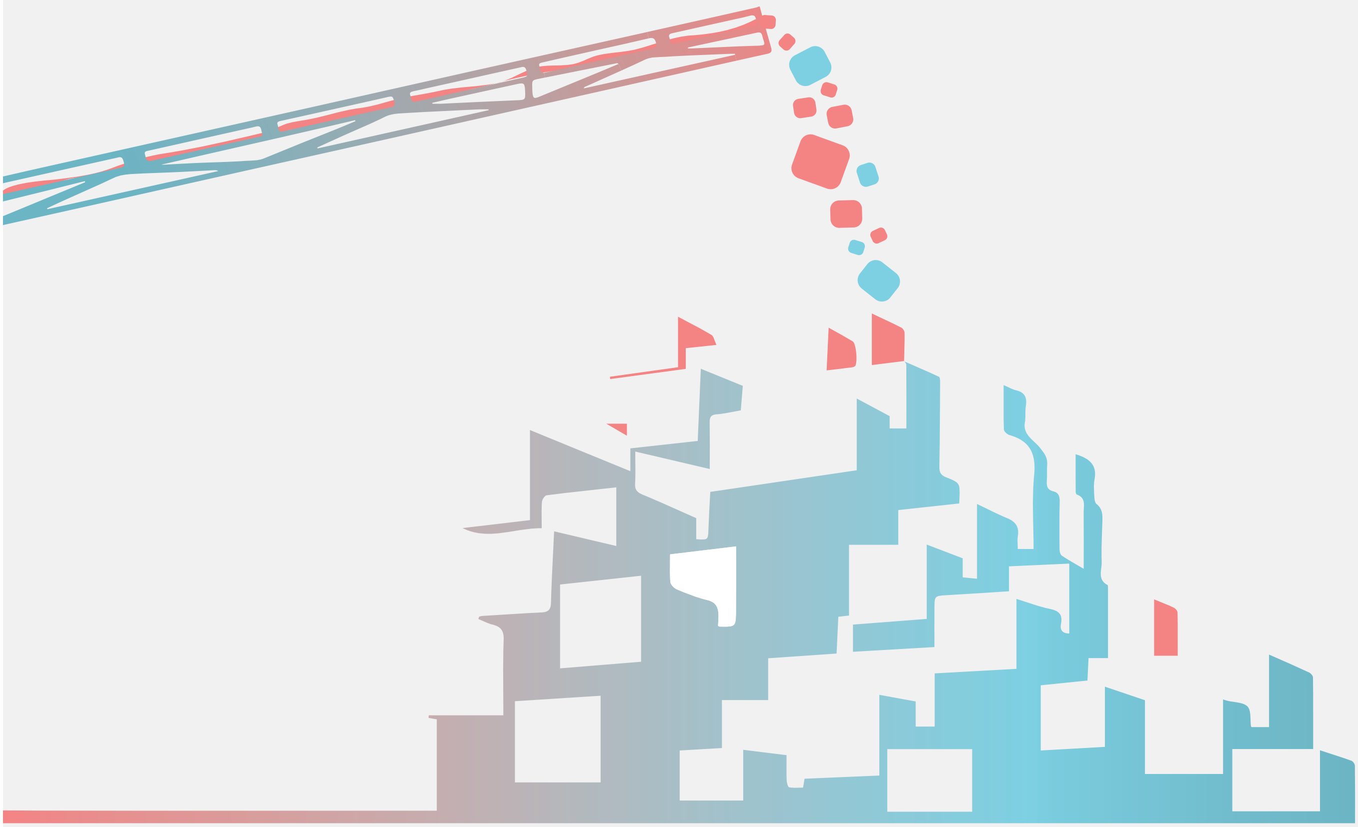
GLOBAL BUSINESS REPORTS

INDUSTRY EXPLORATIONS



Québec Mining
Newfoundland and Labrador Mining

2013

Exploration - Production - Financial Markets - Regulatory Framework - Services

Stimulating the Québec Mineral Industry

Philippe Cloutier, Chairman of the
Québec Mineral Exploration Association (QMEA) Board

During the last months, Québec mining exploration companies have been affected by the severe crisis on investments across the mining sector, which raged on the global industry. This difficult situation is compounded because of a recent heated debate in Québec about the mineral industry after the government's adoption of the Mineral Strategy (2008-2009). This strategy was followed by two modification attempts to the Québec Mining Act (No. 79 and No. 14) and by Bill no. 65, called Loi sur la conservation du patrimoine naturel et sur le développement durable du territoire du Plan Nord, which aimed to subtract about 600 000km2 of possible exploration lands north of the 49th parallel from any industrial activity. Also, the proposed changes to the mining royalty regime and mining taxes (2010 and 2013), the moratorium on uranium industry and various changes in regulations (restoration plan, financial guarantees and waste rock management facilities) have contribute to increase the challenges of our exploration SME's lately.

This ongoing debate continues to mobilize the business community in Québec and is now attracting the attention of the Canadian industry, the international investment community, the media and the public in general. Rarely an industrial sector has been stigmatized and brought to the center of attention the way ours has. At first glance, the mining development in Québec seems destined to stagnate if not decline for years to come. But yet, there is hope.

We believe that the legislator will recognize the importance of our sector and the progress made in the past few years to establish a transparent, predictable and stable mining regulatory framework. Since its foundation in 1975, the Association's mission has been to promote a responsible mining exploration and to support the development of Québec's mining entrepreneurship. In this context, the Association has advanced on many major cases for the future development of our industry. In this regard, an agreement has been developed between different Mining Associations and municipal authorities to facilitate the cohabitation of exploration and exploitation work with the other uses of the municipal territories.

Also, our Association has established a good practice guide for mineral exploration in municipal territory. We are also working to develop a certification according to the principles of sustainable development which will provided recognition to exploration companies that have good practices. In addition, we are improving the QMEA annual Convention so that it becomes The Mining and Exploration gathering in Eastern Canada and in the French-speaking world.

These are few examples of actions that we believe essential to contribute to the improvement of Québec's mineral resource legislative and regulatory framework, despite the current political uncertainties. Québec, with its vast territory, rich subsoil and the perseverance of its explorers, has everything it needs to regain a prominent place on the world stage. In anticipation of the economic recovery of our industry, QMEA intends to continue its efforts and to meet the current and future challenges of the Québec mineral industry.

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All interviews were conducted between February and September 2013. Although company transcripts have been updated wherever possible, interviews may not reflect the most recent developments of the companies featured.

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● Québec ● Newfoundland and Labrador

Je Me Souviens:

An Introduction to Québec and its Mining industry

“Old regions like Québec are now competing against Saskatchewan, which has enormous potash and uranium resources that are very attractive to international investors. Québec’s production has doubled over the last ten years in terms of volume, but Saskatchewan has quadrupled. What Québec really needs is a large new discovery akin to the Ring of Fire. There is tremendous potential in the Plan Nord, but there is a significant need for infrastructure.”

- Pierre Gratton, President & CEO, MINING ASSOCIATION OF CANADA

Source: Shutterstock

An Introduction to Québec

A brief overview of the province and economy

Québec often makes the headlines. This is understandable: as Canada's largest province by land area, and second largest by population, it holds political influence and economic importance to the country. As Canada's only province claiming French as its sole official language, it claims a unique culture; its cuisine, architecture and natural beauty attract roughly 10 million tourists a year.

Yet the media in Canada and elsewhere is more concerned with political squabbles and the fight for independence. In the 2012 provincial elections Parti Québécois (PQ) won a minority mandate. PQ's support for Québec sovereignty has ensured that this issue remains in the public debate, even if no referendum is likely in the foreseeable future. In the meantime, the PQ's "secular charter"; which bans conspicuous religious symbols such as headscarves yet makes allowances for exclusively Roman Catholic "items of cultural heritage"; has caused controversy.

Whatever one's position on Québec sovereignty, the feeling that these political squabbles are distracting from more important economic issues is hard to escape. Compared to three other giants of Canada; British Columbia, Albert and Ontario; Québec has a significantly lower GDP per capita, a lower rate of private investment, a lower rate of home ownership, and a greater public debt. Its GDP growth has averaged below that of Canada as a whole since the early 1980s in a trend that shows little sign of changing: growth in 2011 and 2012 was 1.7% and 1% respectively, compared to figures of 2.5% and 1.7% for Canada as a whole, and its manufacturing output declined even as that of provinces such as Alberta and Ontario increased.

What makes these figures most frustrating is the potential that Québec holds. The province is one of the most richly endowed mineral jurisdictions not just in resource-rich Canada, but in the world. A plethora of top universities; six in the 2013 Academic Ranking of World Universities world ranking; and a level of research and development spending that consistently ranks as the highest in Canada has enabled the development of advanced industries such as aerospace, information technology, biotechnology and health. Québec's well-developed financial industry may lack the size of Toronto, but it is perfectly capable of supporting economic development.

In the near future, the chances of populist political posturing being put aside in favour of sensible economic reform look slim. PQ recently issued a new economic policy, "Putting Jobs First", but many analysts have derided it as too little, too late. Rumours of an election being called in the near future will be welcome to those who blame PQ for recent sluggish growth, but elections usually delay progress in the short term, even if they are necessary in the long term.

Despite these problems, Québec still has its success stories. The mining industry is one of them. While it may not enjoy the reputation for regulatory ease that it once had, it nonetheless was one of only two provinces that saw mining output increase in 2012, a year of generally falling metal prices. Even as some aspects of government policy prove to hinder rather than help, and the global mining market suffers through a dismal bear market, Québec's private sector are still making progress. •

Québec at a Glance

Source: Statistics Canada, Institut de la Statistique Québec, Chambre de Commerce de Montreal Metropolitain

Population: 7,903,001 (2011 estimate)
Capital: Québec City
Head of Government: Premier Pauline Marois (Parti Québécois)
Currency: Canadian Dollar (CAD)
GDP: $336.38 billion (2011 estimate)
Growth Rate: 1% (2012 estimate)
GDP per Capita: $35,111 (2012 estimate)
Economic sector breakdown: goods: 29%, services: 71% (2011 estimate)
Exports: $63.53 billion (2012): aluminium, airplanes, paper, airplane parts, copper and alloys
Imports: $85.61 billion (2012): petrol, automobiles, airplanes, trucks and frames
Major Trade Partners: USA, UK, Germany, France, China

GDP Growth by Province (annual average % change)

Source: Statistics Canada

	2008	2009	2010	2011	2012
Canada	1.1	-3.0	3.4	2.6	1.8
NL	-1.1	-10.0	6.4	2.8	-4.8
PE	0.9	0.4	2.8	1.7	1.2
NS	2.3	-0.5	2.1	0.6	0.2
NB	1.0	-0.8	3.3	0.2	-0.6
QC	**1.6**	**-0.7**	**2.5**	**1.7**	**1.0**
ON	-0.2	-3.3	3.5	1.8	1.4
MB	4.0	-0.4	2.6	1.8	2.7
SK	5.2	-4.2	4.5	5.0	2.2
AB	1.7	-4.6	4.3	5.3	3.9
BC	1.1	-2.7	3.0	2.6	1.7

Population and Workforce information

Source: Various

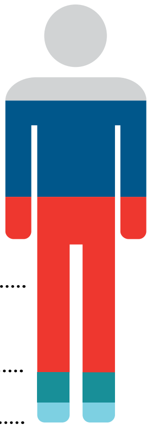
6,102,210 French as Mother Tongue

4,320,300 Labor Force

17,000 Population employed by the mining industry 2013

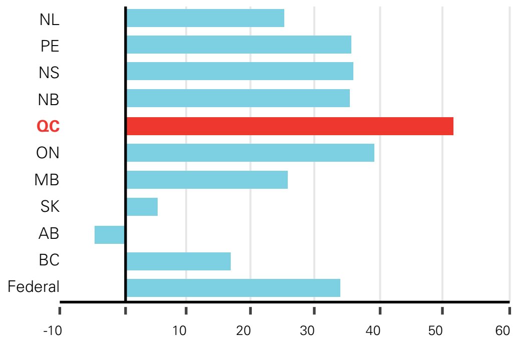
961,700 English as Mother Tongue

335,900 Unemployment Rate 2012



Government Debt as a Share of GDP by Province (%)

Source: Statistics Canada, Conference Board of Canada, provincial governments



INTERVIEW WITH

Martine Ouellet

MINISTER OF NATURAL RESOURCES
QUEBEC

The government's decision to propose a mining royalty tax increase sparked a months-long debate with mining stakeholders in Quebec this year. What was the government's strategy in proposing this increase?

The goal was to maximize the economic benefits that are derived from our collective resources, as the mines of Quebec belong to all citizens. By basing the regime on gross income, royalties will follow the markets. Our aim is ensure that when the market is good, mining benefits all Quebecers.

What are the main initiatives that you aim to accomplish with the reform of the provincial mining code?

We introduced a draft mining law on May 29 that has gone through special consultations with stakeholders. Similar to the International Transparency Initiative, the new mining law will require more transparency throughout the operation of a mine. By making public the royalties paid by the mines and the tonnage extracted, Quebecers will then be able to know which resources are extracted from their territory and how it is done.

Transparency is an essential element in establishing a climate of trust between the public and the industry, and a key element to the success of mining projects. Committees tasked with environmental monitoring and maximizing economic benefits to citizens will be established. For each mining project, we also want to have public consultations conducted by the Office of Public Hearings on the Environment (BAPE), which is a neutral and credible organization. This will ensure that mine development respects the environment and local communities.

To maximize the economic benefits for all regions of Quebec, the government wants to provide the means to bring more processing into the province, as is the case in Ontario, Newfoundland and Labrador, New Brunswick and Nova Scotia. These measures will help to develop projects ranging from extraction to processing and transformation, while also helping to create structural employment within the Quebec economy. Ore processing can create three to four times more jobs in the province than simple extraction. Many groups, including municipalities, public agencies, labor groups, environmental organizations and mining companies, are demanding a new mining law. The mining sector is of vital importance to the economy of Quebec and the status quo is no longer acceptable to the public. To ensure stability and predictability for both citizens and businesses, it is time to modernize the Mining Act, and we ask the cooperation of the opposition parties to do so.

As for Northern Quebec, mining companies and financial institutions have expressed frustration at the difficulty of solidifying the multiuser infrastructure development plans needed to support the growth of iron ore mines in the North. What role can the government play in encouraging this development?

Their frustrations are understandable; the infrastructure plans under the previous government were not fully organized. In the case of the first of their projects that we have worked on, that of Route 167 in the Otish Mountains, we witnessed appalling overspending in a context where the government was alone in paying the bill. In renegotiating the agreement with the mining company in question, our government saved $125 million for our citizens.

Furthermore, the last two sections of the road are now built at the expense of the mining company. The mining was also able to meet its deadlines and reduce the costs of road construction. It is important to note that this road will remain accessible to the public for use. The infrastructure development approach taken by the previous government was not planned out or structured. We witnessed this also with the CN rail feasibility, which was halted due to lack of volume. The mining companies were not interested in the business model suggested. We are now in the process of developing a new business model for a rail much more in line with the model for the expansion of the Port of Sept-Îles, which is an infrastructure that is public but financed by the users.

In addition to the large mining projects coming up in the North in iron ore, there are also smaller projects going forward, such as in rare earths. These small projects, which are equally interesting, must also be able to access infrastructure. They will pay the costs according to the quantities they need. The model we are currently developing allows for predictable costs for both small and large players.

Quebec was considered the number one mining jurisdiction in the world from 2007-2010 by the Fraser Institute. How do you envision Quebec finding its place at the top once again?

We want Quebec to be the first place in the world for responsible mining development that respects the environment in dialogue with communities and in ensuring that economic benefits go to both companies and the public. The key to success for the industry is linked to predictability and public confidence. Citizens need to know what happens on their territory and mining companies, in turn, must know how the government operates and what steps they must take to realize their projects in Quebec. These are the tools that the government aims to implement. The issue of both railway and transport infrastructure is the backbone of the development of the North. The question of a business model for this infrastructure is being considered and we plan to develop a model that will allow for equitable access and predictable operating costs. In this way, when a new player arrives, he will know exactly what the conditions are for access to infrastructure. •

INTERVIEW WITH

Josée Méthot

PRESIDENT & CEO
QUÉBEC MINING ASSOCIATION (AMQ)

Can you provide us with an introduction to AMQ and its mission?

AMQ is an organization that was put in place over 75 years ago. Among our members we have operating mining companies, companies close to being in operation and entrepreneurs who are working for mining companies in an operational capacity. We also have members involved in metallurgy, for example, the Horne smelter and CEZinc.

Our mission is to promote the development of the industry. We support the interests of our members and engage in public relations and government relations for our members. We carry out all of this work within the perspective of sustainable development.

What goals have you outlined under your mandate as CEO?

I became CEO last October and my mandate is to actualize the association's operations and to work closer with our members. We work with committees on different issues for the industry. We are trying now to have further communications and more government relations than there used to be to make sure that the industry is well known and well understood by all the stakeholders, including the general population.

Can you tell us more about your outreach work in public affairs?

AMQ is working with Minalliance, a fund that we have created for public relations, to make sure that the industry is well-known. Our aim is to give the industry the credibility that it deserves. A lot of people think about mining as it used to be 50 years ago. Now with social media, everybody is talking about mining. We are in the national news, whereas we used to be local. We are used to dealing with local groups, but now it has moved onto another level and we have to ensure that we communicate well.

What is the role that Québec's mining industry plays within the province and the global market?

Québec is far from the world markets and we are a small component of the world mining industry, at about 1.3%. Since we are not the ones influencing the markets, we have to live with them. AMQ studied the issue of the royalty increase and we are of the opinion that a profit-based regime is the best way to go. There were major changes to the royalty regime made only in 2010, which increased royalties by 33% on average. This quadrupled the amount of royalties paid, while the average value of production only increased by 70%. We had adapted to the royalty regime changed in 2010 and developed projects with this regime in mind. Our margin is very small in Québec. Changing the regime three years after the fact is saying that it is not a very stable economy here in Québec.

Looking at what the industry is actually contributing to the economy of Québec: mining provides good-paying jobs and employees that pay taxes and spend money. Calculating this amount, it is close to $1 billion a year that the mining industry is giving to governments. We need to look at the bigger picture. In 2011, $5 billion was spent in Québec for mining projects, $2 billion of which was in procurement and salaries and the remaining $3 billion in exploration and mine development. That money is not just affecting mining workers, but the entire value chain.

In light of the global mining downturn, how is sector investment expected to change?

Mining investments decreased to $4.8 billion 2012 and will be decreasing for 2013. The forecast for this year is closer to $4 billion.

How have we seen benefit agreements and outreach work with First Nations improve in Québec in recent years?

Five years ago, there were something like two or three agreements with the First Nations and now we are closer to 15. First Nations companies are winning more contracts for mining development work and mining companies are trying more and more to buy goods and services from First Nations and partner companies.

Can you tell us more about AMQ's mining safety system?

AMQ has developed an approach to safety and it has been used in mines all over the world. The association was first started to increase safety in the mines for the workers and now we are examples for the global industry. You can visit mines in Africa and see the AMQ safety symbol. On the level of health and safety, in the past 20 years in Québec we have reduced by 75% the frequency of accidents.

What forward developments have been achieved recently in the way of sustainable development for the mining industry?

It is not well known that there have been a lot of changes within the mining industry to lower their environmental footprint. AgnicoEagle, for example, designed a new residue site that uses their basic tailings to neutralize the acidic residue from a nearby orphan site. In Québec we have nearly the strictest regulations in terms of residue and wastewater management. We are governed by over 60 laws and regulations only for the environment. The local industry has called for an end to creating orphan sites and agreed to put money aside to cover 100% of the costs of rehabilitation of their sites.

We are also involved in a study done by the Ministry of Economic Development that analyzes sustainable development approaches across different industries. They concluded that our industry was the most advanced. AMQ is now working with the Québec Bureau of Normalization (BNQ) to develop a sustainable development certification, which mines would be able to receive. •


Courtesy of Corem

Mining in Québec

A rallying cry for a stronger tomorrow

Québec often makes the headlines. This is understandable: as Canada's largest province by land area, and second largest by population, it holds political influence and economic importance to the country. As Canada's only province claiming French as its sole official language, it claims a unique culture; its cuisine, architecture and natural beauty attract roughly 10 million tourists a year.

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What makes these figures most frustrating is the potential that Québec holds. The province is one of the most richly endowed mineral jurisdictions not just in resource-rich Canada, but in the world. A plethora of top universities; six in the 2013 Academic Ranking of World Universities world ranking; and a level of research and development spending that consistently ranks as the highest in Canada has enabled the development of advanced industries such as aerospace, information technology, biotechnology and

Mineral Production by Value ($million)

MINERAL	2012	2013
Zinc	400	314
Nickel	489	505
Copper	197	198
Silver	110	96
Gold	1,534	1,850

Mineral Production by Volume (mt)

MINERAL	2012	2013
Zinc	206,161	161,778
Nickel	28,127	29,039
Copper	24,724	24,849
Silver	110	96
Gold	29	35

health. Québec's well-developed financial industry may lack the size of Toronto, but it is perfectly capable of supporting economic development.

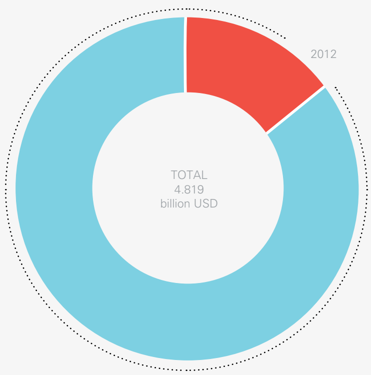
In the near future, the chances of populist political posturing being put aside in favour of sensible economic reform look slim. PQ recently issued a new economic policy, "Putting Jobs First", but many analysts have derided it as too little, too late. Rumours of an election being called in the near future will be welcome to those who blame PQ for recent sluggish growth, but elections usually delay progress in the short term, even if they are necessary in the long term.

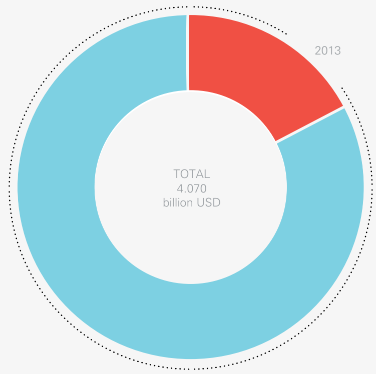
Despite these problems, Québec still has its success stories. The mining industry is one of them. While it may not enjoy the reputation for regulatory ease that it once had, it nonetheless was one of only two provinces that saw mining output increase in 2012, a year of generally falling metal prices. Even as some aspects of government policy prove to hinder rather than help, and the global mining market suffers through a dismal bear market, Québec's private sector are still making progress. •

Investment in the Mining Sector

Source: Institute de la Statistique Quebec

BILLION USD	2012	2013
Exploration and deposit appraisal	0.696	0.690
Mine complex development	4.123	3.380





Quebec's Fraser Institute Ranking

Source: Fraser Institute Annual Survey of Mining Companies

YEAR	SCORE	RANKING
2012/2013	81.9	11/96
2011/2012	89.0	5/93
2010/2011	86.5	4/97
2009/2010	96.7	1/72
2008/2009	96.6	1/71

INTERVIEW WITH

Valérie Fillion

EXECUTIVE DIRECTOR
QUÉBEC MINERAL EXPLORATION ASSOCIATION (QMEA)

Can you provide us with an introduction to the Quebec Mineral Exploration Association (QMEA) and the main milestones that you have achieved since 2011?

QMEA has a membership of almost 2,000 individuals and more than 250 corporations, which includes prospectors, explorers, producers and companies that provide services to the mining industry. Among our corporate members who offer mining services, we have drilling companies, helicopter operators, geophysics companies, laboratories providing analysis, accounting firms and law firms, as well as many others. Since 2008, we have worked to promote the mining industry's position on the suite of legislative changes that apply to industry. Particularly in recent months, the main legislative issues affecting the industry have been the question of the province's mining royalty regime and the draft legislation of Bill 43, for which the parliamentary commission has just been concluded. QMEA strives to represent our members' interests to all levels of government. In addition, our role is to offer services that meet the needs of our members, from the publishing of informational materials to the organization of our two annual events: in Abitibi-Témiscamingue and in Quebec City, both of which present beneficial networking opportunities for the mineral sector in Quebec.

How has the debate surrounding the royalty regime in Quebec affected the investment decisions made in the exploration sector this year?

The proposed modifications to the legal framework and royalty regime call into question the decisions of investors who are waiting for the return of a more stable climate. This uncertainty has a significant impact on small businesses. Contrary to public perception, only 15% of Quebec's underground mineral potential has been explored. Furthermore, the vastness of our territory leads to higher costs and additional logistics support for the exploration and development of projects, especially when it comes to the development of projects and the building of infrastructure in the north of Quebec. It is particularly important that we have a regulatory framework that is transparent, stable and predictable in order to stimulate investment. We have significant challenges ahead of us and we need to find good ideas and solutions. On the other hand, the present situation offers the opportunity to certain investors to take advantage of investments with a lower yield but a longer term.

Access to land is a key issue for the industry. How can the private sector engage with the government to find solutions that benefit all stakeholders?

First and foremost, the government of Quebec is responsible for the management of natural resources by virtue of the Canadian constitution. Quebec's underground potential belongs to all its inhabitants. Quebec is a vast territory and in order to improve our knowledge of its mineral potential, we must acquire more geo-scientific knowledge. We must also have access to the territory to carry out the research and development of its mining sector. It is the responsibility of the government to put in place favorable conditions for the development of the mining sector. Our members follow a code of practices and laws that govern their exploration activities. It is important to emphasize that exploration is an activity that has minimal impact on the territory. The private sector must collaborate with the government so that we can ensure the improvements made to the regulatory framework correspond with the needs of our industry and the reality of our geo-scientific and economic environments.

How can the QMEA play a role in assisting Quebec's exploration companies to improve their approach to sustainable development?

QMEA's participation in different working committees and networking groups allows us to transmit information about best practices to our members so that they can continuously improve their operations. For example, drilling companies innovate, develop and adapt their products and working practices from utilizing biodegradable non-toxic products to using machinery that has minimal impact on the ground. Many companies also have internal processes to ensure constant improvement. The role of QMEA is to be aware of these best practices and to heighten the awareness not just of our members, but also of those who come from outside of Quebec to work within the province.

How will the emergence of rare earths change exploration here in Quebec?

When explorers find new sectors with interesting geological potential, where new deposits are discovered, Quebec acquires new knowledge and develops new competences. Geo-scientific data that we have gathered has helped to stimulate interest in prospection and exploration of certain areas of the province where we have little knowledge of the potential. From this, new opportunities emerge.

Can you tell us about the initiatives that QMEA is partaking in to increase the number of qualified workers in the exploration sector?

Over the course of the last several years, we have frequently discussed the challenge of developing labor. For example, exploration works must be supervised by geologists who are members of professional orders. The congresses and conferences held by the industry are also importance places where we can promote careers in mining. Furthermore, various organizations have also been tasked with the mission of finding solutions to the lack of skilled labor in the industry. •

INTERVIEW WITH

Isabelle Poirier & Normand Champigny

IP: EXECUTIVE DIRECTOR
NC: CHAIRMAN
MINALLIANCE

When we last met in 2011, Minalliance was in its first year. Can you give us an update on your mission and how it has evolved over the past two years?

IP: Minalliance is a communication fund that works with the Quebec Mining Association and the Quebec Exploration Association, as well as other parts of the industry, such as suppliers and service companies. The mandate of Minalliance is evolving as the world is changing. When Minalliance was created in 2010, the first and main mission was to communicate the contributions of the mining industry in the public space, so citizens and stakeholders could understand the value of the industry in their daily life. What has changed is that now we do more than communicate, we engage. Minalliance will reflect that change of priority in the very near future. We want to make sure that we are at the crossroads of all questions and interests about mining for the whole population.

How would you describe the current state of public perception towards the mining industry in Quebec?

IP: There is a clear gap between what the industry brings to the economy, in terms of creation of wealth, and the perception that Quebecers have. Over the years the industry realized that it had to become more transparent. The general public did not understand its fiscal contribution because the information was not accessible. We are at a point where the mining industry has evolved a lot, but the ability to communicate that contribution has to catch up. There is clearly a gap between what the general public understands as a contribution, in terms of money, and what the industry is actually doing.

Can you highlight any specific examples of innovative practices in environmental sustainability taking place in the industry?

NC: There are many good examples that can be found today. If you look at exploration activities that took places in the 1950s to 1980s, companies would often leave camps, drums and equipment on site in the greater north of Quebec. Today's industry decided these sites cannot remain anymore and have raised money to clean the top 20 sites. The project is called Fonds Restor-Action Nunavik and it has been recognized on provincial and national levels with environmental awards. For this cleanup, the Inuit people were hired, first of all to provide jobs, and also because they know the territory, so they are able to clean it up well. The results were remarkable. This was a volunteer effort by the industry to show that the sins of the past are not acceptable today. The main benefit was to solidify the relationship between the industry and the Inuit people.

Coming back and looking at what Minalliance is doing, our challenge is to make those stories accessible to the public at large, and also be prepared for some criticism. We are, to a large extent, prepared to be criticized, but we have to not only be prepared but show that we can accept the criticism.

Given the royalty regime and Quebec's slip in the Fraser Institute rankings, in your view does the province still qualify as a mining-friendly jurisdiction?

NC: Quebec is still a good place to do business in mining. We have very well-qualified workers. We have an approval process for mining projects that is very well streamlined. We have some very good tax incentives for raising funding. They are a lot tougher now, but still better than elsewhere. We have an incredible database of geological data on past exploration work that is unparalleled in the world. Quebec also has good infrastructure, not only roads and ports, also in terms of metal transformation. All of these things are positive, and make the province still attractive.

What makes Quebec less attractive is changing the rules all the time. When you change the rules you create uncertainty, and as you know mining projects typically have a 20- to 30-year horizon for planning. When the rules keep changing, it becomes difficult to plan. This means companies will want a higher return on investment to account for potential changes in rules in the future. If you have a higher return on investment, you will have a shorter mine life with a higher cutoff grade. That means smaller projects, which means fewer jobs, which means less taxes.

What are the goals for Minalliance in the next few years?

IP: The goal for the industry is to reunite Quebecers around the idea that the mining industry is good at what it does, and we should all be proud of it. •

Politics and Taxes:

The Regulatory Environment in Québec

"I do not think the Fraser Institute's downgrading of Quebec will adversely affect...interest in the market. The Quebec government has firmed up its intentions regarding its proposed taxation and royalty scheme. Assuming the proposal is enacted into law, its effect on our project economics is a resulting decrease of 0.2% on the internal rate of return, which is certainly not material. We have met with Premier Marois, the Minister of Finance and key members of the Ministry of Finance and the Economy, who all recognize the importance of economic development to ensure a prosperous future for Quebec. In several cases, including ours, the government has committed its intent for future direct investment in the project. I think these are very clear and strong signals that indicate that Quebec is amenable to business investment."

- Alan Gorman, President & COO
OCEANIC IRON ORE CORP.

Source: Shutterstock

Proposed Policies and New Royalties

Riding the PQ's learning curve

2013 has been a year of uncertainty for the entirety of the global mineral industry but, at least among mature mining jurisdictions, few have worried as much as Québec's mining firms. As the minority government of Parti Québecois (PQ) attempts to form a mining industry platform – accompanied by anti-mining rhetoric - mine operators, investors, and service providers alike have expressed a fear that policy changes, particularly in the area of taxation, would exacerbate for Québeckers the difficulties experienced from a worldwide downturn. In the global mining market, where competition is fierce and margins thin, Québec's firms are wary of being disadvantaged by local politics.

Over the last few years, Québec had already developed a trend towards tougher tax regimes. In 2010 the Québec government, led by the Liberal Party, raised the tax rate on mining profits from 12% to 16%. It also revised the system to tax profits on a mine-to-mine basis, which prevented companies holding more than one property from using a loss-making mine to mitigate the tax liability of a profit-making one. "These changes took Québec from having the lowest mining taxes in Canada in 2007 to being the jurisdiction with the highest mining taxes in the country," said Nochane Rousseau, partner at PwC.

It is also no coincidence that the following year Québec saw itself slip in the Fraser Institute's rankings of global mining jurisdictions from first place to fourth place.

Soon after the provincial elections, the PQ mooted the idea of a 5% ad valorem tax on all ore extraction, with a potential increase to 30% for companies with 'super profits' from production passing a certain 'exceptional' threshold. Talk of such a policy sent shockwaves through Québec's mining sector. The province almost immediately dropped several more places in the Fraser Institute rankings, this time to 11th place. "Québec will be, if the changes come into law, the most demanding jurisdiction in Canada. We feel that this situation will not help Québec's future mining development and that it is worsening the current financing crisis of the sector," said Renault-François Lortie, partner at KPMG Canada.

From the new government's perspective, however, drastic measures were needed to ensure a "fair take" of mining revenue for the public, many of whom perceived the mining sector to be amassing wealth with impunity during the recent boom. Furthermore, the government is in desperate need of ways to widen its tax revenue stream to lighten Québec's enormous provincial debt. "The PQ is not aware of how much progress the industry has made on things that they seem to care about, including the environment and transparency of payments. Part of their new platform is to compel mining companies to publish the payments they make to governments. The industry has been working over the last year with two NGOs, Revenue Watch and Publish What You Pay Canada, to develop a framework for disclosing that information. The Québec government thinks it is trying to force us to do something we do not want to do, but we are supportive of transparency," said Pierre Gratton, president and CEO of the Mining Association of Canada.

Amidst heated debate, the Québec Government's finance department commissioned PwC, an auditing firm, to assess what tax model may be best suited for a typical iron ore mine in Québec. From this assessment, a general policy could be extrapolated for the sector as a whole. PwC concluded that, because of a variety of factors ranging from the low grade of Québec's ore to the remote nature of many of its projects, it would be undesirable to change the tax regime at all.

"Québec is far from the world markets and we are a small component of the world mining industry, at about 1.3%. Since we are not the ones influencing the markets, we have to live with them," emphasized Josée Méthot of AMQ. "AMQ studied the issue of the royalty increase and we are of the opinion that a profit-based regime is the best way to go. There were major changes to the royalty regime made only in 2010, which increased royalties by 33% on average. This quadrupled the amount of royalties paid, while the average value of production only increased by 70%. "We had adapted to the royalty regime changed in 2010 and developed projects with this regime in mind. Our margin is very small in Québec. Changing the regime three years after the fact is saying that it is not a very stable economy here in Québec," said Méthot.

Met with such opposition from multiple fronts, in March the PQ participated with mining industry leaders in a number of "town hall"-style public sessions. These, combined with intense lobbying efforts from mining companies and service providers alike, eventually resulted in the formal announcement by the Minister of Natural Resources for a hybrid tax regime. Widely seen as a compromise, the new regime would require companies to pay the greater amount of either (i) an ad valorem royalty rate of 1% for all ore extraction up to the $80 million mark or 4% for extraction beyond that threshold, or (ii) a progressive tax of 16%, 22%, or 28% of an operator's profit margins as they increase.

Bumped down in the Fraser Institute rankings and now facing higher taxes, miners are understandably hesitant to go forward

> "To us, there is something inherently unfair about adding a layer of costs to a money-losing operation. It is important to note that Beaufor [gold mine] already has royalties to other third parties, so the government has just added an additional layer. The previous regime was still high compared to other jurisdictions, and now they have increased it. When you also consider all the additional time to decipher and understand the implications of the new economics, it all amounts to added costs, which is the last thing producers need at this point."
>
> - Paul Carmel,
> President & CEO, Richmont Mines Inc.

with large-scale investments. "Eleventh in the world is not that bad, so we are still a good place to do business, but we have the capacity to do better. Until we do, there will be hesitation about Québec as a mining jurisdiction in the business community," said Lortie.

While IAMGOLD had already made its investment decision in Westwood by the time royalty increases were first discussed, they were still weighing an expansion at Niobec, their niobium operation in the Saguenay region, which produces roughly 8% of the world's niobium.

"Niobec is looking at a huge expansion, which would create jobs and wealth in the region for many years to come. We are currently considering a $900 million expansion based on pre-feasibility studies, which would extend the project from 15 to 45 years, almost tripling production. For the payback period, which would be about 15 years, we need to be reassured that we will get the return that warrants the investment to begin with," said Bob Tait, vice president of investor relations at IAMGOLD.

Regulatory tumult for the industry has not stopped at its tax regime. In May, the PQ put forward the highly publicized Bill 43 in an effort to reform Québec's Mining Act. Like its Liberal Party-backed predecessor, Bill14, the PQ's bill proposed changes on the local level. "The main issue on the table is giving local jurisdictions more say on the development of natural resources. Indeed, when you are developing a mine that is close to a populated area, it is only normal that you involve the local communities and hear any of their concerns. Even though social acceptability is not a legal term, you cannot get around it anymore. At the same time, one must not forget that the natural resources in the ground belong to the whole population, not just the local population. It is the government's responsibility to ensure that we have a clear understanding of the regulations we face," said Frank Mariage of Fasken Martineau.

A contentious aspect of Bill 43 was a requirement for all mining lease applications to be accompanied by a feasibility study on local ore processing. This initiative is in line with the PQ's goal of bringing 100% of processing into Quebec. Voices in the industry, however, have argued that this requirement would impose too great of an economic burden on miners.

"The obligation for mining firms to conduct feasibility studies for sites for the transformation of minerals will prove unnecessarily costly. We should leave the allocation of minerals processing services to the market," said René Branchaud, partner at Lavery.

Yet in spite of the PQ's efforts, Bill 43 joined a long line of failed attempts by Québec's government to revamp its mining regulation when it was voted down at the end of October. Given the PQ's minority status, the bill's passing would have necessitated considerable opposition support. With policy-makers sent back to the drawing board, mining reform has become an ever more distant reality. •

A Progressive Tax on Profit

Source: Government of Quebec

Profit margin	Applicable rates	Effective rates in the middle of the segment	Effective rates at the top of the segment
Segment from 0% to 35%	16.0%	16.0%	16.0%
Segment from 35% to 50%	22.0%	17.1%	17.8%
Segment from 50% to 100%	28.0%	21.2%	22.9%

RB

INTERVIEW WITH

René Branchaud & Sébastien Vézina

RB: PARTNER
SV: PARTNER
LAVERY

Could you provide a brief introduction to Lavery?

RB: Lavery was founded a century ago, and we have been involved in the mining industry for more than 50 years. We represent several junior exploration companies and small producers, both in Canada and abroad in places like Africa or South America.

In the 1980s, our Québec offices serviced mainly small companies at a time when flow-through shares were a popular model for financing. Over the last 30 years, we have grown with our junior clients. Some of them, like Osisko, are now in production. I have worked personally with Osisko for the last 20 years. In that time I have watched them grow from a one-man show to a very strong team.

SV: What differentiates Lavery from other firms is that, in addition to getting involved in the corporate finance activities of our clients, we are also deeply involved at the operational level. We often act as directors or officers for some of the mining companies we work with. Lavery is fully committed to its mining practice and we have a genuine passion for the industry.

Minister of Natural Resources Martine Ouellet's proposed mining law reform, Bill 43, would require mining companies to undertake feasibility studies for the construction of processing plants. What implications could this requirement have on your clients?

RB: I believe that the obligation for mining firms to conduct feasibility studies for sites for the transformation of minerals will prove unnecessarily costly. We should leave the allocation of minerals processing services to the market. Minister Ouellet should remember that Québec currently processes aluminum, although we are not an aluminum producer. We import it from Brazil and elsewhere because we have a comparative advantage in processing it.

Bill 43 would also give municipal governments the authority to designate municipal land as "incompatible with mining." Is that a good thing?

RB: While many mining companies do not support this new obligation, it would not have a very negative impact. It is part of a wider trend of appealing to the public. The case of Osisko is a good example. Osisko began seeking public and municipal approval through town hall meetings even when they had no obligation, and they found that a very strong majority of the local population was in favor of their project. They purchased 200 local houses with the owners' consent, and there was only one person who was opposed.

RB: In most mining areas, especially remote sites, there are no municipalities. The exception is the Abitibi, but the Abitibi is the mining heartland; the industry is part of the culture and lifestyle of the region. Unlike the Eastern Townships, which mining companies avoid, I doubt any municipality in the Abitibi would rule against the opening of a mine site.

What are your impressions of the hybrid royalty regime that has emerged from several months of debate on mining taxation in Québec?

SV: There have been mixed reactions to the hybrid royalty regime. The mining community as a whole has had significant concerns. On the other hand, companies such as Stornoway and Oceanic have stated that the new regime will have minimal impact and that the economics of their projects will still work. Until we have been able to put the new tax figures into all business models, it will be difficult to tell what impact it will have on current and future projects.

How are you advising clients with regards to raising capital in the public or private sphere under the current market conditions?

SV: First of all, firms need to cut expenses. They cannot cut them too much, however, because at the same time they need to preserve their assets. Some companies have commitments with other partners and are under statutory obligations to do this.

Second, the market is very original. Lavery is seeing the rise of practices wherein some assets, which might have been core assets a couple of months ago, are monetized in order to get additional liquidities. Brokers are also coming to the market with new financial instruments for debt financing. We make our clients aware of these services that are available out there.

SV: Many mining companies are going to Europe and China, offering local players there a stake in ownership as well as management in exchange for financing. This is worth the time and investment, but the results are minimal.

RB: It is time for government organizations in Québec and institutional investors such as Caisse de Depot and Investissement Québec to step up, even if the market is difficult. They can help the development of local projects.

What is your near-term outlook for the mining industry in Québec, based on your legal expertise and the situation of your clients?

RB: The impact of the global market is much greater than the local market. I do not believe the situation will be good in 2013, but hopefully it will bounce back in 2014 because we can only go so long without financing before a significant part of our economy, both in Québec and Canada, deteriorates.

SV: The biggest problem before was the uncertainty, so it is good news for the market that a bill on taxation was finally proposed. Now this jurisdiction must get ready to allow a new generation of managers to assess the value of projects in Québec. Québec is and will remain a top mining jurisdiction. I am very confident of this. •

Mine (pronoun)

Katia Opalka, Partner, Lavery

__Katia Opalka__ provides transactional support on environmental and Aboriginal law matters. With over 15 years of private and public sector experience, she is a trusted corporate adviser, notably as regards environmental assessment and Aboriginal law issues arising in connection with projects requiring a large number of regulatory approvals.

__Lavery__ is an independent law firm offering a full range of legal services and integrated solutions to optimize development strategy, protect rights and fully achieve business objectives. Lavery has 175 lawyers in Montreal, Québec City and Ottawa and is a member of the World Services Group, an international network of service firms with offices in 120 countries. More information can be found at www.lavery.ca.

On October 30th, 2013, the Quebec National Assembly voted down - 57 to 51, with 2 abstentions - draft legislation tabled by the minority Parti Québecois government that would have replaced the province's Mining Act. This was the third, and likely not the last, attempt at overhauling the province's mining law. It seems unlikely that new legislation will be tabled before a provincial election is held, and elections are no longer expected to be called in 2013. There seems to be some concensus that it will take a majority government to put a new law on the books. The tenor of the legislation will likely depend on which party forms that majority. In the meantime, this article reviews the principal innovations found in the now defunct Bill 43. Who knows: we may be debating these matters all over again in 2014.

First, in the bill, environmental requirements were extended and the Quebec environment ministry was given more powers. So, for example, provincial environmental assessments (EAs) would be required for all proposed mines and processing plants regardless of the substance being mined or anticipated production levels. No mining lease would be signed before the Quebec government issued an environmental operating permit and the environment ministry signed off on a reclamation plan. Reclamation bonds would need to be posted early in the life of a project and would cover one hundred percent of the cost of restoring the entire mine site, not just tailings disposal areas.

Next, the public would be more involved. This would follow from the extension of EA rules to a larger number of projects. In addition, public consultations would be required in order to obtain a peat lease or to engage in commercial export. Regional county municipalities would be allowed to amend their land use plans to designate areas as conditionally compatible or incompatible with mining. The Quebec natural resources ministry would be allowed to refuse to enter into or terminate a mining lease for 'public interest' reasons.

Finally, applicants for a mining lease or mining concession would need to file an ore processing feasibility study with the government. Mining lease holders would be required to establish and maintain an economic spinoff and maximization committee. The natural resources minister would have been empowered to ask leaseholders to sign economic spinoff agreements. And the content of agreements between mining companies and First Nations would have been required to be made public.

Since patriation of the Constitution in 1982, courts in Canada have been hard at work spelling out consultation and accommodation required when a project might infringe on First Nations aboriginal and treaty rights protected under section 35(1). The rest of the population has taken notice and, not surprisingly, people have reacted by saying: "Wait a minute, we want to be consulted too!" The federal government has pushed back, limiting the number of projects subject to EAs and issuing strict guidelines on who has standing to provide input on energy projects. With Bill 43, Quebec appeared to be going in the opposite direction.

Legislative committee hearings on Bill 43 attracted dozens of submissions from stakeholders across the spectrum who found fault with one or another of its provisions, notably as regards uncertainty created by some of the provisions and concern that this uncertainty might scare off local and foreign investors. For its part, the official opposition drew a line in the sand, listing four conditions that had to be met if the minority government wanted opposition support for the legislation. The government accepted none of the conditions. Then it held a vote. The rest is history. •

2013: Prelude to a tightening of Canadian mining tax

Emmanuel Sala, CPA , CGA, M. Tax, Blake, Cassels & Graydon LLP

The year 2013 will have been marked by a tightening of certain federal mining-specific tax provisions and a period of unprecedented uncertainty facing the announcement of a "new" mining royalty regime in Quebec.

Federal

The provisions representing the greatest impact for mining companies are (i) the reclassification of pre-production development expenses, historically "Canadian exploration expenses" (CEE) as "Canadian development expenses" (CDE) and (ii) the abolition of the "accelerated" capital cost allowance.

As CEE, pre-production development expenses could either be fully deductible in the computation of the mining company income, or be renounced in favor of investors and be entirely deducted by them. From now on, the costs of these intangible assets incurred in view of bringing a new mine into production in reasonable commercial quantities, including an expense for cleaning, removing overburden, stripping, sinking a mine shaft or constructing an adit or other underground entry, among others, will move from the CEE regime to the CDE regime which allows only a tax deduction of 30% (declining balance). Due to certain transitional relief to "take into account" the development of mining projects, which can be long, and a timetable for transition up to 2017, this new measure will take effect as of 2018.

This new tax treatment applicable to certain intangible assets will have a negative impact on the ability of junior mining companies to finance the development of new mines by way of flow-through shares: the tax treatment of renounced expenses is a decisive factor for the investor.

As for the "accelerated" capital cost allowance allowing to deduct up to 100% (rather than 25%) of the cost of certain tangible assets acquired for use in new mines or as part of a major expansion projects, it will be phased out between 2017 and 2020.

The CEE/CDE reclassification and elimination of the "accelerated" deduction means that tax cannot be deferred until the mine operator has recovered the cost of its assets. The impact of these measures on the net present value of a new mining project and on the internal rate of return is very real.

The mining operator should follow a maximum systematic deduction policy of its cumulative CDE account and of its undepreciated capital cost to create tax losses during the period prior to production: with the period of tax losses carried over 20 years, the impact of these new rules could therefore, in part, be mitigated, all things being otherwise equal.

However, the impact of FEC/FCC reclassification on the accessibility of flow-through financing during the period of pre-production development will be important and will not be easily reduced.

Québec

If passed before the Québec National Assembly, the proposed mining tax regime would add a minimum and progressive mining tax of 1% on the first $80 million of the "value at the mine shaft head", plus 4% with respect to the value at the mine shaft head above that threshold (minimum tax). Unlike the concept of gross value of output, the notion of value at the mine shaft head does not include value added related to processing, transportation, handling, storage, marketing, activities of the mineral substance nor value added related to treatment of ore tailings. In fact, the value at the mine-shaft head — which can never be less than 10% of the gross value of output — is the value of the mineral substance once extracted from Quebec ground but before any other activity.

As for the mine-by-mine approach (i.e. deficits incurred in one mine not reducing the profits generated by another), used to calculate the mineral rights on the annual profits, it will only be subject to very few changes, including enhancement of the processing allowance in Quebec but, more importantly, it will migrate to a mining tax on profit with progressive rates ranging from 16% to 28% of annual profits (mining tax on profit): (i) profit margin up to 35% – 16%; (ii) profit margin from 35% to 50% – 22%; (iii) profit margin from 50% to 100% – 28%. In this context, the profit margin would be defined as the annual profit (computed in accordance with the Mining Tax Act) divided by the gross value of output for all mines operated.

This regime will have fewer harmful effects than expected because (i) the operator will only pay the higher between the minimum tax and mining tax on profit, (ii) if the minimum tax exceeds the mining tax on profit, excess may be carried forward to future years and deducted from the mining tax on profit in future years when the tax will be higher than the minimum tax and (iii) the operator may deduct from its minimum tax a certain amount with respect to annual losses incurred.

In conclusion, the minimum tax should affect only those operators who are and will remain unprofitable. For the others, it will be just a matter of cash flows. Regarding the mining tax on profit, operators should succeed in maintaining their profit margin under the critical threshold of 35%.

To date, there has been no bill tabled before the Québec National Assembly. In light of what has happened last week to Bill 43 (the proposed legislation that sought to replace the current Mining Act), the mining industry could be faced with yet again another period of uncertainty regarding the status of the Québec mining tax regime. •

***Emmanuel Sala**'s tax practice at Blakes focuses on mergers, acquisitions, reorganizations and financing transactions regarding Canadian and foreign corporations, particularly those in the natural resources sector. He is a lecturer at the University of Montreal's master of laws (taxation), a speaker at conventions and the author of several articles.*

***Blake, Cassels & Graydon LLP** is one of Canada's top business law firms. In 2013, Blakes was named "Law Firm of the Year: Canada" by Chambers and Partners, the fourth time the firm has received this award: more than any other Canadian law firm. Blakes was also named "Canada Law Firm of the Year" for the fifth consecutive year by Who's Who Legal.*


Courtesy of Adventure Gold

"The royalties situation created a lot of uncertainty, which is one of the worst anti-market forces, but now the environment is stabilizing. I doubt the government will make another attempt at a royalties reform any time soon. The new draft of the Mining Act is not a huge departure from pre-existing versions. Overall, the combination of the settlement of the royalties debate and the new Mining Act should create a more certain environment for market entry."

- Pierre Boivin, Partner, McCarthy Tétrault LLP

"On the ground, the royalty debate is causing people to think twice about projects that they have in the pipeline. Without certainty over the long term, the viability of projects is called into question, particularly for projects that are going up in newly developed areas like Northern Québec. The projects require billions of dollars in infrastructure development and for that type of investment, you need stability."

- Charles Kazaz, Partner, Blake, Cassels & Graydon LLP

"The mining industry impressively rallied together when the provincial government held a public consultation on very short notice this year. They brought out the entire infrastructure of mining executives and service providers, accountants, and lawyers to prove to the government that its platform was incorrect. Following that, there was another consultation with the Premier's office, where the Finance Minister was mandated to come up with alternative policies. The system is under a constant state of change, and this only perpetuates uncertainty."

- Johanne Senecal, Vice President of Government Affairs and Communications, Mining Association of Canada

"For the most part, there is just too much money and benefit for Québeckers to stop working in this industry. Québec is too rich in mineral resources for the industry not to succeed. Looking at what has already been put into place by past governments (both Liberal and PQ), and other projects that were in place well before the official launch of the Plan Nord, it has been so positive for the province that this setback will not be as negative as some people predict."

- Anthony Marinelli, Associate, BDO Canada

INTERVIEW WITH

Renault-François Lortie

PARTNER
KPMG CANADA

We have heard a lot about the role KPMG has been playing as a mediator between the government and the industry on the debate over royalties. How have these talks progressed and what outcomes have you seen?

The recent forum between the government and the industry was very interesting. KPMG's role was to gather and present facts and analysis in front of the public, clearly stating that these questions are quite delicate and that any increases in royalties could potentially have a very negative impact on producers, explorers, and the pipeline of projects that have the potential to make Québec a big player in the mining industry. We reinforced that, for the moment, Québec is a relatively small player in the global mining industry. Our major minerals are iron ore and gold, and in both of these markets we constitute less than 1% of global output. Because of this situation, KPMG argued that Québec needs a competitive and attractive tax regime.

We argued at the royalties' Summit that a royalty tax based on profits is the best way to achieve this. Any movement that increases tax would be harmful to the jurisdiction, and everyone has already seen Québec's recent fall in the Fraser Institute's rankings to 11th place.

Martine Ouellet, Québec's Minister for Natural Resources, was quoted at the forum saying that the government "would not be waiting to find a consensus." In spite of this, has the industry come up with any action plan to try to reach a middle ground?

There are production leaders in the industry, such as ArcelorMittal and Osisko, as well as the various trade associations, who are engaged in confidential discussions with the government. There are also different viewpoints in the government, especially between Economic Minister Nicolas Marceau and Natural Resources Minister Martine Ouellet. They need to reach an internal consensus at the government level first, and then pursue an agreement with the industry.

From what we have been hearing, it is going to end well. The government will institute some changes, but at a level that speaks more to compromise. The government's main priority is to make sure that every producer that takes ore from the population gives something back. They like to point out that 10 out of 19 producers last year did not pay any tax or royalty because they were not making any profit. We will likely see a hybrid system. Taxation will increase probably by around 10% to 20%, rather than doubling. This will be the result of the industry influencing the government to take a less aggressive stance.

How are you advising your mining clients to deal with the uncertainty plaguing the market right now?

As strategy consultants, we do have to alter the way we deal with clients in times of market uncertainty. The traditional way of doing strategic planning is to set a vision of the external environment. In front of uncertainties, we now use the scenario planning approach; setting different scenarios of the future and identifying the "no regret moves" for our client to move on. We always tell our clients that uncertainty should not freeze strategic action. You need to move on, even in moments of uncertainty.

At the moment, we focus a lot with our mining clients on cost optimization because this is something that a company can always improve. We also conduct economic studies for new developments and M&A studies. The deceleration of demand from China is pushing prices down, which in turn is creating some interesting opportunities for new projects and M&A.

We have been meeting with quite a few iron ore players who have received funding from Chinese corporations. In light of the climate of uncertainty, do you see Québec continuing to be an attractive destination for M&A coming from Asia?

The uncertainty is a temporary factor that will not dull the interest of Chinese and Asian investors in Québec. Demand from these investors may actually increase, as it will be based more on the prices of metals such as iron ore. Asian investors are looking more at the economic arithmetic of investing in Québec mining, rather than short-term political issues such as the current uncertainty on the Plan Nord. That allows us to continue to emphasize the advantages of our territory to investors abroad. We are open for business and will remain so for key foreign customers looking to secure their supply.

What is your outlook for Québec's mining industry in the near future?

I am generally optimistic. Though global commodity markets have dropped lower of late, the current atmosphere is motivating developers and producers to address their cost structures. With better cost performance we have many opportunities. We have a great territory that still remains to be fully discovered. There is a lot of good momentum building in the Labrador Trough area and strong gold deposits in the Abitibi region. We also see interesting new ventures in lithium and rare earths, creating opportunities for exploration, mining exploitation and transformation projects. Of course, everything still comes down to the price of the metals and the demand coming out of China and India, but I am quite positive on the medium term. •

INTERVIEW WITH

Lee Hodgkinson

NATIONAL INDUSTRY LEADER, MINING CANADA
KPMG

What role do the Canadian and Quebec mining sectors play in KPMG's global mining practice?

The prominence of Quebec and Canada in KPMG's global mining practice very much mirrors the level of activity that both of those jurisdictions contribute to mining worldwide. KPMG's Canadian mining practice is one of the largest and most established mining practices of any KPMG country. It is one of the few practice areas in our firm in which the Canadian practice is larger than the U.S. practice, for example. That reflects not only the rich resources that Canada has, but also the strength of its capital markets and the importance of Canada as a global leader in mining.

Quebec does not have its proportionate share of large, publicly-traded mining companies in comparison to Toronto and Vancouver, where the truly large mining companies in Canada tend to congregate. Quebec is not as well-known as a place to build local champions that have gained a place on the global stage. With the presence of Quebec's many mines and all of the expertise and associated industries that come with them, there is potential for more large, publicly-traded mining companies in Quebec. Sometimes it takes time.

What are some of the services and programs you have developed to address the challenges facing Quebec-based firms, such as cost inflation and difficulty in obtaining financing?

KPMG is very focused on cost management, particularly in the areas of capital cost management. We help companies ensure that they have the processes and controls in place to control their capital projects, expand from one project to multiple projects, and refine their internal governance structures. We have actually broadened our strengths by strategically hiring engineers and other experts who can speak the same language as our mining clients.

KPMG also believes that there are significant opportunities in the area of infrastructure. We have experience going back a few decades in advising government organizations on infrastructure and public-private partnerships. Now we are turning that experience around and helping the private sector to understand its infrastructure assets. It may be that you have a client who needs to build a port facility for their mine, but they do not have much experience outside mine operation. KPMG can help them to consider the possibility of bringing in a strategic partner, such as a government or a private equity fund looking to put more money into infrastructure assets. High quality infrastructure assets are attractive to private equity firms, but are increasingly rare, so we feel there is an opportunity there to help the mining industry get these vital parts of the project off the ground. Mining firms might also find strategic partnerships in infrastructure development beneficial because they do not want to undertake the costs alone, only to allow another firm to benefit from the infrastructure when their project is completed.

