an on-going basis," Strand said.

"A number of them have been going to sites

with their consultants and as well as ours, so this is a renewal (process). The mine has been built, it's a lot different if you're trying to permit something from scratch."

Jericho, Nunavut's only diamond mine, currently averages an employment force of eight to 10 people, an environment Strand says creates a tight-knit community.

"It's like the little gem of Nunavut," Strand said. "Everyone that's worked there had an amazing experience because it's a smaller mine, more intimate for people that work there, rather than a big mine and most of the people that were there want to come back."

Next year will be a big year for the company, as it explores its new geological model.

"It's going to be a very big year," Strand said. "Now that we've got a very clear road map in front of us, it's going to be fairly busy."

"We will have to work on the resource in the pit taking more samples. We have a new geological model which is very exciting, and now know about the plant. Once that gets up and running and if we do have diamond recovery from the piles and if we do have diamond sales then we will be upgrading the bigger part of the plant as well. It's the little mine that could, and it will."



Stockpiles of previously processed rock on site yielded a nice surprise for Shear in the form of unrecovered diamonds, 200 carats worth initially with promise of more.

Prairie Creek operation in sight



photos courtesy of Canadian Zinc

With public consultations underway on the environmental review, Impact and Benefit agreements signed, and training dollars in place, Canadian Zinc's Prairie Creek lead, zinc, silver and copper mine is close to setting a production date.

by Sara Wilson
Northern News Services
Prairie Creek

Feds contribute significant training dollars for workforce

Canadian Zinc's Prairie Creek operations are going full steam ahead. The company has finished up its public consultations and has submitted its environmental assessment study for review.

"The environmental assessment process has been going on since May 2008, when we first filed our application for the main operating permits at the Prairie Creek Mine," said John Kearney, chairman for Canadian Zinc, which is aiming to operate a lead, zinc, silver and copper mine 90 kilometres from Nahanni Butte.

"We spent the first year negotiating the scope of the environmental assessment and in June 2009 we agreed to the terms of reference with the review board. It took us the first year to agree to the terms of reference for the environmental assessment.

"We then prepared our environmental assessment report, which we filed in March 2010," Kearney said. "Subsequently that has been going through its various stages of what they call information requests and response and technical meetings, regulatory agencies, technical reports, and then public hearings were held in Fort Simpson and Nahanni Butte in June 2011."

The public meetings proved successful with many community leaders and residents taking part in the discussions.

"There was three days of public meetings in Nahanni Butte and two days in Fort Simpson. Both were well attended. Lots of people spoke up there was lots of support for the project from local businesses and local aboriginal leaders," Kearney said. There were many questions about water quality and protecting the environment, but in general they were very positive meetings."

The zinc mining company has been preparing ways to tackle the environmental issues surrounding the the Prairie Creek mine, and have devised a way to minimize its footprint.

"We have developed a very comprehensive environmental plan specifically related to the tailings disposal and water management," Kearney said.

"We regard (both) as a very innovative process. For example there will be no tailings on the surface. All of our tailings will be disposed of underground in a paste backfill process, which is a very good benefit because in the long run there will be no residual tailings ponds on the surface."

In addition, Canadian Zinc has signed an important Impact and Benefits Agree-

ments with the Nahanni Butte Dene Band and Liidlii Kue First Nation (Fort Simpson), both part of the Dehcho First Nations.

"We see aboriginal employment as very important."

"Both of the agreements are similar in that they provide for the participation of the two communities in the project through jobs, training, business opportunities, what we call social benefits and some financial participation," Kearney said.

The agreement outlines staffing requirements for the project, but the figures agreed upon are guidelines the company hopes to surpass.

"We have agreed to give priority to the local community in our hiring, we will hire first from the local community from the aboriginal (pool), and would target a minimum commitment to aboriginal employment and to the Northwest Territories employment," Kearney said.

"We're targeting a much higher percentage in the NWT – 65 per cent – and we're also targeting a minimum of 25 per cent aboriginal. We see aboriginal employment as very important because they are local and available and they're interested in working."

Canadian Zinc recently entered into a partnership

with government bodies to help train employees within the North.

On Aug. 29, 2011, Canadian Zinc reported that Human Resources and Skills Development Canada (HRSDC) approved a commitment of more than \$3 million over a three-year period to fund the More Than A Silver Lining programs to provide aboriginal participants with training-to-employment opportunities in a variety of mining-related occupations at the Prairie Creek Mine.

"The federal government is contributing \$3 million and the GNWT is putting up money and the aboriginal communities are putting up money and we're putting up money so it will be a \$4.5-million training

program to train the residents of the Deh Cho, specifically for the Prairie Creek Mine," Kearney said.

The training program, run in partnership with the Mine Training Society and Aurora College, will focus on multiple training techniques including a training site in Fort Simpson, hands-on training programs at the mine site and classroom work, Kearney said.

Since acquiring the property in the 1990s, Canadian Zinc has invested over \$45 million, quadrupling the known mineral resource and advancing the Prairie Creek project through five environmental assessments related to applications for various land use permits and licences

required for exploration and development programs.

