

Avalon Ventures brings rare earth elements to light

By Shirley Collingridge

Despite being at least four years from development, Avalon Ventures President and CEO Don Bubar says his company is perched on a metaphorical gold mine. Among its five rare metals projects in Canada is Avalon's flagship property at Thor Lake, NWT. Not only is Thor Lake a large and very rich rare metals cache, it is particularly abundant in rare earth elements (REE).

With more than three decades mineral exploration experience in Canada, Bubar readily recognizes industry trends. "Many do not yet appreciate the value of rare earth elements, but they soon will," said Bubar. "When Sudbury was founded in the late 1800s as a major metal resource in northern Ontario, it was a sulphur deposit that contained an unusual rare metal called nickel – for which there was not much use at the time," he said. "Twenty years later, material science innovation invented stainless steel – creating a market for the nickel and value for the resource in the ground."

"We are seeing a parallel situation at Thor Lake. It was historically regarded as a geological curiosity enriched with oddball elements for which there was previously no real use," said Bubar. "Now with the invention of the rare earth magnet and its widespread application in electronics and hybrid car technology, there is a parallel growth in demand emerging – and value for the resource in the ground."

High intensity permanent magnets primarily use the REE's neodymium and dysprosium, enabling "electric motors to remain small and lightweight, yet deliver the efficiency and performance required to power a modern automobile," he said. "The Toyota Prius contains some 65 pounds or 30 kilos of rare earth elements."

"Virtually all the world supply of rare earth elements is currently sourced out of China. Now China's industrial revolution is creating big demand for all metal commodities in that country. China used to produce an excess for world markets.



Elders and community leaders from Deninu Kue with Avalon and Peak Drilling team members during September 2007 site visit.

Now they are using more and more for their own domestic needs, leaving less and less available for export to other countries," said Bubar.

"When 98 per cent of the supply comes from China, it is obvious that the world could use some new non-Chinese sources of supply," he added. "We have that supply. This deposit in the Northwest Territories is one of the best quality rare earth element resources known anywhere in the world, outside of China."

"These days, resources in the ground are viewed by investors as money in the bank for the longer term. Ultimately, their value will be realized for the shareholders," he said.

As a bonus, the Thor Lake ore is relatively green. "The rare earth elements themselves and most of the other minerals in the ore are environmentally benign – non-toxic," said Bubar. "The ore does not contain the acid-generating sulphide minerals, such as those found in copper and nickel, which can damage the environment. Only thorium presents a potential because of its associated radioactivity. However, the concentrations are so low that we are confident we can institute the kind of protocols on site to make sure that does not present a health and safety risk by mining that material."

Where feasible, the project will use

alternative energy sources. "Traditionally, companies have just used diesel power generation on remote sites, but increasingly companies are looking at alternative energy possibilities," said Bubar. "For example, along a big lake like Great Slave Lake you often have strong prevailing winds. That may allow us to use wind power to reduce the amount of diesel fuel required."

Bubar says environmental sustainability and social responsibility are core values of the company. "It is important to communicate regularly with the general public and make sure local people are aware of our activities," he said. "We have made that a priority. We are working in the Akaitcho Territory, which is in an ongoing comprehensive land claim negotiation between the Akaitcho Dene Nations and the Federal government. We respect that process and accept that once the claim is settled, the Akaitcho Dene will have a greater say over land use policy in the territory.

"We have a land use permit to do the diamond drilling over the next two years, and will be spending about \$5 million in 2008," he said. "The next stages potentially involve a bulk sampling program involving going underground – which would require a higher level of permit. In anticipation of that, we are

working hard to keep the local communities well informed about what we are doing, what we hope to accomplish, and what we are doing to protect the environment and minimize adverse impacts on the land.

"A few people from the local communities have been employed on the project since we got going there last summer," he said. "Once developed, the project will mean a few dozen more jobs. We will institute a progressive social responsibility policy and high levels of health and safety standards. With a smaller size operation like this, you can develop more of a community spirit at the site, as opposed to a giant operation with hundreds of people, which begins to feel like a city."