This year Quebec saw an animated debate over raising the province's mining royalty taxes. Do you see this as part of a wider trend in government policies facing the Canadian mining industry?

Almost every mining jurisdiction in Canada and the world is coping with budget deficits and needs a source of revenue at the moment. The high commodity prices that, until recently, made headlines made the mining industry a very attractive target for governments. However, this attitude has come at a bad time; as companies have gone from focusing on increasing their production, to now trying to increase returns and regain profitability. They are applying very rigid capital allocation policies and cutting back or halting many projects. These are long-term investment decisions, so companies need to feel secure about the certainty of the tax regime before they invest. Mining companies are not trying to avoid paying their fair share, and they understand that the situation has to do with the political dynamics of determining the right taxation values. Nonetheless, there needs to be a decisive middle road that works for the local communities and the mining companies.

2012 was a slow year for M&A activity in Canada, but there was an uptick in the final quarter. What expectations do you have for M&A in the Quebec mining sector in 2013?

I hope we see a revival of M&A activity in the mining sector. We are in for a relatively quiet summer in 2013, especially with the drop in gold prices. KPMG has seen a couple of deals close this year, and for those companies that are well-financed and brave, the current climate provides a good opportunity to buy. Companies are now trading either at or near record-low valuations. Every case depends on the company's circumstances; if a company has its pipeline full of projects going out in the next few years, it has little appetite to raise more equity in the current price depression. Other companies might have single-mine assets and would be keen to pick up other companies. There are a lot of juniors out there who have great projects and really need a small amount of capital ($50 to $100 million), which in a normal market would be easy, but cannot find the backing.

Do you have a final message about KPMG's Canadian mining practice?

KPMG is very passionate about Canada's mining industry. We have been in the industry through its many cycles thus far, and will continue to be in it for a long time to come. Once you get bitten by the mining bug, you are hooked for life. KPMG is very focused on building its practice from a national point of view. While our main centers are in Toronto and Vancouver, we have a growing presence in Saskatchewan and in Quebec, through our recent acquisition of SECOR. Our Montreal presence is giving us tremendous insight into the Quebec marketplace, and we believe KPMG will be very successful there in the future. •

The Tiresome Road to a Fair Tax for Québec's Miners

In 2011, the peak of the most recent global cycle, exploration, extraction, and associated manufacturing represented 3.4% of Québec's provincial economy and nearly 25% of its exports. That same year, mining employed 17,000 Québecers, and indirectly supported a further 17,000 jobs. In 2013, cornered by difficult market conditions on the one hand, and an attempted revamp of the province's mining tax regime by its new government on the other, the Québec mining industry's golden age has been disrupted by an unfamiliar lack of stability.

Economic cycles aside, it is difficult to argue against the intimate correlation between Québec's tax system and global perceptions of the province's viability as a mining jurisdiction. From 2007 to 2010, the province was ranked by the Fraser Institute, a think tank, as the world's number one mining jurisdiction. This was largely due to it having the lowest taxes on mining of any of Canadian province. Getting the top spot while the global mining industry was in an upswing was a coup for Québec. Capitalizing on the increased activity, in 2010 the Québec Government raised the tax rate on mining profits from 12% to 16%.

Crucially, the government also revised the system to tax profits on a mine-to-mine basis. This was a significant step, as it prevented companies holding more than one mine asset from using a loss-making mine to mitigate the tax liability of a profit-making one. Altogether, the new measures reversed Québec's position in Canada, turning it into the highest taxed province for mining. In the 2011-2012 fiscal year, this brought the government $365 million in revenue, approximately 4% of the total value of all extracted ore. Québec's prestige, however, suffered, as the 2011/2012 Fraser Institute Global Mining Survey knocked Québec down to fifth place.

Within two years of the new tax system being put in place, Québec's general elections saw the formation of a minority government led by the francophone nationalist party, the Parti Québécois (PQ). As part of its election campaign, the PQ publicly proclaimed that the previous tax regime on the mining industry was insufficient in providing the provincial government, and the people of Québec, with a 'fair take' of the province's mineral wealth. The PQ initially mooted the idea of a 5% ad valorem tax on all ore extraction, with a potential increase to 30% for companies with production passing a certain 'exceptional' threshold. With such a policy, the party aimed to generate as much as $388 million per year for the government.

In the wake of the election, and amidst a heated debate on the future of mining regulation, the Québec Government's finance department commissioned PriceWaterhouseCoopers (PWC), an auditing firm, to carry out a series of surveys of global mining tax regimes in order to assess which model was right for the typical iron ore mine in Québec. Because of the relatively low grade of most of Québec's ore, the remote locations of many of its mines, and the generally small size of its projects, PWC concluded at the beginning of 2013 that changes to the regime were undesirable and that the optimal tax system was the one already in place. Within the Québec Government itself, there was disagreement over whether or not and how far the PQ should scale back its tax ambitions. The Minister of Finance and Economy, Nicolas Marceau, had been vocal in his view that the changes, spearheaded by Natural Resources Minister Martine Ouellet, risked going too far.

Although no formal policies had been announced, the perceived severity of the government's stance sent a shockwave of uncertainty through the Québec mining industry. Two of Québec's most important mining players, Iamgold and Goldcorp, threatened to halt any expansion in the province if the government did not alter its position. In its 2012/2013 Global Mining Survey, the Fraser Institute once again downgraded Québec's ranking, this time to 11th place.

In March, in a bid to demonstrate its desire for dialogue and good faith, the government participated with industry leaders in a number of 'town hall'-style public forums, which resulted in no agreements being made. Behind the scenes, companies such as Osisko and ArcelorMittal, as well as various trade associations, held one-on-one discussions with the government to find a tenable compromise. Meanwhile, legal and financial service providers to the mining industry were assuring investors that the government could not afford to be too drastic.

On May 6, 2013, Minister Ouellet formally announced a proposal for a hybrid tax regime. Widely seen as a compromise, the new system will require companies to pay the greater amount of either (i) an ad valorem royalty rate of 1% for all ore extraction up to the $80 million mark or 4% for extraction beyond that threshold, or (ii) a progressive tax of 16%, 22%, or 28% of an operator's profit margins as they increase.

Emmanuel Sala, a trained accountant and lawyer at Blakes in Montréal, has stated that "any tax based primarily on income, without regard to profitability of the mine" is counterproductive because it "ignores the cyclical nature of the mining industry," which dictates operators' profit margins. This threatens to render a number of Québec's already struggling projects unfeasible in the coming years. Josée Méthot, president of the Québec Mining Association, agrees. In an interview with the Wall Street Journal, she has said that there is only one option that makes the most sense, and that is "a mining tax solely based on profits."

The new system has also proved a disappointment to the Parti Québécois's own base, as it is predicted to generate between $73 million and $200 million in revenues every year. This is very wide of the government's initial target of $388 million. Furthermore, environmental lobbyists continue to insist that the government could have done more.

In retrospect, the Parti Québécois's foray into mining tax reform seems quixotic. Elected at the tail end of the last mining cycle, the government, like its predecessor, endeavoured to capitalize on the perception that margins were high and mining firms were amassing wealth with impunity. In doing so, the PQ sought to win favour from the political left and finance Québec's enormous provincial debt. The end result, however, is a lukewarm compromise in the middle of a tough period for mining and metals. The new tax regime in Québec is far from the nightmare scenario initially feared during the election campaign. Even so, it may take years before operators in la belle province can shake the feeling that they are caught in a bad dream. •

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INTERVIEW WITH

Zahid Fazal

PARTNER
ERNST & YOUNG

Could you please give us an introduction to Ernst & Young Québec and the firm's involvement in the mining sector?

Ernst & Young's global Mining and Metals Center is led by Mike Elliot, a partner in our Sydney, Australia, office. Each of the four geographical areas in which we operate - the Americas; Europe, Middle East, India and Africa (EMEIA); Asia-Pacific; and Japan - has a mining leader and a team responsible for each jurisdiction. In addition to providing our services to clients, we also bring relevant and timely insights, thought leadership, tailored advice and regulatory updates to the industry.

What are some examples of the cost optimization strategies that Ernst & Young helps firms to pursue on an operational level?

Ernst & Young conducted a study in recent years called "Effective capital project execution: mining and metals", which examined the causes behind increasing costs. In recent years, costs have gone up in the industry for various reasons, including inflation, labour costs, contractor costs, processing costs due to lower ore grades, sustainability costs and direct and indirect taxes, to name a few. The study concluded that projects undertaking capital expenditures around the world were, on average, 71% over budget.

The analysis highlighted some important factors behind this. In many cases, as a result of resource deficiency in the area of engineering and project controls, many projects have suffered from ill-defined project scopes and execution plans. Second, in the execution phase, there has been a lack of structured process around accurate cost and schedule control and scope growth and claims management between EPCMs and project owners. Further, due to human capital constraints, there has been an increased reliance on EPCMs and subcontractors. Finally, all of the risks around infrastructure, reliance on EPCMs or subcontractors and financial management have not been identified on a timely basis and adequate mitigating strategies have not been put in place to identify them early enough to mitigate them. While these tend to be on a global level, we can say specifically about Québec that the projects are very complex and costly, resulting in many projects being deferred in the context of the current economic conditions.

Our cost optimization services relate to our advisory service line. Ernst & Young believes that leading practice is for companies to implement a project control office. There needs to be a distinction between the execution (engineering, procurement and construction management) and the project control (budgeting, contract management and cost scheduling). Ernst & Young is playing a key role in establishing project control offices for companies and, in some cases, is a part of the project control team. In other cost-related areas, we are also working with companies on working capital and supply chain optimization.

In light of the recent delays in the definition of the Plan Nord, how is Ernst & Young helping companies operating in Québec's North to find solutions to infrastructural challenges in the area?

In spite of the delays occurring with Plan Nord, the planned metals projects in the North that have financing are likely to proceed as planned. The North faces a significant challenge with infrastructure, which Ernst & Young ranks as one of the top three business risks around the world and the top business risk in Québec. Our infrastructure practice has worked with a number of companies on different continents, Australia being a good example. We have advised companies in remote regions to help them model the structure and cost modeling associated with putting together a railroad. We have brought our knowledge and experience here to Québec to advise developing and producing companies on potential railroad and port projects. Ernst & Young's infrastructure group also advises infrastructure investors, who generally have a longer-term investment strategy compared to investors in the mining sector.

Do you believe that the fall in commodity prices will shorten the window of time in which northern projects can remain feasible?

Many projects are currently reevaluating their feasibility because of the fall in commodity prices. An increase in supply and the slowdown of China's growth are also inhibiting factors. Ernst & Young's outlook, however, is that long-term demand for the sector will continue to be driven by China and other BRIC operators; the rapid cut-back of expansion and capital spending by many organizations is expected to slow long-term supply and prolong a "super-cycle" scarcity premium. Consequently, those with access to capital and a long-term view will seek to invest in mine development, high-cost mines will be reviewed for cost optimization or sold to investors who can inject capital to reduce cost, and companies will rationalize portfolios.

What impact do you believe the Québec government's recent policies will have on perceptions of the province as a mining destination?

Although Québec has fallen in the Fraser Institute's rankings this year, the province continues to be a very good mining jurisdiction. In the long term, China will continue to provide demand for key minerals such as iron ore, copper, zinc, rare earth, and gold. Québec has a good potential to be part of that if it can get around some of the infrastructure and resource nationalism issues.

Resource nationalism has been the top risk Ernst & Young has identified in its global risk surveys for several years now. Tax policies have an impact on investment decisions. Investment and capital is mobile, so when investors abroad are making capital allocation decisions, they look at all aspects of the jurisdictions they are considering, including tax policies and resource nationalism. Jurisdictions will need to be competitive to attract capital. •

INTERVIEW WITH

Nochane Rousseau

QUÉBEC MINING LEADER
PWC CANADA

Could you explain PwC's involvement in the consultation process between the government and the industry on the subject of the new mining tax regime?

We started playing a role in the royalty discussions last summer, when we were engaged by Québec's Ministry of Finance. They asked us to prepare a survey comparing the hypothetical application of tax regimes from Québec and Western Australia to a typical iron ore mines in Québec and Western Australia. The purpose was to demonstrate the impact of each tax regime on the mines and to share our observations and conclusions. We completed the survey in early 2013, and it concluded that the regime that we have in place in Québec is better suited for a typical iron ore mine in the province than is Western Australia's tax regime.

Iron ore mines here have a much lower grade of ore than in Western Australia and face higher transportation costs. Therefore, we recommended having a progressive tax regime in place. The Western Australian regime is progressive as it is used over there, but if applied to Québec's iron ore mines it would be regressive. It would result in companies paying very high mining duties and taxes even if they are making very little profit.

We were also engaged by the Ministry of Finance to perform a comparative analysis of 25 jurisdictions, looking for applicable examples of minimum tax rates and taxes on super-profits. The results from both studies were made available to the public during the consultation process, and the government has used them as a basis for considering different policy scenarios.

Can the government find a tax rate that generates both sufficient tax revenues for the province and positive incentives for the industry to operate in Québec?

Québec has had a high level of taxation on mining for a few years. In 2009, the government proposed its first change to the tax regime when they removed some of the tax deductions available to the mining industry for major projects. The second change occurred in 2010 when the government announced an adjustment to the calculation of mining profits, wherein profits would be determined on a mine-to-mine basis instead of a consolidation basis. They further increased the tax rate on these profits from 12% to 16%. These changes took Québec from having the lowest mining taxes in Canada in 2007 to being the jurisdiction with the highest mining taxes in the country.

It is difficult to know for certain if business opportunities have been abandoned because of the recent announcement regarding the new mining tax regime. The mining sector in Québec is undergoing a lot of changes. Economic conditions, changes in laws and regulations, and the uncertainty of the last couple of months are factors that have encouraged foreign investors to explore opportunities outside Québec. Many changes to laws and regulations specific to Québec's mining sector have reduced the competitiveness of the province, once recognized for its mining policies' stability and predictability, particularly its provincial mining act and taxation regime.

PwC has recently endeavoured to bring new players into the industry through its executive mining mentorship program and its involvement to promote entrepreneurship within Québec. Could you give us more detail on the role these initiatives have played in mitigating the industry's labor and skills shortages?

The PwC Executive Mining Mentorship Program, called Elevate, is our response to a challenge we've heard vocalized by executives in the mining industry: how to acquire and retain top talent. Our goal is to help develop future CEOs, CFOs and COOs in the mining industry and to provide support to existing C-Suite executives.

Compared with Vancouver and Toronto, there is not much entrepreneurial activity in Québec's mining sector. Capital has been limited here since the exchange listing in Montreal was shut down, and financing has been pulled to other jurisdictions. In 2012, PwC initiated a working session with key mining industry players to discuss how to promote entrepreneurship in the Québec mining sector.

A committee was created to support entrepreneurs in developing mining businesses here. Of course, timing is a factor. The difficult market at the moment gives us enough time to identify tomorrow's leaders. Inspired by the business incubator concept, we asked well-established mining companies to yield the development of certain properties to talented candidates in exchange for stock in the new company that is formed. The new entrepreneur would benefit from financial support from Québec's specialized institutional funds, if funding conditions are met, and from being mentor by industry experts.

What is your near-term outlook for the Québec mining sector and PwC's mining-related activities?

2013 is going to be a difficult year for the industry, but hopefully 2014 will see some turnaround. Although the mining sector will still experience volatility, I am confident that demand for commodities generated by emerging markets in the mid and long term will be strong. PwC is increasingly developing its links with the industry, and our mining team is focusing more on helping clients cut costs and improve productivity in asset and supply chain management. •

FM

INTERVIEW WITH

Frank Mariage & Jean Gagné

FM: PARTNER
JG: PARTNER
FASKEN MARTINEAU

The future of northern developmenthas yet to bedetermined following the change of government. How is Fasken Martineau help-ingexploration companies in light of the new uncertainties?

FM: It is true that the uncertainty is making companies wonder what is in store. I do not, however, think that this government is going to kill the Plan Nord. I think they are intelligent enough to know that the development of our natural resources is essential to the future

growth and development of the Province. In the 1970s, many people questioned what the development of James Bay would bring, for example, but today it is a point of pride for Québec. I strongly believe that in 20 years from now, we will be saying the same thing about Plan Nord.

Can you give us an overview of the key current issues related to the province's mining legislation?

FM: The main issue on the table is giving local jurisdictions more say on the development of natural resources. Indeed, when you are developing a mine that is close to a populated area, it is only normal that you involve the local communities and hear any of their concerns. Even though social acceptability is not a legal term or concept, you cannot get around it anymore. At the same time, one must not forget that the natural resources in the ground belong to the whole population, not just the local population. It is the government's responsibility to ensure that we have a clear understanding of the regulations we face. One of the problems with Bill 14 proposed by the previous government was that we did not have that. We were under the impression

that, because there are around 1,200 municipalities in Québec, we would have to face around 1,200 barriers. For investors, especially those outside of Québec, there is no greater fear than uncertainty for a jurisdiction and the title to an asset. For mining companies, the asset is all they have. Therefore, if you are caught in a situation in which you have had a mining right for 20 years and have invested millions of dollars, and then the government suddenly claims you have no right to mine in that territory and will not be compensated for your loss, there is a serious problem. Furthermore, the mining world is a small one with sophisticated investors who know what is going on in every jurisdiction. They have no qualms about putting their money elsewhere.

Two years ago royalties were raised to 16% in this jurisdiction, and now there is talk of raising them further. How is this affecting exploration companies that you work with?

FM: Exploration companies are very concerned. Companies that are at the feasibility stages now will have to wait to see the effect added royalties will have on the net present value of the mine. For sub-sectors such as industrial mines, rare earths, lithium and graphite, it seems to have less of an effect. For iron ore and precious metals, however, there are major concerns about what is coming. If you face a more stringent royalty regime for a project, the better the grade must be for whatever you find. Right now high-grade projects are being found less frequently, and increasing the cutoff grade for a project would shorten the life of the mine. Therefore, a lot of companies are in survival mode at the moment, consolidating what they have and keeping new activities to a minimum until this storm passes.

JG: Many projects that are under construction have been based on a different fiscal regime, so changing the model will require some adjustments. However, it will take more than this for a company that has invested, for example, $1 billion into a project to stop. The royalty regime change will have more of an impact on long-term investments and expansion projects.

The government has also proposed increasing mining companies' responsibility for mine site remediation. How do you see that discussion progressing?

JG: The increase in responsibility for remediation is going to happen and the industry has no issue with that. Many companies are already taking full responsibility and often enter into contractual agreements to guarantee 100% remediation, particularly with First Nations. This will not be a major stumbling block. The regulation has been adopted and future legislation shall certainly provide for language to that effect. The industry acknowledges that it is the right thing to do.

Following the historic collaboration benefit agreement signed between Goldcorp and the Cree, what impact has its implementation had on the wider industry?

JG: It is a given now that First Nations are important stakeholders in mining projects. Goldcorp signed the first agreement on the territory with the Cree, and since then Stornoway and Black Rock Metals has done the same. The industry has acknowledged that we need good agreements with surrounding communities and that is now part of the culture. As far as implementation of the agreement, it is a new process to which both sides will have to adapt. It is impressive to see the number of Cree businesses that are getting contracts. We are seeing more agreements at advanced exploration and predevelopment stages, which are building relationships early on and paving the way for more to be accomplished in the next stages. •

Gold:
Québec's Crowning Resource

"I view what is happening right now as a temporary correction. I am bullish on the price of gold for a number of fundamental reasons: the world's supply of gold is not increasing and the pressure on demand is going to continue to be strong. At Goldcorp, our vision is together to create sustainable value. In all of our mines and leadership teams we focus on six strategies including: our people, our safety, and our partnerships. When we get those right, we will deliver results, reserve growth and strong margins."

- George Burns, Executive Vice President & Chief Operating Officer, GOLDCORP INC.

Courtesy of Goldcorp Inc.

The Abitibi Greenstone Belt

Prolific and growing

Straddling Ontario and Québec, the Abitibi Greenstone belt has produced over 150 million oz since 1990. The sheer volume of this historical production has prompted fierce debate: while some speculate that its deposits are well past the point of maturity, others argue that the potential at depth has scarcely been development.

In a time of challenging markets, however, juniors are not always keen to dig deeper into the unknown. Instead, exploration companies have utilized historic data and experts' knowledge of the numerous proven sites that dot the belt: reviving former mine sites and sticking to popular areas is a model that eliminates many unknowns from the equation.

One junior that has especially benefited from this strategy is Adventure Gold Inc., which owns 32 sites altogether but focuses its attention towards its jointly-owned Dubuisson and Lapaska properties in Val-d'Or East. "Our primary focus project is Val-d'Or East, where we had a significant discovery last year following 24,000 m of drilling, in which we outlined close to 800,000 oz of gold. We also doubled our land position there last fall," said Marco Gagnon, Adventure Gold's president and CEO. "Our strategy of taking on projects that are in well-established areas like Val-d'Or is a significant reducer of costs, as we do not have to deal with the bother of helicopter transport and other challenges posed by remote areas."

At the former Lamaque mine property in Val-d'Or, Vancouver-based Integra Gold Corp. is focused on bringing the southern portion of the property into production. "The mineralization is actually fairly similar to the old Lamaque mine and to a lesser degree to the Sigma mine," said Hervé Thiboutot, vice president of exploration. "These all have the same type of mineralization: quartz veining with tourmaline, an indicator mineral, some pyrite, and gold. Sigma and Lamaque have been mining for over 75 years, so there have been a lot of studies already done on the area."

Geologica Inc., an exploration-consulting firm based in Val-d'Or, has worked extensively on Integra's Lamaque project, which has benefited significantly from the wealth of historic information available.

"Presently, we are working on the Lamaque Project of Integra Gold Corp. where very successful drill intersections are obtained and significant gold resource increases continue to keep us busy. Having worked at the nearby Sigma mines, Canadian Malartic, Marban and Rand Malartic in the 1980s as mine and exploration geologists, we acquired top level expertise with vein-type mesothermal deposits within the Val d'Or Gold Camp and along the Cadillac Break of the Abitibi Greenstone belt," said Alain-Jean Beauregard, president of Geologica.

Cartier Resources Inc. has also set its sights on Abitibi properties with historically demon-

Select of Producing or Recently Producing Canadian VMS Deposits

Source: Geological Association of Canada

DEPOSIT	LOCATION	MT	CU (wt.%)	ZN (wt.%)	PB (wt.%)	AG (g/t)	AU (g/t)	AGE
Kidd Creek	Abitibi, Ontario	149.3	2.89	6.36	0.22	92	0.05	Archean
Brunswick No.12	Bathurst, N.B.	137.3	0.33	9.56	3.56	100	0.2	Ordovician
Selbaie	Abitibi, Quebec	47.3	0.98	1.98		20	0.9	Archean
LaRonde	Abitibi, Quebec	55	0.33	2.11		50	4.66	Archean
Buttle Lake	Wrangellia, B.C.	26.3	1.9	5.93	0.55	55	2.15	Devonian
Louvicourt	Abitibi, Quebec	15.1	3.67	1.55		29	0.9	Archean
Triple 7	Trans-Hudson Orogen, Manitoba	14.5	2.64	4.98		31	2.12	Paleoproterozoic
Bouchard - Herbert	Abitibi, Quebec	10.2	2.11	4.79		15	1.4	Archean
Callinan	Trans-Hudson Orogen, Manitoba	8.4	1.29	4.02		26	4.02	Paleoproterozoic
Duck Pond	Central Volcanic Belt, Nfld.	3.9	3.59	6.82	1.1	71	2.05	Ordovician
Bell Allard	Abitibi, Quebec	3.2	1.5	13.77		43	0	Archean
Chisel North	Trans-Hudson Orogen, Manitoba	2.8	0.15	9.36	0.4	22	0.8	Paleoproterozoic
Eskay Creek	Stikine, B.C.	4	0.33	5.4	2.2	998	0.4	Jurassic
Konuto	Trans-Hudson Orogen, Manitoba	1.9	4.13	1.41		9	26.4	Paleoproterozoic

> "Goldcorp recovers and treats all water that comes into contact with the industrial site. Our management decided to invest in dry tailings technology, meaning that water management will be minimal. We will also have a geomembrane over the entire tailings facility and will already start reclamation immediately after the first five years cell is completed and this cycle will continue until the end of the life of the mine. That means that by the end of the mine life, most of the tailings area will already have been reclaimed and the area will have been revegetated. This is all done in consultation with our Cree partners and the Tallyman, so that post-mining land-use is jointly planned in respect of the aims of local communities."
>
> - Guy Belleau, General Manager, Éléonore Project, Goldcorp Inc.

strated grade and tonnage potential. "We have a unique strategy in that most juniors do not try to option properties from others. We buy outright or option into a property and then conduct our exploration directly beneath the established resource to confirm its potential at depth," aid Philippe Cloutier, president and CEO of Cartier Resources, and chairman of the board of QMEA.

The area's existing infrastructure is key to Cartier's drilling-focused exploration. "The simple fact that drillers can access the site by pickup truck dramatically lowers the cost, which likewise dramatically increases the amount of drill meters that you can conduct."

Gold Bullion Development Corp., which is advancing their flagship project at the past producing Granada mine, presented a resource calculation after its first drilling program of 1.6 million oz of gold in the measured and indicated and 1 million oz in the inferred categories respectively at 1.0 g/mt. The company released its PEA at the end of 2012, outlining a proposed combination of an open pit and underground operations. Responding to the scarcity of equity financing, the company is opting for a rolling start.

"Gold Bullion is looking at near term production with future drilling for another 1-2 million oz at 3 g/mt. Presently, we have explored only 20% of the LONG Bars Mineralized Zone," said Frank Basa, president, CEO and chairman, Gold Bullion Development Corp. "We are now undertaking a PFS to evaluate the costs and grade of the present drilled resource estimate under a program we call a rolling start. The rolling start will help us better quantify the grade by processing a significant amount of mineralized material over a one to three year time frame. We also intend to start the next stage of the drill program," said Basa.

Further northwest in the Abitibi, Falco Pacific Resource Inc., established in 2010, controls over 700 km² of Rouyn-Noranda's base and precious metals camp in northwestern Québec. Historically the camp has produced over 14 million oz of gold and over 4 billion lbs of copper.

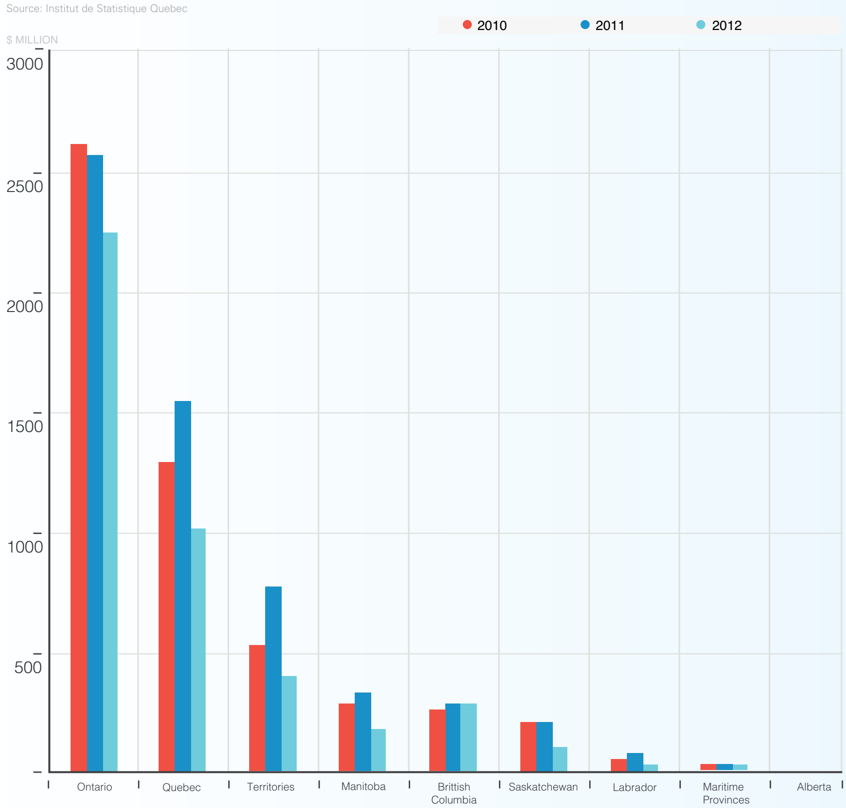
A key focus of Falco Pacific's land package is the Horne 5 deposit; a past-producing mine that is hosted at the Horne Complex, an active smelting and milling operations site. In February of this year, Falco Pacific updated the results of its historical evaluation of the Horne 5 deposit, which pointed to 6.75 million oz of gold and 92.5 million oz of silver. Past exploration conducted by Noranda Mines proved to be a crucial building block for Falco Pacific's exploration program, assisting the company in developing a three-dimensional workable model based in part on historical data.

"We were able to examine for accuracy and completeness the historical resource, data, geological formations and the infrastructure from the previous Noranda exploration… We expect to have the NI43-101 completed by the end of the year. Given the accuracy and completeness of the Noranda data, there is

→ 35

Gold Shipments by Province

Source: Institut de Statistique Quebec



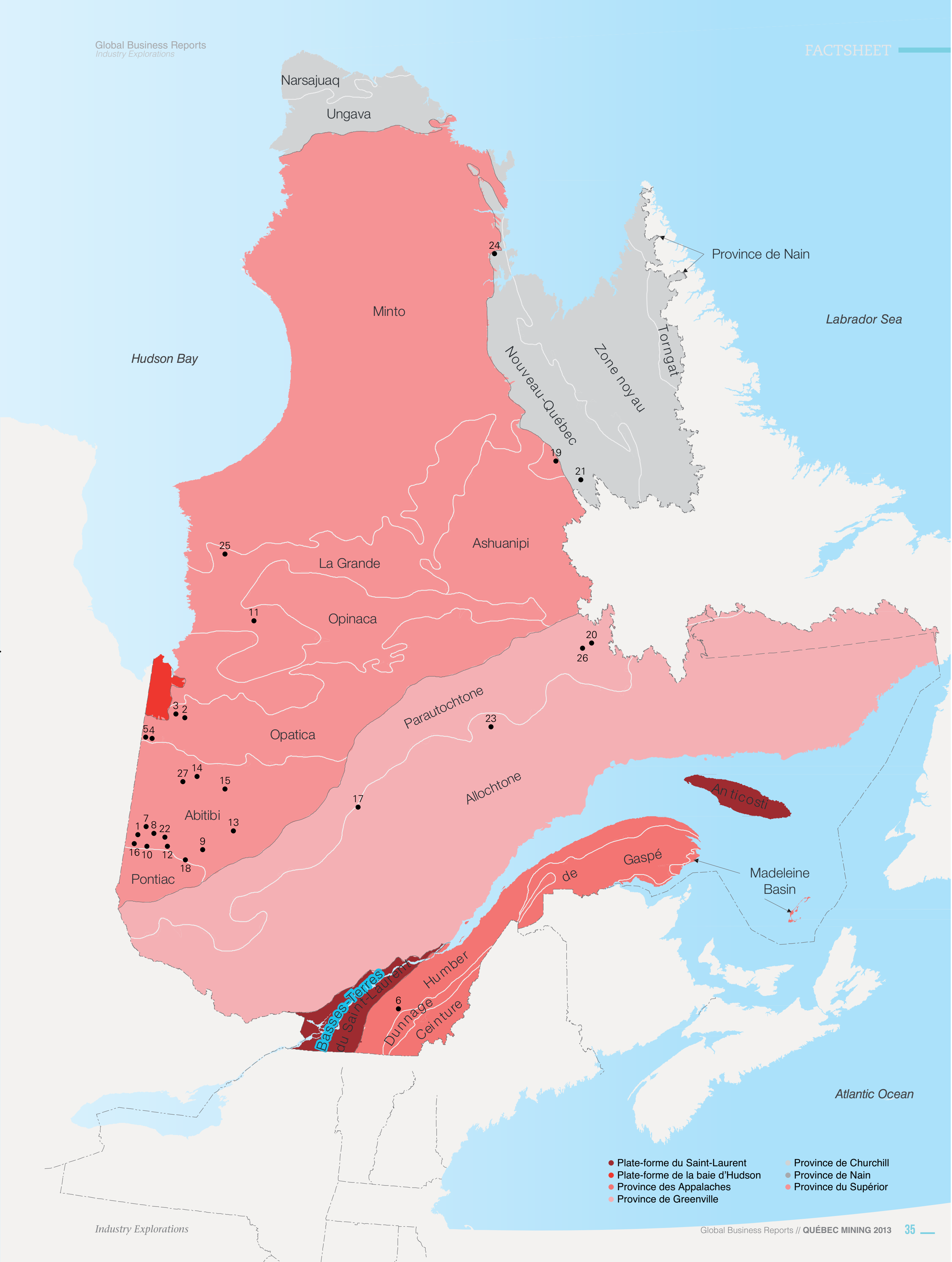
Major World VMS Deposits by District (by million mt)

Source: Geological Association of Canada

DEPOSIT / DISTRICT, COUNTRY	MILLION MT
Iberian Pyrite Belt, Spain and Portugal	1575
Abitibi, ON-QC	**600**
Bathurst, NB	495
Southern Urals, Russia	400
Rudny Altai, Kazahkstan	400
Winday Craggy, BC and Green's Creek, Alaska	300
Besshi, Japan	230
Tambo Grande	200
Mt.Read, Tasmania	200
Black Sea, Turkey	200
Flin Flon - Snow Lake, MB	150
Central Mexico	650
Bergslagen - Orijarvi, Sweden and Finland	110
Central Urals, Russia	100
Northern Cordillera, BC	100
North Qilian, China	100
Lachlan Fold Belt, Australia	100
Trondhjeim, Norway	100

NUMBER	COMPANY	PROJECT
	EXPLORATION	
1	Abcourt Mines Inc.	Elder
2	Adventure Gold Inc.	Lapaska
3	Agnico-Eagle Mines Ltd (51%) & Adventure Gold Inc. (49%)	Dubuisson
4	Balmoral Resource Ltd	Martiniere
5	Balmoral Resource Ltd	Detour East
6	Bowmore Exploration Ltd	St-Victor
7	Clifton Star Resources Inc.	Duparquet
8	Exploration Typhon Inc.	Fayolle
9	Falco Pacific Resource Inc.	Rouyn-Noranda
10	Gold Bullion Development Corp.	Granada
11	Goldcorp Inc.	Éléonore
12	Hecla Mining Company	Joanna
13	Integra Gold Corp.	Lamaque
14	Maudore Minerals Inc.	Vezza
15	Metanor Resources Inc.	Lac Bachelor
16	QMX Gold Corp.	Lac Pelletier
17	TomaGold Corp.	Monster Lake
	PRODUCTION	
18	Agnico-Eagle Mines Ltd	Goldex
19	Agnico-Eagle Mines Ltd	Lapa
20	Agnico-Eagle Mines Ltd	LaRonde
21	Hecla Mining Company	Casa Berardi
22	IAMGOLD Corp.	Westwood
23	IAMGOLD Corp.	Mouska
24	Osisko Mining Corp.	Canadian Malartic
25	QMX Gold Corp.	Lac Herbin
26	Richmont Mines Inc.	Beaufor
27	Richmont Mines Inc.	Monique

This map is intended for illustrative purposes only. It shows only a selection of currently ongoing projects and should not be used for investment purposes.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Madeleine Basin
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Basses-Terres du Saint-Laurent
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Ceinture
Atlantic Ocean
Plate-forme du Saint-Laurent
Plate-forme de la baie d'Hudson
Province des Appalaches
Province de Greenville
Province de Churchill
Province de Nain
Province du Supérior

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no initial drilling required on the Horne 5 deposit to obtain our first resource estimate, which is a huge milestone for the company to achieve," said Kelly Klatik, president, CEO and director of Falco Pacific Resource Inc.

Not 45 km from Detour Gold's Detour Lake mine in Ontario, across the border in Québec, junior exploration company Balmoral Resources has the bulk of its holdings concentrated in its Detour Gold Trend project along the same break. Founded near the end of 2010, Balmoral's management team was established after the sale of West Timmins Mining with the goal of putting the West Timmins team back together in a geological environment and geographical area where they were technically comfortable.

"The opportunity to move the team from Ontario to Québec and acquire a large scale project along one of the main gold bearing structures in the Abitibi was too good of an opportunity to pass on," said Darin Wagner, president and CEO of Balmoral Resources.

In the company's third year of exploration, they have had two drills turning at their Martiniere project, where they have made several higher-grade gold discoveries in the past two years. "Martiniere has three gold mineralized structures, which intersect in an almost triangular relationship, providing a multitude of gold zones. Our challenge at Martiniere is not finding gold, but rather delineating the controls of these structures," said Wagner. Following winter and summer drill programs, Balmoral plans to carry on with drilling after freeze-up to delineate the size of the system.

For those already in production, the March gold crash prompted harsher scrutiny of budgets. IAMGOLD inaugurated its Westwood mine this spring, where it is now ramping up production as its nearby Mouska mine reaches the end of its life.

"It is a very positive story in an area that has really been impacted by lower gold prices. We will add margin dollars that should improve as the underground mine starts up," said Bob Tait, vice president of investor relations at IAMGOLD.

"With the lower gold prices and costs that have risen over the past couple of years, margins have been squeezed... The world is moving towards lower grade operations and IAMGOLD has an advantage because this is something we do very well. Our focus is on profitably running operations at mostly low grade mines," said Tait.

As grades decrease in Abitibi and the gold price hovers around the $1,300 mark, miners have been forced to focus efforts on reducting operating costs. Richmont Mines, which operates the Beaufor mine in the Val-d'Or area, has implemented a cost reduction program focused on the mine's higher grade stopes with a doubled-up workforce.

"This has paid dividends, as our grades have improved. We expect Beaufor to have a much better half in 2013. Having said that, the challenge at Beaufor is its mine life. We have limited reserves and unless we find more ore there, we will be facing a terminal situation. This is the perennial story with Beaufor, however. It is the type of mine where if you keep exploring, you keep finding resources. We just have to make sure we have a handle on our costs before we do that," said Paul Carmel, president and CEO of Richmont Mines Inc.

As cost pressures have risen, the Val-d'Or area has seen M&A activity with the acquisition of Aurizon Mines by Hecla Mining. Hecla, which had previously been in talks with Aurizon in the mid-2000s, stepped in this year following a hostile takeover bid from Alamos Gold made in January 2013. With the addition of Aurizon's main asset, the Casa Berardi mine, Hecla aims to strengthen the company as a low-cost, diversified producer with gold and silver assets.

Casa Berardi, becoming Hecla's third operating unit, requires careful review of its project economics. Cash costs per oz have risen at the mine, from $525/oz to $696/oz since 2011 as it faces lower grades and smaller stopes. "At $1,300/oz you need to seriously examine all of your discretionary expenses. Exploration is the first cost factor to be considered. We have reduced exploration costs at Casa Berardi from around $10 million/year in the first three years to just above $4 million this year," said Christian Bourcier, vice president – executive director, Casa Berardi.

For other regional players such as Agnico-Eagle, which operates the LaRonde, Goldex and Lapa mines, lower grades and the gold price are necessitating large cuts to the tune of $250 million for 2013 and 2014. In spite of the gold market woes, Osisko, Québec's newest home-grown mid-tier producer, is focused on improving mill throughput and posting stronger production volumes at its Canadian Malartic mine. In the second quarter of 2013, the mine hit a quarterly gold production record of 111,701 oz.

INTERVIEW WITH

Darin W. Wagner

PRESIDENT & CEO
BALMORAL RESOURCES LTD.

Could you provide our readers with an introduction to your company?

The management team responsible for Balmoral was established after the sale of West Timmins Mining Inc. The goal was to put these successful professionals back together in a geological environment and geographical area where they were technically comfortable. The opportunity to move the team from Ontario to Québec and acquire a large scale project along one of the main gold bearing structures in the Abitibi too good of an opportunity to pass on. The project was built through acquisition, direct staking and joint venturing and it is one of the largest continuous packages in the Abitibi. Balmoral was able to acquire over 80% of one of the major gold bearing structures for under $8 million. The low cost of this package was due to remoteness of these holdings and the under explored nature of this section of the Detour Belt. That being said, the Detour system has clearly indicated that the regional structure which we control for 80plus km, is capable of generating world-class gold deposits.

You mentioned your team's experience with West Timmins Mining Inc. and the successful sale of that company. Could you talk to the experience of your management team in the Abitibi Greenstone Belt?

The original members of the WTM team came together in 2000 with a focus on aggressive drilling at large-scale projects in proven, productive districts. We looked to projects with multiple opportunities in order to de-risk our operations. In the case of West Timmins, the management team entered the Timmins Belt, acquiring a large land position that we felt was underexplored next to an emerging producer. This led to a the discovery of a gold deposit at Thunder Creek that is now in production and represented one of the quickest turnarounds from exploration to production for a gold deposit in Canadian company in many years. The key to this success was the experience of our team, having worked in the Abitibi for the last 20 years, the teams ability to identify and jump on an opportunity and the patiences and tools to work in areas of extensive overburden – all of which translates well to our Detour Trend Project.

At the beginning of this month Balmoral Resources announced a continuation of its drilling program at the Martiniere property. Could you provide our readers with information on the status of this project and what you are looking to discover with this drilling program?

Balmoral has made a number of higher grade gold discoveries on our Martiniere property over the past two years. Martiniere has three gold mineralized structures, which intersect in an almost triangular relationship, providing a multitude of gold zones. Our challenge at Martiniere is not finding gold, but rather delineating the controls of these structures. The drilling program completed this past winter was an attempt to scope out the scale of these systems with broad based drilling. Balmoral came out of this drill program mildly frustrated, in a good way, because the structures remained open on every front and new ones were discovered. Having completed this program—which nearly tripled the scale of the entire system—the summer drill program is focused on continuing to increase our understanding of the system and delineation of a number of the high grade discoveries. The company is now delineating six particularly high-grade shoots within this system and its main focus is on demonstrating the continuity of these high-grade sections. Results of this summer drill program should be available in early October and the company may continue with drilling through October and after freeze-up to delineate the size of the system.

Let's now move our attention to your outlying property. Could you discuss the status of your N2 property and where you are looking to take it in the near future?

N2 has three gold bearing structures which run parallel to one another and is part of a system which includes the Hecla's Casa Beradi deposit to the west. N2 has seen very little work since it was owned by Cyprus Canada Ltd. in the mid-1980s. The property carries around a 750,000 oz historical resource near surface, at about 1.48 g/mt. Given the higher grade and material profile at Martiniere, Balmoral will probably look to a joint venture on N2 to continue to move it forward.

Balmoral Resources has been a vocal supporter of the regulatory framework in Québec. How have provincial legislation and mining practices created a world-class mining jurisdiction in the province?

The landscape in Québec has changed over the last year and the current government in Québec City and is clearly less "pro-mining" than the previous administration. That being said, mining has always been taken seriously in the province of Québec and it is a valued industry for the development of the province, and in particular for the northern half of the province. On the exploration side, the current provincial framework allows for a refundable tax credit of 35¢ back for every dollar spent, which is greatly appreciated given these tough economic times and make Québec a "go-to" jurisdiction for exploration. This is not to mention the support of government regulators, First Nations and communities, which are all predominately pro-mining. •

INTERVIEW WITH

Frank Basa

PRESIDENT, CEO & CHAIRMAN
GOLD BULLION DEVELOPMENT CORP.

Can you give us a brief introduction to Gold Bullion Development Corp.'s recent developments at the Granada Gold Project?

Gold Bullion completed its first stage of near surface drilling on its Granada Gold property and presented a resource calculation of 1.6 million oz of gold in the measured and indicated and 1.0 million oz in the inferred categories respectively at 1.0 g/t. Gold Bullion completed a PEA on a near surface open pit and a separate underground mining operation giving a cash cost of $950/oz for open pit and $1,100/oz underground. Moving forward, Gold Bullion is looking at near term production with future drilling for another 1 million to 2 million oz at 3 g/t. Presently, we have explored only 20% of the LONG Bars Mineralized Zone.

Your plans for the Granda property involve a zero discharge facility. What technology are you utilizing to this end?

Our present studies are focused on developing a mining operation with a minimal enviromental foot print. We have been working with process plant developers to try to achieve a zero discharge mining operation with the intention of developing a protocol for repurposeing the waste rock.

Going forward, what is your development strategy to putting the project into production?

We are now undertaking a PFS to evaluate the costs and grade of the present drilled resource estimate under a program we call a rolling start. The rolling start will help us better quantify the grade by processing a significant amount of mineralized material over a one- to three-year timeframe. We are focused on our mandate of continually enhancing shareholder value so proceeding a rolling start made the most sense on all counts. Now that we have a sizeable near surface resource but still have other targets on the property to drill with over 80% of the 11,000 hectares yet to be explored, we also intend to start the next drill program. Our target is now 3.6 million to 4.6 million oz but the burn rate with the drills turning is of course higher. Given that the markets are dramatically challenged and according to some analysts, the worst market in a generation, equity financing is simply not an option for most juniors and we are no exception.

This rolling start is key to the long-term future of the company. We cannot just sit around and wait for the markets to recover. How it works is simple: we intend to mine near-surface higher-grade gold using the most advanced environmentally friendly mill technology available in the world. What we have been working on is the correct financing to begin gold extraction. What this does is gives us control by creating cash flow we can use for continued drilling to expand the resource, administrative and overhead costs and to pay back the loaned money. It will be a game changer for us.

Following the political uncertainty and tax regime change in the province, what is your perspective on the general climate for the industry in Québec?

We are looking carefully at what is being proposed. We still feel comfortable with working on the Granada Gold Mine project in Québec.

What is your opinion on the Abitibi's maturity and remaining potential?

Recently, a 10 million oz deposit was developed next to us from former producing gold mines. The region has a long history of producing successful gold mines and we at Gold Bullion believe there is a very bright future going forward.

What development objectives does Gold Bullion have for the next two to three years?

Gold Bullion feels that we have a lot to look forward to going forward with our Granada Property. We have found a significant near surface minerilized zone with the potential for developing a higher grade underground mineralized zone. Again, we have only explored 20% of the LONG Bars Mineralized Zone. We may have another three potential targets to explore on our land holdings.

Do you have a final message about Gold Bullion Development Corp. for our readers?

Our recent valuation in lock step with the junior markets challenges presents an excellent entry point for those seeking unheard of gold in the ground values. We have a plan that continues to unfold including a gold royalty program once gold production begins. Investors should look at Gold Bullion for two reasons: distribution of real gold to shareholders, an issue we feel strongly about and the possibility of dramatic share price appreciation going forward as underlying value is reflected in the share price commensurate with the real value that exists in the gold resource at Granada. •

INTERVIEW WITH

Marco Gagnon & Stephane Le Bouyonnec

MG: PRESIDENT & CEO
SL: CHAIRMAN OF THE BOARD
ADVENTURE GOLD INC.

Please give us an introduction to Adventure Gold and some of the company's recent milestones.

MG: Adventure Gold was started at the end of 2007, and since then we have had some great discoveries and acquisitions in one of the best mining area of Canada: the Abitibi greenstone belt. One of Adventure Gold's greatest strengths is its in-house expertise and I'm very proud of our team. For example, four of us were former geologists with Barrick Gold, Inmet Mining, Noranda, Cambior and Richmont Mines and bring operational experience from Ontario, Québec, the Labrador Trough, and Finland. Our other strength is that all of our projects but two, which we share with Agnico Eagle Mines and Lake Shore Gold partners, are wholly owned by Adventure Gold. We like to control our projects' destinies.
At this stage, we have 32 properties, which we generally group into five projects. Our primary focus project is Val-d'Or East where we had a significant discovery last year following 24,000m of drilling, in which we outlined close to 800,000oz of gold. We also doubled our land position there last fall. For a five year old company to have all these assets in proven mining camps like Val-d'Or, Timmins, Detour, Casa-Berardi and Noranda is certainly an achievement. Our greatest milestone is that we are now at the resource stage of development and there is also great potential for open pit mining on our Val-d'Or East project. With our strong team, we should be able to bring the project to the production stage in the near future.

What are some of the strategies that you are employing both on site and in the management of the company to minimize costs?

MG: Adventure Gold has always pursued a strategy of securing the right partners early on in the exploration process for certain properties. For example, with our property in Timmins, Ontario, we initially said that if we can find the right partner and price, we will de-risk this project by putting down the partner's money instead of our own. We eventually found a good partner in Lake Shore Gold. We pursued the same strategy with the Dubuisson property and Agnico-Eagle, which was producing on the Goldex mine property next door.

When we last spoke to you in 2011, you stated that your main goal at the time was to attract foreign investment. Are you still looking for external financing, and what strategies are you using to maintain a strong financial position?

MG: As many other junior companies, we are often looking for financing, however Adventure Gold has still good shareholders base and an attractive capital share structure: 68 million shares outstanding. We have $2.5 million in cash and securities which is enough for 2013 and 2014 budget. Right now our share price is around $0.15, whereas it was $0.30 in March. Our last two rounds of financing brought 2.2 million shares at an average of $0.44. A further 7.2 million shares were exercised at an average price of $0.20.

SL: Attracting foreign investment is still one of our priorities, though it is a longer term goal. Raising money is not our main priority right now, both because we do not have any external commitments and because of the weakness of the global financial market. This puts us in a better position than those who are struggling trying to get funding because they see the end in sight. The only money that we have to spend is to keep our properties in good standing and fees to the Québec government to keep our claims.
We are, of course, always talking with different groups on how to exploit our best assets. When we eventually do start exploiting them, we will need to raise money, and at that point we may look to a large player outside of Québec if necessary. Additionally, Adventure Gold still has some long-standing strategic partners on the financing side. The Montreal-based fund Windermere Capital, which is backed in part by US investors, owns 18% of our company. The Québec institutional funds altogether also have a significant position in Adventure Gold: 10-15%, down from 25% in 2011. So we believe if we ever need immediate capital, it is available even in this tough market conditions. •

INTERVIEW WITH

Bob Tait

VICE PRESIDENT OF INVESTOR RELATIONS
IAMGOLD CORP.

In light of the recent increase in Québec's royalty regime, how will this impact the strategy for IAMGOLD's operations within the province?

If you are in a jurisdiction where the rules change frequently, it is difficult to make investment decisions based on a reasonable degree of certainty around return on capital. That said, the impact of the increase was much less dramatic than what it would have been under the original proposal. The government in Québec listened to the mining companies to gain a better understanding of the market, particularly in a falling gold price environment where margins are no longer as robust as they once were. They were also mindful of the needs of the communities where mining is a livelihood and employment depends on investment in mining projects.

We had already made our investment decision on Westwood and were near the finish line when discussions around royalty increases began. However, just down the road in the Saguenay region, our niobium operation, Niobec, has the potential for a significant expansion, which would create jobs and wealth in the region for many years to come. The expansion would extend the project from 15 to 45 years at triple the production rate. To earn an adequate payback, we need to be reassured that we will get the return that warrants the investment to begin with.

Looking at the fundamentals of the niobium market, how would this investment coincide with global demand trends?

We produce about 8% of the world's niobium. There are only three significant producers in the world and the niobium market is slightly softer because of exchange rates and steel production. While the markets are soft, it is still a very robust business that is dependent not only on steel production trends but also on the increased usage of niobium as an additive to steel for strength and reduction of weight.

With the recent inauguration of IAMGOLD's Westwood mine, what impact will your subsequent ramping up of production have on Québec's prolific Abitibi gold region?

Westwood is an exciting development for us. We have spent most of the capital there now so at this point it is really about ramping up production. It is a very positive story in an area that has really been impacted by lower gold prices. As the underground mine ramps up unit costs are expected to decline, making this a more robust operation every year it advances towards its full production potential. Westwood should have a very good future impact in the region in the next few years.

How well positioned is IAMGOLD to find qualified personnel for Westwood in a competitive employment climate?

Over the past year, the labour climate has been very competitive; however, it has recently improved because of projects that are being suspended. Our advantage is that Westwood is not a brand new mine in that respect, it is right next door to our Mouska Mine. As Mouska slows down and comes to the end of its life, we are bringing a very experienced mine team into Westwood. In fact, we are using the same plant, refurbished and modernized, that was processing the ore from Mouska.

Can you highlight some of your recent health and safety initiatives at IAMGOLD that have proved particularly effective?

We have our senior leadership development program, which is designed to give our front-line leaders in the mine better leadership skills to motivate their teams and achieve better performance and productivity. We also have our Mine Body Achievement program. It is part of our pre-shift meetings with every crew, whether underground, in the plant or in our offices, where we talk about safety issues and procedures, and we even do calisthenics before going into the work place.

What is IAMGOLD's chief focus for growth in the medium term?

We are focused on three key areas: cost reduction, cash preservation and discipline around our capital allocation. With lower gold prices and costs that have risen over the past couple of years, margins have been squeezed. We want to maintain a healthy balance sheet and continue to choose projects with good returns. The world is moving towards lower grade operations and we have an advantage because this is something we do very well. Our focus is on profitably running operations at mostly low-grade mines. We have a history of timing our capital decisions well at good prices, resulting in a return on capital that has been superior to that of our peer group. •

INTERVIEW WITH

Kelly Klatik

PRESIDENT, CEO & DIRECTOR
FALCO PACIFIC RESOURCE GROUP INC.

Falco Pacific controls over 700 sq km of the Rouyn-Noranda base and precious metals camp in northwestern Québec. Could you provide an overview as to the historical importance of this area?

Over 14 million oz Au and over 4 billion lbs Cu was mined during the life of the Rouyn-Noranda camp. These facts underscore the reality that it is an extremely rich area for mining, dating back to 1927 when Noranda Mines opened the Horne project which became the highest gold grade VMS deposit of its size in the world. The Horne Complex which is the home of our Horne 5 deposit, remains an active smelting and milling operations site which is a positive fact when we begin to analyze future development scenarios. A second important fact is that there is a tremendous amount of skilled labor in the area, given a number of major mining companies such as Xstrata, IAMGOLD, Agnico Eagle, Osisko remain active and are the leading employers in the area.

In February of this year Falco Pacific updated the results of its historical evaluation of the Horne 5 deposit, which pointed to 6.75m oz Au and 92.5m oz Ag. Please provide us with an update on this analysis and the status of your flagship Horne Block project.

As Noranda Mines explored deeper into their VMS deposit in the 1930s they discovered a new lens, which later became known as Horne 5. At that time it was not a material event, however 30 to 40 years later their cumulative work resulted in over 4,000 drill holes into the Horne 5 zone, including four shafts and 40 working levels which allowed Noranda to explore down to around 2,300 m. This provided a huge opportunity for Falco Pacific to compile all of the historic exploration work and integrate into a three-dimensional workable model. We were able to examine for accuracy and completeness the historical resource, data, geological formations and the infrastructure from the previous Noranda exploration. Phase one of the mine model is complete and from that research the company has established a timeline as to when we will complete the NI43-101 compliant report.

In our conversation you have noted the limited historical exploration in the western and eastern sections of the Rouyn-Noranda project. What is Falco Pacific's strategy for approaching these underdeveloped areas?

There is over 4 million m of historical drill data that has been digitized and sits in our database. This allows the company to examine exploration opportunities on both sides of the camp. As our most recent press release shows, we have optioned the Beauchastel Gold Camp which falls within the Flavrian Gold District. This decision was made based on our initial examination of data from the archives in the western camp, which begins at the Flavrian intrusion and hosts the Quesabe mine. Quesabe is a historic producer, dating back to 1949 to 1951, and produced around 109,000 mt Au at 10.1 g/t. This historical work allowed the company to remodel the Quesabe mine, the results which highlighted 8 high grade gold zones and a tremendous opportunity to exploit along the Quesabe fault; which extends over 5 km through the Beauchastel Gold Camp. The company also completed a small drill program in December 2012 on the Flavrian property. It provided the company with a better indication of the structures present in the Flavrian Gold District, allowing Falco Pacific to model and plan possible drill targets.

In June of this year Falco Pacific closed a $1.7 million private placement for an aggregate of 6,800,000 units of the company, at a price of $0.25 per unit. Given the current fiscal downturn and lower commodity prices how is Falco Pacific looking to raise the necessary funds for mine development and exploration activities?

Falco Pacific is in a unique situation, given that the de-risking of our projects has been completely desktop driven. Horne 5 was a desktop discovery from the initial analysis through to what will be our maiden compliant resource. With the help of InnovExplo's three dimensional modeling, this exploration tactic has been very cost efficient. Our return on capital is extremely high, given that the company does not have to incur a tremendous amount of exploration costs to confirm or find new data. The $1.7 million we have raised, plus the $1.1 million of flow-through funds, in addition to cash in the bank, provides us with sufficient capital for the next phase of the Horne 5 and Flavrian Gold District programs. Our discovery cost per ounce should rank up as the lowest in the industry. •

INTERVIEW WITH

Hervé Thiboutot

SENIOR VICE PRESIDENT OF EXPLORATION
INTEGRA GOLD CORP

Can you give us an introduction to Integra Gold Corp?