Over the past year, there have been no major hiccups and the company says it's on track toward production.

"In the past year we've made good progress," Kearney said. "We've concluded the two impact benefit agreements with the communities, we've signed the socio-economic agreement with the Government of the NWT, we have the training program with the federal government, we have launched the feasibility study, (and) we have spent the summer doing exploration at the property, so we've had a busy year and things have gone well."

Setting a production date for the mine will depend upon the progress of the present regulatory reviews and subsequent approvals, according to Kearney.



While Prairie Creek will be sharing the economic benefits of an operating mine with the people of the Deh Cho, the mine will be sharing the breathtaking beauty of the Nahanni watershed with the Nahanni National Park reserve.

Avalon full speed ahead despite 'slow' regulatory process

Mineral exploration and development company hopes permitting process won't compromise place in rare earths race



Don Bubar, president of Avalon Rare Metals Inc., explains how rare metals will remain in high demand during a panel discussion on the future of mining in the NWT at the Prospects North 2007 business conference.

by Thandie Vela
Northern News Services
Thor Lake, NWT

As Avalon Rare Metals proceeds with its Nechalacho project at Thor Lake, fears continue to arise of the territory's regulatory process sabotaging its position among the most promising rare earths projects in the world.

The deposit is one of the few potential sources of valuable heavy rare earth elements outside of China, and is poised to be among the first to get the commodities to "anxious" global consumers, president Don Bubar said. But that's only if the project – currently in the environmental assessment phase – is not significantly delayed by the permitting process.

"Frankly, that process is going a lot more slowly than we would like it to," Bubar said. "We're certainly getting things submitted on our side as quickly as we can and hopefully the review board can find a way to accelerate it on their side."

The company filed its developer's assessment report with the Mackenzie Valley Environmental Impact Review Board in May, and has been given no timeline as to how quickly the environmental assessment will proceed, Bubar said.

The environmental review board recently paid for an external report on improving the timeliness of the environmental assessment process. According to

an Oct. 3, press release:

"The report was commissioned as the first step in the review board's work to address criticism by industry and others that the regulatory system governing land and water resources in the Mackenzie Valley is increasingly complex and lengthy."

The board plans to review recommendations from the report, prepared by Stantec Consulting Ltd. Improvement is "critical" for Avalon's project, Bubar said, as mineral exploration companies continue to crop up in the rare earth development industry.

Bubar estimates the Nechalacho project is in third place in the world outside China, in terms of timelines to reach production, behind U.S.-

based Molycorp Inc.'s Mountain Pass Project and Lynas Corp.'s Mount Weld project in Australia – both scheduled to reach production within the next two years.

Avalon aims to begin production at Nechalacho by 2015, with initial sales by 2016.

"We have a significant head start but if we're delayed then our competitors could catch up and capture the business opportunity so we have to make sure that we're not significantly delayed," Bubar said. "And so far (the permitting process) can definitely be going faster."

The company aims to have the environmental assessment process complete and submitted for final approval by the end of next year, and permits

issued by the first quarter of 2013.

"Each one of these steps seems to take much longer than it should and they all add up," he added. "It's a significant concern to us because it can impact when we can get construction started, and if there's a delay in that and ultimately achieving production, then the whole business opportunity could be frustrated because it's a competitive marketplace, and we're competing against other aspiring producers."

The key rare earths in high demand right now include neodymium, which is used in high strength permanent magnets – key to electric motors for hybrid cars; heavy rare earth dysprosium, also needed

for magnet applications; and terbium and europium, used for energy efficient lighting.

"Those are the ones everybody's looking for and concerned about securing supply of outside China going forward," Bubar said. "That's again why it's important that we keep this project moving along quickly because the consumers are going to jump on the first opportunity they come across to have a new supply."

Toronto-based Avalon is forging ahead with market development work, with memorandums of understanding toward eventual off-take and strategic project partnership now signed with four Asian companies, subject to non-disclosure agreements, Bubar said.

In the black

Despite increasing difficulty in raising capital with recent uncertain global market conditions, the company remains well-financed, Bubar said, with about \$70 million in hand.

"We're more than adequately financed to complete all the work ahead of us for the next couple years related to the feasibility study and initial development work on the project," he said. "We're not at any risk at all of running out of money and not being able to finish our work programs."

The 2012 budget for the project is between \$25 and \$30 million. About \$2 million per month is spent on the project, which is scheduled to resume on-site drilling in January, oriented toward closer spaced holes to better define the geometry of the resource, Bubar said.

Avalon's pre-feasibility study on Nechalacho determined indicated resources of at least 57 million tonnes in Nechalacho's Basal zone, with a probable mining life of at least 18 years.

Approximately 85 to 100 people will be required at any given time during construction for both Nechalacho and the project's nearby hydromet site Pine Point, where the rare earths will be separated from the minerals in the rock taken from Nechalacho. During operations, the company will require about 216 full time employees for Nechalacho and about 69 full time employees at Pine Point.

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