The company is also considering several models of participation agreements to maximize benefits for the local communities.

"We anticipate introducing training programs to ensure we get enough skilled people locally to fill the positions," said Bubar. "Luckily, we will have four communities to draw from. In addition to Yellowknife, the Akaitcho Dene includes Deninu Kue Dene First Nation at Fort Resolution and the Lutselk'e Dene Nation.

"People don't hear about neodymium or dysprosium everyday but we think they soon will," concluded Bubar. "Rare earth elements are used in many common electronic products. Handheld communication devices, iPods, laptop computers – all are full of rare metals vital to these applications. People use REE everyday; they just do not realize it."

Avalon Ventures is a junior mineral exploration and development company. Based in Toronto, the Canadian company focuses on rare metals and minerals that have growing markets, and on green technologies being developed to achieve greater energy efficiency and a cleaner environment. Avalon Venture trades on the Toronto Stock Exchange as AVL. For more information, visit their website at www.avalonventures.com. ▲

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ABORIGINAL PARTNERS IN MINING

Shirley Collingridge is a freelance writer and photographer operating out of Saskatoon, Saskatchewan.

Sheldon Boucher - outdoorsman

When the mercury plunges to minus 50 Celsius, Sheldon Boucher just keeps on smiling. That is because the Fort Resolution native sincerely enjoys his job with Avalon Ventures. Using ski-equipped aircraft, the company flies in Boucher to its Northwest Territories' Thor Lake site for the long and often chilly 10-hour-a-day, four to five-week rotations.

Bone-chilling cold is nothing new to Boucher. Besides, he says, "It is starting to warm up. It was forty below last month. I dressed warm for it. You get used to it."

Being a Dene trapper, Boucher is well accustomed to Mother Nature's icy fingers. "When I'm at home, I'm practically outside all day long," he said. "So it's no different."

Back home, Boucher hunts for moose, buffalo, and caribou near Great Slave Lake as well as trapping. Even on site, evenings often find Boucher outdoors – hunting, skidooring, or setting traplines.

Boucher first arrived in camp at the end of the summer in 2007, bringing with him a solid work ethic, traditional knowledge, multiple talents, and a spanking new Environmental Monitoring course certificate.

The young man quickly impressed Senior Geologist, Chris Pedersen. "Sheldon Boucher takes pride in his work and sets a high standard for himself," said Pedersen. "Sheldon can do just about anything he sets his mind to, and he is someone we would want to invest time and training in."

"He has a lot of interests, particularly in anything outdoors," added Pedersen. "He raises sled dogs, hunts for food, and has close family ties. He is liked and respected by everyone for his quiet and unassuming way, and his skills in mechanics and all around handyman abilities."

Boucher's traditional knowledge also proves useful. "Being from the area to begin with, makes a huge difference," said Pedersen. "Knowing the conditions here – winter conditions, ice conditions – traditional knowledge is very useful for us doing our work."

Boucher thoroughly enjoys all of that work, from splitting core to environmental cleanup to water sampling. A recent workday found him helicoptering to far-flung lakes, assisting in regional water sampling for a baseline water survey. Usually, Boucher spends most of his day core splitting. Every few days, he refills the fuel tanks for each tent's oil stoves – although he personally prefers wood heat.

"I like to work," said Boucher. "I can't sit around and do an office job. That is too boring. I like to be active – really active. I like to be outside."

Inside or out, Boucher knows that he is sincerely appreciated. He receives frequent praise from his supervisors. So even though he misses his six-year-old



Sheldon Boucher sampling water.

(Inset) Sheldon Boucher samples water with Carey Sibbald.



daughter, Boucher's future plans include Avalon Ventures. Likewise, Avalon Ventures' plans include Sheldon Boucher.

"We anticipate that we will be

drilling on and off for the next year, year and a half," said Pedersen. "We certainly anticipate Sheldon Boucher will be with us for that whole time. He is top notch." ▲