Integra is focusing on gold exploration at our Lamaque property, which is close to the town of Val d'Or, Québec. We took over the southern portion of the Lamaque mine property a few years ago and have been advancing interesting exploration targets there faster and more systematically than they were in the past. In the last year and a half, we compiled all of the existing historic information and then drilled 35,000 m in 2012 on the targets that had the best potential to deliver. Between four targets, we now have 700,000 oz of gold delineated in all categories. Integra's main focus is on the two targets that are furthest from the town, about 4 km to the southeast of the city; they represent about 500,000 oz at a grade of approximately 8-9 g/t gold. We are in the process of updating the resource estimation, which we should have completed in Q2 of this year. Following the estimation, we will start on engineering studies namely the baseline environmental studies. Integra's plan is to keep drilling, deliver additional good results, get our share price up and push these deposits towards production.

Can you provide specifics about the deposit at Lamaque?

Right now we have indicated and inferred ounces, which we need to bring to reserve status. There are 15 zones in the property, and we have only done estimation on four of those. From those four zones, we got around 700,000 oz at a grade of around 7-8 g/t. This number does not reflect the drilling we did last year; that will be included in the new resource estimations that will be coming out in May 2013.

How does the mineralization at Lamaque compare to that of other projects in the region?

The mineralization is actually fairly similar to the old Lamaque mine and to lesser part to the Sigma mine; these are in the same district, basically within a 2.5 to 3 km radius. These all have the same type of mineralization: quartz veining with tourmaline, an indicator mineral, some pyrite, and gold. Sigma and Lamaque have been mining for over 75 years, so there have been a lot of studies already done on the area. This information is well known, which brings another level of confidence in our mineralized zones at Lamaque.

What is the outlook for Québec as a mining district going forward?

If you look back five to 10 years, Québec was the number one mining district because of its policies, infrastructure and people. First Nations relations were also better in comparison to the other provinces. All of these factors made Québec very attractive for investment. However, the climate might be changing shortly, as the PQ government has been talking about imposing new royalties and taxes on mining. They should first look at Australia, which has implemented a similar system. Australian government said there would be no impact on the industry, but they realize that there certainly an impact not only the mining companies but also on the community that depend of it. Net Profits Interest (NPI) royalties allow you to deduct infrastructure investment, but Net Smelter Return (NSR) is like a direct tax on production. With NSR royalties, the only thing you can deduct is direct production costs, but this does not take into account that a new mine like ours would requires $100 million to $120 million in upfront costs to put it into production. You might have an eight to 10 year mine life, and you need to pay back your capital investment in the first three years before even turning a profit. NSR royalties will also have a huge impact on the local population; there are 50,000 to 75,000 person, directly or indirectly, in Québec who work in areas related to the mining industry. Miners make good earnings, and pay good taxes that profit to the government and the Province of Québec. However, if the royalties make mines unprofitable, they will close and jobs will be lost. There is a real need to do an impact study before making any decision like this one.

What is your outlook for Integra within the next two to three years?

The obvious follow-up to what we are doing this year is to go underground for exploration and to upgrade resource. This is not something that will happen overnight; we are talking about a timeframe of 18 to 24 months. Within that two-year timeframe, Integra is pushing to get to the feasibility study stage where we can make a decision as to whether or not to move forward towards production. If the decision is positive and we have the financing to start construction, then we are talking about another two years before we produce our first gold bar. One advantage that Integra has is the availability of old mills in the Val d'Or area to treat its ore. We could possibly use one of the existing mills, meaning that we would not have to build a new one, which would significantly diminish our capital investment costs and lower business and environmental risks. •

INTERVIEW WITH

Christian Bourcier

VICE PRESIDENT AND GENERAL MANAGER, CASA BERARDI
AURIZON MINES LTD

How will the planned acquisition of Aurizon by Hecla impact your operations?

The agreement with Hecla originates from a hostile bid that was presented by Alamos Gold in January of this year. At the time, Aurizon had heavily marketed the fact that 2013 and the beginning of 2014 would be a transition phase between the area we are currently mining and another area we are developing to the east. In spite of this, our share price suffered because our 2013 production target was lower than expected. Since the start of the operation in late 2006, we have produced between 155,000 and 160,000 oz of gold a year. Last year, we produced 137,000 oz. Our target for this year is between 125,000 and 130,000 oz. Alamos attempted to take advantage of the low share price, so it was natural for us to talk to Hecla, whom we had previously discussed an agreement with in the mid-2000s. Hecla's offer, at $4.75 per share, was not only higher than Alamos, but it also provided a greater portion in cash.

What are some the benefits that have been brought on by your 2012 transition from contractor- to owner-operation at Casa Berardi?

One of the main drivers behind the transition away from contractors was better health and safety performance, which is difficult to maintain if you have a high rate of turnover as you do with contractors. As part of its increased health and safety culture, Aurizon needed to make sure that every employee was empowered in terms of health and safety and would not be blamed for refusing a job or for trying to improve the requirements for a job because of health and safety concerns. We also put together an in-house program called OCA, which stands for 'Observe', 'Communicate', and 'Take Action'. Hecla has its own rigorous health and safety program, and we have already spoken with them about implementing it here in Quebec.

Since 2011, production costs at Casa Berardi have risen from $525/oz to $696/oz. In the face of rising costs, what is your strategy to remain a low-cost producer?

Costs have increased for two reasons. One has to do with economies of scale. Since 2011, overhead and permanent costs are spread over a fewer number of ounces, consequently the unit costs go up. There is also a geometry factor at Casa Berardi. Over the first five years of its mine life, we were mining larger stopes with good grades. Now we have moved into areas where the grade is a bit lower, but most importantly, the size of the stopes is a significantly smaller which increases, for instance, the cost of stope preparation.

That being said, we have all seen what the price of gold has done over the last couple of years. At $1,300/oz, you need to seriously examine all of your discretionary expenses. Exploration is the first cost factor to be considered. We have reduced exploration costs at Casa Berardi from around $10 million/year in the first three years to just above $4 million this year.

While Aurizon will be producing less gold in 2013, it will also have some major investments to make. These investments are to develop new areas of the mine, to deepen the shaft at Casa Berardi, and to follow through with important construction of a paste backfill plant and a wet shotcrete plant. This is all necessary spending that cannot be delayed to a time when the market conditions are better.

At the Joanna project, what key factors contributed to your decision to shift your focus from the Hosco to the Heva extension?

We released the conclusions of a feasibility study on Hosco in June 2012. Hosco represents an investment of roughly $420 million, with a long payback period of approximately 8 years, based on the gold price of $1350. One of the main issues with Hosco is that the gold is associated with arsenopyrite, a refractory ore. After evaluating a technology developed by Xstrata called Albion, Aurizon found we had better results with an autoclave from a recovery point of view. However, the total costs of the autoclave, including a dedicated tailings impoundment, would add between $70 and $75 million to the costs of construction. After the feasibility study, it seemed clear to us that Hosco would not be the best allocation of our capital at this time. We have not abandoned the project, but we have shelved it until the environment and price of gold improve.

Our focus migrated to Heva, located on the western side of Joanna. Heva is more challenging for an open pit project from an environmental and permitting perspective because of the presence of creeks and larger bodies of water. Heva has higher grade resources than Hosco and no refractory ore. We can anticipate recoveries above 95% typical of the Cadillac Fault. We drilled nearly 60,000 m at Heva in 2012, and approximately 10,000 m more in 2013. At Heva we have measured and indicated resources of 1.9 grams per mt, equivalent to 270,000 ounces. On top of that, we have inferred resources of roughly the same grade equivalent to 470,000 ounces of gold. There are almost 750,000 ounces of gold released, but this does not include most of the drilling from last year and this year. In all, Heva appears to have above 1 million ounces of gold. •

James Bay

A new world-class mining camp

The area of James Bay is not traditionally linked to gold mining, and lacks that historic pedigree of places such as the Abitibi Greenstone belt. Yet recent discoveries have changed that. Increasingly, James Bay is seen as a promising area with substantial blue sky potential.

This shift in perception can be attributed to a single discovery: Goldcorp's Éléonore mine, which is now aiming to start production in late 2014. Once in place, Goldcorp's world-class camp will open doors for further development in the area. "Éléonore is going to be one of Goldcorp's cornerstone mines and a large producer with 7,000 mt/day throughput contributing to 600,000 oz/y and a 20-plus year mine life," said George Burns, EVP and COO of Goldcorp. "Éléonore will play a significant role in reaching the company's goal of 4 million oz by 2017. With the exploration shaft finished, Goldcorp is proceeding with infill drilling to better define the resources, while also developing a decline from the surface to drill on tighter centers deeper into the deposit, in addition to sinking a production shaft."

Compared to the Abitibi, where first mover advantage faded over a century ago, James Bay offers a new frontier for Québec mining. With a wider diversity of metals than the Abitibi, James Bay contains potential for commodities ranging from uranium to iron, nickel, copper, cobalt, zinc, silver, gold and lithium.

Virginia Mines, the largest landowner in northern Québec and the explorer that discovered Éléonore, has James Bay chiefly in its crosshairs. The explorer is now focused on advancing its Coulon discovery in James Bay, which is the largest undeveloped copper-zinc resource in the province. "We consider [Coulon] to be not just a project, but a VMS mining camp. It is in fact the only new VMS camp discovered in Canada in the past 15 years, so we are very proud of the new discovery, and we are working to expand the resource. We have more than 14 million mt, and the deposit keeps growing. We are convinced that this will be a second mine," said André Gaumond, president and CEO of Virginia Mines.

The appeal of James Bay is assisted by its existing infrastructure. "The area has big advantages; among the largest hydroelectric dams in the world are there, along with roads, telecommunications, airports, and the cheapest cost of electricity in North America," said Gaumond. "James Bay also has agreements with the First Nations in place, which makes a big difference. As long as you are a good citizen and care for the people living on the territory, they welcome development."

Starting from scratch, James Bay's gold mining also has the opportunity to implement leading industry standards and practices. Following their groundbreaking collaboration benefit agreement (CBA) with the Cree, Goldcorp is in the midst of implementing education and training programs and incorporating Cree company contractors into the construction process. "This development partnership gives them on-the-job training. We participate in the interviews and hiring because the whole model is that the successful employees hired by this joint venture will ultimately work for Goldcorp. Cree companies are getting real benefits out of the construction phase, which they can leverage further when we are in operating mode," said Burns.

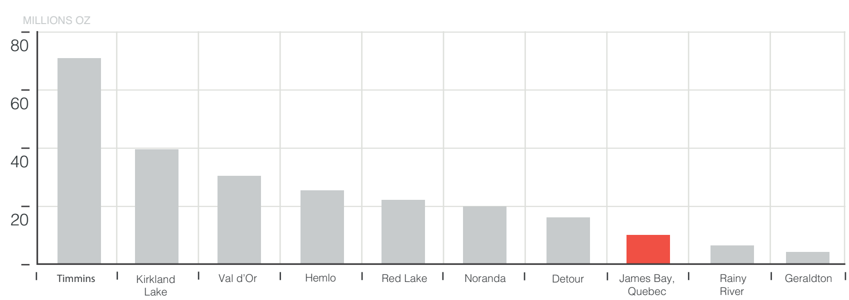
Goldcorp's CBA with the Cree has set a precedent for miners in Québec, and gives testament to importance of a proactive approach to community relations.

"The Cree have leveraged the good work that we did together on our agreement to sign an additional agreement in Québec for another company. The sector generally embraces and understands that success only happens through collaboration and First Nations are an important part of the collaboration that happens in the North," said Burns.

With similar agreements being struck by the likes of Stornoway Diamonds, Québec's industry is building on these successes to set Canada-wide standards in First Nations relations from an early stage. "Stakeholders should be sitting down even when the project is in the strategic planning phase. Companies try to wait until the exploration is completed for consultation and that is too late," said Natacha Leclerc, partner at CLCW, a Québec law firm with expertise in benefit agreements. "First Nation communities are gaining more knowledge and claiming their rights. There is a misconception that they are just claiming financial benefits. In reality, they want jobs and training programs implemented in advance so they are ready to start working when the mine is in operation." •

Top 10 Canadian Gold Camps

Source: Eastmain Resources Inc.



GB

INTERVIEW WITH

George Burns & Christine Marks

GB: EXECUTIVE VICE PRESIDENT & CHIEF OPERATING OFFICER
CM: DIRECTOR OF CORPORATE COMMUNICATIONS
GOLDCORP INC.

Your Éléonore project in Québec is looking to start production in late 2014, how is the project advancing?

GB: Éléonore is going to be one of Goldcorp's cornerstone mines and a large producer with 7,000 mt/d throughput contributing to 600,000 oz/y and a 20-plus year mine life. The underground mining portion of the project has advanced a lot in the last two years. The exploration shaft is finished and we are beginning to develop an exploration ramp that will allow us to do infill drilling to better define the resources. In parallel, we have been developing a decline from surface that is now in position. As that ramp continues to progress throughout the year, we will be able to drill on tighter centers deeper into the deposit. As we get closer to being a producing mine, we need dense drill data to design the stopes and complete the detailed engineering work. In addition to the ramp development, Goldcorp is also in the process of sinking a production shaft. On the surface, construction of the mill has commenced. We also have a new camp that is beginning to unfold, which is critical in terms of housing our construction crews and attracting a world-class workforce.

Do you plan to continue exploration as you advance progress on the production shaft?

GB: To date, most of the exploration drilling has been done from surface. The top portion of the deposit has been fairly well-drilled and we have a good understanding of it . The middle and lower portions of the deposit are not as well drilled off and the development of the shaft and the ramps are giving us the drill platforms to be able to drill underground in a much more cost-effective way. We will continue drilling in the next couple of years to give us the foundation to understand the details about the deposit, which is still open at depth. The deepest holes we have drilled are still at ore-grade intercepts.

Following your groundbreaking collaboration agreement with the Cree, how is your training program progressing?

GB: Our training and education programs are going well. For some of the early construction work, we are partnering with Redpath and Cree companies as contractors. This development partnership gives them on-the-job training and we participate in the interviews and hiring because the whole model is that the successful employees hired by this joint venture will ultimately work for Goldcorp. Cree companies are getting real benefits out of the construction phase, which they can leverage further when we are in operating mode.

What impact has the agreement had on the wider local industry?

GB: We worked on our collaboration agreement with the Cree for several years before we began construction. Where the rubber really hits the road is in the implementation of the agreement and we're now seeing the product of this collaboration agreement in a great win-win partnership. The Cree have leveraged the good work that we did together on our agreement to sign an additional agreement in Québec for another company. The sector generally embraces and understands that success only happens through collaboration and First Nations are an important part of the collaboration that happens in the North.

What labor initiatives are you implementing to assemble your senior management teams?

GB: The vast majority of the people working at Éléonore are Québecers and we are building an outstanding team. The first piece in our strategy is assembling our leadership team. What we are building is going to be the largest mine in Canada and it is our people that are making that happen. The second piece is a blend of hiring highly experienced people that fit our culture to run the plant and underground mines, and the third piece is training new people, including the Cree, to develop their careers with us at Éléonore.

CM: Goldcorp also has a very comprehensive internal training program for our employees; including training geared specifically toward women, supervisory leadership training, safety leadership training and our Art of Leadership and the Science of Management course. It is important for us to help our people develop their careers, fulfill their personal and professional goals, and to build a strong and capable workforce equipped with leadership skills.

Are you still on track to reach your goal of 4 million oz by 2017?

GB: Our five year growth plan is still intact, and that is a unique thing that sets us apart from our peers. We are building three new projects that will help deliver over 70% increase in gold production over the next five years. And these are projects that are currently being built, not just in development.

CM: This speaks to the discipline in Goldcorp's acquisition process. With Cerro Negro, we saw the considerable upside potential at this large property and that the reserves would be more than what had been indicated by the previous owner. In reality, since purchasing the property the reserves have nearly tripled. Goldcorp is quite unique in that unlike many other companies in the business that have had to scale back, we are able to focus on growth of high quality ounces and believe we have a very real and achievable plan to grow our production to 4.0 million ounces by 2017. •

INTERVIEW WITH

André Gaumond

PRESIDENT & CEO
VIRGINIA MINES INC.

To begin, can you give us an introduction to Virginia Mines and your history of operations in Québec?

Virginia Mines is the largest landowner in northern Québec and the largest explorer in terms of our yearly budget. We spend between $10 and $20 million a year, strictly in northern Québec. We have been the most successful explorer in Québec for a number of years. In the past 15 years, we have made six discoveries. One of them is a world-class deposit called Éléonore, which we have sold to Goldcorp. The royalty on Éléonore is now the biggest asset in the company.

Another quite important discovery, which is actually the most advanced project in our portfolio, is called Coulon. It is in James Bay, and it is the largest undeveloped copper-zinc resource in the province of Québec. We consider this to be not just a project, but a VMS (Volcanic Mass of Sulfite) mining camp. It is in fact the only new VMS camp discovered in Canada in the past 15 years, so we are very proud of the new discovery, and we are working to expand the resource. We have more than 14 million tonnes, and the deposit keeps growing. We are convinced that this will be a second mine.

Our corporate strategy is to be project generator and a royalty holder. We want to be at the beginning of the food chain and at the end, with no intention to become a producer. The royalties we have in our portfolio, a dozen of them, including Éléonore, will finance our exploration for the next decades. We currently have 19 partnerships with 14 different partners, which are funding 50% of our $15 million exploration campaigns this year while we keep operatorship.

Most of your projects are in the James Bay area, including the world-class Éléonore deposit. What are the advantages for this area over Abitibi, where gold has traditionally been mined in Québec?

First, it is a very new area. When drilling started in Abitibi 100 years ago, there were a lot of mines to discover on the surface. Deposits were easier to find without going to depth. We have discovered probably 100 deposits in those 100 years along the Val-d'Or belt. The first mover gets most of the value, having the most land.

Second, there is a diversity of metals in James Bay, even more than in the Abitibi; including uranium, iron, nickel, copper, cobalt, zinc, silver, gold and lithium. Virginia Mines has a big advantage in that we have hundreds of kilometers of land possession in James Bay, which would be impossible in any major mining camps. The area has big advantages: among the largest hydroelectric dams in the world are there, along with roads, telecommunications, airports, and the cheapest cost of electricity in North America. James Bay also has agreements with the First Nations in place, which makes a big difference. As long as you are a good citizen and care for the people living on the territory, they welcome development.

This area is the future of the mining sector in Québec and in the northern part of Canada. Now with global warming it is even easier, since you have a longer season to explore. Eventually they are talking about opening the Arctic seaway, which would give access to China, Russia and Japan through the Arctic Ocean. If ever this happens, maybe 15 years from now, imagine having mines in that territory and being able to send material through the Arctic Circle.

How is the growing importance of social acceptability affecting exploration compared to a decade ago?

Social acceptability is more and more important, but this is something that Virginia Mines started a long time ago. Virginia Mines won two sustainable development awards only this spring. When we started to do exploration 20 years ago in James Bay, we approached the First Nations, the trappers, and met with them to tell them what we do. We tried to build respect and trusting relationships. Nobody at the time was talking about sustainable development, it was not even an expression, but that is what we were doing. We wanted to involve the local communities, with representatives from every Nation on every campaign we had in the field.

Virginia Mines was also the initiative behind two new funds. One of them is Restor-Action Nunavik, which now has over 30 mining companies involved. We have been cleaning up sites along with the Inuit for five years now. There were 18 top priority sites we identified, and they are all entirely clean. 40,000 barrels of oil, most of them empty, have been removed. Hundreds of tons of equipment – bulldozers, shovels, big trucks, etc. – have been removed, along with hundreds of batteries, tanks and mattresses. This spring we wrote up a new five-year plan for clean-up in Nunavik. We are also starting a new fund to do the same exercise with the Cree Nations of Québec.

What is your outlook for Virginia Mines in terms of strategy and projects for the next two to three years?

We have not walked away from our exploration strategy for 20 years, and we have no intention of doing so. We are planning to spend between $10 and $20 million in Québec per year. There are lots of treasures to be found, it is just a question of perseverance. We are making history and we will make history in 2014, with the first mine in James Bay. It is a world-class deposit, and it will become one of the leading mines in Canada. We are convinced that James Bay has a lot of potential, and we are committed to it. It just takes time. We want to continue to be there and create wealth for shareholders and Québecers. •

Chibougamau and Beyond

Reviving past mining camps

Courtesy of Falco Pacific

Though Abitibi continues to steal the spotlight for gold production, a handful of gold-focused juniors have been willing to take on the risk of Québec's lesser-known areas for gold. In Chibougamau, though the area is best known for its copper production in the 1930s to 1960s, significant gold potential has also been demonstrated. SOQUEM, the exploration arm of Réssources Québec, has long been focused on advancing gold projects in the area. Juniors have followed in their wake to build upon their exploration work.

"In Chibougamau, we saw a region that had received relatively little recent attention," explained David Grondin, president and CEO of TomaGold Corp. "It had been a long time since much went on around Chibougamau; most of the mills have shut down, and there are opportunities for original discoveries if you have sufficient capital and drive."

Tomagold, which is in the midst of mobilizing its latest 4,000 m 17-hole drill campaign on their Monster Lake project in Chibougamau, is considering putting the deposit into production as a short-term goal. "The majors have been raising their resource-size requirements for acquisitions ever higher, but there are still 300,000 oz to 600,000 oz high-grade projects that can be put into production," said Grondin. "With prices and volumes down on the TSX-V, people cannot keep throwing money into the ground; at some point it needs to come back. Monster Lake would only be a short-term project, and putting it into production ourselves is a strategy Tomagold would consider."

Bowmore Exploration, a junior that forged a strategic alliance in 2009 with Osisko to focus on grassroots exploration, is focused on gold potential in southeastern Québec. By sharing Osisko's exploration office and benefiting from deal flow generated by the mid-tier player, Bowmore is able to focus on early-stage targets. One of Bowmore's key projects is the St. Victor property, a sediment-hosted gold belt of black slate that runs approximately 150 km in length in southern Québec.

"This area is considered a new geological discovery in Québec. The area and specifically the Magog Belt, which runs 250 km in length by 10 km to 20 km in width, is host to numerous historical low-grade gold showings and placer deposits," said Paul Dumas, president and CEO of Bowmore. "The area has also been economically disfavored for a long time, with several companies and manufacturers in the area closing their doors. The elimination of the Jeffrey Mine, well known in the region for its production of asbestos, has left a pool of qualified manpower without jobs."

Now about 0.1 g/mt from being economic at St. Victor, Bowmore is looking to continue expanding its land package through a joint venture or acquisition. As more players reawaken mining in the region, benefits will continue to reach the nearby communities, which are significantly more populated than most of Québec's mining districts.

The south of Québec, while host to only a few mining players today, was actually home to the first gold rush in Canada. The rush occurred in the 1850s, at the same time that the area hosted some of the day's largest copper mines in the world. Exploration in the so-called Beauce area was killed between 1885 and 1985, while the area's land rights were under common law, giving property owners the rights to minerals. When the law changed again in 1985, a claiming rush ensued and persisted until the price of gold dropped at the end of the 1980s. In the interim, only a placer mine, run by the Beauce Placer Company, started up in the 1960s and eventually closed for mechanical and logistical reasons.

Uragold Bay Resources has picked up the Beauce Placer Company's property and bought the land and mineral rights to revive placer gold mining in the area. "We discovered that it was not an alluvial deposit like those out West but an auriferous till deposit. The deposit is all coarse gold with grains up to nugget sizes," said Patrick Levasseur, president and COO of Uragold.

"We have a two-part project: the first step is to mine the placer deposit and the second is to explore the bedrock below." Uragold's project will be the first major commercial placer mine operation in Eastern North America and is fully permitted to begin mining. Because the rules and regulations in Québec are designed for hard rock mining, the Ministry of Natural Resources worked with Uragold to garner the necessary permits from the Ministry of Environment & Durable Development, the municipality and the Agricultural Land Protection Commission of Québec (CPATQ)." While developers will face the stakeholder challenges that come with a more densely populated area, its relative open playing field remains alluring for the reawakening Beauce. •

INTERVIEW WITH

Paul Dumas

PRESIDENT & CEO
BOWMORE EXPLORATION LTD

Following your 2009 strategic alliance with Osisko, what has been your exploration strategy?

Bowmore's two main drivers currently are the Chivas property in the Sonora state of Mexico and the St. Victor property in Québec. The Chivas property is a large epithermal system located within the Sierra Madre Gold Trend. The alteration zone covers an area over 5.7 km² containing 5 zones of which only two zones have been drill tested. We did a limited drill program of 2,200 m on the Chivas property last year and got great intercepts. We can now trace the Piedra Rodante zone over 950 meters on strike length and 240 meters at depth. The area has been underexplored over the last 16 years, and after identifying this large alteration area we would like to go back with an additional drill program in order to follow up on the extensions at Piedra Rodante and to test the other zones.

Here in Québec, we have done extensive sampling of the St. Victor property, located in the southern part of the province. We are targeting a sediment-hosted gold belt of black slate that runs approximately 150 km in length. These sediment-hosted (black slate) gold deposits tend to be significantly large when found; for example Muruntau, Olympiada, and Paracatu, with 170 million oz gold, 22 million oz gold and 18 million oz gold respectively, grading between 0.40 g/t gold and 3.2 g/t gold. We initiated a first drill program in 2011 and got some great intercepts of homogenous gold in all of the holes from surface to depth: which is exactly what we were targeting. We went back last year to follow up on the extensions of that mineralized unit and continued to intercept it. We are now about 0.1 g/t from being economic.

What key factors attracted you to explore for gold in southeastern Québec?

This area is considered a new geological discovery in Québec. The area and specifically the Magog Belt, which runs 250km in length by 10-20 km in width, is host to numerous historical low-grade gold showings and placer deposits. We targeted the area based on models of sediment-hosted (black slate) gold deposits similar to that of Paracatu and Sukhoi log. The area has also been economically disfavored for a long time, with several companies and manufacturers in the area closing their doors.. The elimination of the Jeffrey Mine, well known in the region for its production of asbestos, has left a pool of qualified manpower without jobs. Since the government has now included asbestos as a banned product, this mine will never see the light of day. If we can eventually develop our project to an economic level it would certainly provide an opportunity to regenerate the local mining industry/economy.

Back in 2011, you encountered some local opposition to your drilling program. How have your community relations progressed since then?

A lot of the negativity that we saw in 2011 was from a handful of individuals that were well supported by the coalition that exists in Québec. They started holding town meetings while refusing our Company's attendance, so that we could not have the occasion to clearly explain what we were trying to do. Since then, when we do any kind of exploration program, we advise the municipalities in the area on exactly what we are going to do, when we are doing it, and how. We also give presentations to municipal counselors and hold open session meetings with local residents whereby they have the opportunity to ask questions and voice their opinions. We also make efforts to educate the population about the drilling program and what exploration is all about. We do our best to be as proactive as we can, and by doing so we have become very transparent with our exploration activities. We have also implemented a sustainable development plan within our organization even though we are at the grassroots exploration stage. •

INTERVIEW WITH

David Grondin

PRESIDENT & CEO
TOMAGOLD CORP.

Can you update us on the progress of Tomagold's exploration programs at Monster Lake?

In 2012, Tomagold formed a partnership with Quinto Real Capital Corporation, in which they have the opportunity to acquire up to a 70% in the property. Tomagold's first drilling campaign last winter led to published results in April 2012 of 238 g over 5.8 m, which the market really liked. From there we raised more money and conducted a follow-up program on the very shallow high-grade zone. We were satisfied with the results, but without proof of the zone's continuity and consistency the market did not respond.

Tomagold therefore put together a new team that used sophisticated modeling to recommend deeper drilling. Of the first nine holes we drilled, six have returned good value; we believe we have identified the angle of mineralization, but more drilling is required for certainty. We are now mobilizing a new 4,000m, 17-hole campaign, returning to depths of 150 m to 250 m to see if the mid-depth body extends to a further width. Going deeper would be very interesting but also very expensive; we will do so if the next stage of drilling yields nothing.

What is the strategic advantage of exploring for gold in Chibougamau rather than the Abitibi?

In Chibougamau, we saw a region that had received relatively little recent attention. There had been more focus around big deposits on iron ore in the Labrador Trough and gold in the Abitibi in recent years. It had been a long time since much went on around Chibougamau; most of the mills have shut down, and there are opportunities for original discoveries if you have sufficient capital and drive. There are some very good assets in the area, such as Cogitore with Scott Lake and Lemoine. However, there is more exploration than production activity today, and with some properties set to be developed, expanding the local processing capacity will present issues.

What impact have changes in the price of gold had on the current state of Québec's exploration industry?

Even at the level gold prices have fallen back to, some projects overlooked in the past still make sense. The majors have been raising their resource-size requirements for acquisitions ever higher, but there are still 300,000 oz to 600,000 oz high-grade projects that can be put into production. With prices and volumes down on the TSX-V, people cannot keep throwing money into the ground; at some point it needs to come back. Monster Lake would only be a short-term project, and putting it into production ourselves is a strategy Tomagold would consider.

Companies with low-grade properties, however, are in trouble. Geologists, drillers, fuel and airborne surveys all cost more every year and larger companies are building projects with out-of-control capital expenditures. Operators without tight control over their costs will find themselves in major trouble, especially with the new royalty package from the Québec government. The party is over, but the industry has not done enough to dispel the public image that it is making a lot of money.

What exploration benchmarks do you have planned at your Winchester project, also in the Chibougamau area?

Winchester is a very exciting project with a massive area of surface mineralization. SOQUEM previously drilled a few thousand meters on the property. Tomagold would like to start with 2,000 m initially. At surface it is low-grade, albeit with a few high-grade spikes. Drilling has reached a maximum depth of 89 m and we would like to target between 175 m to 300 m. We have better leverage developing Winchester by ourselves and do not expect it to cost much money. Looking to the project's future, though, Tomagold is always keen to work with larger companies. •

Strategic Materials:
A New Era in Québec

“Producing separated high-purity rare earths in Quebec will be a catalyst for further vertical integration in the province, providing higher-paying technology jobs. Furthermore, there are benefits from the technological developments resulting from our research on separation methods in a brand-new sector. We can become a global leader in rare earth elements. We expect that China’s heavy rare earth resources are very finite and they will become a net importer of rare earths if their high-tech industries continue to grow at the projected rate.”

- Peter Cashin, President and CEO,
QUEST RARE MINERALS LTD

Courtesy of Focus Graphite

Lithium

The promise of vertical integration

Over the past five years the term "strategic metals", or "strategic minerals", has increasingly found its way into industry parlance. The EU, USA and others put together lists of "critical" or "strategic" raw materials around 2010: today, many of the exploration and development projects sparked by this interest are reaching interesting stages.

Québec's mining industry is no exception to this trend, with mining activity in the province having diversified from its historic gold and iron ore to relatively less-known minerals with more robust market dynamics. Lithium, for example, may not have seen the heady price rises of gold since 2010, and has not proven immune to the recent fall in commodity prices, but neither has it seen such significant falls in 2013: overall, it has enjoyed a steady upward trend since the mid 1970s.

2013 saw a landmark for Québec with the production of the province's first lithium carbonates. Canada Lithium, which started construction at their Québec Lithium mine in August 2011, produced its first sample carbonates in early summer 2013 and has plans to ramp up production to 20,000 mt/y by late in the first quarter of 2014. The project is located in La Corne Township, 60 km north of the historic mining hub of Val-d'Or. Demand growth for lithium has been driven by the rapid pace proliferation of small electronics; however the growing electrification movement is making for even rosier market projections. With hybrid use growing and the development of plug-in vehicle infrastructure, lithium carbonate needs are expected to increase. Canada Lithium signed a five-year off-take deal with Tewoo-ERDC, in addition to a three-year agreement with an option to extend with Marubeni.

Canada Lithium's first focus is on lithium carbonate; however the company has plans to pursue opportunities in lithium hydroxide, followed by lithium metal downstream. The province of Québec plans to stimulate vertical integration in the lithium market provides opportunities for the private sector to partner with the government in developing the value chain.

"We see opportunities not just in Québec but on the federal level as well. Québec's plan is to mine lithium in Québec, produce carbonate in Québec, make batteries in Québec and then use those batteries in Québec. The big grid storage

Lithium Reserves by Country

Source: USGS

COUNTRY	RESERVES
United States	38 000
Argentina	850 000
Australia	1 000 000
Brazil	46 000
Chile	7 500 000
China	3 500 000
Portugal	10 000
Zimbabwe	23 000
World total	13 000 000

Lithium Consumption by Application

Source: Canada Lithium

APPLICATION	LITHIUM CARBONATE
Laptop	30 g
E-bike, scooter	500 g
Hybrid cars	6 kg
Plug -in hybrids	12 kg
40 kWh EV	24 kg
120 kWh community energy storage	50 kg
1 MW bulk storage	600 kg

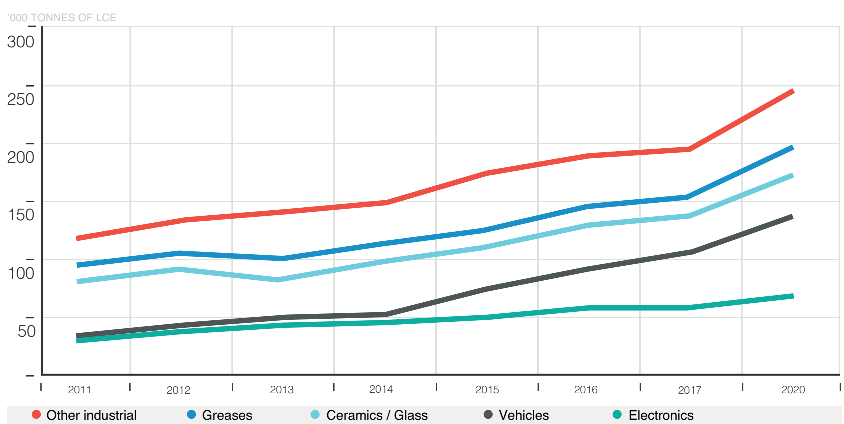
Lithium Production by Country

Source: USGS

COUNTRY	2011	2012
Argentina	2 950	2 700
Australia	12 500	13 000
Brazil	320	490
Chile	12 900	13 000
China	4 140	6 000
Portugal	820	820
Zimbabwe	470	500
World total	34 100	37 000

Lithium Demand Forecast

Source: Merrill Lynch Global Research



batteries fit very well with Hydro Québec's strategy for selling day energy. However, looking at what has happened federally, the federal government has granted us $6.5 million to develop a lithium metal pilot plant…In reality, it is not just a push by Québec but by Canada as a whole, seeing lithium as a key ingredient in the future of the country's energy storage," said Peter Secker, president and CEO of Canada Lithium Corp.

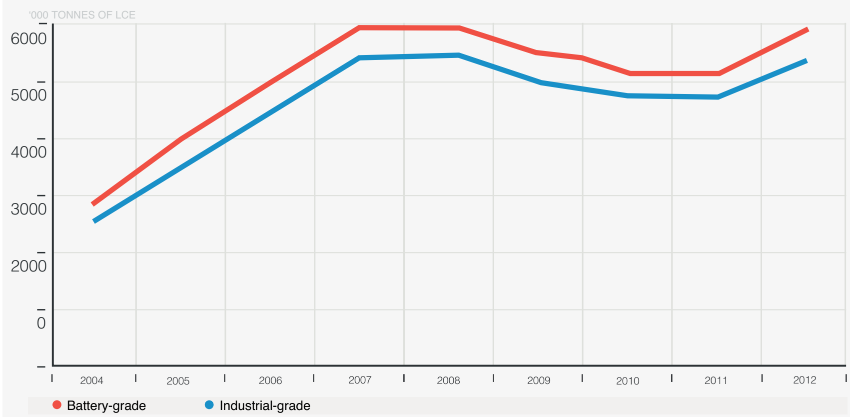
Québec's emphasis on lithium is backed by strong fundamentals. In light of market woes and the poor performance of traditional metals, lithium has fared much better as it is driven by consumables. "Lithium is not comparable to base metals or iron ore because it is not attached to the growth of the construction industry," explained Guy Bourassa, president and CEO of Nemaska Lithium. "Even if construction in China halts, people will still want to have an iPad, batteries or e-bikes. The majority of lithium use is now coming from the market for batteries, for which demand will not cease. We are trying to make people understand that Nemaska Lithium is not only a mining company, but also a chemical company catering to consumer markets. Even if the industry shrinks here, we will continue to have good business opportunities and sell our product.

Nemaska Lithium, a junior moving forward with the Whabouchi project, had initially planned to produce a spodumene concentrate to serve as an alternative source of supply for the Chinese market. In line with the provincial government's objective to increase transformation capacity within Québec, however, Nemaska has shifted its development strategy. "We considered that it might be an interesting idea to transform the product here and create more added value," said Bourassa. "We found a metallurgist who knew of a way to directly produce lithium hydroxide rather than adding a second transformation. We decided to test this process, called membrane electrolysis, and we conducted metallurgical tests on it for approximately a year. These tests led to the filing of two patent applications, aimed at protecting these new processes of making lithium hydroxide and lithium carbonate." •

> "There are also very few lithium hydroxide producers in the world and they all have the same problem: lithium hydroxide is the second or third transformation of the initial product. We wanted to specifically address the lithium hydroxide market, which is very niche but has a very strong forecasted growth. This market is set to double every five years from now until 2025. Therefore, I am certain that the patent applications for our processes will make both Nemaska and Quebec leaders in the lithium sector for years to come."
>
> - Guy Bourassa,
> President & CEO, Nemaska Lithium Inc

Lithium Carbonate Prices (USD/mt)

Source: Canada Lithium



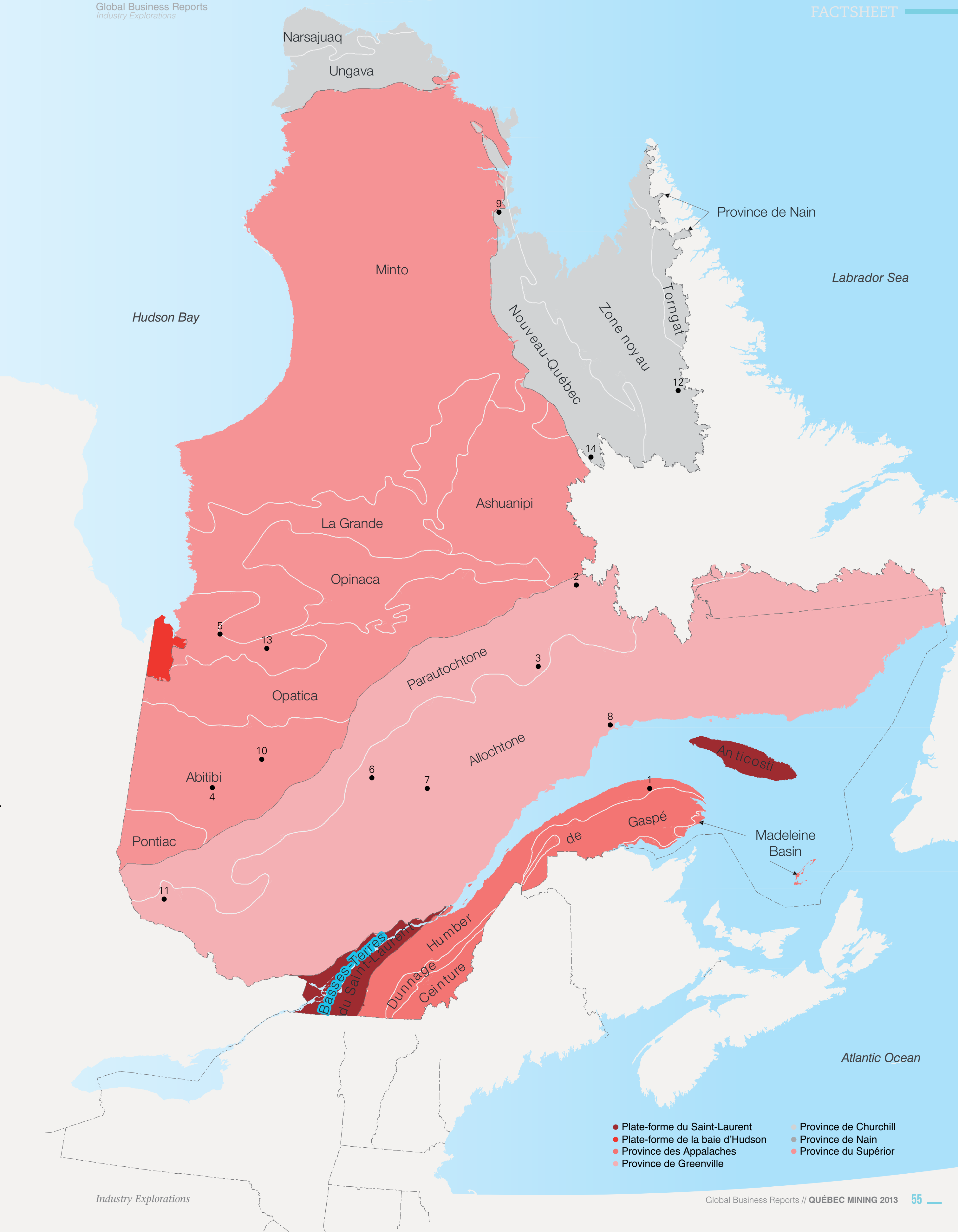
Strategic Minerals, Reserves and Applications

Source: EU14

CRITICAL RAW MATERIAL	WORLD SUPPLY 2009 (TONNES)	PRIMARY PRODUCING COUNTRIES (%)	MAJOR APPLICATIONS (%)	FORECAST DEMAND GROWTH P.A. (%)	PRICE – 3YR AVE ($/KG)
Antimony	187,000	China (91%) Bolivia (2%) Russia (2%)	Flame retardants (72%) Batteries (19%) Glass (9%)	4.2%	6.58%
Beryllium	140	United States (86%) China (14%) Mozambique (1%)	Electronics/it (20%) Electric equipment (20%) Final consumer goods (15%)	3.0%	$165
Cobalt	62,000	Congo Kinshasa (40%) Australia (10%) China (10%)	Batteries (25%) Superalloys (22%) Carbides/tooling (12%)	2.5%	$57.45
Fluorspar	5,100,00	China (59%) Mexico (18%) Mongolia (5%)	Hydrogen fluoride (60%) Steel (20%) Aluminum (12%)	3.4%	$0.42
Gallium	118	China (32%) Germany (19%) Kasakhstan (14%)	Integrated circuits (66%) Laser diodes & led (18%) R&D (14%)	10.2%	$499
Germanium	140	China (71%) Russia (4%) United States (3%)	Fibre optic (30%) Infrared optics (25%) Catalyst polymers (25%)	3.4%	$1,151
Graphite	1,130,000	China (71%) India (12%) Brazil (7%)	Foundries (24%) Steel industry (24%) Crucible production (15%)	3.0%	$1.16
Indium	1,200	China (50%) South Korea (14%) Japan (10%)	Flat panel displays (74%) Other ito (10%) Low melting point alloys (10%)	6.5%	$506
Magnesium	750,000	China (77%) United States (7%) Russia (5%)	Casting alloys (50%) Packaging (16%) Desulfurization (15%)	7.3%	$3.29
Niobium	62,000	Brazil (92%) Canada (7%) Others (1%)	Structural (31%) Automotive (28%) Pipeline (24%)	10.1%	$62.05
Platinum group metals	445	South Africa (61%) Russia (25%) Canada (4%)	Autocatalysts (53%) Jewellery (20%) Electronics/electrics (11%)	2.7%	$31,847
Rare earth elements	124,000	China (37%) India (2%) Brazil (1%)	Catalysts (20%) Magnets (19%) Glass (12%)	9.8%	$29.83
Tantalum	1,160	Australia (18%) Brazil (16%) Congo Kinshasa (9%)	Metal powder (40%) Superalloys (15%) Tantalum carbide (10%)	5.3%	$352
Tungsten	94,009	China (31%) Russia (4%) Canada (3%)	Cemented carbides (60%) Fabricated products (17%) Alloy steels (17%)	4.9%	$41.21

NUMBER	COMPANY	PROJECT	MINERAL
	EXPLORATION & DEVELOPMENT		
1	Orbite Aluminae Inc.	Grande-Vallée	Alumina
2	Focus Graphite Inc.	Lac Knife	Graphite
3	Mason Graphite Corp	Lac Guéret	Graphite
4	Canada Lithium Corp.	Quebec Lithium	Lithium
5	Nemaska Lithium Inc.	Whabouchi	Lithium
6	MDN Inc.	Crevier	Niobium, Tantalum
7	Arianne Phosphate Inc.	Lac à Paul	Phosphate
8	Yara International ASA	Arnaud	Phosphate
9	Commerce Resources Corp.	Ashram	Rare Earth Elements
10	GéoMégA Resources Inc.	Montveil	Rare Earth Elements
11	Matamec Explorations Inc	Kipawa	Rare Earth Elements
12	Quest Rare Minerals Ltd	Strange Lake	Rare Earth Elements
	PRODUCTION		
13	TIMCAL Graphite & Carbone	Lac-des-Îles	Graphite
14	IAMGOLD	Niobec	Niobium

This map is intended for illustrative purposes only. It shows only a selection of currently ongoing projects and should not be used for investment purposes.


Narsajuaq
Ungava
Province de Nain
Labrador Sea
Hudson Bay
Minto
Nouveau-Québec
Zone noyau
Torngat
Ashuanipi
La Grande
Opinaca
Opatica
Parautochtone
Allochtone
Abitibi
Pontiac
Anticosti
Gaspé
de
Humber
Dunnage
Ceinture
Basses-Terres
du Saint-Laurent
Madeleine
Basin
Atlantic Ocean
1
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12
13
14
Plate-forme du Saint-Laurent
Plate-forme de la baie d'Hudson
Province des Appalaches
Province de Greenville
Province de Churchill
Province de Nain
Province du Supérior

INTERVIEW WITH

Guy Bourassa

PRESIDENT & CEO
NEMASKA LITHIUM INC.

Could you please give our readers an update on Nemaska Lithium's activities in the last two years?

Initially, Nemaska had planned to produce a spodumene concentrate to serve as an alternative source of supply for the Chinese market. However, we considered that it might be an interesting idea to transform the product here and create more added value. The government and industries are trying to encourage transformation to be done here in Québec. In line with this, Nemaska has put a lot of work into developing new transformation processes.

We found a metallurgist who knew of a way to directly produce lithium hydroxide rather than adding a second transformation. We decided to test this process, called membrane electrolysis, and we conducted metallurgical tests on it for approximately a year. These tests led to the filing of two patent applications, aimed at protecting these new processes of making lithium hydroxide and lithium carbonate.

What are the advantages to Nemaska's processes over traditional methods?

In a break from what has been going on for the last several decades, our processes are more environmentally friendly and less costly. Most of all, however, they use electricity, instead of soda ash or caustic soda, as the main reagent. We initiated these processes based on our assessment of the evolution of the lithium market. Lithium carbonate and its equivalents are often discussed, but few understand that there are about nine different compounds in the lithium sector.

There are also very few lithium hydroxide producers in the world and they all have the same problem: lithium hydroxide is the second or third transformation of the initial product. We wanted to specifically address the lithium hydroxide market, which is very niche but has a very strong forecasted growth. This market is set to double every five years from now until 2025. Therefore, I am certain that the patent applications for our processes will make both Nemaska and Québec leaders in the lithium sector for years to come.

What are the main reasons behind your decision to delay commercial production at your Whabouchi project, originally slated to begin in 2013?

The delay in commercial production can partly be explained by our shift in focus to lithium hydroxide. We abandoned the idea of selling concentrate. This caused delays in finishing the processing and has delayed the construction of the mine to the summer of 2014. North of the 49th parallel, in Cree territory, you cannot obtain any significant construction permits before you get your certificate of authorization. South of the 49th parallel, you can take the commercial risk of building everything and going through the permitting process in parallel with the hope that the certificate of authorization will come. We are not able to do that because we have to complete the environmental assessment process and get the certificate before building.

That being said, the difficulty of the capital markets and the length of the permitting process right now has given us the opportunity to focus on building our chemical plant, which will allow us to completely prove the quality of our product to end users.

What is your outlook on the Québec mining industry in general and the future role of lithium production in the province?

The mining industry in Québec is struggling and I do not know how long it will take to revive the industry here. Lithium, however, is quite a different case. It is not comparable to base metals or iron ore because it is not attached to the growth of the construction industry. Lithium is driven by consumables. Even if construction in China halts, people will still want to have an iPad, batteries or e-bikes. The majority of lithium use is now coming from the market for batteries, for which demand will not cease. We are trying to make people understand that we are not only a mining company, but also a chemical company catering to consumer markets. Even if the industry shrinks here, we will continue to have good business opportunities and sell our product. •

INTERVIEW WITH

Peter Secker

DEPUTY CHAIRMAN & CEO
CANADA LITHIUM CORP.

Your Québec Lithium mine is nearing production; can you update us on its progress?

In terms of the project, we started construction in August 2011 and substantially completed the mine and processing plant - the front end and the concentrator - in December 2012. We started commissioning the concentrator just before Christmas last year and produced our first concentrates. Since then we have commenced the commissioning of the back end of the plant. Our timetable was to produce our first sample carbonates early in the summer (which we achieved). We anticipate lithium shipments to our Chinese off-take partner Tewoo will begin in October of this year. Capital costs have been roughly in line with what we said it would be, in the range of $207 million.

What targets do you have for production and off take in the mine's first years?

Production at the moment is obviously zero, but we will go up to about 20,000 mt per year by late in the first quarter of 2014. We signed a five-year deal with Tewoo-ERDC, for which we will deliver a minimum 12,000 mt annually. In 2014, they have the option to increase that to 14,400 mt. We also have an agreement with Marubeni, which is a three-year agreement with the option to extend the agreement for a subsequent three years. Marubeni would take delivery of 2,000 mt per year and has an option to go to 5,000 mt in 2015.

Lithium prices have tripled in the past decade; can you speak to the commodity's growth?

There are three major markets for lithium-ion batteries. Initially, growth was driven by small consumer electronic products like laptops and cellphones, iPads, smartphones and the like. Having firmly established its credentials in that area, lithium-ion batteries then began appearing in industrial applications, such as cordless drills and other powered hand tools. Today, you'll see lithium-powered lawn mowers, hedge trimmers and chain saws. Applications in these areas are steadily expanding.

Another major and growing area is the automotive sector, which seems to draw the lion's share of public attention. The market for hybrid and electric vehicles began fairly modestly, but has since shown signs of considerable growth. A few years ago, there were probably only a handful of hybrid models. Today we have about 35 models from virtually every car maker. Auto industry observers are now talking about having 60 models by 2015. I think "pure-electric" vehicle demand will be less than people had anticipated, but that is balanced by the greater demand in hybrids. Of course, I could be wrong about the speed with which pure EVs will ramp-up sales. I am already pleasantly surprised by the sales numbers of the Tesla S, and both Nissan's Leaf and Chevy's Volt have shown remarkable growth in the past several months.

The next stage for electric vehicles is developing the charging infrastructure and extending the range of these vehicles to overcome the major obstacles in consumers' minds: "range anxiety". The sleeper market in the broader question of the future growth for lithium batteries is grid storage (the third major market) both for large and smaller scale applications. Large-scale projects require huge 30 MW to 50 MW batteries to store energy from intermittent sources, such as wind farms and major solar energy installations. Smaller scale systems of 500 KW or 1 MW batteries are being introduced by local or regional electricity providers in "smart-grid' applications for apartment complexes and new suburban neighborhoods. We are quite excited about the potential for grid storage and its impact on demand, and thus price, for lithium carbonate.

What kind of impact will the Québec Lithium mine have on Québec's economy?

We have already created 180 new jobs and that number will grow to about 200 over the next 12 months. This is a significant addition to the local economy. Additionally, we have already spent $207 million, the majority of which was within Québec or Canada. As we ramp up to $120 million a year in revenue over the next year, that will produce $55 million of EBITDA. We are going to be a reasonably-sized player in Québec.

Do you see opportunities in partnering with the government to develop lithium byproducts?

We see opportunities not just in Québec but on the federal level as well. Québec's plan is to mine lithium in Québec, produce carbonate in Québec, make batteries in Québec and then use those batteries in Québec. The big grid storage batteries fit very well with Hydro Québec's strategy for selling day energy. However, looking at what has happened federally, the federal government has granted us $6.5 million to develop a lithium metal pilot plant. Lithium metal is a downstream processing of carbonate into a metal that is then used in both batteries and aerospace alloys. In reality, it is not just a push by Québec but by Canada as a whole, seeing lithium as a key ingredient in the future of the country's energy storage.

How are your First Nations community relations progressing?

We hold meetings with all the local stakeholders on a regular quarterly-basis, whether we are talking about First Nations, residents in the area, community groups or business groups. The nice thing about the Québec Lithium project is that it is not a fly-in-fly-out project, so everyone who works on the mine either walks or drives to work. On a community level, we have a forum at these meetings where anybody can come forward and state their concerns, and we answer those concerns in a timely manner. This is an ongoing relationship that will not stop when we start production, it will continue for the next 15 to 20 years. •

Rare Earth Elements

Rushing to fill China's supply gap

After the spectacular rise, and subsequent fall, of rare earth elements (REEs) since 2010, investors are understandably wary of these formerly little-known metals. Yet signs that the REE market may be picking up begun appearing in the past few months, with prices of some of the 17 minerals (particularly the heavy REEs) showing signs of life and rumours of Chinese purchases to replenish their strategic reserves.

Nonetheless, many of the REE projects initiated by the spectacular price rises seen a few years ago now languish without funding, no longer economically viable. Others, however, show more sensible project fundamentals: some of Québec's deposits are exciting even in a time of low REE prices, and would rank among the most exciting projects of any mineral should signs of life in REE prices continue.

"The viability of Québec's rare earths projects will be based on quality and cost structure. The Chinese have a hold on the market and will manage much of it, but Québecois producers are seizing opportunities to lessen that control and increase competition. At the end of the day, however, the big customers for rare earths are in Asia, and to compete, we will need quality projects," said Lortie of KPMG. "The best rare earth projects in Québec, and anywhere else outside of China, will be cooperative ventures among mine developers, investors and rare earth consuming industries," he said.

Throwing its hat into the ring, Quest Rare Minerals is slated to release its prefeasibility study by end of 2013 for its Strange Lake project. The deposit has about half a billion mt of ore of all categories in the upper half of the system alone and has a goal of 2017 as a start date for production.

"Producing separated high-purity rare earths in Québec will be a catalyst for further vertical integration in the province, providing higher-paying technology jobs," said Peter Cashin, president and CEO of Quest Rare Minerals. "Furthermore, there are benefits from the technological developments resulting from our research on separation methods in a brand-new sector. We can become a global leader in rare earth elements. We expect that China's heavy rare earth resources are very finite and they will become a net importer of rare earths if their high-tech industries continue to grow at the projected rate."

Given the challenges of metallurgy faced by rare earth developers, Quest Rare Minerals is examining strategic partnerships with multinational chemical or high-tech companies. One rare earth junior who has inked such a partnership is Matamec, who is advancing the Kipawa project in a joint venture with Toyota Tsusho Corp., the trading house of Toyota Motor Corp. The Kipawa project is slated to produce 5,000 mt/y, with production beginning in late 2015.

"Through our joint venture with Toyota, we will produce a mix of light and heavy rare earths to be separated outside of Canada, most likely in India, Japan or France. We are presently in discussion with Toyota on this. We will have a plant here for magnetic separation and hydrometallurgy, but the separation plant will be outside Canada," said André Gauthier, president of Matamec Explorations.

For GéoMégA Resources and its Montveil lanthanides project, the junior is taking advantage of academic partnerships to gain a competitive advantage over Chinese producers. "Metallurgy will always be the big obstacle for lanthanides: not every project can overcome it economically. The process flowsheet up to producing concentrate is relatively well-known to metallurgists. However, we are approaching the separation process with the aim of being competitive with China," said Simon Britt, CEO of GéoMégA Resources.

GéoMégA is considering several solutions to confront the metallurgy challenge, including a joint venture with Innovation Metals, which uses a proven solvent-based extraction method that is similar to China's. Partnering with Innovation Metals, which has plans to build a separation facility in Québec, would eliminate the need for high capital expenditure on huge chemical laboratories on the part of GéoMégA.

A further approach for GéoMégA is its own R&D work, which it is developing with a German partner. "We developed a prototype in Montreal Polytechnic last August 2012 that demonstrates that we can separate each of the elements individually. However, it is a big step to reach industrial conceptualization," said Britt. "We hope the initial scale-up conceptualization model will be ready by spring 2014. If successful, it will significantly reduce capital expenditure, cut all the chemicals out of the process and consequently, and make us globally competitive."

> "The rare earth market is very small and to feed the demand for rare earths outside of China will probably only take three or four mines. China consumes around 70% of the world's rare earths and the overall market is presently 100,000 to 135,000 t/y. Around 30,000 mt to 40,000 mt of rare earths are coming from outside of China and most of it is light. Molycorp will produce at minimum 20,000 t/y with their new project, in addition to Lynas producing 20,000 t/y. For heavy rare earths, there are smaller numbers that can be in production. Probably two to three outside of China will be sufficient for the market."
>
> \- André Gauthier, President, Matamec Explorations Inc.

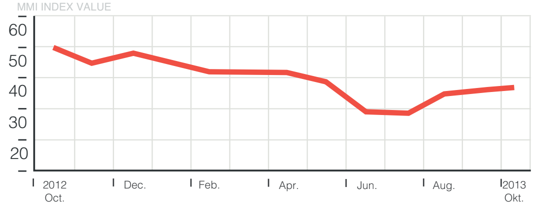
Estimate Ree Market Value

Source: IMCOA, Metal Pages

COMPARISON	2008	2009	2010	2011	2012	2013 YTD
Price (USD/kg REO)	15-20	10-15	30-40	140-180	40-60	35-45
Global Demand	125 000	85 000	125 000	110 000	115 000	100 000
t REO China Demand(%)	55%	70%	60%	70%	70%	66%
Market Value (assuming that Chinese prices are 33% less)	$1,5-2B	$1B	$2-3B	$10-15B	$4-6B	$3-5B

Metal Price Index Trends

Source: Monthly Rare Earths MMI® - MetalMiner



Common Applications of REEs

Source: USGS

APPLICATION	Sc	Y	La	Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu
Alloys and metallurgical uses	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X
Batteries			X	X	X	X	X				X						
Catalysts		X	X	X	X	X											X
Ceramics	X	X	X	X	X	X		X	X	X		X	X	X	X		X
Electronics		X	X	X	X	X					X	X		X			
Fertilizers			X	X		X											
Glass	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X
Lamps	X	X	X	X	X			X	X		X	X	X	X	X		
Lasers	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Magnets				X	X	X		X	X	X	X	X	X				
Medical and pharmaceutical uses			X	X		X		X	X	X			X	X			X
Neutron absorption		X		X				X	X	X		X	X	X			
Phosphors	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X

REEProduction by Country

Source: USGS

COUNTRY	2011	2012
United States	0	7 000
Australia	2 200	4 000
Brazil	250	300
China	105 000	95 000
India	2 800	2 800
Malaysia	280	350
Other countries	0	0
World total	111 000	110 000

REE Reserves by Country

Source: USGS

COUNTRY	RESERVES
United States	13 000 000
Australia	1 600 000
Brazil	36 000
China	55 000 000
India	3 100 000
Malaysia	30 000
Other countries	41 000 000
	World total 110 000 000

INTERVIEW WITH

Peter Cashin

PRESIDENT & CEO
QUEST RARE MINERALS LTD

Can you give us an overview of your recent milestones since we last met in 2011?

Quest Rare Minerals has doubled its resource since 2011 and is well advanced on a prefeasibility study that will be delivered this summer. Our production model is based on 30 years of mining, although we have resources for more than 150 years. The deposit, which has been defined in a very detailed fashion, has about half a billion tons of ore of all categories in the upper half of the system alone. Our bench scale metallurgy has advanced to a pilot mill, where we can evaluate the process technology's efficiencies and recoveries as we scale up throughput.

Quest's cash position remains strong due to funding completed in October 2010. Despite the weak position of junior equities, the bigger concern as we move toward a production decision is the lack of appetite for debt financing of large resource development projects. Cost inflation has led many major mining companies to double their expected expenditures on mining projects. Furthermore, following a round of M&A activity at the top of the market, there has been a whole slate of very large write-downs on resource asset. This has tempered the environment for juniors with their lower financial credibility. Rare earth prices have also deteriorated, although correction had already begun in May 2011. They have now begun to flatten out at levels higher than traditional floor prices, which we always expected given the rising cost of labor in China and the increasing pressure for Chinese producers to be better environmental stewards. The dynamic of the rare earths market has really changed and it is in China's interest to maintain these economic prices. They will no longer be able to turn on the tap and price everyone out of the market.

What strategies is Quest Rare Minerals taking to find specialized buyers and joint venture partners?

Because of the financial credibility gap, it is unrealistic to assume we can finance the project ourselves; development will require in excess of $1 billion dollars. Quest Rare Minerals requires a partner but we must be very strategic in choosing one. Provided we can prove economic viability, we can probably bring in any mining company. It would be more ideal however, to work with a partner that really understands the chemistry. Our deposit has very complex rare earth chemistry and Chinese producers are not sharing their recovery methods with us, so there is much trial and error going into figuring it out. Alternatively, even if the potential partner is not well versed in the recovery of rare earths, multinational chemical producers or high-tech companies in Japan or Korea could help optimize our current activities and facilitate us toward production.

At this stage, what does the timeline look like for Strange Lake to reach production?

2017 would be a fair timeframe by which to reach production, though this will depend upon permitting. The prefeasibility study delay has pushed back the delivery of our environmental impact assessment and from there it usually takes 18 to 24 months to receive final regulatory approval. Many of the end users and technological partners Quest Rare Minerals has been in private discussion with are looking for a catalyst to de-risk the project. The 2013 prefeasibility study will be a fairly detailed document outlining the project, with its recoveries, cashflow model and types of revenue and product deliverables. We hope it will accelerate interest in Strange Lake and distinguish us from companies struggling to develop their projects.

Considering today's market constraints, how important is it for Quest Rare Minerals to assemble a senior management team with a strong understanding of the economics behind the rare earth market?

Our management team has a strong understanding of the relevant economics. Our prefeasibility and feasibility team is composed of metallurgists and metallurgical engineers, and not mining, civil or mechanical engineers. Quest Rare Minerals has always viewed the critical path to success of a rare earth project is the metallurgy. Our board members include a senior vice president at Barrick, responsible for all their mine build-outs in South America and West Africa; and we have just brought on a very senior metals marketing manager whose role is to line up solid off-take or technological partnerships. We also have a newly appointed civil engineer who will go through all the diagrams as we advance the engineering related to the plant, mine, road and port. We view the current downsizing in the industry as a good recruitment opportunity.

As you and your peers advance projects in Québec, what potential do you see for the province's rare earth elements industry in the coming years?

Strange Lake is the largest rare earth deposit outside China, and the largest source of heavy rare earths in the world. Québec would benefit from the long-term stable production of these elements, which would justify the province establishing the necessary infrastructure to support the industry: whether through an industrial policy, an incentive program or a fiscal regime conducive to attracting the necessary partnerships. Producing separated high-purity rare earths in Québec will be a catalyst for further vertical integration in the province, providing higher-paying technology jobs. Furthermore, there are benefits from the technological developments resulting from our research on separation methods in a brand-new sector. We can become a global leader in rare earth elements. We expect that China's heavy rare earth resources are very finite and they will become a net importer of rare earths if their high-tech industries continue to grow at the projected rate. •

INTERVIEW WITH

Chris Grove

MANAGING DIRECTOR
COMMERCE RESOURCES CORP.

Could you provide us with an introduction to Commerce Resources and some of its recent milestones?

Commerce Resources has just achieved the highest-grade mineral concentrate for a developing rare earth element project anywhere in the world. Our preliminary economic assessment, completed by SGS Geostat and filed in July 2012, was based on the production of a 10% concentrate, which in itself is quite good. However, two weeks ago we released results, following work at the world's foremost flotation lab at the University of Freiburg, showing we can increase this to 40% without any change in the project's capital expenditure. The real importance of producing a concentrate is the ability to reduce mass; at such high levels, we can reduce ours by 95%. This will result in much lower acid requirements and, therefore, much lower costs.

Going further back, Commerce Resources doubled the size of its resource a year ago: it now stands at 29 million mt measured and indicated, and 219 million mt inferred. It is a huge deposit and we used an arbitrary cut-off grade of 1.25%, higher than many of our peer-group companies. If we employed the industry standard of 0.5%, the resource would almost double to a combined tonnage of 450 million mt. The 2012 PEA represents the mine's first 25 years, at a daily production rate of 4,000 mt, and only covers 15% of the ore body; it has a $2.3 billion NPV and an IRR of 44%.

What are the next steps you will be taking on the project?

The next steps are primarily to continue with metallurgy at both the labs we are working with. As well as in Germany, we also have work taking place at Hazen Research in Denver, where they are investigating the cracking part of the process, which is key for taking to market the separated oxides demanded by most rare earth element consumers. At the moment 94% of our minerals are going into solution, but Hazen is working on the solvent extraction stage where it is hoped the individual oxides will drop out. We also expect improvements above the 40% concentrate already achieved. The second target for Commerce Resources is to secure a joint venture partner. In total we have about 20 non-disclosures out, with the interest split 60:40 between our Québec and British Columbia assets. Given our recent results, we are hopeful of securing a JV partner in Québec that would own part of the project and finance the next set of developments toward production.

How is the project positioned from an infrastructure-perspective?

Our Ashram project is 80 km from the Adriana Resources project, which is the largest Canadian mine under development today. Arguably, the hundreds of millions of dollars of tax revenue that would come from Adriana Resources and other projects in northern Québec should be supported by some governmental infrastructure construction. Producing 50 million mt/y, the Adriana Resources mine will need a rail line, the extension of Hydro-Québec and a highway to bring in workers, all of which would lessen Commerce Resources' overall infrastructure bill. Our current plan, which has nothing to do with Adriana Resources, is to build and fully finance the $205 million cost of a 135 km road north to the village of Kuujjuaq on Ungava Bay. The previous Liberal government was looking at a rail link to the same destination; it would have gone within about 30 km of our project and would be a benefit to us. Although with our ability to produce such a high-grade concentrate, we may end up conducting the hydrometallurgical processes on-site and building an airstrip. However, even if we have to stick to our current plan - and we could halve the cost if we employ the Inuit of Kuujjuaq to build the road - the PEA still sees our project achieving payback in 27 months.

How does Québec compare as a mining jurisdiction to British Columbia, where you are also active?

The Québec government does more to support mining; it has a whole system of funds to support local projects that do not exist in BC. Different groups are allowed to invest at different stages of projects and we would certainly be eligible for support from the new Ressources Québec fund for early-stage projects in the north. I think the Fraser Institute's downgrading of Québec as a mining jurisdiction is ridiculous – the issues it brought to the fore have nothing to do with the projects in the north owned by Adriana Resources, New Millennium or Commerce Resources. In my mind, this is still the number one jurisdiction on the planet. In the Labrador Trough you are supposed to recover 48% of expenditures; in reality you get back 40%, but there is still no other province where you will see equivalent support.

China is the main global producer of rare earth elements but is looking to decrease exports. What prospects does Québec have as a potential sourcing point for the global market?

Québec has the potential to be a very significant supplier of rare earth elements for a long time to come. All current producing rare earth deposits are carbonatites, a fairly uncommon rock type. There is high carbonatite activity in both BC and Québec, but basically nowhere else in North America. In addition to reducing exports of rare earth elements, China is really increasing its domestic consumption; it wants to create jobs and, instead of supplying feedstock for the rest of the world, be involved in value-addition. As more migration to China's urbanized centers takes place, it will arguably become a bigger importer of rare earth elements. •

INTERVIEW WITH

Simon Britt

PRESIDENT & CEO
GEOMEGA RESOURCES INC.

GéoMégA's initial NI 43-101 resource estimate was released at the end of 2011. How has your Montviel project progressed since then?

GéoMégA has progressed on numerous fronts in the last two years. Our initial resource came out in September 2011. At 184 million mt indicated, averaging 1.45 total rare earth oxides (TREO), and 67 million mt inferred, it was very sizable. Metallurgical works began that summer, a process which was concluded this April. Since the conclusion, we have worked on optimizing the process flow sheet causing delays for our preliminary economic assessment, which is expected this November. We also carried out a second phase of drilling – 24,000 m on top of the original 10,000m – revealing our highest interceptions of lanthanides and niobium and identifying the heavy lanthanides enrichment zone south of the main Core zone.

Metallurgy is key to lanthanides projects and can involve a lot of trial and error. What is GéoMégA's approach?

Metallurgy will always be the big obstacle for lanthanides: not every project can overcome it economically. The process flowsheet up to producing concentrate is relatively well-known to metallurgists. However, we are approaching the separation process with the aim of being competitive with China, and are examining different scenarios to achieve this. One option we are pursuing is a joint venture with Innovation Metals, which uses a proven solvent-based extraction method that is similar to China's. They have plans to build a separation facility in Québec and would charge a tolling fee. This would enable us to get to the individual elements without unacceptably high capital expenditure on huge chemical laboratories of our own. The second possibility is our own innovation, which we are developing with our German partner. We developed a prototype in Montreal Polytechnic last August 2012 that demonstrates that we can separate each of the elements individually. However, it is a big step to reach industrial conceptualization – the model we are now working on, while using the same principles, is very different from the prototype. Not enough work has been done yet to include the model in our PEA, but we hope it will feature in later studies. GéoMégA has an excellent development team today, and we hope the initial scale-up conceptualization model will be ready by spring 2014. If successful, it will significantly reduce capital expenditure, cut all the chemicals out of the process and consequently, make us globally competitive. Cutting the chemicals out of separation would also fulfill our sustainability goals of a green production company.

Which end markets are you targeting for your product?

The market we are targeting is the permanent magnet sector. I regard this as the motor for the lanthanides industry of the 21st century: which basically comprises neodymium, dysprosium and praseodymium. North America is just opening up in this area. Hitachi Metals has now opened a facility in North Carolina, but it still takes its material from China, as do the few niche permanent magnet makers in the US. GéoMégA is predominantly targeting Germany, where the clean technology market is very large, however we hope the North American market will be much bigger in future.

Your resource is rich in neodymium. Outside of China, how much exploration and pre-development is this particular element seeing?

Lanthanides resources are found globally: there is no shortage of them by any means. The question is just how to compete with China, which nobody has demonstrated yet. Certain elements have higher value: the heavy lanthanides are receiving the most attention, but they comprise a much smaller market. At Montviel, GéoMégA must fine-tune its neodymium output so that it does not flood the market; you cannot go with huge production volumes as you would with base metals. There are eight to ten other good deposits of lanthanides outside of China that I know of.

With demand for lanthanides growing worldwide and Chinese labor costs rising, what is your outlook for lanthanide prices?

Labor costs in China are certainly rising, and environmental concerns are another factor. For the last 20 years China gave minimal consideration to the environment if any. While they say this is now changing, we do not know to what extent any increase in concern would lead to a rise in costs. I think the Chinese will set lanthanide prices between 150% and 200% of 2008 levels. Prices are low today because we are in a global crisis, although hopefully at the end of it. The price spike was triggered by stockpiling, which is also a cause of the current absence of demand.

Are there any particular challenges for lanthanide explorers to overcome in Québec?

First Nations are required to give projects the green light in Québec, which requires companies, on a case-by-case basis, to provide impact benefits. The Grand Council of the Crees is pushing for increased workforce participation in the mining industry, although I still foresee a lengthy learning curve to be gone through. Nevertheless, GéoMégA hopes to fill at least 80% of its labor requirements from local stakeholders including Cree Nation communities. We signed the first Pre-Development Agreement with the Cree Nation of Waswanipi in October 2011 and the Cree Mineral Exploration Board invested in our company. The earlier that projects engage with local communities, the better. •

Other Minerals

To graphite, phosphate and beyond

Another rising commodity for the province is graphite, which is also benefiting from increasing market demand. China, which has produced over 70% of worldwide output throughout the 2000s, has incrementally used more and more graphite internally. With few producers outside of China, the global market saw increasing pressure. "This caused graphite prices to start climbing in 2008-2009, and peak in 2011-2012. With that came stronger investor interest, as well as an increase of junior companies trying to start new projects," said Benoît Gascon, president of Mason Graphite.

While growing interest in graphite play has made for a crowded market of explorers, successful projects will rely on not only low cost production, but also the ability to market to the specialized needs of consumers.

Mason Graphite, aiming to be in production in 2015 at the Lac Guéret project in Québec, is confident it can achieve both. "Our property hosts some of the highest graphite grades in the world and the combination of high grade and low stripping ratio results in very low production costs, lower capital expenditure and strong operational efficiencies. It allows us to process a lesser volume of ore to produce the final graphite concentrate. Our recent PEA results confirmed the first 22 years of production at 27.4% Cg of feed rate," said Gascon.

Furthermore, the company is focused on honing its market knowledge to satisfy consumers. "We are focused on having customers pilot test our material and suggest improvements while we build our own market," said Gascon. "In graphite extraction, particle size and distribution, as well as carbon content, are all significant. There is no single user today that has needs for a large portion of the mine's output. Even those who do require a large amount will need it spread among different cuts."

While Mason Graphite is confident that it has an edge in its cost reduction strategy, graphite players like Focus Graphite, founded in 2010, showcase the uniqueness of their assets to win the confidence of the market. Focus Graphite's Lac Knife property, which is seeing the initiation of its bankable feasibility study this year, has the highest concentration of flake graphite in the world. According to Gary Economo, Focus Graphite's president and CEO, this is only the beginning. "The bulk sample pilot plant test results released in August have increased the overall concentrate grades to an average of 96.6 total carbon. More importantly the medium and large flake concentrates grades increased to over 98%."

Phosphate Production by Country

Source: USGS

COUNTRY	2011	2012
China	81 000	89 000
United States	28 100	29 200
Russia	11 200	11 300
Jordan	6 500	6 500
Brazil	6 200	6 300
Tunisia	5 000	6 000
Egypt	3 500	3 000
Syria	3 100	3 000
Australia	2 650	2 600
Peru	2 540	2 560
South Africa	2 500	2 500
Algeria	1 500	1 500
Saudi Arabia	1 000	1 700
Canada	900	900
World total	198 000	210 000

Courtesy of Safripol

Focus Graphite is also unique in its emphasis on the research and production of graphene- an immensely strong, but extremely light, one-atom thick form of graphite- as part of its overall strategy. Whereas Mason Graphite is monitoring graphene-related applications for its output for the long-term but is awaiting the development of further technology to make use of it, Focus Graphite is taking an active approach in turning this potential into a reality. The firm has already started creating R&D-driven joint ventures with Fortune 500 companies to advance the position of graphene in the consumer marketplace. "Graphene's popularity has been undermined because the material is unbelievably expensive to manufacture," said Economo. "Unlike most other junior graphite companies, however, we spent quite a bit of time, money, and effort discovering ways to produce graphene at a low cost. Now, we are the only ones who have that capability. Because of that, it is up to us to revolutionize the whole industry...to develop the market for economical, scalable graphene production."

Québec companies with prospects in new commodities must shoulder the added cost of R&D and engineering solutions that are finely tuned to new areas and new minerals. Arianne Phosphate's property is an example of innovative partnerships with engineering and finance players to maximize operational value. For its bankable feasibility study, started in August 2012, the company enlisted the engineering expertise of Cegertec WorleyParsons. The engineering firm, which was born from an acquisition of Québec company Cegertec by global engineering giant WorleyParsons, relied on its own experiences working on one of the largest phosphate projects in the world, in Saudi Arabia, to tailor its services to Arianne's needs.

Brian Kenny, who was appointed Arianne Phosphate's CEO this summer, expresses a patient confidence that the market will see the potential for Canadian phosphate, and brings a measure of realistic thinking to the company's financial strategy. "In my experience, the period between the end of a successful feasibility study and the arrival of financing can be up to 12 months," he said. "For us, it may be even longer because we are a junior and there are still other agreements we need to get in place. If we had our financing in place by 2014, this would be a success." •

Graphite Production by Country

Source: USGS

COUNTRY	2011	2012
Brazil	73	75
Canada	25	26
China	800	750
India	150	150
North Korea	30	30
Madagascar	4	5
Mexico	7	8
Norway	2	7
Romania	20	7
Russia	14	14
Sri Lanka	4	4
Turkey	10	10
Ukraine	6	6
Other countries	7	7
World total	1 150	1 100

Phosphate Reserves by Country

Source: USGS

COUNTRY	RESERVES
China	3 700 000
Algeria	2 200 000
Syria	1 800 000
Jordan	1 500 000
United States	1 400 000
Russia	1 300 000
Peru	820 000
India	6 100
Australia	490 000
Iraq	460 000
Brazil	270 000
Israel	180 000
Egypr	100 000
Canada	2 000
World total	67 000 000

Graphite Reserves by Country

Source: USGS

COUNTRY	RESERVES
Brazil	360
China	55 000
India	11 000
Madagascar	940
Mexico	3 100
World total	77 000

INTERVIEW WITH

Benoît Gascon

PRESIDENT & CEO
MASON GRAPHITE INC.

Tell us about how activity in the Lac Guéret property has developed with the graphite market over time.

The history of the Lac Guéret project dates back to the 1950s. The owners of the property at that time were looking for iron, and any graphite found was an afterthought. The root of this project as a graphite deposit began in 2002, when strong indications of graphite were discovered on the property. In 2006, an initial drilling program returned very high graphite grades however there was little interest in the global market. From my entry in the graphite industry in 1990 until 2007-2008, prices declined year over year. China was a major graphite producer in the 1990s, but they were not a big consumer and almost everything they produced was exported.

Throughout the 2000s, China continued to produce over 70% of worldwide output, however they started to use more and more graphite internally. This added pressure to the rest of the global market since there were few non-Chinese producers adding to their supply. This caused graphite prices to start climbing in 2008-2009, and peak in 2011-2012. With that came stronger investor interest, as well as an increase of junior companies trying to start new projects.

Thankfully, we don't see any potential competitors for our Lac Guéret project. Our property hosts some of the highest graphite grades in the world and the combination of high grade and low stripping ratio results in very low production costs, lower capital expenditure and strong operational efficiencies. It allows us to process a lesser volume of ore to produce the final graphite concentrate. Our recent preliminary economic assessment results confirmed the first 22 years of production at 27.4% Cg of feed rate, which is exceptional. Lac Guéret is a great deposit and we have a strong team to develop it. This combination of economical production and market knowledge is a must for any prospective graphite producer.

Is there room in the market for distributors and traders to play a role in reaching customers?

Though there are active distributors and traders, the main reason for the Lac-des-Iles mine (Stratmin/Timcal) surviving the 1990s was the elimination of the distributor. A direct relationship with the customer is necessary in order to understand the exact specifications they require. In turn, the production can be adjusted and adapted to meet these exact specifications. As a producing graphite mine, your production processes need to be highly flexible to be in line with the market requirements.

We are targeting all markets with a clear focus on the existing ones like refractories, thermal management but also lithium-ion batteries since these are established markets with interesting volumes. We are also monitoring upcoming applications like graphene, which is an interesting one but need to be further developed. For the moment, industrial applications using graphene in sizable volumes do not exist; however we will be there to supply the market when that changes.

And unlike what some people believe, natural graphite powders are not used to manufacture graphite electrodes, graphite shapes and sporting goods like tennis racquets and golf clubs; large markets but the starting material is simply not natural graphite both for technical and economical reasons, it is mainly petroleum coke.

What is Mason Graphite doing to build awareness among investors of the importance of graphite and your company's role in the sector?

Graphite is not a new product, however not many people know about it. It is a material that we use every day without seeing it. Our role is to first educate the financial community about the necessity of this material, and secondly help them understand the key elements of a successful graphite operation. We have been actively attending conferences, giving presentations, and meeting with investors and members of the financial community. We also continue to do many interviews such as this one to help shed some light on the graphite industry and give investors the tools to make a good investment decision.

What are the big demand drivers for graphite?

Graphite is an additive used in many well-established applications. The main one is steel (refractories and carbon additives), but large demand also coming from the automotive industry (brake pads, clutch facings, carbon brushes), and also thermal management. Mobile energy is another very interesting application with alkaline and lithium-ion batteries. These are only a few of the diversified industries with a medium- to long-term pattern on the upside going forward.

What is your near-term outlook for Mason Graphite over the next two years?

Upcoming work in the pipeline and milestones are the following:

- Update our resource estimate based on the 2012 drilling campaign of 26,000 m
- Further metallurgical testworks to further improve our excellent results
- Completion of the environmental baseline
- Purification tests results
- New drilling campaign of approximately 15,000 m
- Start of our feasibility study and piloting phase
- Discussions with potential end-users and customers

Since taking control of Mason Graphite last year, our team has been successful in achieving many milestones and we will continue with this same momentum going forward. Our management team successfully turned around the Lac-des-Iles mine, the only graphite mine in North America, by making it profitable in a downturn market and creating an industry leader. We are confident that we can achieve the same thing with the Lac Guéret project. •

INTERVIEW WITH

Brian Kenny

CEO
ARIANNE PHOSPHATE INC.

Could you provide an update of Arianne Phosphate's activities and growth since our last interview with you in 2011?

In 2011 Arianne Phosphate initiated a preliminary feasibility study, updated in 2012 to a 3 million mt output of 39% phosphate rock concentrate. We had a capital cost of around $800 million, a pre-tax IRR of 23.2% and pre-tax NPV of $985.1 million. In August 2012 Arianne started a bankable feasibility study with the help of a number of companies, but mainly Cegertec WorleyParsons. We are committed to having the bankable feasibility study completed in the third quarter of 2013.

Last year when the preliminary feasibility study update was published, we had measured and indicated resources of 348 million mt at 6.50 % P2O5 which provided a 17-year mine life. Arianne did further drilling last year and into this year, and we published a new NI 43-101 mineral resources estimate of 590 million mt at a grade of 7.13% P2O5 in the main Zone (Paul Zone). In addition, we have 164 million mt at 5.5 % P2O5 of measured and indicated in another mineralized zone. The feasibility study will be based solely on the Paul Zone resources with a mine life exceeding 25 years. There are still a lot of prospective areas where Arianne can potentially increase its reserves.

What is your interpretation of the current phosphate price environment and its impact on Arianne Phosphate's resource?

The selling price has not varied much, except for the dramatic jump in 2007/2008, but it is important to note that there is a lot of variety in the percentage of P2O5 in phosphate rock. It can run from as low as 20% to, in Arianne Phosphate's case, 39%. Often deposits will have contaminants that can cause a reduction in sales price if they are undesirable further down the value chain. Our product is very high grade, with a very low level of contaminants and heavy metals. That makes it a premium product. By our calculations, a market price of $160 for lower grade product is fine for us because that would price our product at around $200.

Arianne Phosphate has not yet published its last study, but our general view on the price environment is that there are two basic occurrences in the market. The first is that large populations in China and India are consuming more meat, placing more demand on crops to feed the livestock. The second is that the world's population is still increasing. It may be 15 to 20 years before the current compound annual growth rate levels off a bit, and by then we will be already be part of the base supply for phosphate to serve regular demand.

What has been Arianne Phosphate's financing strategy this year?

This is generally a very difficult period for the entire industry. Most of our investors are American and Canadian, but our product is essential for the world. Our financing up until now has been based on the straight selling of shares, the use of some flow through shares, and gaining access to good credit facilities. Arianne Phosphate recently closed a financing deal in which we had $1 million in flow-through shares, $2.5 million in credit, and between $1 million and $1.5 million sold in equity shares. We have had support from Québec's SODEMEX exploration fund but we have not yet had support from other Québec institutional investment funds, for the next phase of our project. We are speaking to them and are optimistic that we will receive support from, among others, the new SODEMEX development fund, complemented by further financing rounds.

Regarding foreign investment, as China is self-supporting in phosphate I am not sure that I could see them investing in phosphate mines overseas. Arianne is, however, considering various strategic partnerships with producers overseas whose phosphate resources are declining. We are also looking at off-take agreements. There are quite a few trading companies in the world, including in Japan and Europe that are of interest.

What are some of the measures Arianne Phosphate has taken to ensure respect for the local environment and community near its project site?

Arianne Phosphate's footprint can probably only be detected on a few hectares of our site. We have done extensive testing on our mineral resource to confirm that it does not leach, and have also come up with solutions for reclaiming the tailings sites. Arianne is careful to treat anything going back into the environment and, as phosphate is a powdery material, we have closed circuit handling and will install extensive dust control systems.

Arianne Phosphate has had regular meetings with the community and been absolutely transparent, as per our policy and philosophy. As soon as any documents are finalized, we publish them on our website. The road leading to our project site is a forest road allowing loads up to 150 mt, which is much higher than normal roads, and is used by the forest industry, Hydro Québec, Rio Tinto Alcan, and us. We all share the maintenance costs. There are very few inhabitants in the area. Nearer to town, however, one community concern has been potential disturbance caused by trucks passing houses, and Arianne Phosphate is developing solutions to avoid this.

What is your outlook for Arianne Phosphate over the next three to five years?

In my experience, the period between the end of a successful feasibility study and the arrival of financing can be up to 12 months. For us, it may be even longer because we are a junior and there are still other agreements we need to get in place. If we had our financing in place by 2014, this would be a success. I hope that by the end of 2016 or 2017 we are producing 3 million tonnes per year of very high quality product and selling it to an international market. •

INTERVIEW WITH

Richard Boudreault

PRESIDENT & CEO
ORBITE ALUMINAE INC.

Can you provide us with some background information on Orbite?

Orbite is a development company involved in different types of materials, but mostly we are a clean-tech company. We have a 100 km² clay deposit in the Gaspé area and we have developed an extraction a process that applies to a variety of materials with which we can essentially extract alumina and other by-products from variety of feedstock. The deposit will provide argillite, which we will crush into a powder. About 23% of this material is alumina, which is used to produce aluminum. The process produces all sorts of other by-products in addition to alumina, including hematite, magnesium oxide, silica, gallium arsenide, scandium—which is used to make valuable super-light aluminum alloy—and a range of rare earths.

What are the advantages of Orbite's extraction method over the conventional Bayer process?

The Bayer process produces tailings called red mud, which is caustic. Three billion mt of red mud have been produced on the planet since the 1880s, without having any chance of redeeming the material into anything else. The Bayer process produces two tons of red mud for every ton of alumina and this exists everywhere alumina is produced, stored in very large ponds. Orbite's process is actually quite simple, we use hydrochloric acid to extract the alumina because the main content of red mud is silica and hydrochloric acid does not digest sand. This way, we are able to remove the sand and avoid producing red mud.

Can you elaborate on your recent agreement with Veolia to develop a red mud remediation plant?

We decided to look at how to treat of red mud and we found that once the material is equilibrated at the right pH, it is more or less like the original material and can produce the same type of products. Orbite's plant with Veolia was originally intended to be a demonstration plant, but we have decided to design it on an economic-scale. We are looking at positioning the plant in Europe or China, which has adopted regulation requiring on turning 20% of red mud in 2015 into other material. China is the first to set up a rule like this and it is likely to be applied elsewhere. The Middle East is now starting to produce alumina but they want to do it cleanly and therefore are also interested in what we do. The first red mud plant is expected to be ready in 2014 and mat be built in Europe, due to the high costs of land there and their capacity for rare earths.

When are you expecting to have your high-purity alumina (HPA) plant starting up commercially?

Orbite has converted and amplified our Cap-Chat HPA plant to three times its original size. We will be producing 3 mt per day of HPA by the end of this year and we are aiming to go up to 5 mt per day at the beginning of next year. The plant is mainly focused on HPA, however we will start extracting gallium and scandium as soon as the latter part of this year or the start of next year. From there, we will move towards extracting the rest of the rare earths. Orbite will be able to provide a safe and secure supply of rare earths in North America. Following production or our own material and demonstrated efficiently of our process, will expected to move to the next step, which is our smelter-grade alumina (SGA) plant, we will also offer the capacity for other deposits to come and transform their original material into rare earths.

Is there sufficient skilled labor available in the area to move your plans forward?

Orbite is going to be creating jobs in the Gaspé region. We have created a training program in partnership with the Québec government to train technicians to be able to operate our equipment. So far, there are between 15 to 20 people that have embarked on this year-long program.

How has your Québec location given you advantages from the standpoint of innovation?

We have received a lot of help from the local colleges for the education of our staff and our research and development. Being in Québec, you get quite a lot of advantages for research and development, both in the form of tax credits and credits for installing a facility in a non-resource region.

Once you are in commercial production, how will Orbite be positioned to compete with Asian HPA suppliers?

We expect to have a lower cost of production because our process is by nature very low cost. Our other critical advantage is that we are located in North America where people can use the material more readily. We have ready access to these markets and should provide them with surety of supply both in alumina and rare earths.

What near-term outlook do you have for the company?

The next two to three years will be extremely busy for us: first with the commercialization of HPA and second with the establishment of the first red mud treatment plant. There are 71 plants around the world that produce red mud right now. The next step after that will be the SGA plant. •

Focus Graphite and Grafoid; Leading the Carbon Revolution

Jeff Hussey, Vice President Project Development, Focus Graphite Inc.

Focus Graphite Inc., is a publicly-traded graphite mining development company that owns the high-grade, Lac Knife Project, located South of the town of Fermont, in northeastern Quebec. There is excellent access to infrastructure, including electricity, major roads, airports, two railroads and deep water ports.

This flagship project, is a world-class natural flake resource of 8.1 million tons in all mineral resource estimate categories grading 16% graphite. From Lac Knife's graphite ore comes MesoGrafTM, a two-dimensional carbon crystal developed and marketed by Grafoid Inc., an advanced technology materials company in which Focus Graphite is the largest single shareholder.

Together, these companies form a mine-to-technology enterprise that is unique in the world and holds the potential to become dominant global player in the high technology sector.

The company is building an excellent relationship with the local Innu First Nation and municipal councils.

Focus Graphite's management group is led by President and CEO Gary Economo, and supported by a world-class team of geologists, graphite production and manufacturing specialists' and scientists.

When Lac Knife comes into production it will produce on a price-competitive basis with China, which produces 70% of the world's graphite.

The project has reached the prefeasibility stage, and graphite concentrate produced at the pilot plant is being shipped to potential end-users. Long term off take agreement specifications are: security of long term supply, purity, competitive cost, and the ability to tailor the concentrate to customer specifications. Some buyers require industrial grade with a 95-96% purity range, while some technology and battery grade graphite purchasers have a 99.5 to 99.99% purity requirement.

Lac Knife's distribution of large, medium and small flake graphite is perfectly positioned to meet current and future demands. More importantly, Lac Knife's high-grade, at 16%, gives Focus Graphite a significant cost advantage over its competitors with resources ranging from 3-8% carbon grade.

Leading the Carbon Revolution

As an innovator, with one of the highest grade graphite resources in the world, Focus Graphite's management set its sights in the emerging green energy and clean technology sectors for sustainable profitability for the foreseeable future.

Grafoid Inc. was incorporated in late 2011 as a graphene investment and business development company. In less than two years, Grafoid, currently a privately held company, has emerged as a global leader in the carbon revolution.

Graphene will change the way the world works, lives and plays and Grafoid is deeply involved in leading that change.

Graphene's physical properties, discovered during laboratory experiments in England in 2004, have captured the imagination of the industrialized world because our world is on the verge of a technology revolution as significant as the Industrial Revolution of the mid-19th Century. Approximately $5 billion in R&D is underway. The best cutting edge technology graphene comes from Lac Knife.

MesoGrafTM

On May 24th, 2013 in Singapore, Grafoid unveiled its global platform for MesoGrafTM its trademarked graphene product, it is like no other in the world. It opens the door to graphene's market commercialization by setting the global standard from which all other graphene is measured.

Grafoid sees its MesoGrafTM high-energy density graphene as a catalyst for change in the industrialized world.

While industry, governments and science communities remain fully engaged in graphene's development, markets and the investment community in particular, have yet to catch up to graphene's game-changing capabilities.

About Graphene

Today, an intense and expensive geo-political race to assume a leading place in the development of the world's new wonder material has seen the United States, China, Korea and Europe compete for control of a technology intended to benefit humanity. Such is the scale and scope of graphene's development activities.

Graphene, derived from graphite is one atom thick. It is a two-dimensional transparent crystal 200 times stronger than steel; it is flexible, stretchable, and it's a vastly better conductor of electricity than copper or silver. It is a natural material that when applied to a solar panel, converts solar energy 100 times more efficiently than silicon, today's standard for passive energy conversion.

It also has a melting point of more than 3,000 degrees Celsius. This characteristic alone is perhaps the least recognized by market watchers.

Here's why; Graphene's thermal efficiencies, combined with its inherent strength, pave the way for the design and production of critical components in jet engines for the aviation industry and, for lightweight, fuel efficient automobile engines and structural components for both.

As a substitute for steel or aluminum, graphene's lightness and strength enable dramatic fuel savings.

And as a substitute for graphite used in lithium-ion batteries, graphene opens the door to a revolution in green energy technologies. Graphene dramatically improves charging times and increases the amount of battery power in a smart phone, laptop computer or tablet, or, a tesla electric car.

The Best Performing Graphene

While commercial and academic R&D efforts focused on downstream product applications and invention, only a handful of companies had an interest in developing a universally applicable graphene standard, which is vital to industry and to market acceptance. It creates a level playing field for all players to adopt.

Standards provide manufacturers with a level of comfort by eliminating variability in the materials they source from their graphene suppliers.

What makes MesoGrafTM so unique is quality, scalability and low cost. No other graphene in the world comes close to matching MesoGrafTM superior properties and characteristics. By bridging the gap between science and industrial commercialization, MesoGrafTM paves the way towards market monetization. •

INTERVIEW WITH

Gary Economo & Jeff Hussey

GE: PRESIDENT & CEO
JH: VICE PRESIDENT PROJECT DEVELOPMENT
FOCUS GRAPHITE INC.

Lac Knife is particularly notable for having one of the highest concentrations of flake graphite in the world. Could you explain the techniques you have used to exploit the resource?

GE: Nature which has been very kind to Focus Graphite by providing a deposit that has extremely high grade graphite mineralization that concentrates to over 96% graphitic carbon in the on-site concentrator. Three types of concentrate will be produced namely the fine and medium flake concentrates, and approximately 40% of production will be large flake graphite that would be the mill feed for a second transformation to graphene.

The concentrate and the flakes themselves are very well structured. The gangue minerals are located on the surface of the flakes, making it very easy to remove them using "polishing" techniques. The mineralization is concentrated using conventional flotation techniques, followed by the polishing stage to remove these gangue minerals from the surface of the flakes. With these relatively simple techniques we are able to achieve a concentrate grade of 96.6% total carbon and we have also seen much higher results in the pilot plant test results. The concentrate classified as large flake means the flakes are larger than 200 microns or 0.2 mm.

At the same time, Focus Graphite has developed its own processing technologies to expand the flake. We also have a proprietary technology to crush the rock so that we do not change the morphology or size of the large flakes. Our goal is to maintain as much of the large flake in tact as possible so as to maximize its applications and value. Most people in the lithium battery industry tend to buy large flake material because it purifies to 99.99%. Small flake typically only concentrates to 89% to 90% carbon content, whereas Lac Knife tests are showing greater than 96% and up to 98% total carbon. End Users purchase the more expensive large flake concentrate for its higher carbon content, purify it, and break it down into small flake because small flake is what is actually used in lithium battery anodes. Lac Knife can potentially become a lower cost supply stream for the battery industry.

What demand markets is Focus Graphite planning to cater to with its output?

GE: Our main focus is the energy sector, which includes lithium batteries for electronics, solar power, and also energy storage. On the energy usage side, every time you use energy you create heat that you need to be able to control and reduce. Graphite is a very good thermal conductor, and we are very heavily engaged in thermal management applications for thermal heat problems in electronics. Both smart phone and mobile tablets use graphite to control battery heat rather than the fans used in desktops. In the transportation sector, along with our graphene partners and their plastics capabilities, we are looking at much more efficient materials for high-tension electric cables that would reduce the loss of energy as it is being transmitted. For energy storage, we are looking at lithium and vanadium batteries.

What is Focus Graphite's outlook for the next two to three years?

JH: Our next key development task is the feasibility study, which will define our project schedule more precisely. As in most projects, there are several key variables and concepts to develop and our team and partners are working hard on all fronts.

We are pleased to have strong support for the project from the Innu First Nation community in Sept-Iles. This project meets the interests for the Québec government with its vision of electrifying transportation as is ours with the effort to develop battery applications with Hydro-Québec.

The mine itself has a relatively small footprint since the concentrator is estimated to produce 822 tpd in the Preliminary Economic Assessment. This represents approximately 46,600 tonnes of dry product concentrate per year. This is a relatively small production rate compared to most metal mines, but Focus Graphite will be producing a very high quality graphite concentrate that is amenable to producing MesoGraf™. This has huge, global technological implications, especially when you consider the association with Grafoid. •

Clean-tech Processing

Fuelling Québec's metallurgical expertise

Strategic minerals of any type rarely have the same depth of historical production behind them: many are fairly new to the commodity market, while others may have a long history of production but of small quantities. Due to this – or perhaps as a cause of this – metallurgical processes and downstream processing are often a more difficult and expensive factor in economic assessments than for more common minerals.

These factors have led some juniors to effectively change their stripes, adapting to market dynamics by offering processing services not just for their own deposits, but for others also. One such company, Argex Titanium Inc., was formerly focused on advancing its titanium dioxide mineral deposits, however then recognized the upside of focusing on processing given the challenging market dynamics for junior explorers. Developing a plant and purchasing ore on the market proved to add more value than processing the ilmenite ore from their deposits. Through a partnership with PPG Industries, Argex has brought in the necessary expertise for coating and finishing and is poised to commission their industrial-scale plant by late 2014 or early 2015.

Orbite Aluminae Inc., a company also involved in clean-tech processing, is looking to exploit a 100 km^2 clay deposit in the Gaspé area using a proprietary process to extract alumina and other by-products from argillite. After converting and amplifying Orbite's Cap-Chat high-purity alumina plant to three times its original size, the company plans to produce 2 mt/day by the end of this year and is aiming to ramp up to 5 mt/day at the beginning of next year. "Following production of our own material and the demonstrated efficiency of our process, we expect to move to the next step, which is our smelter-grade alumina (SGA) plant, at which we will also offer the capacity for other deposits to come and transform their original material into rare earths," said Richard Boudreault, president and CEO of Orbite Aluminae.

Pro-Or Resources, which began as a gold exploration company in Québec, has shifted its focus gradually into clean-tech processing as well, first with the development of a chromite enrichment process and now with its move into producing Platinum Group Metals (PGMs) from scrap metal using patented technology. "Our system can remove the precious metals from catalytic converters and achieve recovery rates of at least 97%," said Sylvain Boulanger, president of Pro-Or.

For PGMs, the majority of which are mined in potentially volatile jurisdictions like South Africa and Russia, the lingering uncertainty in its supply chain is driving Pro-Or Resources to explore alternative sourcing solutions for the increasingly sought-after metals. "Costs of extraction have started to exceed the market prices for PGMs, so many companies are looking at shutting down operations," explained Boulanger.

Through its process and location in Québec, Pro-Or offers considerable efficiencies in the market and the company is now looking at the feasibility study for a processing plant with four reactors. "The process for stockpiling and processing materials through the traditional mining value chain in places like South Africa takes at least six months and you have to pay upfront. For Pro-Or, the entire process from acquiring the material to processing and refining takes less than eight weeks in the prototype plant. In three years, when we get more reactors, the process will be shortened to one to two weeks," said Boulanger.Naturally, an integral part of developing innovative systems like that of Pro-Or is the help of skilled process engineering firms. In Pro-Or's case, many technical solutions were developed with the help of Seneca, a Québec consulting engineering firm that delivers advanced process solutions to the mining industry, with a large focus on extractive metallurgy. Seneca played a significant role in deploying Pro-Or's technology towards the creation of a demonstration plant and developed the continuous process to be used to get the plant online with optimized capital costs and minimized operating costs.

According to Raymond Simoneau, Seneca's vice president, this kind of long-term cost optimization is the true value-added by any process engineering firm that does its job well. Furthermore, they are a key factor in clients' ability to get financing for their projects. "Our detailed methods are much more encouraging to the financial community than standard practice, which involves doing a full design plan at the beginning, only to have the project unexpectedly start over and change course later on," said Simoneau. •

INTERVIEW WITH

Benoît Couture & Raymond Simoneau

BC: CEO & FOUNDER
RS: VICE PRESIDENT & FOUNDER
SENECA

Could you provide a brief introduction to Seneca?

RS: Seneca is one of the most trusted consulting engineering firm delivering advanced process solutions and services to the mining industry. We typically engage in greenfield and brownfield projects ranging from $20 to $200 million. When a processing project proves to be technologically and/or logistically complex, on top of presenting a high-risk level because of dangerous substances, we can really add value.

Half of our current projects are related to extractive metallurgy. If we are succeeding in that sector today, it's because we understand the fundamentals of process engineering and we are able to bring innovative yet industry-proven solutions to the mining sector. For example, continuous process design is a tool mostly used in the petrochemical industry. By integrating that tool into the mining space, we help companies deploy technologies better while lowering their risks and optimising capital expenditure and operating costs.

What are some of the most common mistakes that you believe mining firms can learn from?

BC: The first big error mining companies make is to overlook metallurgical and mineral processing. They tailor most of their plans and financing strategies on the basis of their underground resources and mine operations. The second big error is the misconception that using pre-existing technology on a specific project will lower the project risks. Neglecting process application decreases the chances of you being able to have a project that is more cost competitive. Finally, we often see companies skip process development steps, for example going straight to a demonstration plant, to increase speed and decrease costs. This heightens the risk a lot, and most of the time results in project and operability issues. A good process consultant will ensure that the available existing technology is properly integrated at the very start of the project and this ads value.

RS: Good process design will integrate available technology and give the client a specific product that, all else equal, can be produced below the cost of competitors. The NI 43-101, which is a well-defined and important tool for project planning in the exploration industry, does not address mineral and extractive metallurgy processing well. It is more concerned in defining the resource. Yet there is often substantial work to be done in reducing the operating expenditures of processing. In this sense, Seneca is quite different from the traditional EPCM. We provide a wide range of services, but instead of standard engineering, we have process design and control at the core of our expertise. Our abilities are in the application fundamentals of hydro, thermo and electro-metallurgy.

What are the financial benefits of detailed process design to project owners?

RS: Good process design brings value to a project by lowering capital expenditure and operating expenditure and ensuring that the process is well understood throughout the life of the project.

Our detailed and transparent methods are much more encouraging to the financial community than the standard practise, which involves doing a full plan and design at the beginning, only to have the project unexpectedly start over and change course later on.

The first step in any development project is benchwork to prove the concepts so that you can patent them and protect your innovation. With strong patents on a proven conceptual process, you can get financing for a pilot plant, which you can use to play with parameters, using process engineers to finalize the process and roll out a design. The pilot plant, which is usually capable of only producing limited samples, then helps generate enough financing to move on to a demonstration plant, which ultimately shows that your product is sellable and is the key point of interest for the financial community. The last step in the development project is building the commercial plant. Throughout all of these stages, you can finance your project, but the process engineers are still not finished, as they can continue to optimize your applied technology. With continued design, you may even finish your project at a lower cost than you initially anticipated. This is a common practise in petrochemicals, but mining needs it more because of the variety of its feedstock and the complicated nature of its site specifics.

What are some of the innovative projects that you have conducted that you are proud of?

RS: Seneca has one particularly novel project in which we extract Platinum Group Metals from used and recycled automotive catalysts. Our client was in the pilot stage for two years with very limited resources, and we deployed the technology towards a demonstration plant. Furthermore, Seneca has developed the continuous process to be used in the project, with the specific objective of bringing the plant online at optimised capital costs and minimized operating costs.

What is your outlook for the mining industry in the coming years?

BC: I would like to see more investment in innovative technology, so that we can get better value out of unconventional resources using unconventional processes. We do see people, including some of Seneca's early-stage clients, investing in innovative processes, and they will be rewarded by the market. We could probably run a business well solely based on working with our major clients, but we bet on the smaller companies as well because they are at the forefront of process innovation.

Smaller, innovative projects are also good for our employees, who enjoy as much of a technical challenge as possible. I love projects that honour the intelligence and creativity of our team. •

INTERVIEW WITH

Pierre Pelletier & Claire Lavallée

PP: PRESIDENT
CL: EXECUTIVE DIRECTOR
COREM

In what particular fields of expertise has COREM focused to improve your capacity?

CL: COREM has made a significant improvement in the area of mineralogy. We proceed to the installation of a polished section laboratory and purchased a MLA (Mineral Liberation Analyzer), which allows us to do more automated quantitative mineralogy and therefore automatically examine several thousand particles of the same sample. We have also increased the number of mineralogists on staff so that we are able to maintain a close link with metallurgists in the plant. This allows to better understand the behavior of minerals in their processing.

PP: Mineralogy is a tool that metallurgists use to understand the association of the minerals and identify ways to recover them. Mineralogy is at the beginning of the process, so it is important to focus research on it. In our pre-competitive research projects, our members really benefit from exchanges with COREM's staff.

CL: Another sector on which we have focused on is the improvement of our flotation equipment. The instrumentation of our flotation columns and the modernization of the pilot plant mechanical flotation cells permitted to improve our operational performance through a better stability of the flotation process, an increase of throughput and an increase of flexibility in flotation flow sheet design.

Can you provide us with some examples of the key innovation projects that COREM has developed recently?

PP: In the ferrous sector, an important accomplishment for COREM is the development of the LIBS (Laser-Induced Breakdown Spectroscopy) technology. We worked on this technology for many years and have developed a way to analyze minerals with a laser.

CL: In order to validate the technology, a LIBS prototype was implemented in one of our member's plant couple of years ago. This validation was conclusive. The next step for us was to find a partner to bring this technology to a commercial level; we signed an agreement with Outotec. They are now developing new applications and a commercial analyzer should be available by the end of the year.

As another example, in the iron ore industry the recovery of the fine particles is an important concern in term of process performance and production costs as those particles are generally lost in the tailings. At COREM, we have tested a relatively new equipment, the Reflux Classifier mainly used in the coal and minerals industry. Experimental work at the pilot scale has been undertaken at COREM with very positive results. Successful recovery of iron ore fines was achieved which push further the limits for the beneficiation of iron oxide fines by gravity separation. The potential applications of this technology (Reflux Classifier) might be a direct implementation in the concentrator, as either complementary to or as a replacement of the spiral. We have also demonstrated that we can recover iron ore from tailings with this equipment, without having to regrind the materials. Following the positive results obtained at pilot scale, some COREM's members have decided to pursue the validation of this technology at their installations.

How unique is this collaborative research model in the mining industry?

CL: Innovation is more and more important for the mining industry in the current context. Companies face increasing pressure to have competitive operations. COREM's business model of regrouping industrial members to share the risks, benefits and cost of R&D is even more relevant in this context.

COREM is an industry-driven research center. We have labs and pilot plant that allows us to perform efficiently precompetitive research projects. The research program is funding by government funds and annual fees paid by our members. The Pre-competitive Research Committee composed of representatives of industry members authorizes and monitors research projects. The operating mode of COREM promotes exchanges not only between COREM's researchers and the personnel of the institutions but also between the representatives of the various companies member of COREM. It is an efficient and innovative way to innovate. The efficiency of such a collaborative research model has been demonstrated in other industrial sectors; FPInnovations, a Canadian research centre in the forest industry and the world's largest private non-profit organization in its sector, is a good example. •

INTERVIEW WITH

Sylvain Boulanger

CEO
PRO-OR INC.

Can you explain the key milestones that Pro-Or has achieved in your evolution as a junior mining company to a clean-teach processor?

Pro-Or started as a gold exploration company, but our focus quickly shifted when we discovered the presence of chromite, used to make stainless steel, on one of our properties. Because our chromite had a weak chrome to iron ratio of 1.6:1 and the industry required at least 2:1, we began to develop a patented technology to remove iron content in a vapor form under low temperatures of 800 degrees. This was the first spark for a chain of innovation to come.

Eventually, we realized that we could achieve a ratio of 2:1, 20:1, and even 100:1 through our new process. After building a plant outside of Québec City to realize the technology on an industrial scale, we discovered that through another patented process we could further separate any metal by converting it into a complex table salt, putting it into liquid form, and using filtering techniques. As the market price for PGMs was much higher than chromite, we looked to see if we had any on our property. We did, but it was nothing compared to what we could get from scrapped cars, specifically from catalytic converters. Right now the quantity of cars being scrapped per year is equivalent to the quantity of PGMs being used by the industry to make catalytic converters.

Most PGMs are mined in potentially volatile jurisdictions like South Africa and Russia, which creates potential instability in the supply chain. As a Québec-based company, how are you positioned to meet this demand gap?

The increased demand and usage of cars plus the growing trend of governments mandating the installation of catalytic converters, as pollution control devices, are driving up the demand for PGMs. South Africa has been in a very good position for multiple decades, but it is now reaching a state in which mines have to go deeper and working conditions are worse. The result is increasing labor unrest and demand for higher wages from South African miners. The government is not only increasing taxes, but also requiring companies to pay for infrastructure. Costs of extraction have started to exceed the market price for PGMs, so many companies are looking at shutting down operations. In light of these difficult conditions, there are discussions that Russia and South Africa will form a cartel to fix prices to a more economical level, creating market distortions. As catalytic converters are increasingly required in cars, this situation puts consumers in a bind.

How are you developing partnerships in the supply chain to gain access to scrap metal?

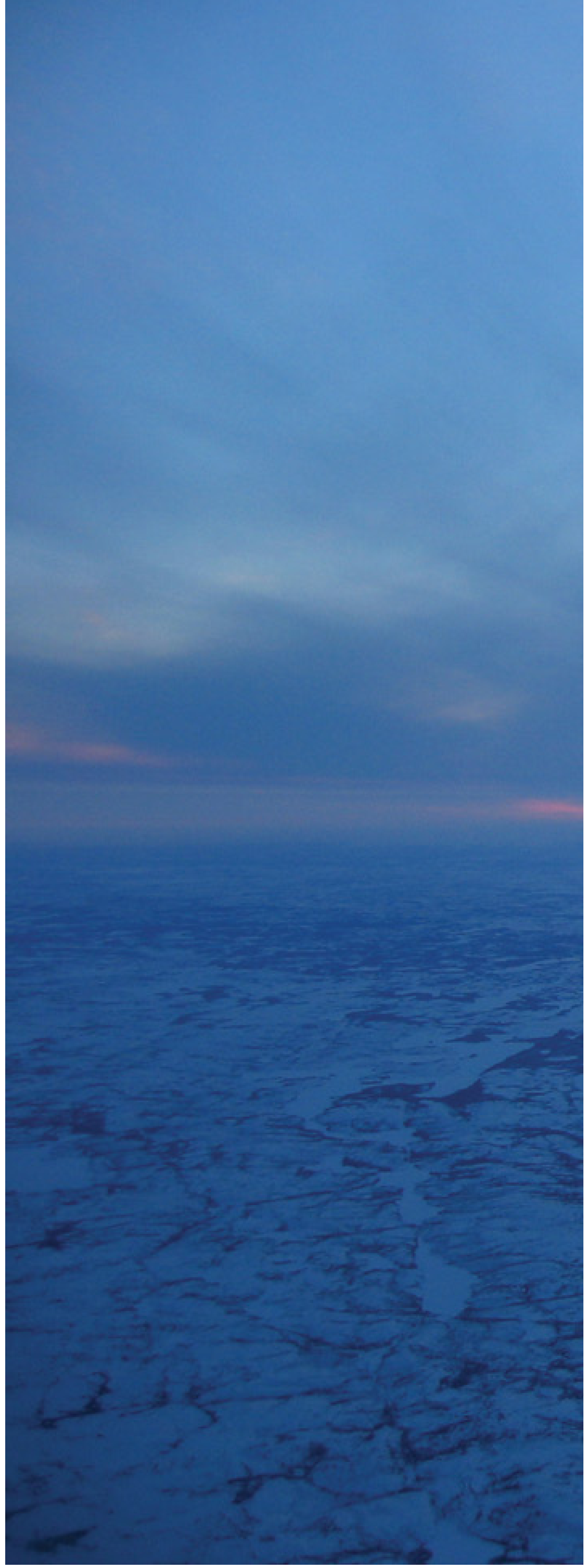
We are streamlining the entire supply chain by partnering first with large scrapyards that handle at least 200,000 catalytic converters per year. Through a model that franchises our patented technology, we offer them the opportunity to put a plant on their site and process the catalytic converters at the scrapyard. With four reactors on site, the scrapyard can recover 4,000 catalytic converters per week. Right now, scrapyards make a certain margin selling catalytic converters, but if they equip themselves with our system they will more than double their margins.

As soon our financing is secured, we are going to start manufacturing the reactors in order to plan the build up of a plant with four reactors in Québec Before the end of Q1 2014, we will have one plant with four reactors completed. This will serve as the showcase plant and training facility for franchisers, as well as a research center for the next stage of our R&D. We are also in discussions with a British Columbia-based private company, which handles 400,000 catalytic converters a year and represents close to 25% of the Canadian market. The rest of the Canadian market is heavily fragmented. In the US the market is 10 times larger and PGM Solutions has begun training US contacts in the recycling business. We have also set up training programs and kits that include information on all necessary licensing for each relevant country. •

Québec's North:
A New Era in Québec

"You cannot necessarily count on the equity or debt markets for the degree of capital needed to properly fund Plan Nord. The Quebec government needs to seek out and encourage foreign investment. There are pools of capital in many areas around the world that are specifically earmarked for mining investments so the Quebec government needs to attract these potential investors. There will always be a certain degree of protectionist sentiment in Canada, but in order to build multibillion-dollar mining projects in Quebec you are going to need significant foreign capital. Part of the role of the Quebec government should be to educate the public on these matters and encourage foreign investment."

- Don Robertson, CEO
STANDARD CHARTERED WHOLESALE BANKING CANADA



Courtesy of Air Inuit

Le Nord Pour Tous

Plan Mort no more?

The highly publicized Plan Nord, an ambitious bid for mining and energy infrastructure development, promised to enable a multitude of projects in northern Québec: projects that due to the high cost of transportation, logistics and power, and the recent fall in commodity prices, were often of increasingly questionable feasibility. Yet the excitement generated by the announcement of the plan in 2011 by former premier Jean Charest, of the Liberal Party, has cooled following the accession of the PQ to power. The PQ re-launched the plan under the name of "le Nord pour tous" in 2013, though like its predecessor, it has yet to translate into actual infrastructure developments.

Many projects have been put on ice as a result, but several with strong backing and favorable fundamentals have succeeded in going forward. "An increase in supply and the slowdown of China's growth are also inhibiting factors," said Zahid Fazal, partner at Ernst & Young. "Ernst & Young's outlook, however, is that long-term demand for the sector will continue to be driven by China and other BRIC operators; the rapid cut-back of expansion and capital spending by many organizations is expected to slow long-term supply and prolong a 'super-cycle' scarcity premium. Consequently, those with access to capital and a long-term view will seek to invest in mine development, high-cost mines will be reviewed for cost optimization or sold to investors who can inject capital to reduce cost, and companies will rationalize portfolios."

In the case of Glencore Xstrata's global zinc operations, several mines are either shutting down, as in the case of Québec's Perseverance mine and the Brunswick mine in New Brunswick, or shifting away from zinc-rich produc-

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Area Covered by Plan Nord

Source: Government of Quebec

Regional country municipality (RCM) boundary

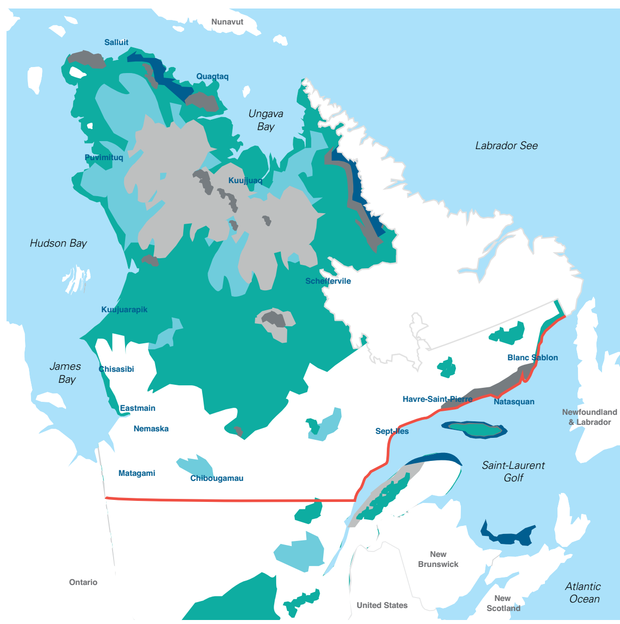
Southern boundary of Nunavic

Administrative region boundary

Area covered by the Plan Nord

Windpower Potential of Northern Quebec

Source: Government of Quebec



Average wind speed at 80 meters (200 meters resolution)

6.8-7.5 m/s

7.5-8.1m/s

8.1-8.6 m/s

8.6-9.4 m/s

9.4-12.8 m/s

Southern boundary of the area covered by the Plan Nord

"The C$5 billion to C$7 billion rail project that was timed together with the Plan Nord was derailed in February 2013. Century Iron did not join the consortium to build a new rail, because we felt there was a general misconception about how much infrastructure capacity was needed. It would be a weak assumption to plan for enough capacity to accommodate all of the projects currently in development in the area. A project of this scale and size is a necessary step that we must take to get to a multi-billion dollar project. However, it is a long process. It takes several years for the most advanced taconite projects to go from the pre-feasibility stage to the feasibility study. Even when the feasibility study is done, you cannot make an investment decision on the strength of a feasibility study alone. We have to look at a lot of elements outside of the feasibility study itself."

- Sandy Chim, President & CEO,
Century Iron Mines Corp.

"One of the big issues of the mineral development in Quebec's North is infrastructure. Plan Nord is a window: metal prices are not going to stay high forever and so we have a window of time to develop these projects and get these resources to market. You have to be able to leverage these high prices to pay for the infrastructure to make these projects viable. The discussion around Plan Nord was initially about mining and taking advantage of our natural resources. Developing this new territory is not just about mining, it is about developing new communities, building new infrastructure and finding the energy to run these small communities."

- Charles Kazaz, Partner, Blake,
Cassels & Graydon LLP

Courtesy of Stornoway Diamonds

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tion, such as at Antamina in Peru and Mount Isa in Australia. Amidst an expected 15% drop in global zinc production, Glencore Xstrata's Bracemac-McLeod mine entered into production in the late spring in Québec's northern mining camp of Matagami.

The mine started up in a quick segue from the end of life at Glencore Xstrata's Perseverance mine to take over and feed ore to their existing mill. Bracemac-McLeod will produce 90,000 mt/y of zinc and 13,000 mt/y of copper. The zinc and copper concentrates produced at the mine will be refined at Glencore Xstrata's facilities within the province.

A challenge facing northern development that is more salient than commodity prices is the question of accessing these remote sites. "The North faces a significant challenge with infrastructure, which Ernst & Young ranks as one of the top three business risks around the world and the top business risk in Québec," said Fazal.

Though host to world-class deposits, the North has also necessitated world-class solutions as mine developers deal with engineering and construction challenges and high operating costs. Miners owe a large part of their success to the ingenuity of Québec's rich base of EPCMs and manufacturers. Flexibility is key and service providers play a crucial role in providing specialized services.

At Glencore Xstrata's Raglan nickel mine, which operates at the extreme limits of Northern Québec, harsh conditions necessitated a customized approach from supplier Technosub, a Québec-based company offering customized industrial pumps and dewatering solutions. "[Raglan] was having trouble with the water, as it has a high salt content, so Technosub had to fly in and fly out for repairs. This was costing Raglan a lot. Since we have a small lab, we conducted analysis on the water with different metallurgies, and we determined the metallurgy that would last the longest in those conditions. Using that metallurgy, we cast a pump for them, and now the pump life has increased," said Eric Beaupré, director of sales and marketing at Technosub.

Northern Quebec at a Glance

Source: Government of Quebec

Area	1.2 million km^2
(72% of Quebec's geographic area)	
Population	12 000
(including 33 000 aboriginals, in 63 towns, villages and communities)	

For Quest Rare Minerals, advancing its Strange Lake rare earth deposit near the northern border with Labrador, an initial plan for an on-site processing plant with a large footprint of around 750mx500m proved too difficult in the climate. "Up in northern locales there are many additional engineering considerations to take into account, such as discontinuous permafrost and a very short construction window of four months that can risk a one-year delay," said Peter Cashin president and CEO of Quest Rare Minerals. "We therefore decided to evaluate the viability to locate our separation complex in southern Québec. It had always been our intention to provide downstream processing in the province, very much in keeping with the new government's policy of support for vertical integration," said Cashin.

In the planning of these northern projects, service providers have made themselves indispensable in offering technologically-advanced, careful attention to detail. "Whether it is in the area of camp construction, logistics, or even infrastructure, most companies have a tendency to go for the fastest option, which is rarely the cheapest one," said Norman Jacob, director at Services Technominex, a company with exploration expertise in geological services and remote camps.

Technominex opts to access sites by land, even though it is a longer and more complicated process because it keeps costs down for the company. "In April, we built a northern camp for Midland Exploration. We were able to cut the costs down from their initial estimate by around half by transporting the excavator fully assembled by land and lake," said Jacob. •

INTERVIEW WITH

Éric Beaupré

DIRECTOR OF SALES AND MARKETING
TECHNOSUB

Can you give a brief update as to how Technosub has developed in the past two years?

In the past two years, Technosub has opened a new branch in Surrey, near the Vancouver area, because Western Canada was our primary focus for expansion. We have been successful in growing there and are receiving sales month after month. The plan this year is to open a new branch in Saskatchewan, as it is currently the only province where Technosub does not have a presence. Saskatchewan's mining industry is booming and people like to buy local, so it is only natural for Technosub to make that move. We also just finished a year-long renovation and expansion of our main shop here in Québec, making it the biggest pump shop and manufacturer in Canada. Our inventory for the mining industry is unparalleled.

How has growth in the mining sector been for your business?

Over the last two years, it was fantastic: we could hardly keep up with the sales, which is why we had to expand our main office. While business has been going well across Canada, it has slowed down a bit since November. Of course, new projects are slowing down because of the price of commodities, but we have also had many projects delayed by the uncertainty with the new government in Québec. It used to be a positive thing to invest in Québec, but now people are going to other provinces or to South America.

As you move more into manufacturing custom pumps, what is the breakdown between distribution and manufacturing in your product portfolio?

At the moment, we are looking at about 65% distribution and 35% manufacturing. Each mine is different, so we make pumps specified to the customer's conditions. However, where Technosub really stands out is our speed of delivery. Where it may take a competitor two to four months to deliver a custom multi-stage high-pressure pump, we can build it within a week. Because we are a hybrid of a shop and a manufacturer, we are not stuck in a chain of assembly, so it is easy for us to prioritize a project and execute it quickly. We are not the cheapest, but we are the fastest. When a mining company calls us, they do not want to hear that it will take three months to get their pump. They want it right now. This is the niche that we have and that we intend to keep.

Can you give an example of how Technosub has solved a mining client's problem through innovation?

Raglan is a good example. They were having trouble with the water at the mine, as it has a high salt content. The number of pump repairs they had was very important. Our engineer went on site to make a better analysis of the problem. Since we have a small lab, what we did was conduct analysis on the water with different metallurgies, and we determined the metallurgy that would last the longest in those conditions. Using that metallurgy, we cast a pump for them, and now the pump life has increased. No other pump company would do that for just one mine.

Working in both research and development and manufacturing, what benefits do you see being based in Québec?

The benefit of being in Québec is that we are in a mining area where we have some of the deepest mines in the world. We are also only three hours away from Sudbury, where we have an office, and only two hours away from Timmins. All in all, we have about 40 good, deep mines in a three to four hour radius from here. For us, this location is perfect because we are well positioned, not because we are in Québec.

How hard is it to find qualified personnel, as you are competing directly with the mines for engineers?

It is true that we are competing directly with the mines, in fact not only for engineers, but also mechanics and machinists. We cannot offer a salary competitive with what the mines are offering, but we can offer a stable work environment that is close to home. Not everyone wants to do the two weeks in and then two weeks out schedule. With Technosub, people can expect a certain quality of life. Last year was particularly difficult for finding machinists because the diamond drilling manufacturers were hiring many of the qualified people, so Technosub had to hire on people starting from scratch and work with schools to train them. We have had no choice but to build those skills ourselves.

In the next two to three years, what objectives does Technosub have to grow its market share in Canada?

Technosub's primary focus to finish our expansion within the Canadian market is complete our growth in British Columbia and then develop in Saskatchewan. We are now examining our future growth plans and considering expanding to international markets, particularly in South America, where there is huge potential. If we go south, it would not be just like opening another branch with inventory, we would be recreating our entire huge shop. Right now we are also exploring the distribution market for our own products that we manufacture; up until now, we have only sold them directly. Overall, as a company, Technosub will remain committed to our niche in the mining industry. We do not focus on municipalities, and we do not focus on oil fields. For us, it is mines, mines, mines. We understand the needs in the mining space, and we will stay there. •

INTERVIEW WITH

Ghislain Poirier

VICE PRESIDENT PUBLIC AFFAIRS
STORNOWAY DIAMOND CORP.

Can you provide us with an update on the recent milestones that Stornoway has achieved at its Renard project?

In November 2011, Stornoway completed its feasibility study for the Renard Project, which was shortly followed by its environmental and social impact assessment ("ESIA"). In 2012, we held provincial and federal public hearings, which went very well. We have made our ESIA, restoration plan and baseline studies public for the benefit of the consultation process. Our goal was to provide our stakeholders with all the information possible so that they are in better position to see what we want to accomplish. Before the hearings, we also signed two agreements: the first is a collaborative impact benefit agreement with the Cree Nation of Mistissini and the Grand Council of the Crees. The second is a declaration of partnership with the towns of Chibougamau and Chapais in the James Bay region. We also opened two regional offices, one in Mistissini in 2011 and one in Chibougamau in 2013. We have plans for training and business development programs.

What initiatives are you undertaking to minimize the environmental impact of the mine?

On the restoration side, our mine is "built to be closed" and we have planned for progressive restoration throughout the life of the mine. The footprint of this mine is very limited, which was not the case at the beginning of the project; however, our plans have evolved with, among other, the recommendations of a working group on the environment that we established with the Crees. For example, we had originally planned to access two kimberlite pipes underneath a lake by putting in a dyke and emptying part of the lake. Because of the concerns raised and recommendations provided by the working group, we decided to go in a different direction and mine the kimberlite pipes using underground method. The mine site including airstrip is now planned to be 3 km², which is a relatively small footprint for a 20-year mine life. About 85% of our reserves will be mined underground using a ramp, which is another way for us to avoid a huge impact on surface.

Is there potential to expand the mine beyond its 20-year life?

The potential to increase our resources is huge. In the last few months, we reviewed our underground development and decided to change from a shaft access to a ramp access for ore extraction. This has allowed us to cut $50 million from our initial $800 million capex. However, because of our plan to extend the mine's life beyond 20 years, a pillar will be preserved to ensure that we can sink a shaft for the mine's long-term development.

How was Stornoway able to continue with your road development plans in light of the government change and the uncertainty around Plan Nord?

In 2011, we signed an agreement with the government for our contribution to a 240 km-long road connecting Lac Albanel to the mine site (Route 167 Extension). However, in fall 2012 the plans changed when the government decided to review all infrastructure projects in the province. This meant a possible delay at that time, which we were very sensitive to because our financial strategy is attached to the schedule. Being in the North, there is also a seasonality sensitivity that we have to consider. Avoiding a delay was critical for Stornoway, so we decided to go ahead with our own road for the last 100 km. The government backed us with a $77 million loan for the permanent mining road, which has opened the door for us to maintain our development schedule.

We initiated the construction of the permanent mining road as soon as the winter road was completed in mid-February. We converted this winter road to a permanent road and had all sections of the road in place to connect Chibougamau to the mine site by September 1. Our completion of the road was two months ahead of schedule and came in under budget. Stronoway was able to use the remaining amount of the government loan to start construction of the Renard Mine airport. Our main success in the road phase of the project is that we are building it with experienced regional contractors from Mistissini and Chibougamau. It is a good example of how we can be efficient when we use regional human resources and when we have good partners.

Do you foresee that it will be difficult to find enough skilled labor as the project advances?

The best way for Stornoway to have retention is to bring in people who live in Mistissini and Chibougamau. The qualified professional shortage in Canada is huge, so to have the maximum local workers is the key. This is why we are focusing on training programs with the local institutions.

With the high costs associated with putting the mine into production, what is your approach to financing?

Financing is the last major milestone that we have to reach before starting the mine construction. We hope to complete the financing as soon as possible to begin construction of the mine in 2014-2015 so that we can enter into commercial production in 2016. Last September we announced that we are in negotiation with a banking syndicate, a group of seven institutions from South Africa to France and Canada that also includes Investissement Québec. The syndicate should provide a loan representing roughly 50% of what we need to build the mine. They are happy with our progress and confident that we have a robust project with a good development team. We are also contemplating other financing possibilities including financings tied to future diamond production so that we should have financing in place in order to initiate construction at the end of the year. Our financing strategy is based on minimizing the capital to be raised, minimizing the amount of equity and maximizing shareholder value. •

Improving the Public Consultation Process

New region, new agreements

Technical challenges in the North are accompanied by social responsibilities. With roughly 33,000 people, or just over a quarter of the region's population, being Inuit or First Nations, the Québec government has been reviewing its consultation policy. The industry has already taken initiative in responding to stakeholder concerns and precedents are currently being set in the public consultation process.

Stornoway Diamonds, which is developing the first diamond mine in Québec at the Renard property near the Otish Mountains, has planned for progressive restoration throughout the life of the mine, which is a 3 km² site including airstrip. "The footprint of this mine is very limited, which was not the case at the beginning of the project," explained Ghislain Poirier, vice president of public affairs for Stornoway Diamonds. "Our plans have evolved with the recommendations of a working group on the environment that we established with the Crees." Stornoway, which had originally planned to access two kimberlite pipes underneath a lake by putting in a dyke and emptying part of the lake, shifted its plans because of recommendations provided by the working group. "We decided to go in a different direction and mine the kimberlite pipes using underground method," said Poirier. "About 85% of our reserves will be mined underground using a ramp, which is another way for us to avoid a huge impact on surface."

Negative public opinion towards the mining sector and its environmental responsibility has stemmed in part from the scars that remain from a past, less-socially conscious industry. "If you look at exploration activities that took places in the 1950s to 1980s, companies would often leave camps, drums and equipment on site in the greater north of Québec. Today's industry decided these sites cannot remain anymore and have raised money to clean the top 20 sites," said Normand Champigny, chair of the board of directors of Minalliance.

The fund, called Fonds Restor-Action Nunavik, has been recognized on provincial and national levels with environmental awards. "For this cleanup, the Inuit people were hired, first of all to provide jobs, and also because they know the territory, so they are able to clean it up well. The results were remarkable. This was a volunteer effort by the industry to show that the sins of the past are not acceptable today," said Champigny.

Working with the Inuit in such a capacity has helped to foster understanding between the two groups. "Ever since mines have started operating in our region, we have been of the mindset that the Inuit community should receive some of the benefits associated with their work," said Pita Aatami, president of Air Inuit, a local airline that operates under the parent Inuit company Makivik. "Air Inuit plays an important role in building the bridge between the resource sector and the local community. Companies learn more about the Inuit from us and, through Makivik and other affiliated organizations, we provide cultural sensitivity training."

The mining industry plays a crucial role in Air Inuit's business, from both an economic and a social perspective. "We engage the mining sector to fill the gap in their services in a way that ensures a flow of profits from their operations to the Inuit. We are a social company, and our desire to work with mining firms comes from a balance of social and economic incentives," said Aatami.

Indigenous Groups in Quebec

Source: Government of Quebec

The Tigers of the North

Asian Investors May Revitalize Quebec Mining

This article was taken from GBR's weekly newsletter and blog, the GBRoundup. To subscribe to this newsletter, or view other articles and exclusive interviews, please visit gbroundup.com.

When the Plan Nord was introduced by the Liberal Party of Quebec in 2011, it was touted by the government as "the project of a generation". Two years later, however, the Plan Nord is mostly mentioned in inquiries about what has happened to it. A key potential rail service linking much of the north with the Port of Sept-Iles, and funded by Canadian National Railway (CN) and Caisse de Depot (the Quebec pension fund), has been put on hold. Mining companies operating in the region have yet to agree on an alternative. In May, the Parti Quebecois (PQ), Quebec's current ruling party, introduced a new plan, 'North for All', which has been heavily criticized for being a watered-down, noncommittal version of the Plan Nord with no definite budget. For Quebec's miners, this is just one more worry added to a list that already includes regulatory and tax reforms and a global downturn in the industry. Financing has all but dried up at home, and now Quebec's project owners are stretching their hands abroad.

It seems they are in luck, as Asian mining firms, particularly in China and India, are scouring the globe for new projects. They are driven by a desire to secure resources for growing populations to convert into tools for growing economies. Iron ore, the main component in steel, is of particular interest because of its role in urbanization. At the moment, China's primary foreign steel suppliers, Brazil and Australia, produce large quantities of high grade ore that needs little refining. Even so, the volatility of the commodities markets has impressed upon Asian firms the importance of diversifying, and increasing numbers are looking to Quebec.

Although Quebec's regulatory uncertainty and proposals for higher taxes may raise the threshold for success in the province, the global context matters. For Chinese and Indian investors used to opening mines in countries where poverty and unrest are endemic and civil war a fresh memory, Quebec appears to be a bastion of stability. In the current climate, there is little competition from Canadian investors who would otherwise have several 'home field advantages'.

There have been concerns raised about the prospect of Asian companies moving into Quebec, but most of them are overstated. A common fear is that companies will import undesirable practises from Chinese-owned projects in Asia and Africa, such as micromanagement or the importation of large amounts of cheap labor. The case of Canadian Royalties, an exploration firm recently acquired by Shanghai-listed Jilin Jien Nickel Industry Co, is a shining example of the evolution of Chinese management methods to fit the Canadian environment. "What will make our project succeed where other Chinese owners abroad have failed is Jilin Jien's approach and philosophy," says John Caldbick, CEO of Canadian Royalties. "They basically say, 'It is our company, but it is your company too. We finance it, but you run it.' They do not get involved in the day-to-day operations."

Globalization and increased cross-cultural exchange help more Asian investors gain awareness of Canadian modes of doing business. To this end, Raymond Chabot Grant Thornton (RCGT), a leading Quebecois accounting firm for the mining sector, conducts monthly visits between Montreal and Beijing partners. Quebec has much to learn as well. Some Asian companies, such as India's Tata Steel, are already well-established leaders in the global mining industry and have the ability to bring a wealth of knowledge, experience, and best practises to the Quebec market. Tata Steel's new Quebec-based subsidiary, Tata Steel Minerals Canada (TSMC), plans to be a leading employer of First Nations communities in the vicinity of its project site in the Labrador Trough and will run training workshops that draw on its global expertise.

Another major benefit Asian partnerships can bring to Quebec's miners is the deeper integration of the province into the global mining value chain. Major off-take agreements guarantee a market for output and early financing in exchange for equity. Agreements between Alderon Iron Ore Corp and Hebei Iron and Steel, and Blackrock Metals and Prosperity Minerals, are two examples. Blackrock, which owns an iron and vanadium property south of Chibougamau, has even strengthened links with Middle Eastern supply and demand markets, and gained valuable engineering expertise, by forming an equity partnership with an Omani oil company.

There is, however, one concern, pointed out by past CIM president Rene Dufour, that merits consideration among Quebec's miners and lawmakers alike. Asian investment can revitalize Quebec mining under difficult conditions, but without proper precautions the province's industry may become trapped at the bottom of a crowded value chain. If Quebec companies and the provincial government do not make efforts to transform concentrates at home, Dufour warned in an article in CIM Magazine, the province risks having to ship Asian-owned output directly to processing facilities in other countries and losing out on employment in one of the highest value-added roles in the industry. Quebec, Dufour argued, has the expertise to capture market share in transformation, and should establish "a $25 million fund" to boost local iron ore processing. The PQ recently tabled a discussion of Bill 43, which would require all Quebecois mining firms to conduct feasibility studies for processing plants. It has been severely criticized by mining executives for burdening firms that already suffer from tight margins, but the bill could go a long way to ensuring that Asian investment in Quebec is harnessed for sectoral upgrading.

As financiers on Bay Street and Rene Levesque Boulevard close their doors to Quebecois miners, Chinese and Indian executives are chartering planes to Val d'Or and Chibougamau. The Wuhan Iron and Steel Corporation (WISCO) has compensated for Plan Nord's faltering by putting billions of its own dollars into northern infrastructure. The current crisis, therefore, sets up an interesting crossroads for Quebec, giving the province's miners a major opportunity to look outward and forge supply and demand links with a vast, wealthy continent hungry for minerals. The real test for Quebec, however, will be whether it can use Asia's appetite to feed its own long-term development. •

INTERVIEW WITH

Pita Aatami

PRESIDENT
AIR INUIT

What brought on the decision to create Air Inuit 35 years ago?

When the Inuit people signed the James Bay Agreement 35 years ago, they received compensation money from the government. They wanted to see what they could do with the funds. One of the obvious uses was to create an airline linking the community with the rest of the country. At that time, there were few roads into the communities and no airstrips except in Kuujjuaq, which had an old American military airstrip. We started Air Inuit, which is owned by Makivik, the corporation that represents the Inuit people.

An airline company also gives the Inuit control over costs and profits from transportation in and out of their region. Any profits we have made throughout our history have gone back into the community in areas such as recreational activities, Bible studies, and poverty alleviation. Regarding employment, Air Inuit has been very successful in recruiting Inuit people as pilots. Even though they usually only stay on for a few years, we have had many Inuit pilots join the company. 99% of our ticket agents are also Inuit.

Air Inuit recently worked with Canadian Royalties to service the Nunavik Nickel Project. Could you explain Air Inuit's involvement with mining began and what services the company has developed for miners?

The first agreement Makivik signed with a mining firm was with Falconbridge in 1994. It was an Impact Benefit Agreement, where we would be given priority of employment, priority of contracts for any work derived from the mine, and places in the company's committee to deal with impacts on the local environment. Falconbridge's mine has changed hands multiple times over the years, but we have continued to apply that agreement with every new owner. We use that agreement as a model for other mining companies that want to work with us in the region.

Even where companies have their own infrastructure already in place, we can help. Glencore, for example, has its own jet service operated out of Rouyn for its mines. However, they have contracted us to provide them with turboprop operation into smaller communities in the region. They would benefit significantly from using our jet service as well, so we are currently talking with them about the potential to do so.

What made mining an attractive sector for Air Inuit to engage with?

Ever since mines have started operating in our region, we have been of the mindset that the Inuit community should receive some of the benefits associated with their work. We engage the mining sector to fill the gap in their services in a way that ensures a flow of profits from their operations to the Inuit. We are a social company, and our desire to work with mining firms comes from a balance of social and economic incentives.

Air Inuit also plays an important role in building the bridge between the resource sector and the local community. Companies learn more about the Inuit from us and, through Makivik and other affiliated organizations, we provide cultural sensitivity training.

What are some important challenges Air Inuit faces?

While we have been successful in getting Inuit pilots, we have not achieved the same success in finding engineers and maintenance personnel. We have also been trying to integrate Inuit personnel into the management of the company. This has had mixed success, but it is an ongoing process.

Difficulties in the mining industry will also certainly have some impact on air service providers like Air Inuit, but not to a very great extent. The mining sector is a welcome addition to our customer base because it brings profit to our company and the organizations we serve. Tough economic conditions in mining will affect this aspect of our business, but the communities living in the North will still need us to provide transportation to the rest of the country. •

Accessing Capital:

Québec's Framework for Raising Funds

"Mining projects can last for more than 30 years. Accordingly, investors should not make decisions on projects on the basis of the latest political polls or a comment by a politician. In the long run, Quebecers are reasonable people, they welcome mining, and a great number of Quebec's MPs come from mining regions. Mining companies should remain calm, carry on and continue engaging with the community. For example, through the use of effective social media campaigns and by involving their employees, mining companies can provide accurate information on the benefits of their projects for the community."

- Pascal de Guise, Partner,
BORDEN LADNER GERVAIS LLP

Source: Shutterstock

Institutional Investors in Québec

Lending support, fostering partnerships

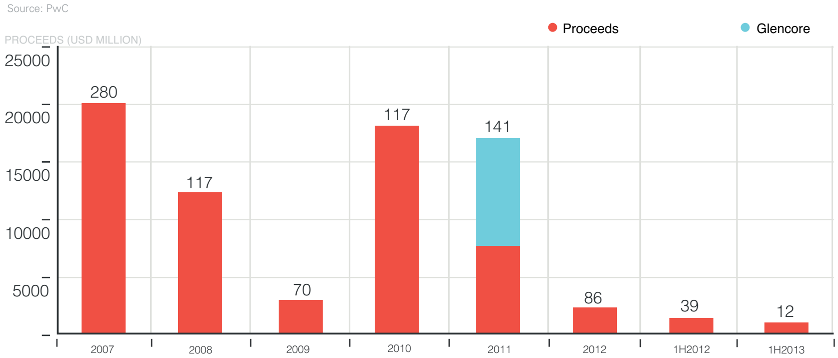
Though Québec may not enjoy the same reputation as Toronto or Vancouver when it comes to exploration and mining financing, the province has proven more than capable of providing financing solutions to the mineral industry. Even today, as producers have felt the sting of this year's tax regime debate, exploration players continue to benefit from highly favorable tax credits for flow through and research and development. A strong tradition of institutional lenders further assists the sector as a strong financing ally.

In pursuit of financing, Québec's mining sector has also substantially benefited from strong institutional support, a distinguishing asset among jurisdictions. In pursuit of international investors, Investissement Québec (IQ), a crown corporation providing financial products to local companies, has established offices outside of Québec in the United States, Europe, and Asia to identify interest from abroad. IQ went further in 2012, with the creation of its subsidiary Ressources Québec, which has facilitated the corporation to exact a more targeted approach to in supporting the natural resources sector. "Ressources Québec's budget is $1 billion, all of which is expressly devoted to investment within the mining sector. This is a break from the past, where mining was a small portion of Investissement Québec's $200 million to 300 million annual investment budget. We have a five-year plan, which will allow us to invest approximately $200 million per year solely in the mining sector, and given the current market conditions, it comes at the right time," said Denis Williams, general manager of Ressources Québec.

Royal Nickel Corporation (RNC), which filed its bankable feasibility study on its mammoth Dumont project in July 2013, has worked with Ressources Québec throughout the project. The relationship came to RNC's great aid when the markets turned and the group inked a $12 million royalty deal with RNC in only the sec-

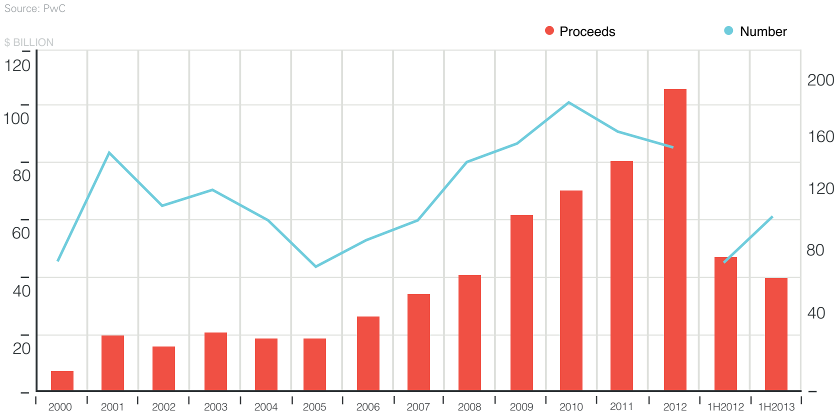
IPO Proceeds and Volume (Global)

Source: PwC



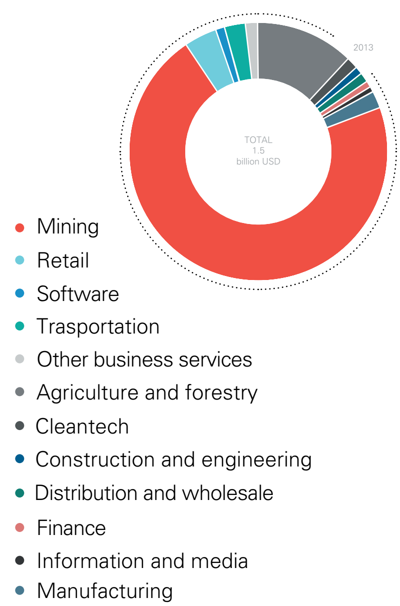
The Global Downturn: Bond Volume and Proceeds

Source: PwC



Quebec Disbursements and Deals by Sector (H1 2013)

Source: Thompson Reuters



INTERVIEW WITH

Louis Doyle

VICE PRESIDENT- MONTREAL
TSX VENTURE EXCHANGE

TMX Group's stock exchanges are famous around the world as "mining exchanges." How has the TMX Group come to be where it is today?

We have a long history of providing public financing to the mining industry. Toronto Stock Exchange (TSX), our senior exchange, is over 160 years old. In 1999, Canada restructured all of its stock exchanges and adopted a specialization strategy. Under the realignment of the Exchanges, the junior markets were regrouped under TSX Venture Exchange. We currently provide listed issuer services in our four offices in Vancouver, Calgary, Toronto and Montreal. With these offices, TMX Group is able to provide a regional approach to our services. The Montreal staff deal mostly with Québec and Atlantic Canada-based companies.

The primary roles of the exchange are to provide access to capital to listed companies and to provide liquidity to market participants through its trading platform. Liquidity is a key element in an investor decision to invest in a company. In general, the reality for junior mining companies in Canada is that unless you list your company on an exchange and provide liquidity to your investors, the likelihood of raising money is very low. By providing an access to capital and liquidity to investors and shareholders, we enable companies to raise money and pursue their growth.

What does TMX Group bring to the mining sector beyond its role as an exchange platform?

TSX engages in activities and services that go beyond raising money. We list some very early-stage companies and offer tools and services that mentor and guide them.

We offer a series of workshops aimed at educating and helping junior management teams on how to better fulfill their public company management obligations so that they will be more successful in raising money. These workshops cover a wide range of topics. The Investor Relations Fundamental workshop, for example, addresses the key component of a quality and successful investor relations program and also how to use the various tools available. We have other workshops covering corporate governance, management compensation and technical mining disclosure (in compliance with Exchanges requirements and NI 43-101).

While our workshops have been designed for individuals active with listed companies, private companies looking to get listed are also welcome to these workshops. It is a great way of finding out what to expect if you bring your company public.

Since January 2000, over 240 mining companies have graduated onto TSX from TSX Venture Exchange. We see these graduations as a great cause for celebration because it confirms that our business model works, that mining entrepreneurs can access the capital market at an early stage, raise the money required to develop their projects and grow their company, and when ready graduate to Canada's senior market. Our staff is present at every mining conference in Canada to meet with our listed companies and also raise awareness and partner with local associations to further reach out to private companies.

In addition, through Equicom Group, we offer investor relations and strategic corporate communications, while TMX Equity Transfer Services supports issuers with corporate trust, transfer and registrar services.

In difficult market conditions do you believe that it is a wiser strategy for junior companies to seek public listing rather than private capital?

The environment varies province to province, but we mentioned earlier if you are trying to raise any decent amount of money, you need to access the public market and list on the Exchange. The risk level attached to an early-stage junior mining exploration investment is so high that a typical retail investor will ask for a market to provide them with liquidity. In mining, unlike other sectors such as technology, there is often no choice between public and private markets. If you want a significant amount of financing, the investor will require you to go public.

There has been recent speculation that up to a quarter of junior mining firms in Canada will be forced to delist from stock exchanges next year. As mining is a crucial part of TMX Group's client base, what steps has TMX Group taken to mitigate the impact of these potential developments?

We have heard from many sources that a large number of companies will be forced to delist next year, but our own picture of the reality is very different. Junior mining companies have traditionally been very well supported by their management and key shareholders. The fact that their financial resources are under a lot of pressure today does not mean that those companies will cease to operate later on. The junior mining company model usually involves having no debt other than borrowing money from insiders, so there are no banks showing up to pull the plug. We understand that this is currently a difficult market. We feel that the number of companies that could be forced to delist is much less than what some analysts are predicting.

We also endeavor to help companies as much as we can. For example, on TSXV we have minimum pricing policies, pursuant to which companies cannot issue shares at less than $0.05/share. In an attempt to provide more flexibility to our listed companies, TSXV has introduced temporary relief measures, allowing companies to raise money at less than $0.05 subject to certain limitation and to the proceeds being used to protect assets. We have also held town hall meetings in Vancouver and Calgary where a number of issuers attended to participate in a two-way dialogue with the Exchange. •

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ond such agreement in its history. "It was a great arrangement for both parties: Ressources Québec received a significant opportunity for a long-term revenue stream, and RNC received a cash injection without having to issue shares. No other province in Canada has the equivalent of Ressources Québec, with its billion dollar fund specifically dedicated to mining," said Tyler Mitchelson, RNC's president and CEO. "It is worth noting that the current government approved this fund, giving a significant indication of the value it still sees in the resource industry," he added.

Going forward, RNC is considering a variety of project partners and debt and equity structures to have a full package in place to commence construction. "This would allow commissioning to begin in late 2015, and nickel production by 2016," said Mitchelson.

With global demand for nickel growing by 75,000 to 150,000 mt/y, the Dumont project is an attractive project in Québec's pipeline and one that its institutional funds are keen on supporting. "In five years' time," Mitchelson said, "we expect to be producing 33,000 mt/y of nickel and hopefully making the decision to expand capacity."

Getting in even closer to the ground level, Québec's crown corporations are active through SOQUEM, the exploration arm of Ressources Québec. SOQUEM carries out exploration programs and enables the government to more directly funnel its exploration expertise into the private sector. Stornoway Diamond's Renard project was originally discovered by SOQUEM. Joint venturing with the site's initial exploration company, Ashton Mining, SOQUEM helped to bring the project to the tail end of the development phase.Ressources Québec has put an emphasis on the role that strategic commodities can pay in integrating Québec's economy. "Our main priorities are profitability and developing sub-sectors that bring wealth and jobs to the province. At the same time, the Québec government sees good opportunities in new materials and wishes to establish innovative industries, so we are always keeping our eyes open," said Williams.

In addition to Investissement Québec, which is more active at the pre-feasibility and production stages, Québec has other institutional funds such as Sodémex, Sidex, Fonds Solidarité FTQ and Société de Développement de la Baie-James. "These institutions have been strong supporters of exploration and in many cases they can play the role of lead investor when a company does a financing or can be active on the secondary market," said Benoît Gascon, partner at national law firm Miller Thomson.

Sodémex, the mining activity investment arm of Caisse de Dépôt, Québec's largest public pension fund, has been particularly innovative among institutional investors in the way that it has structured its investment strategy. The group recently announced its newest initiative, the Sodémex Développement Fund (SDF). SDF continues the work of the Sodémex Exploration Fund (SEF), which invests in exploration activities, by targeting defined explored and defined deposits that have already initiated preliminary economic assessments and feasibility studies. SDF has been allocated $250 million to disburse in mining development, through individual investments of between $5 million and $20 million. Of course, SDF and Sodémex as a whole may look to invest with a profit motive and carry the weight of competition that comes with that, but ultimately the institution sees itself as a partner of other funds like Investissement Québec and FTQ. "We do not see them as competitors, because there is so much money required in the mining industry that there are opportunities for us to work together," said Dany Pelletier, investment director at Caisse de Dépôt. "Many companies use a combination of funds from us and the other institutions."

Part of this long-term, cooperative perspective is another initiative launched by Sodémex, in which the group aims to maximize networking opportunities in the mining sector. Sodémex organizes monthly mining lunches in which it invites students to hear and meet industry professionals. In a particularly innovative move, Sodémex is also looking to compile a bank of potential board members for new mining companies that it will be working with. "These people would be retired, lifelong veterans of the mining industry with substantial expertise to offer," said Pelletier. "We would not necessarily require companies to have any of these people as board members, but rather to have them ready to step in and share knowledge with newcomers who work with us."

Yet the province's institutional investors have their limits, and cannot be the panacea that miners might hope for. "The problem that we see now is that because the capitalization of some companies has become so low, there is a limit to the help they can get from these institutional investors, since those investors do not want to hold more than 10% of a company. In many cases, institutional investors cannot reinvest if there is no additional money being raised at the same time," said Gascon of Miller Thomson.

"Even players like FTQ will be taking a step back because they have probably placed a significant amount of money recently in resources such as gold, and they need to see where prices will land before they make any additional moves," echoed Vitale Santoro, partner at Osler, Hoskin & Harcourt LLP. •

INTERVIEW WITH

Benoît Gascon

PARTNER
MILLER THOMSON

Could you provide a brief introduction to Miller Thomson and the role that the firm plays in Québec's mining sector?

Miller Thomson is a national firm with 11 offices across Canada in five provinces. The services we provide through our mining practice include equity and debt financing, mergers and acquisitions, option, joint venture, exploration and royalty agreements, as well as structuring of transactions and environmental and first nations and aboriginal issues. We cover the whole spectrum of services that mining companies need.

Québec has always been an important part of Miller Thomson's national mining practice. We have always had a good base of junior exploration companies in Montreal that we have served over the years. We also act for investment dealers even though the deal flow is recently a bit slower than it used to be since many financings are now made on a non-brokered basis.

Juniors are facing an extremely challenging financing climate at present. How are Québec-based companies dealing with the added uncertainty surrounding the Parti Québecois's mining initiatives?

For the last year it has been very hard for junior exploration companies to obtain financing, so this additional uncertainty could have a very significant impact. In the first quarter of 2013, approximately 50% of the exploration companies on the TSX-V were trading at less than 10 cents and about 250 TSX-V exploration companies had a market capitalization of less than $1 million. Additionally, we are seeing in Québec an increasing disinterest from the retail investment community. You would think that savvy investors would see stocks with low prices and get in the market; however, raising money continues to be difficult. It will be interesting to see in 2013 how many companies will close their doors, or whether we will see mergers.

Québec has a relatively favorable tax regime for exploration. How does this advantage Québec-based companies on a national level?

Québec investors have a 100% deduction at the federal level for Canadian Exploration Expenses (CEE) incurred. For certain types of exploration expenses in Québec, investors can have a 150% deduction of the expenses incurred for their Québec tax declaration. This flow-through regime has been in place for many years and it is one of the last tax shelters remaining in Québec. At the end of the day, however, investors have lost a lot of money over the last few years and the tax deductions do not seem to be always enough to attract investors.

Another issue is that the proceeds from the issuance of flow-through shares can only be used for exploration programs. Companies still need hard-cash dollars to cover monthly expenses, the preparation of the financial statements and the annual fees with regulatory authorities. The cost of being public on the TSX-V for junior exploration companies can be between $300,000-500,000 and flow-through shares will not help you to cover those costs.

Québec has a strong base of institutional lenders. As retail investor interest wanes, are exploration companies able to rely on them to access capital?

They certainly help. In addition to Investissement Québec, which is more active at the pre-feasibility and production stages, we have, among others, Sodemex, Sidex, Fonds Solidarité FTQ and Société de Développement de la Baie-James. These institutions have been strong supporters of exploration and in many cases they can play the role of lead investor when a company does a financing or can be active on the secondary market.

The problem that we see now is that because the capitalization of some companies has become so low, there is a limit to the help they can get from these institutional investors, since those investors do not want to hold more than 10% of a company. In many cases, institutional investors cannot reinvest if there is no additional money being raised at the same time.

It has been predicted that nearly 25% of companies on the TSX-V will have to de-list within the coming year. Do you think this forecast necessitates a reevaluation of listing criteria?

The purpose of the TSX-V is to permit junior issuers to have access to the market. This is particular to Canada and a very good thing for the mining industry. I do not think that listing criteria are currently a problem. Once the junior companies access the market, it is up to them to advance their projects and attract investors. This being said, I am not sure that all the spin-offs of junior companies that have taken place in the last few years have been a success. •

INTERVIEW WITH

Denis Williams

GENERAL MANAGER
RESSOURCES QUÉBEC

Could you provide a brief introduction to Investissement Québec?

Investissement Québec is a crown corporation, meaning it is owned by the government. Mainly, we provide financial products, such as direct loans, loan guarantees, and equity, to companies in Québec. We have a dual mandate: profitability and economic development. As part of this, we have established offices outside of Québec: four in the United States, four in Europe, and three in Asia. Through these offices, we look for companies and investors that want to put money into Québec.

How does the recent creation of Ressources Québec enhance Investissement Québec's service offering and ability to promote investment in the mining industry?

Ressources Québec was formed after the creation of Plan Nord with the express purpose of supporting Plan Nord's attempts to develop our province's northern regions by encouraging the investment activity of private companies. Ressources Québec's budget is $1 billion, all of which is expressly devoted to investment within the mining sector. This is a break from the past, where mining was a small portion of Investissement Québec's $200 million to $300 million annual investment budget. We have a five-year plan, which will allow us to invest approximately $200 million per year solely in the mining sector and, given the current market conditions, it comes at the right time.

We have met with several companies such as Royal Nickel Corporation and Donner Metals that have benefited from Ressources Québec funding. Could you give us some other examples of projects that you have been instrumental in financing?

The best example of our involvement leading to positive results is the case of Osisko. Some years ago, we had lengthy discussions with Osisko about our involvement, though they had not yet completed their bankable feasibility studies at the time. When the studies were completed, we were satisfied with their results and we put forward a proposal to commit $75 million. Our involvement made a very positive impact.

Another very different case is that of Stornoway Diamonds. In fact, their mine was originally discovered by SOQUEM, Investissement Québec's exploration arm. We partnered with Ashton Mining for a joint venture and brought the project to the tail end of the development phase, where construction could begin.

Are you trying to focus any of Ressources Québec's investment support on particular commodities?

Traditionally, of course, Québec is known for gold and iron ore, but we do not try to focus on any one commodity in particular. We have some involvement in gold, but we are also looking a lot at lithium and rare earths. Our main priorities are profitability and developing sub-sectors that bring wealth and jobs to the province. At the same time, the Québec government sees good opportunities in new materials and wishes to establish innovative industries, so we are always keeping our eyes open.

With many projects facing an uncertain future, do you see many industry players coming to Investissement Québec for financing?

We do see more companies coming to us for assistance. However, one of the main reasons is probably the fact that the public market has been almost shut down for the last six months. It is very difficult to raise equity in the market right now, and naturally our announcement that the government has given us $1 billion to invest has attracted many entrepreneurs in the industry. We are trying to serve them the best we can.

How is the debate around royalties in Québec impacting the investment environment?

It is important to remember that no new laws have been put in place yet, so it is still "business as usual". Of course, the government has made announcements that it intends to change the royalties system, but no result has been announced yet. While this creates some uncertainty in the market, any good project should go ahead. The government has made some public consultations, and while sometimes there was disagreement, in general they have gone well. Factors other than uncertainty created by the government, such as generally poor market conditions in the industry worldwide, can also explain the recent slowdown in Québec. Additionally, discussions about "sharing the profit" are not particular to Québec. They are happening more and more in jurisdictions around the world.

How are difficult conditions in the capital markets changing your approach to financing? Do you have to reevaluate your criteria for issuing finance?

We have to consider that nowadays it is going to be riskier investing in a company because of uncertainty in securing financing in the capital markets for future stages in the project. However, I think one must also consider the current situation to be a phase. The economy has always been cyclical, and right now we are in a downturn, but most of the signs point to a better future. The global population is still consuming a lot of what the mining industry puts out, so the sector will recuperate.

We have heard a lot about the role that Asian investment has played in developing the Labrador Trough. Do you foresee more interest from Asia developing?

China's appetite for minerals is not going away any time soon, and they are looking around the globe for opportunities. Québec is still a very good jurisdiction for them. We have seen quite a few Asian companies moving in. A noteworthy example is the recent acquisition of Canadian Royalties by a Chinese nickel company. Furthermore, our offices in Asia report a lot of interest and do ask us to meet with many potential investors. Countries like China will continue to be interested in the province of Québec. There is a lot of opportunity here, and every success sets a precedent of profitability for Asian business people. •

INTERVIEW WITH

Dany Pelletier & Carl Gilbert

DP: INVESTMENT DIRECTOR, CAISSE DE DÉPÔT
CG: INVESTMENT DIRECTOR
SODÉMEX DÉVELOPPEMENT FUND

Please give us a brief introduction to the Caisse de Dépôt's newest initiative, the Sodémex Développement Fund.

DP: Sodémex Développement Fund (SDF) is the newest piece of the puzzle in Sodémex, which is part of the Caisse de Dépôt. The first piece is Sodémex Exploration, the arm through which we invest in exploration activities. As soon as resources have been defined and preliminary economic assessments and feasibility studies are under way, Sodémex Développement Fund, led by Carl Gilbert, is responsible of our investments at that stage. Sodémex Développement Fund has been allocated $250 million to do that, in stakes of between $5 million and $20 million, though the specific amount depends on each company's specific requirements.

One of the key elements for us is discipline. We will not finance every project, but we will get involved in the ones that we believe have an exceptional management team, high-quality resources, and sustainability, including social acceptability. The project, rather than the metal itself, is what is most important to us. Our interest in the project and the management weighs more heavily than the immediate conditions for the commodity, because markets undergo cycles while sound management can get through those cycles.

Essentially, the Caisse, through Sodémex and the SDF, will be there in every phase of a solid mining project. We have divided the task into different sections because a specific mindset and set of skills are required to invest in projects at the exploration, development, and production stages. We strongly believe that Investing in mining companies requires in-depth knowledge of the project and a specific approach adapted to each stage.

What are the different vehicles through which you will disburse investments?

DP: The financing vehicles to be used will depend on the investment's risk profile. We are focused on generating a return on our investment to meet the needs of the various stakeholders who have money in the Caisse. We could work with small amounts of equity or larger amounts of convertible debentures and royalty streams, for example.

CG: Given the current market conditions, many companies have very low market capitalization, so we have to use different methods to manage our investment. This is because we do not want to hold more than 20% equity in a given company. We prefer to be under 10%. If we relied only on equity, we could not make large investments in small-cap firms while staying under 20% ownership.

What differentiates Sodémex from other institutional investors in Quebec?

DP: The way we put the pieces of the puzzle together is quite unique, and that is the key. Denis Landry, a geologist, manages our investments in the exploration phase. He has been doing that successfully for the last 17 years, Carl Gilbert, a finance specialist, heads the Sodémex Développement Fund, which includes, at the board level three mining engineers and two geologists. At the Caisse, we have a strong research group and have in-depth knowledge of the public market. All of these people are tied together within our Material Team and meet once a month to share ideas on market conditions or specific companies. I think what differentiates us is not the money, but the in-depth knowledge we have of each development phase of the mines in which we invest.

CG: With Denis being involved in the exploration aspect of the business, we gain an understanding of every project being pursued in Quebec. When we look into getting involved in a new project, we will be aware of its full history and development over time.

DP: Sodémex also meets and works regularly with other institutional investors, such as IQ, Sidex and FSTQ. We don't see them as competitors, because there is so much money required in the mining industry that there are opportunities for us to work together. Many companies use a combination of funds from us and the other institutions.

What kind of human resources support do you provide to companies you may invest in?

DP: We are currently involved with Nochane Rousseau in PriceWaterhouseCoopers' incubator program for new talent in the Quebec mining sector. This year, we launched a new collaboration with Sidex, PwC and FSTQ, Sidexwithin theorganization of Montreal monthly mining lunches in which companies are invited to give presentations. We invite interested students to attend these lunches. We are also involved in the "Chaire en entrepreunariat minier UQAT/UQAM". These are some of the little things we do to foster entrepreneurship.

One of our goals is to establish a bank of potential board members for the companies we work with. These people would be retired, lifelong veterans of the mining industry with substantial expertise to offer. We would not necessarily require companies to have any of these people as board members, but rather to have them be ready to step in and share their knowledge with newcomers who work with us. We hope, by the end of the year, to have 30 people in this bank.

What is your short-term outlook for the Quebec mining sector and SDF's role therein?

DP: Right now, we are probably at the low point of the cycle, with less exploration activity expected in the near future. In the long term, however, we are strong believers in the potential that Quebec has to offer and in the potential of the mining industry itself.

CG: Every project needs at least a few years before it goes into production. In other words, if we can invest in good projects early on, such projects could be ready to go into production when the cycle picks up again. •

INTERVIEW WITH

Tyler Mitchelson

PRESIDENT & CEO
ROYAL NICKEL CORP.

You recently filed a feasibility study on the Dumont project. Could you provide us with an update on the project?

Royal Nickel Corp.'s (RNC's) focus over the last year has been on the feasibility study and permitting activities. I am very pleased with the results of the feasibility study in we announced in June, which showed very solid economics for the Dumont project with an after-tax NPV of $1.1 billion at an 8% discount rate, using a $9 per pound long term nickel price. The initial capital investment for the project came in minimally higher than our prefeasibility estimate at $1.2 billion for a long life and large-scale open pit operation that would place Dumont among the largest base metals mines in Canada. The project will also be among the lowest cost nickel mines in the world with projected cash costs in the low second quartile of the global cost curve. The key to the low cost structure of Dumont is the inherent advantages of the location of the deposit in the Abitibi region of Québec where favorable hydroelectric rates, proximity to major support infrastructure and a skilled work force are readily available. Also, part of our ore body contains magnetite and, although we did not include this in the feasibility study's economics, iron ore concentrate can be produced and could be a significant byproduct, providing between 500,000 and 1 million mt per year. It would not be very costly to produce, as it would come out of the tailings stream, and the property has a direct rail link to the Québec City port. In addition to the feasibility study, in November 2012 we submitted our ESIA, kicking off the official permitting process. The federal and provincial governments have reviewed our paperwork and we are now in the Q&A process that will lead to the final document for public consultation, most likely before the end of 2013. RNC then hopes receive permits mid-2014.

The market has changed dramatically since we last met, with many juniors' projects stalled. What has enabled RNC to succeed during this time?

From a financing perspective, Québec is a great province to be in. RNC holds a truly strategic asset in a mining friendly province, with infrastructure all around it. We have focused on transparency in relationships, and the credibility of our nickel team, containing former Inco and Falconbridge people, makes a big difference. Over the last year or so the market has been very difficult and our junior mining stocks have been under pressure, so we needed to look for alternative options. We have worked with Ressources Québec throughout our project, building relationships at every level of government, and the group was willing to make a $12 million royalty deal with us in August of 2012, only the second such agreement in its history. It was a great arrangement for both parties: Ressources Québec received a significant opportunity for a long-term revenue stream, and RNC received a cash injection without having to issue shares. No other province in Canada has the equivalent of Ressources Québec, with its $1.2 billion fund specifically dedicated to mining. It is worth noting that the current government approved this fund, giving a significant indication of the value it still sees in the resource industry; mining duties are obviously a hot topic today. In May, we also closed a $15 million financing with Red Kite, who is a leading global mining investor. The Red Kite deal was similar to the Ressources Québec transaction in that it was a royalty deal and in both cases we feel these financings are significant endorsements for the Dumont project and we look forward to the potential to work further with both parties.

RNC opened a community relations office in January. What outreach work is the company doing?

Our project team has worked all over the world and understands the need to engage communities everywhere. Community relations are very important to the province of Québec and to potential partners who will want decades of stable cash flow. When RNC started its community consultation committee at the prefeasibility stage; we wanted it to be truly independent, so we let a third party appoint and run the committee. We worked with the committee through the pre-feasibility and feasibility stages, attempting to incorporate the committee's feedback into the planning on the project. For the feasibility study and ESIA, we doubled the group's size to provide further input into these phases and have benefited throughout the process from the dialogue at our open house sessions. •

INTERVIEW WITH

Vincent Metcalfe, Jonathan Allard & Gabriel Rousson

JA: SENIOR MANAGER FOR NORTHERN DEVELOPMENT
GR: GENERAL DIRECTOR
VM: VICE PRESIDENT, METALS AND MINING – INVESTMENT BANKING
DESJARDINS

VM

Please tell us about Desjardins' growing involvement in Québec's mining sector, both from its local offices in Québec's mining regions and on the corporate level.

GR: Desjardins' decision to become more involved in the mining industry is a fairly recent decision made by the company's administrative board in the two years since the announcement of Plan Nord.

JA: We have had clients in the mining sector for a long time and our decision to become more involved was a way for us to help them access financing more easily and use Desjardins' various functions as a common funnel for getting financing to projects. Québec mining projects are generally bigger, riskier, and in more demanding environments than other industries. To address these challenges, Desjardins created a coordination group, a project group, and a tactical group in which people in our local business centers can work with clients at a regional level.

GR: In our local offices, such as in Val d'Or, Desjardins' immediate client base is mostly suppliers to the mining sector; however, we are also getting more involved in arranging financing for junior companies operating in the area.

What are some of the creative ways in which you have helped to generate financing for companies?

VM: Every project is different and has its own idiosyncrasies. For instance, in 2010 we worked with other creditors to provide a $250 million credit facility to Consolidated Thompson, in which we provided $50 million. Most of the time, we work with our institutional partners as Caisse de dépot et placement du Québec, labor funds, Investissements Québec, and foreign investors. Desjardins has more impact financing the infrastructure and everything supporting the industry rather than the actual start-up of the mining project itself.

Do you think recent government initiatives such as the hybrid tax regime and Bill 43 are viable steps to reform mining regulation?

GR: In mining regions like the Abitibi, uncertainty was the greatest inhibitor to business in the last year, especially for the juniors that we work with.

JA: Some reform had to be done, but we will see what the industry says in the next few months. The political session is ending this summer and everything will start again in the fall. Hopefully at that time the government will be more receptive to the industry. Regarding Bill 43, which aims to require mining firms to conduct feasibility studies for potential domestic transformation facilities, this affects some metals more than others. For specialty metals like lithium and titanium, we have seen many efforts to promote transformation in the province already.

Given the delays in the government's implementation of Plan Nord, where do you see the greatest potential for financing northern development coming from?

VM: In the near future the majority of the money for northern development will come from foreign investment, mainly Indian and Chinese companies. For example, WISCO's investment in the north will equate to more than $10 billion. Desjardins plays a role as a bridge between foreign investors and project implementation in the north. There is no consensus right now on northern rail and port operations, and we have not yet seen the government action plan to tackle those specific issues. This is an issue because Asian investors will be looking not only at investing in the commodities themselves, but also the infrastructure surrounding them. I am positive that private sector players and government will come up with a good solution for this soon. A consensus will be reached eventually, and Desjardins will be able to play a role in this.

What are the most feasible steps that can be taken in boosting skills and professional capacity in Québec?

GR: One of the advantages of Québec is that it is home to historic mining towns like Val-d'Or. Regardless of the cycle the industry is in at any given time, there is always a vast reserve of expertise on the operations side. On the professional side, those of us who work for Desjardins in these regions gain a lot of knowledge on the industry, which we then transmit to Desjardins' other offices in Québec, including Montreal. Large companies should maintain offices in mining regions to keep an exchange of knowledge open between professionals in the mining and financial services sectors.

JA: On a more macro level, involving the First Nations will build tremendous capacity. About half of the population of First Nations communities on average is under 35 years old and their education rates are increasing. I have met recently with the Cree Human Resources Development program, and they have partnerships with the federal government to expand education specifically in mining and related trades. There should be more collaboration between the industry and the government in this area.

What is your outlook on Québec mining and Desjardins' involvement in the sector over the next few years?

JA: Desjardins welcomes almost all kinds of projects. Our territory is largely unexplored. We are living in a historic time right now, with a lot of major developments. The mining industry itself is also changing, getting bigger projects further in the north. In the next few years, Desjardins will hopefully join many new projects to help companies lift off. There are a lot of opportunities in the mining industry, and Desjardins is prepared to help. •

Surviving the Low Cycles

Flow-through shares and exploration benefits

Despite the current controversy over production taxes, exploration and mining companies in Québec still benefit from one of Canada's most favorable exploration credit regimes.

"Québec investors have a 100% deduction at the federal level for Canadian Exploration Expenses (CEE) incurred. For certain types of exploration expenses in Québec, investors can have a 150% deduction of the expenses incurred for their Québec tax declaration," explained Gascon at Miller Thomson.

This advantage in flow-through shares is one of Québec's remaining regulatory attractions following the PQ mining tax increase. Québec has a wealth of juniors that call it home, and flow-through has been a crucial tool for their survival.

"One of our greatest challenges in Québec has been that the source of capital markets is not here; it is in Ontario. We are also competing with British Columbia, which has done very well, to attract investors," said Santoro of Osler.

There are limits to these financing solutions. "The proceeds from the issuance of flow-through shares can only be used for exploration programs. Companies still need hard-cash dollars to cover monthly expenses, the preparation of the financial statements and the annual fees with regulatory authorities. The cost of being public on the TSX-V for junior exploration companies can be between $300,000 to $500,000 and flow-through shares will not help you to cover those costs," said Gascon.

High listing costs have led to both delisting and a drop in IPOs coming from the province. As private companies avoid the public markets, the struggle to access a broader range of investment will be an even steeper uphill battle.

"We may see more reverse takeover bids pursuant to which shelf public companies with no assets - other than a nominal of amount of cash - and generally clean of liabilities acquire the assets or shares of a privately-held company," said Hugo-Pierre Gagnon, associate at Osler. "In most cases, these shelf companies are capital pool companies listed on the TSX Venture Exchange, and the Venture team is very eager to help these companies complete their qualifying transaction such as a reverse takeover bid. For this reason, private companies looking to access the public capital market in the near term might go for reverse takeover bids because they will be quicker, more efficient and less costly than traditional IPOs."

Whatever the benefits and challenges of typical financing in Québec, the current down cycle has forced a change in tactics for many companies. Many new strategies and alternative financing solutions, on the part of both explorers and the financial industry, are proving innovative and effective.

"The market is very original. Lavery is seeing the rise of practices wherein some assets, which might have been core assets a couple of months ago, are monetized in order to get additional liquidities. Brokers are also coming to the market with new financial instruments for debt financing," said Sébastian Vézina, partner at Lavery. "Many mining companies are going to Europe and China, offering local players there a stake in ownership as well as management in exchange for financing. This is worth the time and investment, but the results are minimal."

Accounting firm Raymond Chabot Grant Thornton has seen a sharp increase in business between Québec and China. "When Chinese investors come here, we are on the front line making sure that their service needs are taken care of. We ourselves have been going through an education process over the last few years about Chinese practices, perspectives, mindsets, and priorities. We work closely with our Chinese member firm and attend several conferences and trade shows in China. We also assist Chinese investors at the professional level in the evaluation and due diligence of potential partnerships and deals," said Anand Beejan, mining sector leader at the firm.

With drills on hold, the down cycle has also been a time for research and development, which can be used to improve anemic balance sheets when applied to Québec's tax credit scheme. "There is a big advantage to identifying and balancing scientific research and experimental development eligible projects with commercial projects that may be eligible for different credits. Often it is the case that companies have projects that may be eligible for multiple different programs and then forego one program in favor of another when in reality there is the possibility of claiming the project within multiple different programs...There can be a lot of money left on the table if companies are limiting their scope and not maximizing their tax credit budgets," said Anthony Marinelli, associate at the accounting firm BDO.

COREM, a Québec-based research center that receives government support, has found that its unique pre-competitive research model is particularly fitting in the current climate for its industry members. Through government funds and annual fees paid by its members, COREM's Pre-competitive Research Committee is composed of industry representatives authorizes and monitors projects in research areas related to ore processing. "Companies face increasing pressure to have competitive operations. COREM's business model of regrouping industrial members to share the risks, benefits and cost of R&D is even more relevant in this context," said Claire Lavallée, executive director of COREM.

A boom in COREM's contractual research services from 2010-2012, increasing activities from $6.1 million to $10.8 million, enabled COREM to increase funding for its pre-competitive research program to $6.4 million and improve capacity at its labs and pilot plant. For its members, among them IAMGOLD, Osisko, Cliffs and ArcelorMittal, this research consortium is yet another example of cost-efficient solutions to costly research and development programs. •

INTERVIEW WITH

Michael White

PRESIDENT & CEO
IBK CAPITAL

Can you give us an introduction to your company and an overview of your recent milestones?

IBK Capital is a boutique investment bank based in Toronto that services the mining industry. We typically conduct advisory work and private placement financings for our clients, including mergers, acquisitions, divestitures, valuations and fairness opinions, as well as placements of equity and debt. IBK Capital develops long-term relationships with our clients where we can create true value not just for the firm but also our clients on the buy side and the issuer side. Last year, we completed a $7.2 million charitable financing transaction for Eagle Hill Corporation, which was a flow through offering done at a premium to market.

What are the benefits of a charitable financing?

Charitable financings work by issuing flow through shares to a buyer who then donates the bought shares to a charity, which then sells it on to another person, the end buyer, who wants to hold the stock. There is a good spread available between the flow through price and the end buyer price because of Québec's tax incentives and the federal government's allowance for shares to be donated at no tax cost. All four parties therefore benefit. By selling shares at a price premium to market there is less dilution back to the company. The charity receives a donation. The end buyer gets a nice discount, usually to market. And finally, the donor benefits by getting the tax reduction both from the flow through and the donation of the shares, which greatly reduces the cost on the donation. In Québec, a donor can lower the cost of a donation to less than 10% of its value. This type of deal funded Eagle Hill to continue exploration on their Windfall Lake project in Québec. We have used this type of financing in the past and will continue to conduct these types of transactions. Particularly in Québec, they are very powerful.

Aside from gold and iron ore, are you seeing increased investor interest in other commodities coming out of Québec, such as lithium?

From a hard rock perspective, Québec has very interesting lithium assets. Lithium is a metal that could be in very high demand as batteries proliferate into everyday use and sectors like the auto industry advance their needs for batteries. There is good possibility for a robust lithium market in Québec; however there may be a longer lead-time to see some of these projects going into production because of their hard rock nature. Hard rock lithium assets tend to be more difficult to process and more costly than the brines in South America.

Considering the challenges faced at this time by exploration companies, how have you changed your approach to work with them?

There is still funding out there and companies need to be able to find it or make it available. It is a matter of being able to convince that money to come back to the exploration sector and, even in these tough markets, this can be done. Companies need to be more creative in their approach and that is why we are seeing more royalty and streaming deals. We have noticed that at least on the inquiry level there seems to be more interest in joint ventures now from the majors and mid-tiers, which is a reflection of how the approach to funding is changing. For many years, the junior sector was able to easily raise money independently. When we were in that environment, it forced the major and mid-tier companies out of the type of ways that they like to transact because juniors were less willing to consider their offers. Now the major and mid-tier companies with cash are realizing that juniors are willing to come back to the table and negotiate transactions akin to the joint ventures we saw in the mid-nineties. It appears there is more activity in this space and it is healthy for the industry.

What expectations do you have for M&A in 2013?

Transactions will be completed more on the project level than on a company level. M&A has not increased over the last couple of years to the extent that everybody thought it would because companies were more interested in the projects out there and less interested in the companies that owned them. The difficulty was companies were not interested in selling assets. The attitude was buy our entire company at a healthy premium or go away. The difficulty with a merger is it can destroy value in a generally illiquid down market. Two juniors' merging can be seen as a liquidity event which puts additional downward pressure on the stocks. With tight money, companies are now willing to deal on their properties. I see acquisitions or deals on the project level increasing this year.

What is your outlook for investment in Québec in the coming year?

As long as the province maintains its desire to be a prominent place in the world for exploration and mine development, then the prospects for Québec look very good. Québec has always been very good at supporting itself, through the pension funds and flow through funds available within the province. On the exploration side, if you combine the province's willingness to internally fund projects with the ability to use flow-through shares for charitable donations, it creates additional funding that may not be available in other provinces. •

INTERVIEW WITH

Vitale Santoro & Hugo-Pierre Gagnon

VS: PARTNER
HPG: ASSOCIATE
OSLER, HOSKIN & HARCOURT LLP

What are your thoughts on the current stalemate between the PQ government and the mining industry?

VS: Disagreement between the PQ government and representatives of the mining industry was expected when the government announced its new proposals. Rather than a stalemate, I believe the situation can be best characterized as disguised negotiations. I suspect that at the end of the day the PQ government will scale back somewhat from what they originally announced.

HPG: The challenge for the PQ government is to strike a fair balance between attracting investment, creating jobs, and ensuring that all stakeholders are involved in the process. As that challenge is very difficult, the government likely put forward its most demanding proposal in order to gauge the reaction of stakeholders, and the community at large. I believe they will now go back to the drawing board and see whether they can reach a compromise that will be more satisfactory to all interested parties by scaling back their current platform. This has been their modus operandi on many other policy measures since their election in September 2012.

One of the greatest challenges facing the industry at the moment is raising capital from public and private markets. What is, in your view, the best way for junior mining firms to get the financing they need right now?

VS: Québec has a lot of institutional players, such as Sodemex, Fonds de solidarité des travailleurs du Québec (FTQ), and Investissement Québec. Those sources have been very helpful to a lot of companies. The issues for junior mining firms when it comes to their ability to raise capital are pricing and project location. These issues affect the profitability of the mine as well as potential taxes. However, it is a difficult time. Even players like FTQ will be taking a step back because they have probably placed a significant amount of money recently in resources such as gold, and they need to see where prices will land before they make any additional moves. Therefore, I believe that right now most fundraising will be done through the private markets. There may be some public financing, but unless you have a really nice story, capital markets are almost shut down for junior miners.

HPG: We will see less IPOs as investors will be very fearful in the near-term climate. Therefore, the difficulty for privately-held junior mining companies that have developed successful case studies will be acceding to the public capital market. They will have a hard time accessing the broader range of investment to which a public company has access. We may see more reverse takeover bids pursuant to which shelf public companies with no assets (other than a nominal of amount of cash) and generally clean of liabilities acquire the assets or shares of a privately-held company. Reverse takeover bids are often coupled with an equity financing such as a private placement or a public secondary offering. In most cases, these shelf companies are capital pool companies listed on the TSX Venture Exchange, and the Venture team is very eager to help these companies complete their qualifying transaction such as a reverse takeover bid. For this reason, private companies looking to access the public capital market in the near term might go for reverse takeover bids because they will be quicker, more efficient and less costly than traditional IPOs.

What, if anything, sets Québec apart as a mining jurisdiction from its counterparts in Canada or overseas?

HPG: Québec has built up generations of technical knowledge about its mineral resources throughout its long history. The province has always been very open with sharing this knowledge. Access to information on Québec's mineral resources is also easily accessible online. Anyone who wants to conduct surveys and exploration work here has access to a lot of technical knowledge, expertise and qualified labour which fact is very appealing for investors coming from outside. The business environment and regulatory regime in this jurisdiction also used to be very predictable and welcoming of new investments. It is not clear how much of that has changed with the new government, but these positive factors were certainly much more noticeable with the previous government. •

Moving the Industry Forward:
Engineering, Manufacturing and Equipment

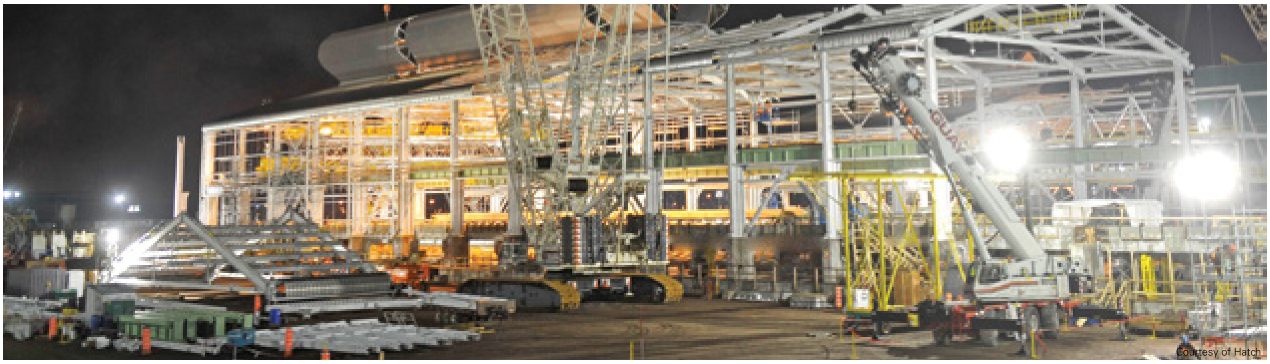
"Some organizations have a few 'A Teams' or execution hubs around the world. But WorleyParsons' philosophy is to have many in each country. For example, in Canada there are four execution hubs that we have access to for big projects. WorleyParsons has some of the best experts and completed the world's biggest projects in rare earths, for example. The same goes for phosphate, as they recently completed the biggest phosphate project in the world in Saudi Arabia. Phosphates and rare earths are new areas of practise in Quebec, and it is good that we can rely on international experience with them."

- Eloise Harvey, VP Corporate Development,
CEGERTEC WORLEYPARSONS

Courtesy of Aurizon Mines Ltd

Social Acceptability

Spurring firms to strengthen environmental practices



Courtesy of Hatch

The state of the mining and exploration market, facing a dearth of funding and falling commodity prices globally and taxation uncertainty in Québec, is not a situation that anybody involved in the industry gladly welcomes. Yet challenges force solutions, and for Québec's engineers and manufacturers, the downturn has been a time for innovation, diversification and global expansion.

Québec has always had a strong reputation for research and development, spending more in this area (across all industries) than any other Canadian province. In the mining industry, these efforts have been increasingly guided by considerations of social acceptability. Québec's service and technology providers, already known for their technical expertise, are honing their expertise accordingly to meet heighted environmental, health and safety standards, and playing an instrument role in bringing new technologies to the field that minimize environmental and social impact.

Biogénie, a division of EnGlobe Corp specializing in remediation, offers miners a patented technology to treat organic soil contaminants biologically. The brainchild of two graduates of Québec City's Laval University, Biogénie now operates globally, bringing its biological soil treatments to many industrial sites across a range of sectors. Unlike many support industry players who are diversifying beyond mining, Biogénie is strategically turning toward the sector to work with the long-life mines starting up across Canada, namely in Québec and Nunavut. "We help mining companies who need to remediate soil they have impacted, which afterwards can be reused to reclaim their tailings," said Eric Thomassin-Lacroix, general manager, Site Assessment and Remediation, Northern Canadaat Biogénie.

"One advantage of our technology is that it is exportable; we can bring it to a mine site anywhere. We have worked, for example, on projects in the Northwest Territories using wind turbines as the sole energy source to remediate the soils. Our clients can also come to us to deposit their soil at our permanent treatment facilities located in Yellowknife or Kuujjuaq. Biogénie has already applied more than 35 remediation technologies and with the support of a multidisciplinary technical department of engineers, microbiologists, geochemist, agronomist and hydrogeologists, we are able to optimize them to suit the needs of specific clients or projects."

To assist with environmental work, stakeholder communication expertise is also an increasingly important asset for a service provider. Roche, a Québec-based engineering firm with environmental expertise, worked with Stornoway Diamonds on its ESIA for the Renard project, which won the E3 Plus award for its environmental and social stewardship. "Roche was responsible for developing communication tools for the public consultations in Misstissini and participated in the public consultations and public hearings alongside Stornoway's representatives," said Vital Boulé, director of environment at Roche.

H.J. O'Connell, the constructors of the first dams and dikes for ArcelorMittal's project site in 1981, has over the years honed its construction methods and techniques to better meet environmental standards. "Since 1981, no other contractor has been taken on for that site. We have also recently built a fish habitat for Wabush Mines," said Anoop Singh, district manager LECQ / H.J. O'Connell. "With companies like ArcelorMittal gaining ISO 1401 certification, environmentally conscious construction is becoming the standard. This is a good thing because we now receive environmental specifications for our contracts, whereas in previous years the industry has had to define its own environmental standards on an ad hoc basis."

The mining industry is all too familiar with public criticism, and in the past many elements of that criticism were no doubt deserved. Yet in the past 30 years huge strides have been taken, very often driven by the private sector itself. The environmental and social impact of the sector is now argubably in many ways than many other economic sectors, as is continually diminishing in size as environmentally-friendly products are adopted. The demand for these products has been noticed by EPCMs and equipment providers, who are in turn catering to this growing market. "Hewitt Equipment provides lube trucks which can plug into customers' machines, remove their oil without spillages and decontaminate it to be used for long periods. Meanwhile, our services for reducing failure eliminate the environmental impact of repairs, and Caterpillar has made massive investments over the years to reduce emissions to next to nothing," Jim Hewitt, chairman and CEO of Hewitt Equipment.

INTERVIEW WITH

Eric Thomassin-Lacroix

GENERAL MANAGER, EASTERN AND NORTHERN CANADA
BIOGÉNIE, DIVISION OF ENGLOBE CORP.

Can you give us a brief history of Biogenie and its role in Québec's mining industry?

Biogenie, division of EnGlobe Corp, was founded more than 25 years ago by two graduates of Laval University based in Québec City, one engineer and one biologist, who at that time strongly believe in beneficial reuse of the soil, rather than landfilling it. They began by offering environmental services, but later patented new technologies to biologically treat organic soil contaminants. Soil can be biologically treated in any environment, and we are interested in all types of organic contaminants. We help mining companies who need to remediate soil they have impacted, which afterwards can be reused to reclaim their tailings. We have worked all across the North and also have offices in Montreal, Québec City, Edmonton as well United Kingdom and France. Beyond our core business, Biogenie also offers environmental site assessments (Phase I to III) to analyze the types and extents of contamination, provide remedial action plans along with solutions specific to each site we assess.

What are the advantages to Biogenie's approach to treating contaminants?

Being able to rely on 17 highly qualified scientist part of its Innovation and Development department, Biogenie conducts small-scale laboratory experiments for any type of contaminant. We bring soil samples into the lab and run trials with different formulations and settings. In this way, we can test the efficiency of our technology and how it can be tweaked to reach specific remediation criteria. These experiments allow us to prove our expertise to the client and guarantee our ability to work under certain conditions, such as on remote sites without engine power. For properties where biodegradation is not possible, Biogenie can rely on other physic-chemical approaches. In a situation of technical impracticability, we can always excavate the soil and bring it to an approved disposal facility.

Regarding remediation, what unique challenges are there in Québec's North?

Local employment and logistics are the key challenges in Québec's North. Our northern office, serving every Territories in the country, is dedicated to working in the remote locations where mines are based; we have developed the expertise to mobilize to these sites. Biogenie now has a CAT-Train, which can do over-land transportation. We have our own equipment, and can bring and operate our own work construction camps. Our transportation capabilities mean we can help small companies who need to mobilize their own equipment to their exploration sites. Most projects in Nunavut, where we have remediated five remote former radar sites belonging to the DEW Line, have local labor force targets of up to 70%, so it is important for us to provide associated training to our workers.

Several mining companies are taking the initiative in cleaning up abandoned mines. Can Biogenie involve itself with these industry efforts?

With our expertise in site assessments and cleanups, Biogenie can also undertake projects where demolishing is involved. This fits with our objective to restore sites to their original conditions, such as the DEW Line former radar stations. Our experience working at remote sites and our expertise in different remediation technologies would make us a valuable partner for mining companies undertaking these cleanup initiatives at abandoned mine sites.

Your specialty is with soil, but do you involve yourself in tailings?

For tailings, Biogenie can provide covering and re-vegetation. Together, Biogenie and his sister company Solutions EAS, has more than 22 permanent soil treatment facilities located in both North America and Europe; the soil it treats can be reused to cover mine sites. We also have an organic waste management division. Mixing a partially treated contaminated soil with some compost works very well for covering and re-vegetation. As a part of EnGlobe Corp, there are many different divisions Biogenie can work in synergy with, such as another division Tanknology who specializes in the reservoir testing and calibration sector. •

INTERVIEW WITH

Rob Metka

GLOBAL MANAGING DIRECTOR, INDUSTRIAL MINERALS
HATCH

Following the boom in mining activity in 2011, the industry has faced a steep slowdown; how has Hatch evolved its strategy to deal with this new climate?

In 2011, everyone thought the financial crisis of 2008 was history. Investment resurged and projects were barreling ahead at full speed, but the next wave of turmoil was then precipitated by the European banking crisis. In a matter of three years we have seen a complete cycle of depression, euphoria and now depression again. It has been hard on everyone: producers, financiers and service providers like Hatch. Globally we peaked at around 11,500 employees, but undoubtedly we overgrew and have had to throttle back in the last year. Today our numbers are around 10,000, with a different mix of expertise from before. Advanced construction projects have continued, while intermediate ones have been placed on hold. There are now more studies to find new efficient ways to deliver projects; some are looking at how to reduce capital intensity by phasing. This probably does not yield the best NPV or IRR but limits debt exposure, which may be what shareholders are demanding.

In response to the crisis, Hatch has seen an even stronger need for a broad international reach. In the coming year, we anticipate working in Gabon, Mauritania and other areas where we did not previously have the available resources to help. We see ourselves as a truly global company; regions are completely irrelevant. Clients in the Amazonas, for example, do not care who the best metallurgist is in their state, or even in Brazil; they want to know who the best is in the world. Hatch, which is employee-owned, only reports global earnings and pushes all regions to work within a collaborative global environment.

The Québec mining industry is increasingly examining partnerships in francophone Africa. In what ways does Hatch intend to service upcoming international projects, particularly in West Africa?

Hatch's service is always situational; we have to weigh up all the factors. Typically, Hatch looks for a way to offer a differentiated service. We want clients facing complex situations ideally suited for our capabilities, who are reliable and operating in a safe environment for our staff. This eliminates some parts of the world, but there are ample opportunities with mid-tier companies in Africa. Many of the large Russian companies are taking an interest in the continent, and some of the big European players are also becoming more active. This is good for Hatch because we do well dealing with large companies. The best fit for us is when there is a really knowledgeable client because together we can really create synergy.

How will uncertainty about regulatory change impact the feasibility of projects in Québec?

Projects with enough natural momentum can overcome these obstacles, but others will fail to get over the hump. A lot of good projects will probably slide back and be parked on the side of the hill. Of course, in our world of scarce resources, projects will eventually go ahead; demand from Chinese and Indian urbanization will drive prices up. The question is just whether it will happen in this decade or the next.

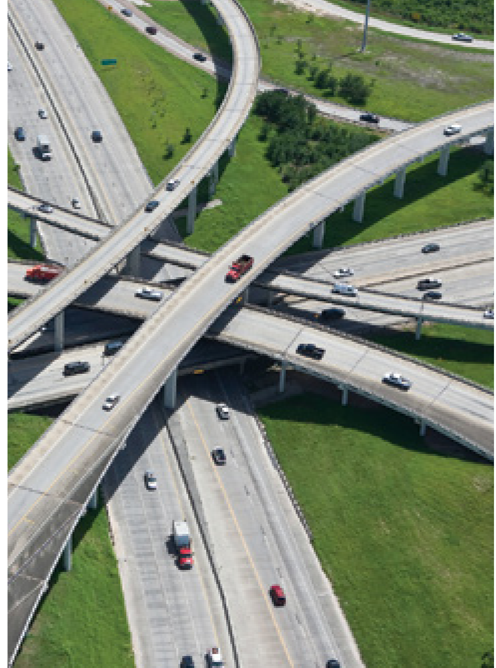
Québec is a center of metallurgical excellence for Hatch. How has the local metallurgical processing industry been impacted by recent trends in mining?

Metallurgical processing is affected just like everything else in the mining chain. It is the same story with every commodity: there needs to be a focus right now on cost reduction and putting yourself in the position to capitalize on the next wave of growth. In the interim, companies are giving all their free cash flow back to corporate to placate shareholders. The London-traded majors have to satisfy their market, whose demand right now is for dividends. It is unfortunate to have to act according to the immediate wishes of shareholders, because a small uptick in the global economy could quickly shift the mining industry from oversupply to undersupply, and everyone's horizons will then change. Our big concern is that the next surge will be even bigger than the last, creating all sorts of shortages and cost-escalations.

One of the biggest issues for projects in Québec's under-explored north is infrastructure development. How can Hatch bring in its multidisciplinary expertise to help projects go ahead?

Hatch can absolutely apply its multidisciplinary expertise to assist projects in Québec's far north. Many people do not realize our company has diversified itself beyond mining and metals into public and industrial infrastructure and energy. For example, we are working in the tar sands of Alberta and are looking forward to partnering effectively with Hydro-Québec in the coming years. Many mining projects today are infrastructure-challenged and, without support from the government, must consider installing their own railways and port facilities. There are many which could be catapulted into feasibility if the infrastructure was publicly funded. It remains to be seen whether society is prepared to make the tough decision to put tax dollars toward future jobs, but I suspect companies will have to look after themselves, in some cases with two operations sharing common infrastructure. •





Site selection for mine waste management – a good start to a great project

Anne-Marie Dagenais, Eng., Ph.D., Project Engineer
and Andrée Drolet, Eng., PMP, Project Manager,
Golder Associates

Site selection is among the first steps in planning waste management for a mining project. Our experience has taught us that budget and time constraints must never lead to neglecting this critical task. Poor siting often results in operational problems, complex closure or irreversible limitations.

When undertaking a site selection mandate, Golder's main objective is to assist the client in identifying economically and technically sound options that will be acceptable to communities and that will successfully go through permitting and authorization stages.

IMPORTANCE OF A STRONG PROCESS

Stakeholders have different and sometimes conflicting interests. Taking on the task of identifying locations to store and manage mine waste must rely on a strong process in order to avoid subjectivity and provide arguments in defending the best options to stakeholders, including authorities.

Over the years, Golder has carried out many site selections and has developed an approach and a tool (GoldSET©) that enable our professionals to cover all aspects and ensure that no stone has been left unturned.

GUIDELINES

In Québec, regulatory authorities require that formal site selection studies be submitted for permit application for any mining waste management facility.

The relevant guidelines for a site selection study are the provincial Directive 019 from the Ministère du Développement durable, de l'Environnement, de la Faune et des Parcs (MDDEFP, 2012) and federal document Guidelines for the Assessment of Alternatives for Mine Waste Disposal from Environment Canada (EC, 2011).

Directive 019 presents the environmental guidelines and requirements for mining projects, and outlines the content of the documents to be submitted for permitting. The federal guidelines are used to assess options whenever a project is considering the use of a fish-frequented water body for the deposition of mine waste. It also provides useful guidance for the assessment of all waste management facilities including those developed on land.

GOLDER'S APPROACH AND TOOL

Golder's approach and tool for site selection studies consider the economic aspects of the development of a waste disposal facility along with the environmental, social and technical aspects in the evaluation of the options as per the federal guidelines.

This approach also considers deposition technologies and storage alternatives as part of the site evaluation. Impacts related to the deposition technology or storage alternative selected for a particular site would also be subjected to the evaluation process, enabling the selection of the most advantageous option for the project.

The site selection approach can be divided into four main stages. At each stage, the client is consulted to ensure that:

- the specificities of the project are reflected in the options developed;
- that all the stakeholders and their interests are identified; and
- that there is a consensus on the criteria, the scoring and weighting scheme used and that their significance for the evaluation is understood.

These ongoing discussions are vital to ensure that the evaluation is transparent to the client allowing him to take ownership of the selection process and development of the waste management facility.

Throughout the process, GoldSET© (Golder Sustainability Evaluation Tool) is used to record site characteristics, criteria, weighting and scoring scheme, and to evaluate the various alternatives. GoldSET© is a decision support tool to embed sustainable development principles into engineering projects. This comprehensive analytical framework developed by Golder, allows for an unbiased comparison of options on the basis of sustainability principles that can lead to sound business and engineering decisions.

As a first stage, specificities of the project are defined, highly conceptual options are developed and pre-screening criteria are established. The pre-screening criteria are unique minimum specifications that, if not met, could be fatal flaws for the project. Fatal flaws are site characteristics that are so unfavourable or severe that, if taken singly, can eliminate a site. The pre-screening process will result in the identification of alternatives to pursue in the selection process.

At the second stage, the list of criteria is established with the client based on a review of corporate policies and objectives, authoritative references on sustainability as well as on identifying key local specificities and technical constraints.

The third stage consists of the characterization of each site according to the selected criteria. Characterization is often based on a conceptual model of a tailings management facility as presented in Figure 1. Physical characteristics used to evaluate the technical and economical aspects will be derived from this model. It will also be used to evaluate the impact of a waste facility on its surrounding environment and communities using aerial photography, local legislation and known environmental and so-

Photo taken by Mayana Kissiova for Golder Associates at Osisko's mine in Malartic, Québec

cial elements in the vicinity of the potential sites. To ensure a thorough assessment, Golder can count on a team of environmental and social science specialists to work alongside the engineers in developing the conceptual options.

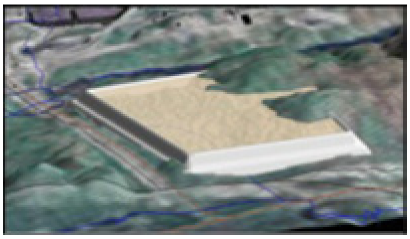


Figure 1: Conceptual model of a tailings management facility option

The last stage is the evaluation of the options by attributing a score to the weighted criteria. The evaluation of the various options under consideration is then performed based on a structured system for ranking the options within GoldSET. A sensitivity analysis is done by assigning different weight to the criteria. By doing so, the elements to which an option is sensitive can be identified, thus providing understanding of the options' strengths and weaknesses.

The interpretation leading to a sound decision can be made based on the outputs of the evaluation process. Example of the outputs is shown in Figure 2.

In providing support during the decision process, we want to emphasize that the choice of an option is not dictated by the framework but remains the client's prerogative. However, the process provides an opportunity to understand the strengths and weaknesses of the options and legitimize the selection of an option on that basis.

The benefits provided by GoldSET© are not limited to understanding and managing the issues in order to make a decision. The tool with its transparent evaluation process and its graphical capacities can also be used to support the communication process with the various stakeholders.

*As a global, employee-owned organisation with over 50 years of experience, **Golder Associates** is driven by its purpose to engineer earth's development while preserving earth's integrity. From more than 180 offices worldwide, over 8000 employees deliver solutions that help clients achieve their sustainable development goals.*

*Since the debut of **Anne-Marie Dagenais, Eng., Ph.D.** with Golder in 2007, she has participated in numerous projects related to mine waste management, such as geochemical characterization programs, design of storage facilities and closure planning.*

***Andrée Drolet, Eng., PMP,** started with Golder Associés in September 2007. She joined the Geo-engineering Group as a Contract Manager and is now a Project Manager in mine waste management projects coordinating all disciplines involved, including the development of mine closure plans. She is also the Coordinator of the Project Services Office.*

OPTION 1

Environmental	71%
Social	59%
Economic	57%
Technical	38%

OPTION 2

Environmental	61%
Social	60%
Economic	68%
Technical	39%

OPTION 3

Environmental	71%
Social	76%
Economic	77%
Technical	40%

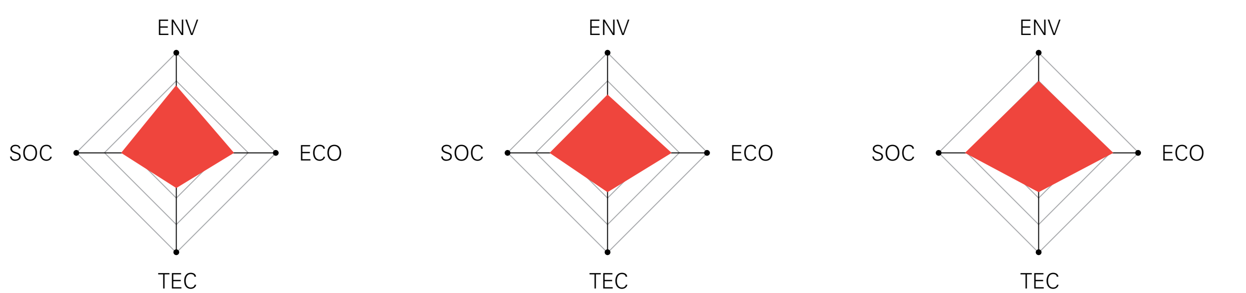


Figure 2: Example of result outputs from GoldSET showing scoring and graphical area representation

A smooth path to successful project development

Vital Boulé, M.Sc., Director Environment, Roche Consulting Ltd

Environmental assessment (EA) process, an effective tool to optimize project design and costs in a competitive market

Environmental assessment is often perceived as an extra cost by project sponsors. This is a common belief that will be challenged in this article. Working for Roche the past 22 years, I have had the privilege to be an insider in the development of large-scale greenfield mining or infrastructure projects. I am right in the middle of project development teams, government regulatory institutions, local stakeholders and lenders. As environmental consultants, we guide project sponsors through the maze of the applicable legislative and regulatory framework and the environmental and social best practices in order to lower the project exposure to risks, increasing the likelihood of successful project financing. In a competitive market, only the best projects with a strong social acceptance will go ahead.

Roche's historical track record has taught us that it is early on in the project development that you have the highest capacity to influence the project outcome at the lowest cost. Throughout the project lifecycle, EA helps to reduce project costs through energy and water conservation measures, process efficiency and design optimization to limit the project footprint and earthworks. The EA process is an effective tool to assess alternative ways to provide access to the land and natural resources. A carefully planned procurement strategy reduces waste management costs and fosters local economic spinoffs. Most importantly, EA helps to shorten the project critical path.

Environmental and Social Impact Assessments take a long time to complete…a myth

As an EA practitioner, sometimes I hear that Environmental and Social Impact Assessments (ESIA) take a long time to complete and are a waste of both time and money. This is another myth. The EA process helps to develop more robust projects that can sustain the scrutiny of the public, government authorities and the financial community. At the end of the day, these stakeholders decide whether to support and finance the project or not. Projects increasingly fall under the scrutiny of the financial community and of the newly revised (May 2013) Equator principles III and the associated International Finance Corporation (IFC) performance standards on environmental and social sustainability, as a way to reduce the risks for investors.

Consultation process as part of the ESIA is a pre-requisite to obtain social acceptance

Local community concerns are commonly underestimated despite the fact that they often lead to important delays in the project if not addressed properly at the beginning of the project. Consultation not only means that project sponsors have the obligation to inform local communities, meaningful consultations must take place early during the EA process and not after the project design is completed. Meaningful public participation requires that public inputs are truly considered in the project optimization and design, and that public concerns are addressed in the open by the project sponsor. To do so, a proponent needs to listen to, document and respect the public's views and perceptions, act to address the issues raised and to fulfil its promises. Roche was awarded the mandate from Stornoway Diamond Corporation to carry out the ESIA for the Renard Project in Northern Quebec, the first diamond mine in Quebec, and to coordinate public consultations and public hearings with the Cree aboriginal community affected by the project and the non-native communities. This project's social acceptance is high because Stornoway showed leadership by engaging early on, and throughout the project, the local communities affected by the Project in a sustained, meaningful and transparent dialogue. This is what the Chief of the community most affected by the Project had to say regarding the consultation process : "The proponent has demonstrated an immense openness and has been willing to adapt the project in a manner that respects the Crees of Mistissini, our interests, our values, our culture and our way of life. This is the way we want to be dealt with." (Chief Richard Shecapio of the Cree Nation of Mistissini). The project received the E3 Plus award from the Quebec Mineral Exploration Association for the "high level of environmental and social responsibility" shown by the Renard Diamond Project.

Failure or serious delays encountered by recent major projects were more due to the lack of social acceptance than the lack of financing or technology. More than ever before, projects must earn their social license in order to successfully proceed.

Multidisciplinary and site specific knowledge and skills are essential to successfully guide project development

To develop greenfield projects in Northern Quebec or worldwide, you need access to people that know the land, the natural resources and the human environment. That is why our recruitment strategy aims to carefully select people with the knowledge and practical experience of these environments, investing in their professional development and keeping these resources to ensure the stability of our team. This stability is appreciated by our clients. Year after year, they know they can count on us to ensure the follow up of their project.

This firsthand knowledge of the specificities of

the North is important when developing mining projects. For example, the geochemistry and ultrapure nature of surface water in some areas of Northern Quebec influence the mine water management and water quality objectives to be achieved. As well, to ensure the perrenity of wetlands and fish habitats, you need knowledge of the ecological conditions supporting the numerous wetland and stream systems present in the North. During the 2010-2013 period, in Nunavik and Northern Quebec, Roche has carried out surveys and mapped the biophysical and human environments of approximately 3,000 km² as part of environmental studies.

In order to benefit from traditional ecological knowledge, aboriginal field assistants are actively integrated into our survey teams. This strategy encourages the development of know-how and fosters local economic and business opportunities while contributing to the capacity building expected by all communities welcoming development on their land.

Roche also has qualified and experienced resources in mining and mineral processing, mineral resource assessment, environment, health and safety, water and atmospheric emissions management, industrial engineering, land planning, transportation and access road development and construction, landscape architecture, building, construction, socio-economic assessment, public consultations, etc. This multidisciplinary expertise provides our clients with all the depth and perspective necessary to better assess projects risks and opportunities.

Knowledge of applicable environmental regulatory framework

Early on in project development, a good knowledge of the applicable regulatory framework is necessary. This may vary depending on the project scope, location and land tenure. We always recommend to our clients that they carry out an environmental scoping study to identify key project environmental and social issues, to outline the applicable EA process and regulatory framework, and to delineate the project timeline and environmental studies leading to project implementation. Through practical experience, we can provide our clients with a clear understanding of the project timeline and of key obstacles to address. With clients that have a portfolio of projects, scoping or strategic environmental assessment can help them decide which projects are the most robust and should be prioritized.

Through Roche's 50 years of existence, we have witnessed a strengthening of the environmental regulatory framework. We always provide our clients with accurate and up-to-date information to enable them to make informed decisions and plans.

The EA experience gained over the years is exported worldwide

The experience gained through the execution of many ESIAs is sought after and exported worldwide. International Funding Agencies, multinational project sponsors and governments contact us to assist them in project development, environmental assessment or analysis and institutional and regulatory framework strengthening.

Conclusion

The relatively low cost of investing in project optimization with a multidisciplinary team of experts and through meaningful public consultations early on in the project development, will have a tremendous positive impact on the environmental and social acceptance of that project and its critical path, and will likely prevent project design changes which could involve major additional costs and delays. •

***Vital Boulé** has 25 years of relevant experience as a project management professional and environmental specialist. He is currently Director of the Environment Sector of Roche Consulting Ltd, an engineering-construction consultancy based in Quebec City, Canada. Throughout his career, he has been active in environmental assessment and monitoring, integrated natural resource management, aquatic ecology as well as environmental protection and rehabilitation. Among other things, he has contributed to the successful development and implementation of large-scale mining and infrastructure projects in environmentally sensitive and culturally complex areas such as the US$5 billion Koniambo Nickel Project in New Caledonia.*

***Roche Ltd**, Consulting Group is one of the largest construction engineering firms in Canada. For 50 years, Roche has covered all engineering disciplines and has made a name for itself in building, construction, energy, environmental and industrial engineering as well as in forestry, urban infrastructures, transportation and urban planning.*

INTERVIEW WITH

Natacha Leclerc, Robert-André Adam & Pascal Porlier

NL

NL: LAWYER
RA: EQUITY PARTNER
PP: PARTNER
CAIN LAMARRE CASGRAIN WELLS LLP

Can you provide us with an introduction to CLCW and your work as it pertains to the mining industry?

PP: CLCW was formed in 1999 when a group of regional firms in Québec decided to work together and pool their expertise. Our firmed is formed of specialists in different areas of law working throughout Québec. Our office in Val-d'Or often works with various players in the mining industry, from the mining companies themselves to First Nations communities. Mining files are handled regionally however, the Val-d'Or office works in close collaboration with the Montreal office when it comes to mining law due to the presence of experts and location of the TMX and Autorité des Marchés Financiers. When it comes to explorers, it is very beneficial for us to meet directly with our clients in the Abitibi-Temiscamingue region.

RA: CLCW has 16 offices around Québec, each regional office having been formed of major local law firms. Branches are formed of people originating from each region that can connect with the regional players. There are no other law firms in Québec using such a business model. We have the local expertise, but are associated and work together as one big enterprise.

When it comes to First Nations legal issues related to mining, where has CLCW specialized in terms of your practice?

NL: When it comes to the aboriginal aspect of the mining industry, our work with First Nations is mainly centered on consultation and accommodation issues. To avoid litigation and lengthy land title claims, as soon a company is on native land, negotiations are initiated with First Nations to conclude impact and benefits agreements or other similar agreements. Many First Nations and mining companies opt for agreements in two stages: the first stage is a Pre-Development Agreement (PDA), covering the construction, development and exploration stages, and the second is the Income Benefit Agreement (IBA) stage, which takes place when the mine is under operation.

The first step consists of informing the mining company about the existence and extent of First Nations land claims before we can sit down and negotiate, which can be a huge step. We usually start out with a brief aboriginal law course, explaining why they have rights, what those rights are and what options exist towards reconciliation of First Nations rights and mining activities. If companies do not sit down with the First Nations, they will end up with court cases and major delays or even termination of their mining projects.

What are the key challenges that come up during the consultation process for a mining project?

RA: Most of the time, when speaking of First Nation groups and mining companies, people foresee confrontation. In fact, First Nations want to see projects go ahead; but want to ensure that they are a part of them and have an opportunity to grow with the mining company.

NL: Stakeholders should be sitting down even when a project is in the strategic planning phase. Companies try to wait until the exploration is completed to undertake consultation and that is too late. First Nation communities are gaining more knowledge and claiming their rights. There is a misconception that they are just claiming financial benefits. In reality, they want jobs and training programs implemented in advance so they are ready to start working when the mine is in operation.

Can you provide us with some successful examples of First Nations initiatives that the local industry has developed?

PP: Mining companies have created positions for native communities to join the management workforce. For example, in one case, an assistant to the underground mining operations supervisor was created as a training opportunity. This is not a usual position, but by creating this role and placing a First Nation representative in such a position, they are able to learn and eventually fulfill the position.

We also have a First Nations group that is recognized by the TSX as a preferential investor as a result of an agreement with a mining company. They own shares of a mining corporation, thereby ensuring the community is invested in mining operations and reap substantial financial benefits. They are now involved as shareholders and shall generate more profits if the project goes well. In another case it was a good solution for a small exploration company. At the exploration stage, funds are limited, so it did not impose too much strain on the cash flow.

What lessons can be learned from the IBA signed with Goldcorp and the Cree; will we see many more agreements like this in the future?

NL: We are constantly reinventing the terms of IBAs and trying to adapt them. You cannot just take one model and use it from one community to another. We are considering using other types of legal structures instead of IBAs, which can scare mining companies. As a team, we reinvent how we work with First Nations and look at how everyone can reap benefits.

How do you expect First Nations relations to progress within the Québec mining industry?

RA: There is not much precedent, aside from the Cree, so this is something that is pretty new to the mining industry in Québec. But there is an opening and we are hoping that as years go by that it will become easier to sign agreements. CLCW is the best player for being a partner in this, because these negotiations happen close to where we have offices. The same file is treated by our experts across Québec. •

Equipment Suppliers

Seeking cost control in the down cycle

Equipment suppliers to an industry as cyclical as mining face a challenging job. Managing inventory in expectation of expected peaks and troughs in demand requires a predictive skill or large degree of luck that not everybody can claim.

The current downturn has severely impacted the equipment supply sector, with many players mobilizing for high capacity and expansion in the upswing of 2010-2011 that subsequently failed to materialize. Hewitt Equipment, the authorized Caterpillar dealer for the province of Québec as well as Western Labrador, acquired the distribution rights for Caterpillar's Bucyrus mining product range in August 2012. Subsequently, the mining slowdown and a decrease in infrastructure project spending have led to a drop in new machines going into the field.

Yet with predictive abilities relying more on luck than skill, how a company manages an unexpected change in market dynamics is a more accurate gauge of good management. Many equipment suppliers are using the current market conditions as a way to distinguish themselves, providing new solutions to help their clients control costs. For Hewitt Equipment, which launched their D-tech Condition Monitoring Center in 2011, an investment that may have initially seemed poorly timed has proven helpful in assisting cost reduction. With a team in place to monitor information feeds coming from machines, either by cell connection or GPS, the monitoring center can check machines' health and productivity, and alert customers early on to potentially costly problems. "Safety can reduce costs in its own right, and Hewitt Equipment is one of five dealers around the world to have worked with Caterpillar on the advancement of Condition Monitoring," said Hewitt. "For several years we have had the information available from machines, but using it intelligently and effectively is not simple."

Dux Machinery, a Repentigny-based equipment supplier focusing on trucks for underground mining applications, is a good example of a company that has to deal with cost issues while keeping a significant portion of its products local. Dux's equipment is highly specialized, and the firm often caters to stringent demands from customers who prefer specific dealers or high-end technologies while maintaining a desire to be economical. According to Caroline Bumueller, marketing manager at Dux Machinery, Dux is particularly proud of its work with local subcontractors and the domestic heritage of the parts they provide. "As we have had more equipment in production lately, we have been able to secure volume pricing and pass along savings to our customers whenever possible. We also buy locally, which not only helps reduce transportation costs and lead times, but allows us to better manage the quality of our product," said Bumueller.

Equipment manufacturers have also found the need to prove themselves in a difficult market. Cowan Dynamics is another example of a company that is proud of its ability to keep its supply-side operations in Québec. The company manufactures its equipment, hydraulic and pneumatic cylinders, entirely in-house at its Montreal office. The ability to ensure rigorous quality control through domestic

Courtesy of Dux

manufacturing and oversight while being cost-efficient seems like a daunting task. To that end, Cowan Dynamics invests considerable resources in R&D and approximately 85% of its products are non-standard, ruling out scalable mass production. Yet, there is a reason that Cowan Dynamics' client list includes such heavyweights as Xstrata, RioTinto, and IAMGOLD. The company has established a proven track record of success. "A good example of a recent success in productivity enhancement is our work with RioTinto for a copper mining project in the United States," said René Wenker, Cowan Dynamics's president. "Cowan Dynamics brought a solution to them to enhance the efficiency of their existing flotation cells. RioTinto estimated that, partially because of [our solution], they were able to increase their yield by around $33 million annually."

The secret to Cowan Dynamics's success is the company's strategy to take advantage of its relatively small size and to keep its sales and service personnel mobile. The low overheads associated with being a small firm counterbalances costs imposed by non-standard design processes and domestic, in-house production. Even the production process, however, was not taken for granted. "Three years ago," said Wenker, "we embarked on a structured and aggressive 'Lean Manufacturing Program' with the help of an outside consulting firm."

Lower overheads for drilling companies have also had a huge impact on the market, as international drillers' fleets remain largely inactive. Foramex, which specializes in surface diamond drilling for mining exploration, has a small fleet of three rigs that has enabled the company to more adeptly navigate the shrinking market. Despite the low levels of exploration activity in the Abitibi, two out of three of Foramex's drills are running and they are awaiting a contract on their third. Though only founded in 2005, and based in Rouyn-Noranda nearby major international drilling companies, Foramex counts among its clients Richmont Mines, IAMGOLD and Osisko.

"We are in a quiet time today, but being a small company, it is easier for us to tighten spending because our overhead is lower than those of larger drilling companies. To this end, it will certainly be easier for Foramex to get out of the crisis the sector is currently experiencing. We are using this slowdown to repair and improve our equipment. The deceleration in activity has also allowed us to develop new ideas and to focus on making ourselves known to potential customers," said Serge Caron, president of Formex," said Serge Caron, president of Foramex.

As equipment providers strive for greater cost efficiency, product flexibility has played a key role in appealing to clients. The Val-d'Or-based drill manufacturer VersaDrill made its name as one of the first companies to put aluminium drills on the market, and is now also one of the first companies to adapt underground drills for surface drilling. "This is a practice that has caught on. Boreal Drilling, for example, frequently uses our underground drills for fly jobs up in the north. We are also seeing clients in Mexico and Africa using underground drills for surface drilling when they are not sure how deep they will need to go," said Philippe Laplante, general manager of VersaDrill.

With the creation of an engineering department in 2011, VersaDrill is also more focused than ever on R&D to stay competitive in the bear market. "We decided at the end of 2011 to build a drill with geotechnical applications, which was the product of 14 months of R&D and business development," said Laplante.

As the exploration sector in Québec stagnates, building a reputation in the geotechnical market could stand to double the client base for a drilling company. •

INTERVIEW WITH

René Wenker

PRESIDENT
COWAN DYNAMICS

Could you provide an introduction to Cowan Dynamics and the company's role in the mining sector of Québec?

Cowan Dynamics was founded in 1957, as a manufacturer of hydraulic and pneumatic cylinders, particularly for processing and manufacturing applications. We have 30,000 sq ft of manufacturing and office space at our headquarters in Montreal plus a fully staffed sales office in Ontari. We are focused on servicing the mining, petroleum, and aerospace sectors. We specialize in solutions to the tougher applications of the industry.

Cowan Dynamics has developed a complete solutions approach. In other words, we produce not just the actuators, but the automation and process control side of it as well. This includes control which we design build and program in house. We have 45 employees, including five professional engineers and a team of ten for technical support. While our focus is Canada and North America, we have installations in China, South America, India and Europe.

Here in Québec, we count amongst our clients companies such as Iamgold, RioTinto, and Xstrata. We also work closely with engineering consulting firms. Based on discussions with our clients we design and build problem specific solutions often integrating third party products, such as specialty valves and controls, into our own products. For example, we have developed considerable expertise on the control side in flotation cell technologies, and some proprietary products like our Series AT, which is a valve-positioning cylinder with a patented feedback module.

A lot of the players in the mining industry are focusing on productivity enhancement, tweaking their existing processes. While projects appear to be on hold right now, existing operations are becoming more productive. Those are the type projects we are targeting, and we have been successful with that approach. As a small company, we have certain advantages: we are flexible and quick to deliver cost effective solutions.

What is the manufacturing and design process for your equipment?

Cowan Dynamics manufactures its own actuators and control panels and does all of the engineering in house. We are ISO 9001 registered since 1997 and enforce a rigorous quality control system. For some projects, particularly those designated for overseas markets we conduct comprehensive factory acceptance tests, in the presence of the client, at our facilities. Such tests can take anywhere from a couple of days to several weeks depending on the complexity of the system.

How have you been able to enhance clients' operational productivity through innovation?

When you look at Cowan Dynamics' product portfolio, six or seven years ago we provided primarily standard actuation and control solutions. Today, probably 85% of what we do is non-standard. It might be a derivative of a standard product, but the approach we take now is to engineer the solution around a specific problem. We will either adapt existing products to resolve a particular problem or, if this is not possible, design a solution from the ground up.

A good example of a recent success in productivity enhancement is our work with Rio Tinto for a copper mining project in the United States. Cowan Dynamics brought a solution to them to enhance the efficiency of their existing flotation cells. They estimated that, partially because of this, they were able to increase their yield by around $33 million annually.

We invest considerable resources in R&D on either new products or on design enhancements. We take a customer driven approach to this based on feedback and suggestions from the industry. This year alone Cowan Dynamics has nine significant R&D projects under way, though not all are related to mining.

What strategies do you use to minimize costs?

Being a small company, we have certain built-in cost advantages because our overheads are relatively low. We also make ongoing investments in new and more efficient production equipment and processes. Three years ago we embarked on a structured and aggressive Lean Manufacturing Program with the help of an outside consulting firm. All this shows up in cost saving to our customers.

To ensure efficient service, we maintain regular contact with clients at their operations sites. Our sales people are constantly on the road, visiting those sites. We primarily work directly with the end user and maintain a strong line of communication with relevant consulting engineers.

What are Cowan Dynamics' plans to look beyond the Québec and Canadian market to expand?

Cowan Dynamics is and will remain export-driven. Although we serve a variety of market sectors, the mining industry is our primary focus because of its potential for growth internationally South America in particular is proving to be a viable market for us. We often work in partnership with larger OEMs, consulting engineering firms and local value added distributors particularly in overseas markets.

What is your outlook for Cowan Dynamics' operations in Québec mining for the next two to three years?

I think the focus on process improvements of existing operations will continue in the mining industry, and Cowan Dynamics is targeting those applications. I am not holding my breath for any new large mining-related projects over the next few years in Québec. Investment in mining projects will be a little tough to come by, for many reasons beyond the current trend in commodity prices. Cowan Dynamics will continue to develop its market for applications in existing operations and to be a viable component in helping our clients improve efficiencies. •

INTERVIEW WITH

Jim Hewitt

CHAIRMAN & CEO
HEWITT EQUIPMENT

How have Hewitt Equipment's operations expanded in recent years as the authorized Caterpillar dealer for the province of Québec, as well as Western Labrador?

Between 2010 and 2012 Hewitt grew very significantly; however in 2013 we are looking at slightly lower sales than 2012 because of the mining downturn and the decrease in spending related to infrastructure projects. Mining was a very large component of our sales in 2012 and it will continue to be important in 2013, however it will be dramatically lower on the new machine sales side, despite the fact that we became the Bucyrus dealer in August 2012 when we acquired the distribution rights from Caterpillar. We will see some offset on our product support sale side because of fleets that continue to operate, however we are seeing a big decline of new equipment going into the field.

Hewitt Equipment has placed a large number of machines with mining companies over the last five years, and we have always maintained an apprentice technician-training program. In the last two years we had 60 apprentices, a slight increase from before. This kept us ahead of the problem everyone was facing of skilled technician availability. In 2012 we invested more than $8 million in our training center, with a view to increase our annual trainee intake to 70 or 80. Unfortunately, due to the state of the economy and political uncertainty facing the mining industry, we will only be hiring 20 in 2013. It is a vivid illustration of the impact of question marks over the fiscal regime, and other obstacles related to the Mining Industry in Québec.

How has the mining slowdown created a need for Hewitt Equipment to diversify into other areas?

Hewitt Equipment has always been focused on diverse industries, not just mining. We try to adapt, although all the machines we have placed in the field will continue to need our servicing. There have not been any mine closures yet, so these machines remain in operation to a certain extent. The dramatic reduction in mining investments in the last eight months has mainly been caused by commodity prices, but the bigger question is where things are going in the future. This will be influenced partly by commodity demand, but more in Québec by policy.

How has Hewitt Equipment responded to the industry's cost constraints by offering new services?

Cost reduction is one area Hewitt Equipment has always helped its customers with. In December 2011 we launched our D-tech Condition Monitoring Center, which represents a significant investment. We now have a team in place monitoring information coming from machines either by cell connection or GPS. They can check machines' health and productivity and advise customers early on when they are running into potentially costly problems. We offer operator-training simulators for customers to use, and invest heavily in training our own technicians.

Last year Hewitt acquired Caterpillar's Bucyrus line. How has your relationship with the manufacturer evolved in the last two years?

Caterpillar, like its dealers, constantly looks for ways and means to help customers improve operations and reduce costs. Just recently it acquired a company that does fatigue identification for operators on machines, illustrating the strong safety concern it shares with us. Safety can reduce costs in its own right, and Hewitt Equipment is one of five dealers around the world to have worked with Caterpillar on the advancement of Condition Monitoring. For several years we have had the information available from machines, but using it intelligently and effectively is not simple. Some of the technicians from our longstanding oil-analysis lab are now located with our Condition Monitoring team. Between Caterpillar and Hewitt Equipment, we have highly experienced experts in earth moving, mining and construction around the world, so we can help customers identify more effective ways to use their equipment.

Plan Nord and the development of the north is a hot topic for government and industry today. How much of a challenge do you face as an equipment provider servicing mines in the north?

Hewitt Equipment has always been very closely connected to the north, and has a long history dealing with its harsh environment. To deal with personnel issues, we have established a more comprehensive hiring and training strategy. We continue to do a lot of work in this province's north, supplying numerous Construction and Mining companies as well as local communities. When big opportunities arise, we are prepared to do what is necessary to look after our customers' needs.

How does Hewitt Equipment contribute to improving environmental performance standards in the mining industry?

A lot of people bash the mining industry's environmental performance, but standards today are far higher than 30 years ago. The industry takes a great deal of responsibility, and several projects in recent years have actually remediated previous tailings sites. Hewitt Equipment provides lube trucks that can plug into customers' machines, remove their oil without spillages and decontaminate it to be used for long periods. Meanwhile, our services for reducing failure eliminate the environmental impact of repairs, and Caterpillar has made massive investments over the years to reduce emissions to next to nothing. Apparently the exhaust of a Caterpillar machine in Los Angeles today is cleaner than the intake air. •

INTERVIEW WITH

Serge Caron

PRESIDENT
FORAMEX

As a small drilling company operating in a mature market such as Quebec, do you find it difficult to complete with the larger, international drilling companies also active in the province?

Foramex is a small company, which permits us to be close to our clients as we execute our contracts. My academic training and my experience of 18 years in mineral exploration enable us to better understand what geologists are looking for, as I have been a part of many exploration projects. When a client hires a drilling company, they not only have expectations in terms of our drilling production, but also with regards to environmental regulations and standards of health and safety. Our mission is to satisfy our clients. We constantly adapt to meet industry standards as they evolve.
In terms of competing with larger companies, one should reverse the question by asking whether it is difficult to compete with small drilling companies!

Particularly with this year's slowdown in Quebec's exploration sector, do you foresee your size being an advantage when it comes to recovering from this period of crisis?

We are in a quiet time today, but being a small company, it is easier for us to tighten spending because our overhead is lower than those of larger drilling companies. To this end, it will certainly be easier for Foramex to get out of the crisis the sector is currently experiencing. We are using this slowdown to repair and improve our equipment. The deceleration in activity has also allowed us to develop new ideas and to focus on making ourselves known to potential customers.

At this moment, how would you characterize the prevalence of surface exploration projects in the province of Quebec?

There are many surface exploration projects in Quebec, but the current economic climate has required exploration companies to restrict their exploration budgets. Most players in this field expect a full recovery in 2014. If the stock market resurges and the price of gold continues to rise, several exploration companies will be able to carry out work on their claims, which should increase the demand for drilling.

Can you provide us with examples of Foramex's approach to health, safety and environmental practices?

All of our rigs are equipped with an interlock device and furthermore our equipment is regularly inspected once or twice a week to ensure they are properly functioning. The same safety rules that are applied in big businesses are applied to our activities at Foramex.
From an environmental point of view, we are committed to reducing the impact that our operations have on the ground. This applies as much to tree removal as it does to our approach to streams. In this aspect, we tend to use pumps that do not require the use of heavy machinery for transport, which significantly reduces the damage caused to the shores of water bodies. We clean our sites as we work and we conduct follow-up visits to the drilling sites in the spring and summer after the drilling is completed in the winter.

While some argue that the Abitibi has matured as a gold mining territory, what is your position on its further potential? Does Foramex intend to focus on new territories, such as James Bay?

The gold potential of the Abitibi region is still excellent; even after so many years, new projects continue to emerge that surprise us. With the price of gold remaining high enough, past projects that were in operation 50 to 60 years ago can still be revived.
Our activities are spread out over the entire province, including the James Bay region. We have already carried out several contracts in this area and we intend to work further on projects there. I worked in James Bay for over 12 years on various exploration programs, therefore it is an area where Foramex has considerable expertise. •

INTERVIEW WITH

Caroline Bumueller

MARKETING MANAGER
DUX MACHINERY CORPORATION (DUX)

What have been DUX's key milestones since we last met in 2011?

Since 2011, DUX has added a new 50mt haulage truck to its line of underground mobile mining and tunneling equipment. This unit is available as a model DT-50 with standard dump box, and also as a model TD-50 with 29.8 cubic meter two-section box with telescopic action, which allows for unloading in headings as low as 3 940 mm. This high capacity hauler comes with Dana powertrain and 575 HP Detroit Diesel Series 60, 14 DDEC engine. Four of these units were manufactured for the North American market late last year.

Could you talk us through some of the special characteristics of DUX and what differentiates the company?

One of DUX's most unique characteristics is its ability to customize equipment to meet the specific needs of mining and tunneling projects worldwide. Our customizations often begin with customers sharing information about their particular project and our team of engineers, designers and field-technicians analyzing these requirements, and then recommending and sometimes designing a machine best suited to the application at-hand. Often, this can be as simple as supplying a truck with a particular brand of engine if the customer has a preferred dealer, or it can be as complex as developing a brand new frame to suit certain width and height requirements. DUX has also designed machines to work in tandem with other equipment on site. For example, the above-mentioned TD-50 Teledumpers were designed to work with a continuous miner the customer had purchased.

One important issue in Canada is the climate. How do you adapt your machinery for northern mining?

All DUX equipment is manufactured for use underground. However, DUX has added cold weather packages for start-up in temperatures of up to -30°C. These often include heaters for the engine oil pan, transmission, hydraulic tank and battery blanket. In addition, all DUX equipment is offered with totally enclosed, fully-equipped FOPS/ROPS-certified cab including artic heater for maximum operator comfort. This same cab is also requested by many of our South American customers, where other climatic and operational challenges exist. For example, DUX has installed special cooling packages for operation at higher temperatures, as well as specially calibrated engines for operation at altitudes of up to 4000 meters above sea level.

Environmental requirements in Québec are very stringent, and will only become more so. What measures are you taking to minimize your footprint and that of your customers?

Although we have some internal environmental measures, mostly we are driven by regulations, especially regarding emission standards. The new Tier-4 emission requirement does not yet completely affect us, as we supply much of our equipment to less regulated countries. However, the same cannot be said for the North American market, where we have already installed an OM 460 LA, Tier 4-I engine on an ET-24 ejector truck, which has proven to be a challenge. We are also in the process of working on a unit with Tier 4-I Cummins QSB4.5L engine for a Québec customer. New emission requirements make it somewhat harder for us to do business in Canada and the US than elsewhere, but we are investing heavily and are committed to meeting these requirements in order to remain compliant with all regulatory bodies, both at home and abroad.

As an international company, what are the advantages of being based in Québec?

Being based in Québec, and close to such a culturally diverse city such as Montreal, has given us the opportunity to employ individuals who also speak a third language in addition to French and English. For instance, at the moment we have some staff members who are also fluent in Spanish and Russian, in addition to French and English. Language is not only important in sales, but even more so when it comes to providing on-site equipment commissioning and operator training, as well as parts and technical support once the equipment is delivered. •

Innovative Consultancies

New technology, new tools

For Québec's many juniors, consultancies can play a key role in bringing in new tools for modeling and analysis. In recent years, the mining industry as a whole has also witnessed the rise of 3D modeling as a tool to provide sorely needed solutions to issues dealing with equipment and personnel management. SRK Consulting, an international firm with offices across Canada, has focused on supplying consulting services in structural analysis across the mining development cycle.

"In exploration and resource development we focus on understanding what controls either the district-scale or deposit-scale distribution of mineralization, reducing client's exploration risks and costs," said James Siddorn, a principal consultant at SRK Consulting Canada. "In resource modeling and estimation we have an integrated team that focuses on working with clients to provide geologically robust resource estimations that can be effectively applied to future exploration and exploitation of deposits."

Québec firms have been particularly innovative in developing 3D modeling technology. Montreal area-based Simsmart Technologies, for example, originally started as a software engineering firm that created computerized models of ships and nuclear submarines to assist the military sector with design and retrofitting. Eventually, when the company's technology was used to map, analyze, and control submarine heat transfer and airflow, the mining industry took notice.

The company's flagship software, SmartEXEC, represents the adaptation of its military technology to the mining industry. Using SmartEXEC, mine operators can access a dynamic 3D, simulated visualization of their mines to interact with and control air conduits, dampers, fans, electrical wiring, generators, fluid pipes, etc. all in real time. The ability to work with a simulation to design, tweak, and optimize the operations of all of these key infrastructures remotely, and even in advance of equipment installation, can help reduce costs in a number of ways. Optimal airflow can reduce electrical consumption, one of the greatest expenses in mine operation. It also reduces the need for extra control and engineering personnel, while boosting the productivity of existing staff.

In another example, Simsmart Technologies works with Val-d'Or-based Meglab to service the Opinaca mine in the James Bay region. According to Michel Massé, Simsmart's president: "Meglab does the physical controls and communications systems in the mine, and [SmartEXEC] is essentially the brain that you put on top of that, managing the distribution and optimization."

With a software firm from Montreal and a controls engineer in Val-d'Or working together to service a mine in the James Bay, it is an excellent demonstration of cross-regional ties developing multiple aspects of the operations value chain. "We dial into Opinaca every day from our office via the internet and help them remotely using our Montreal-based engineers," said Massé.

Of course, software can be used in a far wider range of applications than mine site mapping, extending even to the area of social responsibility and the environment. Golder Associates, a geotechnical and environmental consulting firm, has developed a software called Goldset, which is a multi-criteria analysis tool that assists firms in making environmental decisions. "We mostly apply it to the tailings facility site selection process," said Pierre Frechette, a partner at Golder. "By law in Québec, you cannot simply choose the most convenient location for a tailings facility. You need to prove to the authorities that you have made the best possible compromise between economic efficiency and environmental factors. [Goldset] has thus developed a tool and service to assist our clients go through the various options in the shortest time possible."

Goldset software is an innovative, but integral part of Golder's overall goal to help its mining clients maintain their commitment to the environment while ensuring profitability. •


Courtesy of Geologica Inc.

INTERVIEW WITH

Pierre Fréchette

PRINCIPAL
GOLDER ASSOCIATES

What are some of Golder's key milestones in Québec from the last two years?

The last two years were extremely busy for Golder and the sector overall. We received monthly calls from Québec to West Africa requiring our services in engineering solutions and feasibility studies. We have recently had projects in Burkina Faso, Mali, and Guinea in both the gold and iron ore sectors. In Québec, we are currently involved in all mining sectors.

Recently, the kickoff of iron ore projects in the Labrador Trough has contributed to diversifying Golder's portfolio in Québec. We also got involved in three rare earths projects, as well as a diamond project with Stornoway. We still maintain strong involvement in gold and in base metals through our work with Raglan and Canadian Royalties among others.

In the last two years Golder has widened its services and transformed its approach significantly. Traditionally, Golder was well known as a firm providing effective solutions for tailings management. This includes the construction of tailings storage facilities, design of waste rock facilities, rock mechanics, water treatment, and expertise in geotechnical work. At the same time, managing mining waste is also about managing water, especially in Québec, which has an abundance of lakes. This is an area in which we are very experienced.

In Québec, we are increasingly providing environmental and social impact assessment studies for a number of companies. Recently, for Goldcorp we did studies at several of their mining sites on industrial hygiene and health and safety systems. We are not energy designers, but we help companies reduce their energy costs by working on ventilation and power systems. With all the talk of Plan Nord, permafrost engineering has been an important service offering for us in northern Québec and northwest Canada.

What recent innovative solutions has Golder brought to engineering solutions in Québec?

Golder has developed a software called Goldset, which is a multi-criteria analysis tool to make environmental decisions. We mostly apply it to tailings facility site selection process. By law, you cannot simply choose the most convenient location for a tailings facility. You need to prove to the authorities that you have made the best possible compromise between economic efficiency and environmental factors. We have thus developed a tool and service to assist our clients go through the various options in the shortest time possible.

How does Golder help its clients with cost efficiency in engineering?

Cost reduction does not necessarily translate into less engineering. Often, it will mean more engineering to get to a better solution. In recent years, the industry has been extremely active and hurried with projects. This prioritized speed over cost effectiveness. The best thing to do is to have mine closure and tailings management planned from the inception of the mining project. You want to do things once, and do them correctly. Golder tries to introduce plans for closure very early on into the design to save our customers from costly, repeated, last minute planning attempts later on. We encourage companies to share future plans with us so that we can help them build structures now that do not interfere with planned facilities later on.

What is a good example of a recent project in which Golder has added value?

A good example of our recent work is our contract with Matamec Exploration for a rare earths project in Temiscamingue. Golder got involved early on in the process. We participated to the feasibility study and also took care of the environmental studies in an integrated manner. We provided information on hydrology, which serves the people in charge of the feasibility study and design. It also serves as a baseline for the environmental team. Golder reached compromises on technical efficiency, economic value, and environmental considerations. We were involved in the pit design, two tailings storage facilities, the geotechnical work for the foundation for the plant site, the water management, the geochemistry, and cost estimates for all of those structures. This project really allowed us to utilize most of our range of services in one integrated study. •

INTERVIEW WITH

James Siddorn

PRINCIPAL CONSULTANT
SRK CONSULTING (CANADA) INC.

Could you update us on the recent milestones that SRK has achieved?

SRK Consulting has roughly doubled in size in the last six years and we now employ more than 1,600 people in over 50 offices on 6 continents. Our North American staff of 300 is evenly split between Canada, where we have been since 1978, and the United States, where we have been since 1980. We do not yet have an office in Québec, although this is something frequently discussed. The proportion of our Canadian work done in the province varies according to projects; it has been lower in the last two years, but we remain active in Québec and work with a number of companies there.

Québec has a very diverse range of minerals. How does the province's unique geology require SRK Consulting to tailor its services?

Our geological staff have been educated and gained experience largely focused in Québec and Ontario, but also worldwide. In many ways Québec's geology is similar to Ontario's, as they are both largely within the Superior Province, but within that mineral deposits always have unique characteristics and so any geological evaluation needs to be based on data and sound geological interpretation. This is especially true for gold and base metals where a lot of our work is focused. SRK brings its worldwide expertise to each project focused on providing clients with a robust geological framework and understanding that can assist with rapidly advancing exploration projects to the next stage.

Québec has 679 orphaned mines, and the government is paying close attention to site remediation. How does SRK Consulting help companies minimize this problem?

Mine closure has been a core part of SRK's business since at least the early 1990's. Our Canadian teams have worked on mine closure projects all around the world. What do we do to help minimize the problem of abandoned mines? Well, first we help mine owners plan for an orderly closure, including taking care of as many environmental liabilities as possible while the mine is operating. The industry has been doing very well at that for a couple decades now, so most of the abandoned mines that fall into government's hands are from earlier times. In those cases we work with the government agencies that end up becoming responsible for remediating abandoned sites. We have assisted government remediation teams in several provinces and all three territories, as well as in Europe and South America, making sure they have access to the same level of technical expertise that we provide to industry.

Amid uncertainty over regulatory change in Québec, some companies are scaling back operations. How is this impacting the service sector?

Uncertainty about Québec's regulatory regime is not affecting SRK right now. We attribute most market change either to the current lack of investment capital or the influence of problems facing many of the majors. Any time a jurisdiction considers changing its tax system, it makes people uneasy and takes away the level foundation for them to build on. While companies may scale back their operations, they are not going to back away from good projects. It will be a case instead of some marginal projects not going ahead and, more worryingly, barely profitable existing operations having to close down. All the projects we currently work with in Québec are continuing, but there may be more of an impact once the new legislation is actually announced. We hope the provincial government has enough foresight from its industry consultation to evaluate the potential effect of fiscal changes on Québec's economic output. The province has been moving toward higher mining taxes for the last 15 years or more, but still a lot of mining companies operate there. As much as the fiscal regime is important, so too is the length of time it takes to move projects ahead; hopefully some of the federal changes will help improve this process. •

INTERVIEW WITH

Yvan Dionne

PRESIDENT
PROMINE

Please give us an introduction to Promine.

I founded Promine by myself 20 years ago in Québec City. The company has now grown to nine employees with two Québec offices in Québec City and Rouyn-Noranda, one Mexican office in Guanajuato and one Peru office in Lima. Promine has approximately 100 clients, most of whom are in North America, Central America, and Peru. We also have a few clients in Africa.

Our product, also called Promine, is a mining and geology software fully integrated into AutoCAD, an engineering graphics program widely used in mining. This makes it very convenient for our clients. Promine software takes care of almost every aspect of mining operations, from exploration to resource estimations to mine planning to extraction.

Which software solutions are most in demand in the mining industry right now?

At the moment we are responding to a great demand for aspects of the software application that address future planning of operations. Combined with our current platform, which covers the day-to-day work of the mine, this will help managers substantially optimize their operations and ultimately see more profits.

Promine is also developing an addition to its mining package that deals with open pit, surface operations. Thus far we have not had a great presence in the open pit market, but both clients and Autodesk, the company that makes AutoCAD, have urged us to expand our services in that area and we are happy to cater to those needs.

What differentiates Promine software from its competitors?

Promine software is easy to learn, flexible, and robust. It may not be the quickest, but we have found that people prefer quality over speed. We help clients deal with the diverse demands and deadlines of operations by streamlining the process as much as possible. Most of Promine's staff come from careers in mining, so we understand these demands very well, and we know that clients do not have hours to devote to learning difficult software. Our approach is to explore ways to automate processes and remove steps to make the product comprehensive but user-friendly.

Every time Promine upgrades its software, we look at the different components and ask what we can afford to remove. This is totally opposite of conventional thinking, in which developers think add-ons are a necessary part of every upgrade.

How does Promine customize its software to meet the needs of different mines while maintaining an ability to scale?

Promine is divided into 30 modules. The client can select which one he would like to install and then choose from a range of add-ons and other options to customize the product to their needs. If at any point they need a specialized solution that is not part of the package, they can simply get in touch and we will do our best to program something for them.

Sometimes Promine provides customized products free to clients to test in exchange for feedback that we can use to scale the product for the market. Our staff's career backgrounds in the mining industry help them to understand intuitively what the client is really looking for.

What kind of support does Promine provide to clients using its software for the first time?

Promine provides training manuals, periodic training sessions throughout the year, and frequent onsite training. We also provide internet support in which we hook up to the mine site computers remotely and guide personnel through each step. It is very important to be flexible like this because the mining industry is known for high personnel turnover and we want to ensure that new staff are always up-to-date on how to use our products.

What have been some of the most instructive client relationships for Promine?

The first mine that installed Promine is Casa Berardi, and they continue to use the product to this day. As a mining engineer and programmer, software has always been easy to learn for me, but through our work with the Casa Berardi mine we saw that mine operators often need extensive guidance. Casa Berardi was a key case for us to learn to prioritize user-friendliness.

The most challenging project that Promine has had is its work servicing the Agnico Eagle mines, which are all using Promine. Although all of their mines have different needs, Agnico Eagle wants a standardized way of using Promine. We have been working with them to make this a reality by creating as adaptable a program as possible.

We are always aiming to scale Promine's software to a company level rather than a mine-by-mine level, and we know it is possible because have already achieved it with Hudbay Minerals' Flin Flon and Snow Lake properties in Manitoba

What is your outlook for Promine's work in the mining sector going forward?

Although the market suffered a slowdown in the last year, Promine saw 40% increase in revenues. We are expecting to replicate that performance this year. Our software does really well in downturns because it is less expensive than its competitors.

Do you have a final message for our readers?

Although Promine is one of the best softwares on the market, I leave it to the customers to figure it out for themselves. We have already had some clients leave us to try another software, only to come back later on. Those facts speak for themselves. •

INTERVIEW WITH

Michel Massé & Marcos Severino

MM: PRESIDENT
MS: VICE PRESIDENT OF SALES
SIMSMART

Please give us a brief introduction to Simsmart.

MM: Simsmart was first and foremost an engineering company, assisting customers with designing systems involving liquids, gases, ventilation, electrical generation and distribution, hydraulics, controls, and decision-making processes. We started in the military sector. Our largest navy customer is the US Navy, which has been heavily utilizing our software for surface ship and nuclear submarine design and retrofitting. Eventually, clients began connecting our high-fidelity, real time simulators to physical control systems to train sailors. Over time, we developed processes and controls to analyze airflow and heat transfer on submarines. About six years ago, the mining industry became interested in what we developed, and since then we have adapted our military technology to the mining industry through the creation of our proprietary software, SmartEXEC.

SmartEXEC is a dynamic, physics-based simulation tool in which we can draw up a 3D visualization of a mining system to interact with components like an air conduit, damper, fan, electrical wiring and generators, fluid pipes, etc all in real time. It cuts the time needed to design processes in half compared with conventional methods.

After the design phase and in the operation phase, our software controls ventilation in such a way as to provide air in various work zones at the volume and quality required for the number of workers and diesel engines operating in each.

How does Simsmart keep track of activity in various parts of the mine in order to distribute air appropriately?

MM: Simsmart uses methods ranging from reliance on a simple production plan that schedules the activity of workers on various levels of the mine to the use of sensors and personnel/machinery tracking systems. Some technologies use wifi access points to track miners and the locations of machinery. Quite a few companies, including our sister company Newtrax, offer tracking solutions, and we can hook up our software to those technologies. Simsmart has access to the databases of a number of tracking systems, from which we read the dynamic location of personnel and modulate the infrastructure of the mine to an optimum distribution point.

As a Québec company looking outward, what is Simsmart's strategy for international expansion?

MS: We have built our company in such a way that most of our engineers are multilingual, giving us the capability and cultural understanding to handle projects in other countries. We are particularly focused on South America, including Chile, Peru, and Brazil. In Latin America, the economies and legal frameworks are relatively stable.

MM: Being in roughly the same time zone as Latin America also helps considerably. We have done previous projects in the military sector with Australian clients, and the time difference meant that we often had employees working night shifts to accommodate them. After many months of that, we found that the only way to make work across huge time zones sustainable would be with a local presence.

What are some of Simsmart's targets and objectives in Québec mining over the next two to three years?

MM: Simsmart is working very hard to provide more complete solutions for ventilations in mines. We would like Québec mining companies to call us, tell us about their ventilation problems, and give us a turnkey mandate to provide them with everything they need. At the World Mining Congress in August, Simsmart will be announcing the launch of new products to help smaller mines as well. The solutions will be bundled into a smaller package with less functionality, but retaining key capabilities of minimizing electrical consumption and enhancing air quality. This will be good for companies with lower budgets. Simsmart wants to be the sole source for ventilation. •

New Frontiers

Service providers export their expertise

While mining companies can more easily seek projects farther afield, Québec's mining service industry has had to confront the downturn head on. "We are cautious about the potential impact of current capital markets on our business. They have not affected our Canadian business yet, but we can see the challenges in other jurisdictions worldwide," said James Siddorn at SRK. "Our Canadian team is also insulated by being able to work around the world. The fact that everyone in the industry is still struggling to recruit employees demonstrates that we are still operating in a good market."

Responding to the crisis, Hatch has looked to extend a broader reach in its diverse range of projects across the globe. "In the coming year, we anticipate working in Gabon, Mauritania and other areas where we did not previously have the available resources to help. We see ourselves as a truly global company; regions are completely irrelevant," said Rob Metka of Hatch. "Clients in the Amazonas, for example, do not care who the best metallurgist is in their state, or even in Brazil; they want to know who the best is in the world. Hatch, which is employee-owned, only reports global earnings and pushes all regions to work within a collaborative global environment."

Following clients across the globe, and even seeking out new international business in prospective areas, consultants and manufactures alike are increasingly looking outside of Québec for growth. "Around 1993, we started to do international work in evaluating projects in Africa and Europe. Throughout the late 1990s, we reoriented our international involvement toward South America, with mandates in Mexico, Peru, Argentina, and other locations in the region," said Alain-Jean Beauregard of Geologica. "The geological potential of Latin America is enormous. We see events in the Andean geology as young as 60 million years old, as opposed to 2.6 billion years old like in the Abitibi."

In addition to diversifying its activities amongst Québec's growing list of mineral commodities, Golder has also seen a rise in business between their Québec office and West Africa, given their bilingual capabilities. "We received monthly calls from Québec to West Africa requiring our services in engineering solutions and feasibility studies. We have recently had projects in Burkina Faso, Mali, and Guinea in both the gold and iron ore sectors," said Pierre Fréchette of Golder.

For other members of the support sector, growth opportunities are offered more immediately within Canada's borders. "Technosub's primary focus to finish our expansion within the Canadian market is to complete our growth in British Columbia and then develop in Saskatchewan. We are now examining our future growth plans and considering expanding to international markets, particularly in South America, where there is huge potential. If we go south, it would not be just like opening another branch with inventory, we would be recreating our entire huge shop," said Beaupré.

Courtesy of Altius

INTERVIEW WITH

Alain-Jean Beauregard

PRESIDENT
GEOLOGICA INC.

Could you provide an introduction to Geologica and the various services you provide for clients across the market?

Founded in 1985, Geologica was established in Val d'Or, Abitibi, a very prolific gold mining district, at a time where mining exploration was booming and geological consultancy services were insufficient. The company's professional team has reached 25 employees in peak periods. In the present economic and slower cycle, we manage to maintain a team of 10 to 15 professionals and technicians mainly on more advanced projects with solid concrete in situ resources and potential for growth. However, we also assist several clients in their property acquisition strategy using in house prepared geoscientific compilation and the Quebec Ministry of Natural Resources accessible huge data bank. With innovative ideas and experienced well-trained personnel, we can select properties in favourable metallogenetic areas as well as orient, devise and follow effective exploration strategies based on present and anticipated market trends.

In the field, our services consist of geological mapping, sampling, diamond drill supervision, core logging, follow up with assay results validations and verifications prior to categorized ore resource calculations. Geologica also completes fair market valuations (F.M.V) of mining projects and properties for private and public companies, financial and legal institutions, government agencies, etc. NI 43-101 technical reporting, qualified competent persons, QA-QC, diamond drill data base, geological interpretation, model validations, mineral property valuations and due diligence for informed decision making are all services we can provide. Locally, we are the geological consultants of choice.

While Geologica mostly specializes in exploration for precious and base metals, the last few years have kept us busy on projects for other commodities such as iron, rare earth minerals, lithium as well as aluminae-rich mudstones and red beds.

Quebec has recently suffered in rankings of worldwide mining jurisdictions. How have you been able to adapt your services to deal with this new reality?

Being a small consulting firm, Geologica has never had any problems finding clients and keeping busy. As previously mentioned Quebec is still a very interesting place to work in and a friendly mining province due to available help programs, road access, infrastructure, and qualified manpower. The financing incentives remain even though the provincial government just slightly modified taxes and duties recently (an increase of 1% only instead of 5% like in Australia).

Quebec still has the most interesting flow through financing (150% deductible) program in the country. If you spend hard dollars in exploration, for instance, the government will reimburse you with close to 50% of your expenses in some cases (northern remote projects). Also there are numerous forms of tax credits and subsedies to accommodate the mining investors and enterprises. The incentives are there and the people in Quebec want mining to continue and prosper. The northern regions, especially depend heavily on mining and forestry which have seasonal and cyclic economies. I believe that the government will continue to listen and help the mining industry. If our mining industry can keep on communicating their concerns, and show the increasing mineral economic value for the government, then flexible programs adapted to their needs will be put in place by the government in order to keep northern populations more self-sufficient.

Foreign investors and developers, mainly from Japan (Sumimoto), Brasil (CVRD), China (Wisco), Russia (Rusal) and India (Arcelor Mittal) have recently made some fantastic and very significant acquisitions of mineral assets in Quebec. For example, in Val d'Or the Lamaque Project attracted Shandong Gold of China which acquired 10% interest in the share capital of Integra Gold Corp. Shandong Gold is a major gold producer in China. Several acquisitions were primarily completed for huge Iron-rich Projects and Deposits and large open-pit mining operations on the St-Lawrence North Shore (Wabush, Schefferville, Fermont), the Labrador Through, the James Bay territory, Ungava Raglan Nickel Belt, etc. •

SPECIAL SECTION

The Labrador Trough:
A Developing Hotbed for Iron Ore

"Since 2008, the rejuvenated worldwide interest in Iron that corresponded with the increase in the iron spot price, prompted several mining companies to complete aggressive exploration programs in the Labrador Trough area. This led to the delineation of several very large iron ore deposits. The year 2012, however, threw two major challenges at iron ore companies seeking major investments to push their projects forward: a drop in financial markets and a new political party in power in Québec… However, we believe this slow-down is temporary, since the demand for iron worldwide continues to grow. Economic growth-rates for China, India, and other emerging countries, indicate that they are going to require a lot of steel over the next decade."

- Martin Bourgoin, President of
MRB & ASSOCIATES GEOLOGICAL CONSULTANTS

Courtesy of Champion Iron Mines Ltd.

The Labrador Trough

New producers emerge in a tough climate

The Labrador Trough is a geological belt that cuts through northern Québec and western Newfoundland and Labrador. Since the first discovery in 1894 and first production in the post-World War Two period, over 2 billion mt of iron ore has been produced from the Labrador portion of Labrador Trough alone, propelling Canada to its current position as the world's ninth largest iron ore producer.

The Labrador Trough has not yet reached its full potential. There are over 15 billion mt of iron ore in NI 43-101 compliant reserves (inferred or above) yet to be exploited: expected increases in demand from the Chinese market and the development of ongoing exploration projects is expected to increase Canadian iron ore production to around 57 million mt in 2014.

This potential is not accessed without facing a fair few challenges: harsh and remote environments, permafrost, and the lack of necessary infrastructure to transport a bulk commodity to market, as well as the lack of capital currently afflicting the entire mining community. As is the case for many companies with diverse mineral and geographical focuses, many players in the Trough are placing their hopes in Asian investors.

Amidst the industry's feeble attempts at forming multiuser infrastructure agreements, Alderon Iron Ore's Kami project has revived hope among other players in their attractiveness to Asian investors. Rapidly advancing towards the title of the trough's newest producer, Alderon inked in 2013 a strategic partnership deal with Hebei Iron and Steel Group, in which China's leading steel company has committed to invest over$400 million in the project. With Hebei's support in tow, Alderon is aiming to enter into commercial production by 2016.

Already as of late 2011, Alderon had filed to increase its production. "Although we plan to initially produce at 8 million tpa, we registered the project for a name plate capacity of 16 million tpa as part of our environmental assessment project. This represents our goal to eventually produce at 16 million tpa, which we would expect to achieve by 2020," explained Tayfun Eldem, CEO of Alderon.

In assessing the existing infrastructure available to Alderon, executive chairman Mark Morabito, estimates Kami's production will have sufficient capacity. "The existing railway on the Labrador side of the trough has 50 million mt of surplus capacity, so it will be adequate for the next 10 to 20 years," he said. Furthermore, the area's main port, Sept-Îles in Québec, is undergoing significant expansion with the participation of major companies like Tata Steel and Alderon. Power infrastructure in the Labrador Trough area is also set for an upgrade with the development of Muskrat Falls.

"Everyone is doing their part. We are bringing the money and partners to the area to initiate projects, and the government is providing the infrastructure needed to ensure that we can go into production. With the help of all of these factors, we are confident that we can get into pilot production by the end of 2015 and full commercial production by 2016," said Morabito.

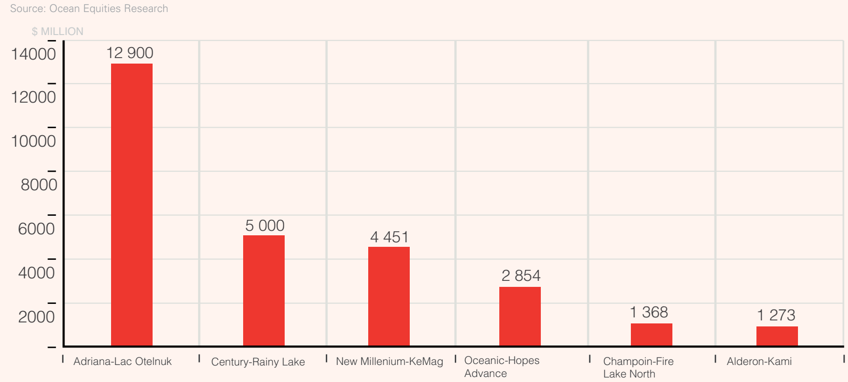
Asian links in the province can also be found in Tata Steel Minerals Canada, a joint venture between Tata Steel and New Millennium Iron, now with an active DSO operation in the province. TSMC has further partnered with Labrador Iron Mines, the area's only independent producer, in a strategic partnership.

"We are very pleased that we have now been able to expand our relationship with Tata Steel, as we are operating side by side and using the same rail line and port," said John Kearney, CEO of Labrador Iron Mines. "By cooperating on infrastructure, there are opportunities in which both companies can improve efficiency."

On the exploration side, the Labrador Trough is host to juniors such as Golden Dory Resources, which is currently focused on advancing its early stage Iron Horse project. "In the summer of 2012, we tested some of the magnetic anomalies with a 1200 meter, five-hole Phase I drill program. All of the holes hit iron ore with grades in the 30-40% range. We followed up with a Phase II program in October of 2012, drilling another 1200 meters on specific target areas. We had good results, with one of the thickest intercepts of iron ore found in the trough in recent years, at 354 meters of roughly 28% iron," said Tim Froude, vice president of exploration for Golden Dory. •

Capital Estimates of Projects within the Labrador Trough with Completed Studies

Source: Ocean Equities Research



INTERVIEW WITH

Karen Oldford

MAYOR
LABRADOR CITY

Could you explain Labrador City's relationship with the mining industry?

Labrador City was founded as a mining community when the Iron Ore Company of Canada developed the Carol Lake project in the early 1960s. They built a state of the art community that has thus far supported three generations of workers for the mining industry. Labrador City and Wabush, sister municipalities collectively known as Labrador West, are both at the heart of the Labrador Trough and have a rich heritage of iron ore.

Labrador West has a stable economy and governance structure as well as great infrastructure to rail and port that is able to handle the volumes that are being produced. Right now, Labrador City has IOC and Rio Tinto and Wabush has Cliffs Natural Resources. Alderon is the new kid on the block, hoping to be operational by 2015. Additionally, the Newfoundland government owns their own property called Julienne, which is currently in the RFP stage. When they move forward with that property, it will have a 30-year mine life. We are quite literally a community surrounded by, supported by, and supporting iron ore mines.

What are some cases in recent years illustrating successful cooperation between the municipal authority and the mining industry?

Labrador City generally engages in joint planning with the mining firms, examining all of the needs of the community as well as potential benefits to both the mining firm and the people. From that process, many joint projects arise. One example of such projects is that during our 50th anniversary the Iron Ore Company of Canada partnered with the town to put a splash pad for children in the town's playground area. IOC supplied the financial contribution and the town provided all of the labor and experience required for operation and maintenance. We also have tools such as the joint task force, which has all of the mining companies, both municipalities of Labrador West, and key provincial and federal government officials. The task force looks at the challenges of communities right now in meeting the needs of the mining community for the future. It is a symbiotic relationship: we both find benefit, and that is our motivation for working together.

As a city council, what role do you play in bridging the gap between regulation and business?

One example of the potentially negative impacts of mining activity is dust. Dust monitoring is something that the companies had to work with the provincial and federal governments on. Labrador City partnered with them for permitting and site specification for dust monitoring stations. Dust monitoring data also goes to the provincial government in real time, 24 hours per day.

We have also been careful to ensure that mining projects do not impact our watershed. Labrador City worked with Rio Tinto to develop stringent guidelines for their operations in watershed areas. There is a new process on the go for a new pit for IOC, Wabush 3, for which we have similar concerns. We have identified our concerns with IOC and will work with them on all levels of government to find a solution.

What efforts are you making in the area of education to ensure that future residents of Labrador City are qualified to work with the mining companies as industry standards evolve?

The College of North Atlantic, a provincial college, opened a campus in Labrador City in the 1980s. That college has been developing apprenticeship workers and doing training for many different trades. The college partnered with IOC to develop a mining technician program, which allows the graduate to come out with a millwright's certificate. The presence of the college also helps us to offer more training at home. The equipment here is state of the art, and many students that have left to study elsewhere have found themselves training under obsolete equipment and systems. The college has started to engage in distance education wherein the professor teaches book training via the internet and visits the town for more hands-on training. That has worked out really well and has had a 100% success rate with heavy equipment mechanic graduates.

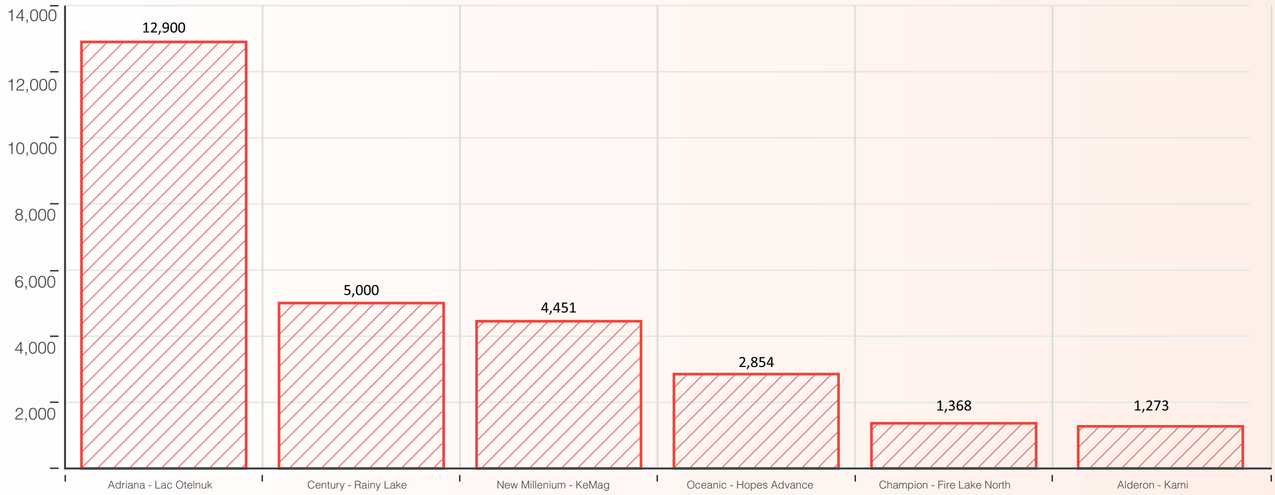
The biggest barrier for training has been the lack of journeyman, because there has been an influx of skilled young people looking for apprenticeship training and the journeymen are at the end of their career or retired. The companies have had innovative programs where they have re-hired retirees to help train apprentices.

Do you have a final message for our readers?

The stability and capital in Labrador City makes us a very attractive investment to foreign countries. For example, Chinese investors have put a lot off money into Alderon. One of the challenges as we move forward is for the companies to recognize that we are not a greenfield development. There are existing communities here, and they will need to partner with us to help us put the necessary infrastructure in place to allow them to grow and develop. Existing residents cannot be the ones bearing the entire burden for new companies coming in requiring a lot of new infrastructure. We are having those discussions with Alderon and the provincial government regarding offset agreements that will be required to allow our communities to grow to support the mining industry. •

Capital Estimates of Projects within the Labrador Trough with Completed Studies

Source: Ocean Equities Research



Product specification of selected projects

Source: Ocean Equities Research

COMPANY	PROJECT	PRODUCT Fe (%)	WEIGHT RECOVERY (%)	GRIND SIZE μ	SiO_2 (%)	Al_2O_3 (%)	SiO2 + Al2O3 (%)
Adriana Resources	Lac Otelnuk	68.5	27.0	53	3.3	0.03	3.33
Alderon Resources	Kami	65.2	37.8	263	4.5	0.2	4.70
Century Iron Mines	Rainy Lake	66.0	24.2	45			
Champion Iron Mines	Fire Lake North	66.0	38.5	850	5.07	0.52	5.59
New Millennium	KeMag	69.8	28.0	45	2.2	0.1	2.30
Oceanic Iron Ore	Hopes Advance	66.6	37.6	128	4.5	0	4.50

NUMBER	COMPANY	PROJECT
	EXPLORATION & DEVELOPMENT	
1	Adriana Resources Inc.	Lac Otelnuk
2	Alderon Iron Ore Corp.	Kami
3	Altius Minerals Corp. & Century Iron Mines Corp.	Labrador Trough
4	Augyva Mining Resources Inc.	Lac Duncan
5	Barlow Mine Inc.	Montgolfier Iron Hills
6	Blackrock Metal	Blackrock
7	Cap-Ex Iron Ore Ltd	Schefferville
8	Century Iron Mines Corp., Champion Iron Mines Ltd & Wuhan Iron and Steel Corp.	Attikamagen Lake
9	Champion Iron Mines Ltd	Fire Lake North
10	Government of Newfoundland and Labrador	Julienne Lake
11	Grand River Ironsands Inc.	Churchill River
12	New Millennium Iron Corp.	DSO
13	New Millennium Iron Corp.	KéMag
14	Oceanic Iron Ore Corp.	Hopes Advance Bay
15	Tata Steel Minerals Canada & New Millennium Iron Corp.	Taconite
	PRODUCTION	
16	Arcelor Mittal Mines Canada	Fire Lake
17	Arcelor Mittal Mines Canada	Mont-Wright
18	Cliffs Natural Resources Inc.	Lac Bloom
19	Cliffs Natural Resources Inc.	Wabush
20	Labrador Iron Mines Holdings Ltd	James
21	Rio Tinto Iron and Titanium	Lac Tio
22	Rio Tinto Iron Ore Corporation	Labrador City
23	Tata Steel Minerals Canada	DSO

This map is intended for illustrative purposes only. It shows only a selection of currently ongoing projects and should not be used for investment purposes.


Hudson Bay
LABRADOR TROUGH
14
23
1
13
20
12
15
7
8
3
NEWFOUNDLAND AND LABRADOR
4
11
10
2
9
17
QUEBEC
5
6
19
21
18
22
16
Atlantic Ocean

INTERVIEW WITH

Mark Morabito

EXECUTIVE CHAIRMAN
ALDERON IRON ORE CORP.

How will Hebei's 20% stake in Alderon Iron Ore Corp. affect the company and the Kami iron ore project on an operational level?

This is Hebei Iron & Steel's first foreign deal. With six active steel mills and several iron mines in China, they bring considerable iron ore mining and iron market expertise to the table. Hebei has contractually agreed to provide their best efforts to assist Alderon with financing for the capital expenditures of the project, and they are highly motivated to see the capital expenditures and operational numbers of the project stay in line. To that end, they have offered all of their existing expertise as well as their purchasing power to source materials of international standards at prices that we could never get. There is certainly a more formalized process of cooperation required in having a Chinese partner, but the end result is well worth it.

Hebei has committed to purchasing 60% of the Kami project's production. What is your strategy for selling the remaining 40%?

Four days after our signing ceremony in China a year ago, I was in Tokyo starting the second off-take file. Our discussions have focused on Japan, Taiwan, Korea, and other Asian markets separate from Mainland China, and we expect to bring home a second off-take deal before the end of Q4 this year. The fact that Hebei finalized their deal with us earlier this year and put in an additional $119 million to the $62 million they invested in September 2012 has helped to accelerate discussions. All of the steel mills know of the tremendous amount of legwork and due diligence Hebei completed in order to make their decision to buy from Alderon and that gives them comfort.

What are your views on the significance of the current discussions on raising royalties in Québec and the implications they may have for the competitiveness of your projects on the Labrador side of the Labrador Trough?

If Québec proceeds with the implementation of a more severe royalty regime, we will definitely have a competitive advantage on the Labrador side of the Labrador Trough. We are happy to take advantage of the situation, but ultimately what is being proposed in Québec sets a bad example for the rest of the country. The politicians there do not understand how difficult it is to take a project from discovery to production, particularly in Canada where mines often operate in remote areas with no pre-existing infrastructure. They also do not understand that the bulk of the money to develop many of these projects does not come from within Canada.

The banks in this country rarely lend to mining projects because they consider themselves already overexposed to a resource-based economy. Therefore, we must go around the world to raise money, and foreign capital is very sensitive to the economics of a project. When players in other countries consider investing potentially billions of dollars here, they require incentives, such as an attractive royalty regime, to compensate for the risk that they are taking.

There are suggestions that the Labrador Trough alone could produce 5% of global iron ore output. How do you see Canada's future as an iron ore producer?

It is certainly possible for Canada to be a significant iron ore producer, but for specific reasons. First, we are a safe jurisdiction that is better positioned than Australia or Brazil to supply to Europe and the United States when their economies eventually recover. Second, we produce high-quality, high-value ore that is very low in deleterious elements. This gives it value in use beyond that of a typical base load supply of iron ore from Australia or Brazil, which is the key motivator for the Asian steel mills and iron traders that are talking with us now.

Finally, I do not believe in the extremely low predictions of iron ore prices that are coming out now. Our case, in which China's leading steel company has committed to invest over $400 million in our project, is a much better indicator of confidence in iron ore prices going forward than some of the commentary made by investment analysts. Hebei's view of iron ore prices, which have been remarkably accurate since I have began dealing with them over two years ago, is a long-term average in the $110/mt to $130/mt range, leaning toward the higher side over the next few years.

Plans to develop railways in the Labrador Trough have been recently delayed. Do you feel that the infrastructure being set up in the Labrador Trough matches the potential of the area?

The existing railway on the Labrador side of the trough has 50 million mt of surplus capacity, so it will be adequate for the next 10 to 20 years in my opinion Our main port is Sept-Iles in Québec, which is owned by the federal government and undergoing a major expansion with the participation of major companies like Tata Steel and Alderon. The whole process is extremely well managed, which is what Canada needs to ensure competitiveness. The power infrastructure in the Labrador Trough area needs some upgrading, but that is already under way with the development of the Muskrat Falls hydroelectric project.

Everyone is doing their part. We are bringing the money and partners to the area to initiate projects, and the government is providing the infrastructure needed to ensure that we can go into production. With the help of all of these factors, we are confident that we can get into pilot production by the end of 2015 and full commercial production by 2016. •

INTERVIEW WITH

Dean Journeaux & Ernest Dempsey

DJ: PRESIDENT & CEO
ED: VP INVESTOR RELATIONS & CORPORATE AFFAIRS
NEW MILLENNIUM IRON CORP.

New Millennium has partnered with Tata Steel to develop your DSO project in the Labrador Trough. What is the project's current production status?

DJ: The project is owned and operated by a joint venture company called Tata Steel Minerals Canada (TSMC), in which New Millennium's interest is 20% and Tata's 80%. The project has 65 million mt of 43-101 compliant resources and is progressing well. Its core products will be 65% Fe sinter and pellet feeds, upgraded from the 58% to 60% Fe in situ ores in an innovative year-round processing plant under a weather-proof dome that will be in production in mid-2014. The output will go to Tata Steel's operations in the UK and Holland.

While the processing plant is being constructed, TSMC has entered the iron ore market via a simple crushing and screening operation that is producing a good quality ore with a grade of approximately 62% Fe. Commercial sales of this material began in September of this year.

Also in September, NML announced the completion of a multi-faceted agreement between TSMC and neighboring producer Labrador Mines Holdings Limited to optimize the use of respective resource holdings in the TSMC plant area and cooperate in rail transport and port infrastructure development. Both companies will enjoy the benefits of cost synergies.

When it comes to your taconite projects, where you have deposits on either side of the border in the Labrador Trough, what is your strategy for further development?

DJ: We have approximately 5.7 billion mt of proven and probable, and 15.9 billion mt measured and indicated of NI 43-101 taconite compliant resources in the Millennium Iron Range. In addition to the above, New Millennium has another 7.7 billion mt of inferred resources. New Millennium has a strategic partnership with Tata Steel to complete a $50 million feasibility study on two of the taconite deposits, LabMag in Newfoundland and Labrador and KéMag in Québec. Tata Steel has an option on each and the main product would be pellets. The study began in the summer of 2011 and will be completed shortly. Once it is published, Tata Steel will decide whether to exercise its option. If they do, we will have to choose between developing either LabMag or KéMag first. Tata Steel and New Millennium are looking for other partners with off take needs to round out the consortium.

These are huge projects and only one will be developed at a time. It will depend on the economics and government policies, as the projects are in different provinces. The political situation and tax increases in Québec will undoubtedly play a role though we do not know yet how these factors will affect the projects. Proposed legislation has not yet become law. Our concern is long-term certainty of laws and taxes regardless of jurisdiction.

Infrastructure is one of the biggest challenges that iron ore players face in the Labrador Trough. How does New Millennium plan to approach this issue?

DJ: New Millennium's development plan has always been to use a ferroduct to transport the concentrate in slurry form from the mining-beneficiation stage to the pellet plant. Because we make such a fine concentrate, in order to liberate the material we have to grind it down to flour-size, which makes it ideal for slurry transportation. We participated in the CN Railway study in order to assess all transportation options, so while it was suspended that decision does not affect us. Our original ferroduct option is the most economical and furthermore does not tie us to other potential producers and their development plans and timeframes.

When the slurry material arrives at the pelletizing site, we will dewater it and pelletize a portion of it - 17 million mt of 22 million mt - and the remainder will be sold as concentrate. The saleable products will then be shipped from the new multiuser deepwater dock at Sept-Îles, Québec, in which we have invested nearly $40 million. New Millennium and TSMC together is the biggest single player in the dock project and will have reserved 40% of its 50 million mt per year design capacity. It will be a world-class facility with a vessel loading capability for the range of vessels sizes servicing the North American and seaborne iron ore trade. This will include access to the largest vessels and therefore the option of shipping product competitively into Asia.

Seeing the increasing amount of Chinese partnerships in the Labrador Trough, is China's market going to be a target market for New Millennium?

DJ: While the Chinese market is attractive, it is the most distant from the Labrador Trough so Canadian suppliers are at an ocean freight disadvantage. The more natural markets for our projects are North America, Europe, the Middle East and North Africa, although China and the other Asian markets are very much a part of our overall marketing strategy.

ED: Typically, the Eastern Canadian iron ore companies that sell to the seaborne market have more of a global portfolio with a mix of geographies and that is what we are aiming for. We also are targeting consumer partners as opposed to traders or middlemen where possible. Our preference is to have a high-quality steel company that consumes our ore as a partner.

DJ

How are you working in partnership with neighboring First Nations to bring them into the workforce?

DJ: Since we first started to work in the area, New Millennium has had very close relations with the First Nations. In 2002, we made an agreement with the Naskapi Nation on the LabMag project under which they invested in its very early development. They were willing to put money into the project, especially into the environmental aspect, and now they own 20% of the LabMag property. For the DSO project, we have four different IBAs with the Naskapi, the Labrador Innu, the Innu of Matimekush-Lac John (Schefferville) and the Innu of Uashat-Maliotenam (Sept-Iles), as well as a Cooperation Agreement with the NunatKavut Community Council, which represents the Southern Inuit of Labrador.

We have a number of First Nations members working on our projects in the exploration stage. TSMC has a number also in their operations. We are doing a lot of training to improve their skills in equipment operations, geology and exploration and we have established a scholarship program for secondary school students that awards $50,000 annually to encourage secondary students to reduce the drop-out rate. There are 1,800 First Nations people that live in the area and our emphasis on education and training is so that these people will eventually become good and reliable employees that live in the area.

How does the Millennium range compare to other world-class deposits in North America?

DJ: Our Millennium Iron range, which is over 200 km long, is equivalent to the Mesabi Iron Range in Minnesota in geographical size, although our resources are already double theirs and we have fewer faults. Our advantage over the iron mines in the Labrador Trough built in the 1960s and 1970s is the opportunity to lower costs through the use of large scale and the most technologically advanced equipment. The recently idled Wabush pellet plant has three pelletizing lines with annual production capacity 2 million mt each, whereas a single line in our pellet plant will be capable of producing 8 million to 9 million mt per year. Magnetite requires half the energy of hematite to pelletize.

ED: Additionally, our taconite is at surface (outcrops) and is relatively flat lying. The mining costs are relatively attractive compared to the other types of deposits that have higher dips requiring more waste removal. Looking at the vagaries in the steel cycle, we know we need to be positioned attractively in the cost curve, not just in North America but also globally. We have natural advantages which new equipment and innovative operating practice can optimize. The ferroduct is innovative for North America and brings a significant operating cost advantage over rail. Our high-pressure grinding rolls are also new for Canadian iron ore operations. Because of the energy intensity of the concentration process, their inclusion in the flowsheet brings down the grinding energy and operating cost. •

INTERVIEW WITH

John Kearney

CHAIRMAN & CEO
LABRADOR IRON MINES HOLDINGS LTD

As a leader in iron ore production in the Schefferville area, can you give us some background on its history as an iron ore producing area?

Labrador Iron Mines is a leader in reactivating the iron ore industry in the Schefferville area of Québec and Labrador. The Schefferville area is actually the original home of all iron ore production from the Labrador Trough. The Iron Ore Company of Canada (IOC), which was incorporated after the Second World War in 1948, specifically to develop the Schefferville iron ore deposits, came with the benefit of a special act of Parliament that enabled the development of iron ore in the area. IOC started construction in 1950, opened in 1954 and operated until 1982 producing about 150 million mt. Our company is reactivating this historic direct shipping iron ore production in Schefferville, effectively picking up where IOC's operations left off, and rejuvenating the area.

Can you provide us with an update on the key facts and figures of your James Mine?

The James Mine is the first in a series of about 20 deposits that we own in the Schefferville/Menihek area, which have a combined total of about 170 million mt of iron ore. Labrador Iron Mines is currently operating at around 2 million mt per year, and our plan is to increase production to 4 million to 5 million mt per year over the next two to three years. The James Mine started in 2011 and produced about 600,000 mt of iron ore, of which we sold about 400,000 mt. In 2012, we produced and sold 1.7 million mt of iron ore, a significant increase year over year. Over the past two years, we have gained tremendous operating experience that will enable us to achieve greater efficiencies in the future. For 2013, we are targeting a similar level of production as last year—between 1.7 million and 2 million mt of iron ore. We are proud of our achievements in demonstrating our integrated mine-to-port solution, in which our iron ore is mined, loaded onto trains and then travels by rail to the Port of Sept-Îles in Québec. From there, our ore is sold to IOC and exported to the China markets.

What kind of infrastructure does the Schefferville area have?

A main attraction to this area for us was its existing infrastructure, which significantly lowered our capital cost. Labrador Iron Mines has one of the lowest capital cost profiles in the world for iron ore, and that is primarily because we have the benefit of this infrastructure that was put in place many years ago by IOC. They built the town of Schefferville entirely for the mining industry. We are right next to the railroad, which can take our ore from the processing plant to the port 600km away. We also have the existing roads, hydropower right over our head, easy airport access and basic support facilities and medical services, all at our doorstep. When compared to other remote projects in the Labrador Trough where you have to build everything from the ground up, the benefit of this existing infrastructure to LIM is tremendous.

You recently announced a strategic partnership with Tata Steel. Can you give us further details on the partnership?

While we were the first company to reactivate the Schefferville area, we did not acquire all of the properties that were previously developed by IOC; we have about half of them, and the other half are held by Tata Steel in a joint venture with New Millennium. We are very pleased that we have now been able to expand our relationship with Tata Steel, as we are operating side by side and using the same rail line and port. There are synergies to be gained by cooperating and working together with Tata. We have also formed a joint venture to develop one of our iron ore deposits: the Howse Deposit. While Howse is a long way down the line for us, it is located right beside Tata's new processing plant and there is a great deal of savings to be gained by mining and processing it in conjunction with their plant. Also, the potential exists to commence production at Howse much sooner than if LIM were to develop the deposit on our own. By cooperating on infrastructure, there are opportunities in which both companies can improve efficiency. In the long run, we look forward to working with Tata and seeing some potential off-take agreements. As one of the largest steel producers in Europe, Tata will be in a position to help us access the European market when the European economy improves and steel production increases.

How are you advancing your relationships with the First Nations in the area?

From the day we started in the area back in 2005, one of our priorities has been to ensure that we have positive relationships with the local communities. We have spent a great deal of time and effort working on these relationships, and we have signed IBAs with four First Nations groups that are most closely impacted by our project and on whose traditional lands the project is located. We strive to maximize employment of local people in our workforce. We have up to 40 or 50 local community people working with us on a seasonal basis, and we also have training programs where we work with the local communities. We are very conscious of the impact our work has on the local communities; it is a big change from where it was 20 years ago, and we want to make sure that it has a positive impact. •

INTERVIEW WITH

Rajesh Sharma

CEO & MANAGING DIRECTOR
TATA STEEL MINERALS CANADA (TSMC)

Tell us about how Tata Steel Minerals Canada was founded and the importance of your Quebec operations in the greater context of Tata Steel Group.

Tata Steel started operations in India over a 100 years ago. Since its inception, the Company's steel-making operations have been backwardly integrated with its mines. Today, 100% of the iron ore supplies to our steel plants in India are from our own mines. In order to ensure raw material security and improve the competitiveness of our European operations, we looked for iron ore and coal opportunities globally. We have initiatives in Africa, Australia, Europe, and Canada; Canada is one of the most significant for iron ore. We found a good direct shipping ore deposit, good partners, and a good business climate here. Also, the Port of Sept-Iles is close to our European steel plants, which provides an advantage in terms of freight costs and proximity to the consumption center.

You decided to enter the Canadian market through a joint venture with New Millennium Iron Corporation. What are some of the advantages of that partnership for Tata Steel Minerals Canada?

First and foremost, New Millennium Iron Corporation (NML) brought us the mineral deposits. Second, to have a local partner, especially in the initial stages, is extremely helpful. They know the lay of the land and how business is done here. They have certain relationships that we were able to leverage and utilize. Tata Steel also demonstrated its commitment to NML by becoming its single largest shareholder.

Can you provide us with details on your Direct Shipping Ore (DSO) project in the Labrador Trough area?

The Direct Shipping Ore project is in the advanced construction phase. Tata Steel Minerals Canada started production in 2012 through a contingent plan, but we could not bring the ore to market because of logistics constraints. The processing plant will be commissioned next year. We are negotiating short-term logistics arrangements to evacuate ore this year. We have also invested in the new deep sea terminal with the Port of Sept-Iles. We have booked capacity that should come on stream sometime in the latter part of next year. We will commence sales this year and operations are expected to stabilize in the next year.

The greatest risks to remote projects in Quebec include access to infrastructure and transport links, which are particularly scarce in the Labrador Trough region. What are your strategies to overcome this challenge with your projects?

Both inbound and outbound logistics are proving to be a challenge. However, as we are still in the construction phase, we have managed to bring material into the site in time through detailed planning and investing in transport equipment to de-bottleneck the process. The more challenging aspect is the outbound logistics, where we have to deal with four rail operators, interchange agreements, and a number of terms and conditions. We have secured most of the arrangements. The piece which is as yet unresolved is the port. We have booked capacity in the multi-user deep sea terminal, but there are still issues with respect to access and unloading and stockpiling facilities at the port.

What has been your experience in integrating local communities into the life of the DSO project?

Tata Steel has extensive experience in working with local communities and is recognized as one of the global leaders in corporate social responsibility. We have operations in the most economically challenged regions of India. We have been able to integrate our operations with the needs of the local community and have been able to co-exist with them in a mutually beneficial way. We have tried to bring the same principles and philosophy to Canada.

Expectations in Canada are significantly higher, but we have a very collaborative relationship that is reflected not only in the signing of Impact Benefit Agreements, but also in various other engagements with the communities. TSMC has provided them with employment and contracting opportunities, and has always contributed to the local social causes. There is also, of course, a significant component of financial contribution that is linked to the progress of the project. Our goal is to create a situation in which each individual in the community gains respect and perceives Tata Steel positively. We are very comfortable doing that, but every new area always requires continuous efforts and has its nuances.

What are some of the comparisons and contrasts you can draw between Quebec and Newfoundland & Labrador from Tata Steel Minerals Canada's experience operating in both provinces?

Collaboration and accessibility to the government are common threads across Newfoundland & Labrador and Quebec. The regulatory requirements are stringent, but the provincial governments are transparent and open to dialogue. Both recognize the importance and economic benefits of our projects, and are willing to help and support us.

There is another dimension regarding taxation and the mining regime. As an operator, we would like to be sure that there is certainty of policy for the future. It is in our interest to have the royalty regime as low as possible. If a project is not competitive, then obviously an investor will not invest money. Today, it is a global world, and we have to recognize that.

The strengths of Canada are availability of resource, clear policies for permitting and environmental clearance, overall transparent regulations, and a good climate for doing business. There is a culture of mining, which helps, but there is scarcity of skilled manpower. That puts pressure, especially when times are good, because there are not enough qualified people and it is difficult to retain talent. •

Infrastructure Development

Ports and rails

Developing any economic sector in northern Canada is a challenge: sparse populations have led to inadequately developed infrastructure and, with much of the country located within the Arctic Circle, climatic conditions are difficult. These challenges are felt acutely by the iron ore players in the Labrador Trough, for whom the availability or dearth of energy and transportation infrastructure has a substantial effect on project feasibility.

Analysts have predicted that the Trough could grow from 1% of the global seaborne market to 3% in the next five years, provided that streamlined action is taken to support its volume-intensive operations. Trough juniors saw a setback in February when CN halted its feasibility study on a multiuser rail, however ensuing negotiations have yielded progress. A significant step was achieved in October when the Québec government announced it would set aside $20 million for an independent prefeasibility study on a multiuser rail link to the Trough.

A leader in the drive to bring a multiuser rail to the Trough has been Champion Iron Mines, whose flagship project Fire Lake North is located 40 km south of Fermont. "The objective is to build and finance a railway with access to all iron ore developers that offers a competitive transportation cost. The corporate structure of the railway company would operate as a cost center and charge a tariff to customers," said Jean-Luc Chouinard, vice president of project development at Champion Iron Mines.

"This infrastructure project would be a catalyst to the development of the iron ore industry and could become a turning point in the Québec economy. A project like Fire Lake North can bring hundreds of millions of dollars annually to governments," Chouinard added.

As juniors face the uncertainties in today's capital markets, government funding for infrastructure development is crucial. "Many mining projects today are infrastructure-challenged and, without support from the government, must consider installing their own railways and port facilities," said Rob Metka, managing director of industrial minerals at Hatch, a global engineering firm that has diversified itself beyond mining and metals into public and industrial infrastructure and energy works. "There are many projects which could be catapulted into feasibility if the infrastructure was publicly funded."

As strides are made towards a multiuser rail, developers further from ports can also gain ground from high quality ore. "Champion's strongest advantage is the ability to produce a very high-quality product. On average over the mine life, the forecasted production rate is 9.3 million tonnes per year of high-grade iron ore concentrate at 66% iron with an expected mill recovery of 82%," said Chouinard.

Oceanic Iron Ore, aiming for a production startup of early 2017, is projecting a far lower operating cost than its iron ore peers in the Labrador Trough due in large part to its infrastructure advantage. A 2012 prefeasibility study demonstrated a net present value of $5.6 billion and projected the lowest operating cash cost per mt FOB for iron ore in North America, at $30.18 over the life of mine. "Oceanic's project Hopes Advance is a coastal deposit with direct access to market from what will be a wholly owned port at Ungava Bay that will be able to ship all year round. In a number of cases, we will be twice as cheap," said Alan Gorman, president and COO. "Our advantages are derived entirely from infrastructure differences… Furthermore, wholly owning our port facilities will save us from incurring tolling fees."

New Millennium Iron Corp, which is developing taconite projects on either side of the Trough in both Québec and Labrador, had devised an original plan to use a ferroduct to transport their concentrate in slurry form from the mining-beneficiation stage to the pellet plant. "Because we make such a fine concentrate, in order to liberate the material we have to grind it down to flour-size, which makes it ideal for slurry transportation," said Dean Journeaux, president and CEO of New Millennium. "We participated in the CN Railway study in order to assess all transportation options, so while it was suspended that decision does not affect us. Our original ferroduct option is the most economical and furthermore does not tie us to other potential producers and their development plans and timeframes."

Once the inland transportation is decided, concentrates reach the coast at the Port of Sept-Îles, which is the largest iron ore terminal in North America and is making preparations to support increased volumes. In partnership with the industry, the port is developing a state-of-the-art terminal that will be built in two phases.

"The first phase is already engaged, having started last February. The port contributed 25% of the costs, and the federal government provided a grant to cover another 25%. The other half of the project has been funded by five of the industry players: New Millennium, Tata Steel, Champion Minerals, Alderon, and Labrador Iron Mines. Interestingly, the financial model for this project will allow these companies to be reimbursed for their initial payments through the tariff schedule," said Pierre Gagnon, president and CEO of Port of Sept-Îles.

The new facility will have a capacity of 50 million mt/y. "With new clients coming in, we anticipate having a capacity of over 200 million mt/y in the next 10 years. To put this in perspective, Port Metro Vancouver, which is the largest port in Canada, ships 70 million mt of bulk cargo per year," said Gagnon.

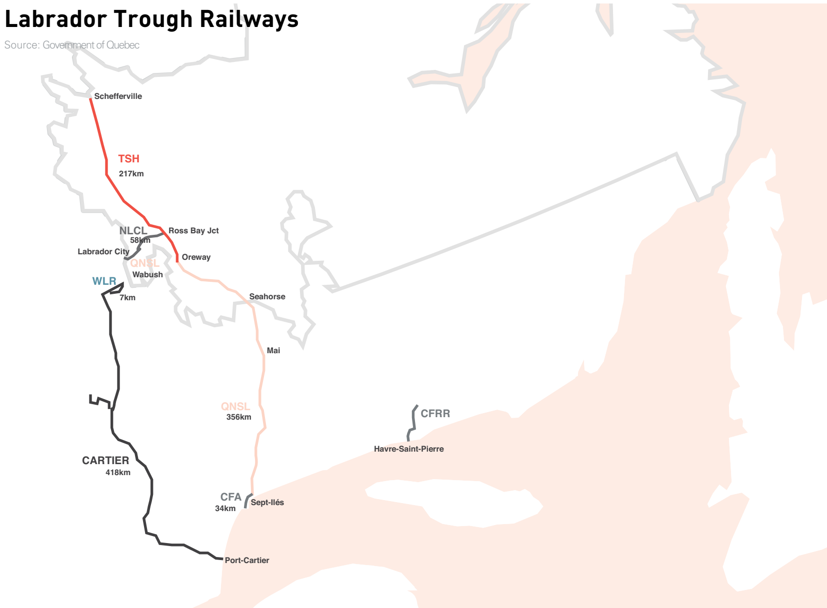
New Millennium, along with partner Tata Steel Minerals Canada (TSMC), its joint venture with Tata Steel, will be the biggest single player in the port development and will have 40% of its designed capacity. "It will be a world class facility with a vessel loading capability for the range of vessels sizes servicing the North American and seaborne iron ore trade. This will include access to the largest vessels and therefore the option of shipping product competitively into Asia," said Journeaux at New Millennium. As evidenced by Labrador Iron Mines' participation in the multi-user port expansion, projects on the Labrador side of the Trough hang just as much in the balance on the basis of Québec's infrastructure. One common line comes out of the area, therefore Labrador players are facing the same problem as their Québec counterparts.

TSMC, which has its DSO project in Labrador, has heralded the willingness of both provinces to work with the private sector. "Collaboration and accessibility to the government are common threads across Newfoundland & Labrador and Québec. The regulatory requirements are stringent, but the provincial governments are transparent and open to dialogue. Both recognize the importance and economic benefits of our projects," said Rajesh Sharma, CEO of TSMC. "As with any bulk-commodity product, the real challenge for mining and exploration companies developing iron ore projects in the Trough, whether in Labrador or Québec, is infrastructure. More particularly, in this case, is the need for a new rail line linking iron ore projects to the Sept-Îles deep water port facility. Although there are currently two rail lines operating in the area, they are both privately owned and the use of either is restricted and/or very expensive," said Martin Bourgoin, president of MRB & Associates, a Val-d'Or-based consulting firm with iron ore expertise.

"Rail costs are a substantial part of the economics of iron ore projects and could represent up to 40% of operating costs… A new, multi-user, common carrier rail line would unlock several major iron ore projects in the southern Trough. It is the catalyst that would propel several projects into commercial production," said Bourgoin. •

Labrador Trough Railways

Source: Government of Quebec



TL

INTERVIEW WITH

Tom Larsen & Jean-Luc Chouinard

TL: PRESIDENT & CEO
JLC: VICE PRESIDENT OF PROJECT DEVELOPMENT
CHAMPION IRON MINES LTD

Champion Iron Mines published a Prefeasibility Study for its flagship project, Consolidated Fire Lake North, in February of this year. Can you provide us with highlights from the study's conclusions?

JC: Our flagship project, Consolidated Fire Lake North ("CFLN"), is favorably located roughly 40 km south of Fermont, in northeastern Québec. The main results of the prefeasibility study show that the project will generate a $3.3 billion NPV at an 8% discounted rate. The internal rate of return is 30.9% and the payback period is very attractive at 3.4 years. These economic metrics include a financing scenario for a railway solution in order to release the prefeasibility study, which is quite amazing. The project's pre-production capital expenditure is $1.4 billion, excluding the railway component.

Champion's strongest advantage is the ability to produce a very high-quality product. On average over the mine life, the forecasted production rate is 9.3 million mt per year of high-grade iron ore concentrate at 66% iron with an expected mill recovery of 82%. The anticipated silica content of the concentrate is less than 5%. Additionally, the alumina content is very low with a ratio to silica of less than 1:10, which is a very positive characteristic for the steel industry. The concentrate also has low phosphorus content, allowing for a wider variety of applications.

Our engineering consultant, BBA, estimated that the in-pit measured and indicated resources were 691 million mt, and the reserves that were used for the PFS were 465 million mt. Within both the East and West pit deposits, drilling indicated that we have in excess of 1.2 billion mt of iron ore resources in all categories. The global resources for the Fermont Holdings are over 5 billion mt and they are proximal to the future concentrator at CFLN.

Champion Iron has been strongly involved in infrastructure discussion currently ongoing in Québec. Could you provide some more detail about this situation?

TL: Despite the very challenging market environment in 2013, we continue to focus on de-risking the development of the Consolidated Fire Lake North flagship project. We are working with various stakeholders on developing a cost effective rail solution as a first priority to allow us to complete the CFLN Feasibility Study and we believe that the project's financial metrics will be robust.

The announcement in early October by the Québec Government regarding a prefeasibility study on a new third railway that was within their economic policy is very good news and a big step in the right direction for the development of the iron ore industry in Québec. Funds totaling $20 million were allocated to the secrétariat du développement nordique to perform an independent prefeasibility study to evaluate and determine the optimal solution to finance and build a new 3rd multi-user railway system. Certain paradigms exist regarding current infrastructure and capacity estimates and this study will include an independent peer review of previous studies and work performed to date.

The objective is to build and finance a railway with access to all iron ore developers that offers competitive transportation costs to help to further develop the iron ore industry in Québec. The objective of the corporate structure for the railway company would be to operate as a cost center and charge a tariff to customers.

For the last two to three years we have been working with stakeholders and more intensively since the CN withdrew from their project in February of this year. Currently the existing railways are owned by large mining companies, who are competitors. One railway is deemed to be private and will not allow access, and the QNS&L is very expensive.

Shipping costs from Sept-Iles to China are $10 to $15 more than our global competitors. That is why we as customers of a new railway system want to pay a competitive rate to better control this cost center to offset the higher maritime transportation costs to develop a more sustainable iron ore industry. The only costs that we can control are our own! The second biggest cost center after mining is rail transportation.

Therefore the company continues working with stakeholders in order to advance the multi user rail concept by increasing communication with all stakeholders. This infrastructure project could become a catalyst for the development of the iron ore industry, and a turning point in the Québec economy.

The Fire Lake North project with only one production line can bring hundreds of millions of dollars annually to governments. Champion has the potential for four production lines with the resources outlined at the Fire Lake North project and at the Oil Can project located six kilometers to the North.

It is more difficult for junior mining companies right now to finance large infrastructure projects with the uncertainties in today's capital markets. Even major companies have challenges and difficulties with financing large projects today and some projects are put on hold. We will continue to move forward.

What are the differences in the regulatory challenges you face operating on both sides of the Québec-Newfoundland and Labrador border?

JC: The themes and processes underlying regulation in the two jurisdictions are similar. The regulations are there to ensure that the environment is protected and that the local population is accommodated. On both sides of the provincial border, you have a relatively easy access to power and infrastructure.

Even so, Québec is a slightly tougher jurisdiction at the moment as a result of uncertainty stemming from the provincial government's mining taxation policy proposals. While the uncertainty does not change our project plans, it does pose an additional constraint for financing in the near term. •

INTERVIEW WITH

Martin Bourgoin

PRESIDENT
MRB & ASSOCIATES
GEOLOGICAL CONSULTANT

As a geological consulting firm with expertise in iron ore, what has been MRB & Associates' experience since 2011 as the Labrador Trough has attracted more development attention?

MRB & Associates originally got involved in the iron ore business in 2008, and we have been very active in the Labrador Trough ever since. We have helped clients advance their projects from the grass root exploration level to feasibility stage. Since 2008, the rejuvenated worldwide interest in Iron that corresponded with the increase in the Iron spot price, prompted several mining companies to complete aggressive exploration programs in the Labrador Trough area. This led to the delineation of several very large iron ore deposits. The year 2012, however, threw two major challenges at Iron Ore companies seeking major investments to push their projects forward: a drop in financial markets, and; a new Political Party in power in Québec. The new government has been somewhat unclear as to the direction it will take towards mining regulations, and this combined with a drop in financial markets has resulted in a sharp decrease in exploration activity in the Labrador Trough area; however, we believe this slow-down is temporary, since the demand for Iron worldwide continues to grow. Economic growth-rates for China, India, and other emerging countries, indicate that they are going to require a lot of steel over the next decade.

Are you seeing interest from Asian partners who are willing to get involved in iron ore projects at earlier stages?

Most of our clients have China-based strategic partners. Chinese companies have been evaluating and monitoring Iron ore projects in the Trough for some time now. They have been involved at all levels from small private equity financings to strategic partnerships. Chinese companies are keen to invest in the Labrador Trough Iron Ore projects in order to lock up product. China wants to slash its reliance on Australia's iron ore miners, and are on record with its plan to secure 40% of its iron ore imports from overseas supplies under its ownership, by 2015.

With the political uncertainty on the Québec side, is exploration having an easier time moving forward on the Labrador side of the Trough?

Exploration companies exploring in Québec still get reimbursed 40% of their exploration expenditures. This is quite an incentive program. As with any bulk-commodity product, the real challenge for mining and exploration companies developing Iron Ore projects in the Trough, whether in Labrador or Québec, is infrastructure. More particularly, in this case, is the need for a new rail line linking Iron Ore projects to the Sept-Îles deepwater port facility. Although there are currently two rail lines operating in the area, they are both privately owned and the use of either is restricted and/or very expensive. Rail costs are a substantial part of the economics of Iron Ore projects and could represent up to 40% of operating costs. This is why area miners are studying the viability of building their own rail line. I believe a new, multiuser, common carrier rail line would unlock several major iron ore projects in the southern Trough. It is, in my opinion, the catalyst that would propel several projects into commercial production.

Looking to the future, what potential do you see for the region in terms of gold development as miners deal with the falling gold price?

I believe that mining companies in the area will find a way to adjust by reducing their costs. Unfortunately, this usually means cutting back on exploration, which means fewer new discoveries. There are many junior exploration companies in the area that have announced very positive exploration results and seemed well on their way to commercial production; however, even though many of these projects host multi-million ounce deposits, they were still not able to attract markets. In a weak junior resource market "the street" is not really paying close attention, making it difficult for these projects to move forward. I believe the markets will eventually rebound and that these projects will start to get a lot of attention from investors. I like to call these projects "sitting ducks". •

Chinese Investment

Looking Beyond the Numbers

From peak GDP growth of over 14% in 2007 to just 7.8% in 2012, China's slowing rate of economic growth has been a big source of concern to the world economy; it has even been blamed for the collapse of the commodity market, and the mining and resource sectors of the capital market in the last couple of years. Whether or not China is slowing down is the most-debated topic in forecasting the direction of the global economy.

Numbers are good at expressing economic achievement. However, they fall short when it comes to explaining an economic phenomenon and giving us a full picture of what is really happening and what lies ahead. We need to look at both the internal conditions and the external environment to understand what is happening in China.

Is China Geopolitically Stable Enough to Grow?

In modern times history, democracy has been a cornerstone of social stability for nation-states (not necessarily policy stability) and represents an evolution in the post-industrial revolution world. During this period, the world has not quite seen an example of a country's sustained economic achievement without it. Dictatorial countries may have seen economic progression for a while, until the dictators are overturned and the countries go back to chaos, as we experienced in the last century.

The lack of democracy in China is certainly a concern in the wider context of its geopolitical conditions and social development, but the economic development of the BRIC countries we have seen in the last decade or so reveals that China is a special case. Indeed, it has out outperformed the rest of the BRIC countries (mostly democratic countries) by wide margins.

Based on over three decades of continuous and uninterrupted economic reform – resulting in tremendous economic progress – over four generations of power transitions (not within the same family), China seems to have found a way to balance its internal constituencies in selecting new leaders and peacefully handing over authority (most notably over the army). Four generations would appear to be long enough testimony of a stable system that has made peaceful transition possible in an undemocratic country. Such a system not only provides peaceful succession in leadership, it provides consistency in policy-setting and execution that is the driving contribution to the country's economic and overall development.

Setting aside debates beyond the economy, the current political system seems effectively functional to carry forward the mandate of running the country according to its plans for economic progress.

Does China Have the Skills/Expertise to Grow in a Sophisticated International Economy?

The second interesting question to explore has to do with the external environment within which China operates. Similar to the West meeting the East in the early 1800s, the gap between the advanced countries and the rest is huge and this time, the world has evolved to be much more sophisticated in commerce and finance. It is reasonable to question China's ability, in this early stage of its economic reform, to cope with external shocks such as the international financial crisis, and to manage its progress in this sophisticated international economy.

To an external observer, China enjoys an advantage in the way it selects its leaders. The Standing Committee of the Central Politburo is made up of highly qualified leaders selected from the bureaucracy based on the accumulation of their collective experience and expertise, providing a training ground for successors and the basis to select the ultimate top leaders. These leaders must qualify by successfully running provincial or similar jurisdictions as top leaders before being selected to this elite committee of the decision-making machine. This leader selection process, as the Hon. Maurice Strong calls it, provides a pool of individuals with the competence and training to run a country.

We have seen this Chinese bureaucracy over its three decades of economic reform, executed through great challenges and times of extreme economic shocks. In the 1980s, China was like a poor man trying to start a business with no capital, skills or markets. No banks or customers would trust him.

In the 1990s, before joining the World Trade Organization, it was at the mercy of advanced countries in getting Most Favoured Nation status on the international trading platform in order to export its products to big markets, especially the U.S. Towards the end of the 1990s, with some accomplishments achieved, the Asian financial crisis set in and devastated the major Asian economies and currencies. China was the only country that withstood the shock without depreciating its currency, thus contributing to stability in the region. About 10 years later, the international financial crisis triggered by the subprime problem in the U.S., followed by the European debt crisis, attacked the global economy on an unprecedented scale. China responded swiftly with a $560 billion stimulus program of fixed investment in infrastructure, which sent the Super Cycle to its peak in 2011.

The Chinese bureaucracy seems to have done very well in the face of these major challenges over three decades with four generations of leadership changes, building the second largest economy in the world. Without dwelling on the details of how a primitive economy could have managed through these difficult times, it seems that an effective bureaucracy understood the issues at hand and set effective policies to survive and thrive.

It is also interesting to note the phenomenal demand for higher and management education among Chinese students, career professionals and executives. In 1991, there were only nine MBA programs offered in China; by 2011, there were 236, according to the Chinese Education Centre. Many of these programs are offered by reputable Western business school or universities. China is not only the consumer products factory of the world, it has become an MBA factory.

This is an abridged version of a longer article that originally appeared in Century Iron Ore Corp.'s 2013 Corporate Report, reprinted here with the kind permission of Sandy Chim.

Sandy Chim *is President and CEO of Century Iron Mines, the company's founder and a member of its board. In addition, Mr. Chim is a non-executive director of Prosperity Minerals Holdings Limited (listed on AIM, London), a director of Augyva Mining Resources Inc., and Sage Gold Inc. (listed on TSXV), and a member of the supervisory board of Anhui Chaodong Cement Co, Ltd., (listed on the Shanghai Stock Exchange of China). He has sat on public company boards in Australia and Hong Kong, as well as Canada, London and China.*

The vision of ***Century Iron Mines Corporation*** *(TSX:FER) is to exploit its large property asset base—believed to be Canada's highest number of iron ore claims held by a publicly traded company—to become one of the country's largest iron ore producers. Century has structured a unique strategic formula to pave the way to achieving this vision: It has attracted WISCO and MinMetals, two of the largest Chinese state-owned enterprises, as equity investors and strategic partners (25% and 5% respectively).*

INTERVIEW WITH

Pierre Gagnon

PRESIDENT & CEO
PORT OF SEPT-ÎLES

What strategic role does the Port of Sept-Îles play within the North American shipping system?

The Port of Sept-Îles is the largest iron ore terminal in North America. With somewhere between five and eight new iron ore mining players that are working to put new deposits on the market, this position will only increase in the future. In the past five or six years, the port has been closely following the new players in the industry here, offering to help them build the infrastructure they will need to reach the market.

In partnership with the industry, we will be developing a state-of-the-art terminal that will be built in two phases. The first phase is already engaged, having started last February. The port contributed 25% of the costs, and the federal government provided a grant to cover another 25%. The other half of the project has been funded by five of the industry players: New Millennium, Tata Steel, Champion Minerals, Alderon, and Labrador Iron Mines. Interestingly, the financial model for this project will allow these companies to be reimbursed for their initial payments through the tariff schedule. We are proud that we were able to work together to create a mechanism for the financial scheme that was appropriate to get this new key infrastructure in place for our growing Canadian iron ore market. Additionally, we foresee helping our new partners with the logistics behind the port, as it is not only the infrastructure in the water that counts but also those last few miles on land before you get to the water. We are looking at the various ways we can support them to help them achieve their goals of starting production in the coming months and years.

In terms of capacity, what type of increase is the expansion going to bring?

The new facility will have a capacity of 50 million mt per year. This is the first phase, at a cost of $220 million. The second phase will begin once we have completed the commercial agreements with other new partners. At the moment we are around 30 million mt per year, but we are aiming to increase our capacity to 35 million mt per year by the end of 2013. With new clients coming in, we anticipate having a capacity of over 200 million mt per year in the next 10 years. To put this in perspective, Port Metro Vancouver, which is the largest port in Canada, ships 70 million mt of bulk cargo per year. We have a sister port relationship with them where we are the younger sibling, but we are catching up. Our relationship is very close, and we share a lot of expertise. This period in front of us will be very interesting, and we are looking forward to it.

What is the timeline for the multi-user expansion?

We have been engaged with the first phase since February 2012. This is a really tight timeline, as we must deliver the infrastructure by March 2014, well ahead of Alderon and Champion's needs. However, we will be in place to help with the DSO project between Labrador Mines and Tata Steel. This is the schedule for Phase I. Phase II will be started as soon as we complete the contract agreements with some of the new partners, such as Adriana Resources and Century. There are a lot of projects that are being considered at the moment that will rely on our new capabilities and capacity.

With 25% of the project's funding coming from the federal government, have you reached out to the provincial government to create initiatives to develop the mining industry?

We at the Port Authority rely more on federal funding because we are tenants of a federal asset. We are totally autonomous. This is a relatively new model for the Canadian port system; it was semi-privatized in 1999, when 19 port authorities were created across Canada through the Canada Marine Act. We have been able to access funding through a joint program of both the federal government and the government of Québec named the Continental Gateway Program, which supports any project in the transportation system that enables growth or creates economic activities and trade.

With all the mining players behind us, this project will clearly create a strong economic impact for Canada. By building this asset, we are enabling four to six new mines to begin operations, which creates jobs for 5,000 to 8,000 people. These projects have a total of over $25 billion in construction and investment in the country. Additionally, there is a multiplication factor of five or six when you calculate the total economic value created by these projects, as you have to take into account all of the associated service sector activity. This new facility is also a good opportunity to build new bridges of trade with foreign countries. For example, we are working with Tata from India, as well as the first steel producer from China. Building sister port relationships with these two countries is definitely a priority for us, connecting the world through our Canadian commodities.

What is your outlook for the Port of Sept-Îles in the next five years?

We will surely continue this pace of investment if the market maintains its growth Even though there are some more prudent players in the market now, we foresee that the fundamentals will remain strong. We are forecasting total investment up to three quarter billion dollars in infrastructure in our port within the next 5 years, acting as the market is expecting from us, to be an agent of growth. This is our mission. Another key element in our mission is our approach to building partnerships, both domestically and internationally, to support the needs of all our users, and mainly those of the mining industry. •

Quaerite prime regnum Dei:

An Introduction to Newfoundland and Labrador

"The investment climate is cool internationally and Newfoundland and Labrador has definitely seen that. Junior exploration companies are suffering right now in terms of raising capital and costs have increased dramatically, especially for labor. Going forward we will see shortages of skilled and unskilled labor that could drive up costs. Ultimately, however, we are a very commodity-rich province, and the future is strong. Mining will always be a part of this province."

- William Cahill, Associate,
COX & PALMER

Courtesy of Altius

An Introduction to Newfoundland and Labrador

A brief overview of the province and economy

With a population of just half a million, Newfoundland and Labrador may not dominate the headlines as much as its larger neighbour Québec. Its political developments and economic importance do not command the same attention as Québec, Alberta, British Columbia or Ontario. An outsider may be forgiven for viewing it as Canada's easternmost outlier, rather than a central part of the country.

Yet this would be doing a disservice to a province that has, throughout history, played an important role. Human habitation in the province dates back 9,000 years. It was the location of some of the earliest European contact with North America, first from the Norse and then the Portuguese. It was the site of England's first permanent settlement in North America and a significant source of conflict between British, French and Spanish imperialists in the 18th Century. The process by which Newfoundland became part of Canada, which occurred only after World War Two, has been a source of extended study by historians.

In the more modern age, Newfoundland and Labrador looked destined to assume a permanent status as a "have not" province as economic stagnation in the 1990s led to record unemployment. An economy that for centuries had been dependent on fishing, with poor conditions preventing significant agricultural development, found itself unable to adapt to a changing global market and declining fish stocks.

A number of factors have since combined to reverse the fortunes of Newfoundland and Labrador since the turn of the 21st century. The expansion of the oil and gas industry has proved an invaluable source of revenue for the province. Sensible government policies led to record budget surpluses. Increased interest and investment in the mining sector, led by exploitation of the iron ore-rich Labrador Trough, has brought jobs and tax revenue. Tourists, attracted by the province's unique and varied geography, have arrived in ever-growing numbers.

The success of this economic transformation is such that, despite the effect of the global fall in commodity prices on an economy that depends substantially on its natural resources, Newfoundland and Labrador is expected to reverse the 4.8% fall in GDP it experienced in 2012 with a 2013 growth of 6%. This would put it well above the Canadian average of 1.8% GDP growth, and in a comfortable first position among Canada's provinces and territories; a position it is forecast to maintain with 3.8% growth in 2014. Although Newfoundland and Labrador still struggles with challenges such as high unemployment, the future is looking positive.

Newfoundland and Labrador at a Glance

Source: Statistics Canada

Population: 526,702 (2013 estimate)
Capital: St. John's
Head of Government: Premier Kathy Dunderdale (Progressive Conservative Party)
Currency: Canadian Dollar (CAD)
GDP: $33.624 billion (2011 estimate)
Growth Rate: 1% (2012 estimate)
GDP per Capita: $65,556 (2012 estimate)
Exports: $11.32 billion (2012): fish and processed foods, oil and gas, mineral
Imports: $5.33 billion (2012): mineral products, machinery
Major Trade Partners: USA, China, Russia, UK, Denmark

INTERVIEW WITH

Tom Marshall

MINISTER OF NATURAL RESOURCES
NEWFOUNDLAND AND LABRADOR

Newfoundland and Labrador has been forecasted to lead the pack in economic growth amongst Canadian provinces this year, What is the role that the mining sector can play in encouraging growth within the province?

In 2013, Newfoundland and Labrador's provincial economy remains strong and continues to lead the country in capital growth. Resource developments in the province's mining sector have helped to boost capital investment to a record high of $11.8 billion. Mineral products mined within Newfoundland and Labrador include iron ore, nickel, copper, zinc, gold, aggregates, cobalt and silver. These commodities are used within the local and international markets. The annual value of mineral shipments for 2013 is expected to be $4.9 billion. Iron ore and nickel account for the majority of production. An increase in iron ore shipments is expected with all producing iron mines in the province scheduled to increase output. Newfoundland and Labrador's mineral exploration sector this year is also expected to remain robust. Annual expenditures forecast for 2013 are over $200 million with the bulk of expenditures being spent on iron ore.

What key initiatives is the government taking to maintain the province's attractiveness as a destination for natural resource investment?

Newfoundland and Labrador's Department of Natural Resources assists the provincial mineral industry through the delivery of its in-house mineral geoscience program. Through extensive web-based research tools and the public release of in-house materials, the Department provides information to help inform investors on potential exploration and development prospects. Investments in mineral geoscience are necessary to maintain a healthy exploration sector and alleviate risk and costs for companies involved in the exploration phase. Participation in a variety of mining conferences and international trade missions is another important aspect of the Department's work to inform potential investors about the province's mineral potential. In June 2013, Newfoundland and Labrador participated in a successful mission to China. Meetings were held with the National Development and Reform Commission (NDRC) and Hebei Iron and Steel (HIS).

How is the government taking part in the infrastructure development process?

Along with the mines already in operation in western Labrador and at Voisey's Bay, up to $15 billion of investment in Labrador mining projects may be realized over the next decade. Future mining developments in Labrador, particularly in the resource-rich Labrador Trough, have significant existing infrastructure capacity – including power, railway and port - for project expansion. With growth forecasted in the province's mining industry, along with advances in the fields of oil, gas and hydroelectricity, the Provincial Government wants to be prepared to meet the needs of industry and these resource developments.

The Government of Newfoundland and Labrador has established the Labrador West Regional Task Force. The task force is comprised of representatives from relevant government departments, municipalities, and mining companies to assist in the planning for growth in the region. The province has completed a report on infrastructure development in western Labrador. The report is a useful document that will help to guide discussion with industry and plan for future development.

With megaprojects in the oil and gas, mining and hydropower sectors putting pressure on the human resource pool, how is the province positioned to meet these industries' growing labor requirements?

In 2013, Newfoundland and Labrador's provincial investment in the resource sector is led by the $14 billion Hebron offshore oil project, the $7.7 billion Muskrat Falls hydroelectric project and the final year of construction at the $4.25 billion Long Harbour nickel processing facility. Major project investment in Labrador is expected to be stronger again this year, reaching more than $1.5 billion as work picks up on Muskrat Falls.

Over the next decade these projects, in combination with the continuing requirements of existing industries, will exert substantial demands on the provincial labour force. The province has been active in addressing the current and projected labour force challenges since 2007 with the release of the Skills Task Force Report: All the Skills to Succeed. Within this report, a Human Resource Action Plan was outlined and since its release, over $98 million in funding has been dedicated to support the initiatives outlined within this report.

Recognizing the importance of stakeholder participation, the Government of Newfoundland and Labrador has established the Workforce Development and Productivity Secretariat. This Secretariat is creating responsive labour market policies and programs and through streamlined communication channels with Industry and both private and public training institutions, is ensuring there is an accurate understanding of the labour market requirements utilized to plan and develop training and employment programming. In tandem with this initiative, government continues to update labour market information for all occupations, including those involved with major projects and is developing new labour market information products to identify and better communicate and respond to those occupations which are under most pressure. •

INTERVIEW WITH

Tayfun Eldem

PRESIDENT & CEO
ALDERON IRON ORE CORP.

Could you give our readers an update on the company's activities since 2011?

It has been a very busy two years for Alderon and we have covered a lot of ground. We completed all of our exploration drilling and issued several resource updates with the last one bringing us to 1.4 billion tonnes. We have completed a preliminary economic assessment and followed it up with a bankable feasibility study. Both of these assessments have confirmed the robustness of our project yielding very attractive economics with $3.2 billion net present value at an 8% discount, as well as a 29.3% internal rate of return. We have also signed a number of agreements, including our Port Access Agreement with the Port of Sept-Iles starting in 2015-2016 to use their new multi-user facility for access to global seaborne markets. We have also established offices in Montreal, St. John's, and Labrador City and added to our already strong talent base by recruiting professionals with proven track record in the region.

By far our most important accomplishment has been the strategic partnership we have signed with Hebei Iron and Steel Group. Hebei is China's largest steelmaker and the world's third largest producer. It recently completed its initial strategic investment in Alderon's Kami iron ore project for an aggregate amount of C$182.2 million. This is Hebei's first investment in iron ore assets in Canada and Alderon is very pleased to have them as a long-term strategic partner.

How will your recent partnership with Hebei Iron and Steel accelerate the Kami project's development?

We consider our partnership agreement with Hebei Iron and Steel to be a major milestone It further strengthens our potential to finance the remainder of the capital for the Kami project through global financial markets, including Chinese banks. Alderon now has both the initial capital and the China market access to build a leading iron ore company. Hebei now owns 19.9% of Alderon shares at the corporate level in exchange for a $62.3 million investment completed in September 2012. In March of this year, we completed a second tranche of their investment that provides Hebei with 25% of the project's assets in exchange for approximately $120 million. Hebei has also agreed to purchase 60% of our annual production once the mine is in operation. The conclusion of this strategic investment further validates and meaningfully de-risks the project and leads the way to successful development of the Kami Project into a high quality iron ore mine.

In addition to Hebei, we have also entered into a private placement with Liberty Metals and Mining, a subsidiary of Liberty Mutual. Liberty has injected $49 million into the project thus far in addition to Hebei's investment of approximately $182 million. These investments not only help to financially secure the project, but also display our partners' confidence in the legitimacy and value of the project.

As you advance towards production, do you anticipate difficulty in finding skilled professionals?

In general, finding skilled professionals in the mining industry in Canada is a challenge. That challenge is compounded by our location in a remote region in which it is difficult to attract and retain people. We are confident that we will have the workforce we need to start and sustain the operation. Initially, these people will come from outside the community, but the expectation is to eventually have fully residential employment. Furthermore, because we recognize that there is a deficit in skilled labor, we are considering a number of trade schools to create a pipeline of talent that will be ready in time for our operations.

In October 2011, Alderon filed to increase its production from 8 million to 16 million tpa. When do you expect to undertake this expansion?

Although we plan to initially produce at 8 million mt/year, we registered the project for a name plate capacity of 16 million mt/year as part of our environmental assessment project. This represents our goal to eventually produce at 16 million mt/year, which we would expect to achieve by 2020, and it means that when we decide to expand the project, we save a lot of time as much of the necessary environmental assessment will have already been done. To move to that level of production, however, we want to accomplish three things. First, we need to open up the pit to sustain that level of output. Second, we want to finance any such expansion through internally generated cash flow. Finally, we want to get an updated view on supply and demand in the iron ore markets between now and 2020, which would be used as one of the bases for a decision to expand.

Iron ore prices have been doing well in the last decade but have also seen volatility more recently. Is Alderon bullish on the price of iron ore in the near future?

Iron ore prices between 1983 to 2003 were abysmal. Between 2004 and today, however, we have seen a tremendous surge in prices underpinned by demand for iron ore and steel largely coming out of China. I do not think we will revisit 2011 levels, where a ton of iron ore was trading for between $185 and $200 per mt. At the same time, I do not expect a reversion to the 1980s and 1990s, where iron ore traded for $30 to $35 per mt.

I do not believe the appetite for bulk commodities coming out of China will dwindle. China has a very large population base that is still mostly rural. The continuation of urbanization sweeping across the country in the years to come will sustain demand for iron ore, although I believe we will see a saw-tooth trend in pricing going forward. •

Mining in Newfoundland and Labrador

Posting Growth Through the Gloom

In contrast to Canada's more widely known mining jurisdictions, where markets are maturing as government and public relations grow increasingly tense, Canada's youngest province Newfoundland and Labrador is offering a rare story of a mining sector on its way up.

No strangers to mining, both Newfoundland and Labrador have long histories of mining dating back to the 1800s. As a province, however, the industry's production levels have only recently reached significant shares of overall Canadian production. Increasing six-fold from 2001 to 2011, Newfoundland and Labrador's mining sector went from 4.4% of the overall share of Canadian mineral production, at $863 million, to 10.3% with an output valued at $5.19 billion. In the interim, the province surpassed Alberta and Manitoba to rank as the fifth largest province for mining.

The takeoff of the mining sector is part of a larger natural resources boom occurring across the province that has been led by offshore oil and gas developments. On the back of oil and gas growth, Newfoundland and Labrador transitioned to a "have" province in 2008, no longer a recipient of equalization payments for the first time in its history.

This has translated into wider economic prosperity for the province. Newfoundland and Labrador's GDP is expected to grow at a rate of 6%, far outpacing Canada's other provinces. In contrast, second place for the year is expected to be Alberta at 3.2%, followed by Saskatchewan at 2.7%. According to the Royal Bank of Canada's provincial outlook for September 2013, the oil and gas and mining sectors are chief contributing factors to this impressive growth. In 2011, mining alone contributed 10% to the province's GDP.

Though not immune to the global mining malaise, the province has seen reasonable growth in production and exploration. In data released by the provincial industry's main mining association, Mining NL, the value of minerals shipped by the province in 2012 was $3.8 billion. "While down a little compared to 2011, the value of mineral shipments in 2012 was still higher than the historical average, and is forecast to rise in 2013" said Ed Moriarity, executive director of Mining Industry NL.

According to Mining NL, exploration in the province increased 24% in 2012, reaching $194 million. That number is expected to increase further in 2013. "This can be attributed to iron ore-related activity in western Labrador. Iron ore production reached 19 million mt/y in 2012. Capital investment relating to development and production is also taking place," said Moriarity.

Considering these growth rates posted by the province's mineral sector, and the province's overall 6% GDP growth for the year, expectations are overwhelmingly positive for the anticipated upswing of the mining market.

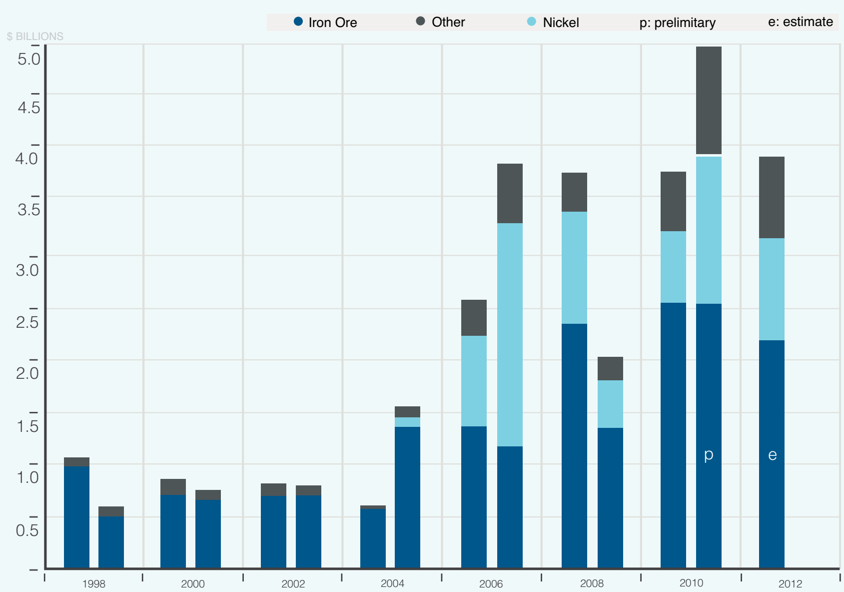
"The industry is really maturing here in Newfoundland and Labrador. There will continue to be a lot of exploration, as we have only scratched the surface in Labrador," said John Baker, chairman at leading local law firm Ottenheimer Baker.

Baker, one of the longest standing active solicitors in the province, has been a strong advocate for top-level government support of the industry. "[The sector] will be the salvation of the economy of the province long after the oil industry has petered out. There is so much focus on oil right now because there is so much money being generated; however the same opportunity is there in mining," he said.

The mineral potential of the province is undeniable and its increasingly healthy numbers speak for themselves. Continued development will depend on cooperation on the part of the government and the industry to develop the infrastructure needed to further pave the way to world-class deposits.

Value of Mineral Shipments

Source: Department of Finance - Newfoundland and Labrador



INTERVIEW WITH

Ian McBride

PARTNER
DAVIES WARD PHILLIPS & VINEBERG

Could you provide an introduction to Davies Ward Phillips & Vineberg's work in the mining sector and key highlights of its involvement in the industry in Newfoundland and Labrador in recent years?

Davies Ward Phillips & Vineberg has offices in Montreal, Toronto, and New York City. Out of those three offices, we manage transactions internationally, particularly as a result of the international reach of our mining clients. We have handled mining transactions in M&A, bank and project financing, joint ventures and shareholder proxy battles, among other things. We have a diverse range of mining clients from junior mining companies like Avnel Gold with its gold properties in West Africa, for example, right up to seniors like Barrick and BHP, as well as everything in between. We also represent banks, hedge funds, private investors and other financial partners in the mining sector. Mining is an important part of our practise, and one we have been engaged in for many years. We like to focus on the more challenging, innovative, and time-impacted transactions that hopefully add value to our clients' businesses.

In the Labrador Trough, Davies has acted for a few Chinese investors. We acted for Hebei when it invested in Alderon and China Minmetals when it invested in Century Iron Mines. We also represented Hunan Non-ferrous when it acquired the Beaverbrook antimony mine in Newfoundland. We have a very focused practise group here that specializes in reaching out to Chinese investors in metals and mining.

What are some of the strategies that Davies uses to help Chinese investors make decisions regarding their investment decisions in eastern Canada?

It is important to note that China has a wide variety of mining companies and investors, some significantly more experienced with international business transactions than others. With a novice international investor out of China, we get much more involved in helping them to understand the local legal, regulatory, and operating environment. Relying partly on past experience, we are able to reach out and provide concrete solutions for transaction management that address the risk mitigation issues that are front and centre in many Chinese investors' minds. They are extremely concerned about issues such as corporate social responsibility, aboriginal consultation, and environmental management. . These issues are obviously critical, and Chinese mining investors realize the importance of understanding Canadian approaches in these areas.

What management strategies employed by Chinese firms in mining acquisitions do you think are the most beneficial for cooperation?

From Davies' general experience, Chinese investors usually take care to maintain existing management teams because they understand that those people have the skill level and institutional memory to continue the success of the acquired operation. A really great example is China Minmetals' acquisition of OZ Minerals in Australia a few years ago. They kept the management team and formed a group called MMG (Minerals & Metals Group), which is now Hong Kong listed as MMG Limited. That management team, composed of experienced Australian staff, has stayed on to work side-by-side with their Minmetals colleagues from China. Together, they are the front line in developing Minmetals' international exploration and investment initiatives. With this kind of approach, I do not think it will be too long before you see Chinese mining investors competing internationally on an equal footing with other international mining companies for financing, M&A, joint ventures and other mining investment opportunities.

What key services does Davies offer to help bridge the gap between local communities and mining companies?

The critical element to our approach is ensuring that the client understands the risks that it is taking. Foreign investors, in particular, need to understand that, in some parts of Canada, you may either be unable to negotiate with certain local groups or, if you are able to negotiate, the process may be prolonged beyond your investment time horizons. The challenge is helping the client to understand how that works, how to quantify the risks and what they can do to mitigate those risks.

Given the challenging social licence issues in Canada for mining companies, our foreign clients are often struggling to understand what kinds of deals are possible and what the soft and hard costs would be. One of the pieces of advice that we emphasize the most is to examine the management team you are buying, assess their skills, understand what their history has been in dealing with aboriginal groups, communities, and governments. If the company is well run in those areas, do what you can to make sure that you send the right signals before the purchase so that you can retain key management in these areas.

Do you have a final message for our readers?

It is very important for engineering firms to work closely with the law firms. I have found that some of Davies' most useful working relationships in mining deals have been between us and the engineering consulting firms. We tend to reinforce each other. If, for example, we urge a client to be particularly vigilant about certain environmental regulations, that is obviously something that the engineering consulting firms can help the client understand as well. Particularly where a client, even an experienced mining company, is unfamiliar with the Canadian regulatory, environmental and operating environment, Davies urges its clients to include in their due diligence a report or other independent engineering advice from an experienced consulting firm familiar with local conditions. •

The Geology of Newfoundland and Labrador

Sean O'Brien and Phillip Saunders

Newfoundland and Labrador will soon celebrate the 150-year-anniversary of the launch of the modern mining era in the Province. In 1864, a copper mine was opened at Tilt Cove in what would become the prolific Baie Verte Peninsula mining camp. The provincial mineral sector has diversified tremendously in that period, strengthened by discoveries throughout the 1900s, including the famous Buchans, Labrador Trough, and Voisey's Bay ore deposits. Ongoing developments are ensuring the vitality of these world-class mining districts well into the twenty-first century. Other discoveries, notably gold, have underpinned sector growth Province-wide. In recent decades, advances in legislation, the ready availability of more and better technical data, and the growth of local junior exploration and prospecting sectors have allowed the Province to mature into a dynamic and globally competitive mining jurisdiction.

Today, the industry continues to prosper, despite challenging conditions in the current marketplace. Most mines are in full production, and several advanced exploration projects are progressing steadily through the development stage. New industry players on the scene, both domestic and foreign, are investing in new and existing projects targeting a range of traditional and strategic commodities including industrial minerals. Large capital investments of both private and public funds are being made in plant and infrastructure, in support of current and future mining operations.

Geology and Mineral Deposits

Labrador embodies the vast, underexplored eastern edge of the Canadian Shield. Its geology spans most of the Precambrian, recording successive collisions of Archean cratons and juvenile island arc terranes. The Archean rocks are prospective for Cu–Ni–PGE, VMS, orogenic Au and diamonds. Paleoproterozoic mobile belts separate the older cratons and include the metal-rich Labrador Trough, host to variably deformed and recrystallized iron formations, mined continually since the 1950s. Paleoproterozoic volcano-sedimentary terranes in central Labrador host uranium deposits (e.g., Michelin). Mafic- ultramafic intrusions of Late Paleozproterozoic age are the focus for ongoing Ni-Cu-Co-PGE exploration in southern Labrador. Mesoproterozoic plutonic rocks are widespread, and include anorthosite-gabbro-granite suites containing magmatic Ni-Cu-Co mineralization, most notably at Voisey's Bay. Smaller peralkaline complexes contain rare earth metals (e.g., Strange Lake).

Newfoundland comprises the northeastern extremity of the Paleozoic Appalachian Orogen. Like Labrador, it represents a collage of prospective mineralizing environments. Its geology records the development of an Early Paleozoic ocean and subsequent collision of Proterozoic continental margins. Western Newfoundland carbonate rocks, deposited on the margin of the Canadian Shield, contain MVT-type Zn deposits and hydrocarbons. In southeastern Newfoundland, relics of a Neoproterozoic Pan-African magmatic arc terrane contain well-preserved Au-Ag-Cu-bearing epithermal systems. Vestiges of the Paleozoic ocean underlie central Newfoundland, where ophiolites and volcanic arcs host high-grade, Au-rich VMS (Buchans, Rambler), and younger orogenic Au deposits. Siluro-Devonian granites occur across the orogen, formed during and after collision, and are associated with deposits of wolframite, molybdenite, antimony, and fluorspar. Carboniferous extension produced redbed basins that contain uranium, evaporites and hydrocarbons. Continued rifting formed the younger offshore sedimentary basins that host major oilfields (e.g. Hibernia, Terra Nova; White Rose).

Government's roles

In addition to its regulatory roles, the provincial Department of Natural Resources delivers programs and services to encourage sustainable growth in the Province's minerals sector. These include systematic geoscience mapping and research; direct financial support for junior exploration companies and prospectors; online, real-time mineral lands acquisition; and extensive web-based research tools and utilities, including GIS-based databases, available via the GeoScience OnLine portal.

The Department's Geological Survey is responsible for mapping and interpreting the geological framework of the Province and its mineral deposits. It delivers programs to encourage the mineral exploration sector, including regional geochemical and geophysical surveys (some in cooperation with the Geological Survey of Canada), mineral deposit studies and regional metallogenic syntheses.

The Department also invests in an array of strategic initiatives designed to directly stimulate mineral exploration and development in the Province. They include:

- promoting the province as an attractive exploration and mining destination;
- providing commodity specific industry-oriented mineral resources information to investors;
- training and mentoring prospectors and helping them generate and market new prospects;
- providing direct financial assistance to the exploration industry;
- managing private-sector exploration data, available online, gratis, via a searchable database;
- providing over-the-counter information and related exploration consultation services to clients

The Department plays a lead role in informing potential investors about the Province's mineral resources, and its mineral potential, and the overall operating environment of the mineral sector. This effort is conducted through a variety of activities including: participation in mining conferences; developing technical materials to promote the mineral sector; publishing high-level or sector-specific technical articles in trade journals; liaising with new clients on mineral investment opportunities; and developing and maintaining an online minerals investment section on the Department's website. Locally, the Department partners with the CIM in organizing the Province's annual mining conference: Mineral Resources Review.

In recent years, the Department's marketing efforts have increasingly turned to the fast-growing Asian sector, both as a source of investment capital for advanced projects, and as a market for our existing and potential mineral resources. The Department participates annually in conferences and focused mineral investment forums in China. It also organizes inbound trade missions from China, and facilitates private meetings and field trips between potential joint venture partners. To further facilitate this investment, the Department maintains a Mandarin-language mineral promotion and investment area on its website. •

Sean O'Brien *is Senior Geologist with the Newfoundland and Labrador Department of Natural Resources, where he manages the Mines Branch's mineral investment attraction and mineral exploration service programs, and its geoscience information and publications group. Prior to this, he enjoyed a 25-year career as research scientist with the Newfoundland and Labrador Geological Survey.*

Phillip Saunders *is Mineral Exploration Consultant in the Department's Geological Survey. He provides independent advice and technical information to industry clients on exploration opportunities and prospecting environments in the province. Before joining government, Phil worked for 25 years in the mineral exploration industry, most recently as exploration manager for a TSX-listed junior company.*

Mineral Wealth in Newfoundland and Labrador:

Geological Potential in the Province

"In Newfoundland and Labrador, there are three very large capital projects underway at the same time: our Long Harbour project, ExxonMobil's Hebron project, and Nalcor Energy's Muskrat Falls hydroelectric development. These projects are putting a lot of pressure on the local labor market and on local contractors and suppliers. We have also seen consolidation in the contractor base, which has made it very challenging to get competitive bidding. Contractors are essentially taking no risks in executing projects and demanding very high premiums for the bids they do submit."

- Jeff McLaughlin, Vice President of Operations,
VALE NEWFOUNDLAND AND LABRADOR

Courtesy of Vale

Exploiting Resources

Immense Potential, Yet Challenges Persist

The success of Newfoundland and Labrador's mining industry has seen one of Canada's smallest provinces, both in terms of population and area, overtake many of its larger peers in terms of both exploration expenditure and mineral production. Though still smaller than the "big four" - British Columbia, Ontario, Saskatechewan and neighbouring Québec – Newfoundland and Labrador now ranks a very comfortable fifth, accounting for roughly 10% of Canada's total mineral production. Exploration expenditure in the province, despite the general downturn in 2012, increased by 24% last year, reaching a record $194 million.

The mining industry in Newfoundland and Labrador, both in the exploration and production fields, is dominated by iron ore, which accounts for roughly 50% of all exploration expenditure. Due to this, a substantial portion of projects (whether early-stage exploration, development or in production) are concentrated around the Labrador Trough. Yet it would be a mistake to describe Newfoundland and Labrador as a single-mineral province. Sixteen mineral commodities, including cadium, copper, gold, nickel, silver and zinc, are produced within its borders. Expenditures in uranium exploration were roughly $15 million in 2012 following the March lifting of a three-year moratorium on uranium mining.

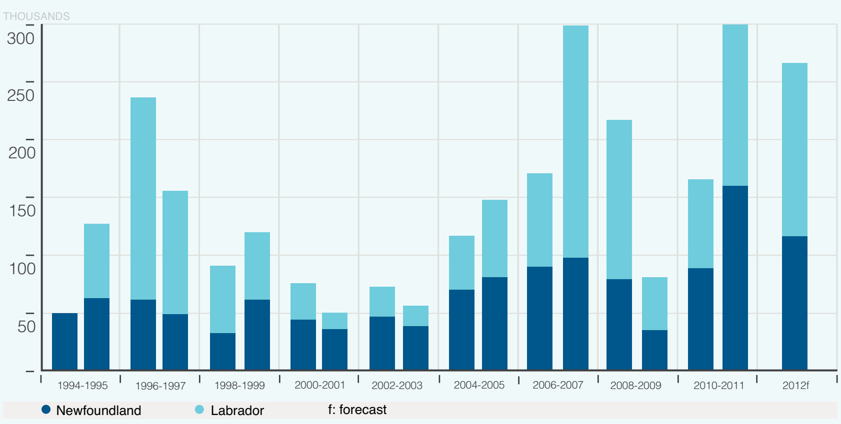
Despite the apparent health of the industry in Newfoundland and Labrador, there are challenges to overcome. The province's ranking on the Fraser Institute's Annual Survey of Mining Companies has remained within the top 20, but has been rather stagnant, over the past five years. The value of its mineral shipments, hit hard by declines in iron ore prices, fell in 2012 and, although a rise is expected in 2013, future revenue depends heavily on a renewal in global iron ore demand.

While increased exploration activity in an increasing diverse range of locations is good for the health of the industry, decreasing dependency on iron ore from the Labrador Trough, it also increases the already urgent need for infrastructure development, especially as some of these new areas do not stand to benefit from the "Le Nord Pour Tous" infrastructure initiative of neighbouring Québec in the same way that projects in the Labrador Trough may be able to.

The government of Newfoundland and Labrador deserve commendation for the efforts they have put in to grow the province's mining sector. The wealth of material made available to the private sector by the Department of Natural Resources, for example, has played a large role in opening up non-traditional areas to exploration interest. Yet if the province is to continue its growth, and possibly even close the gap on its larger provincial peers, neither the private nor the public sector can afford to rest on its laurels. •

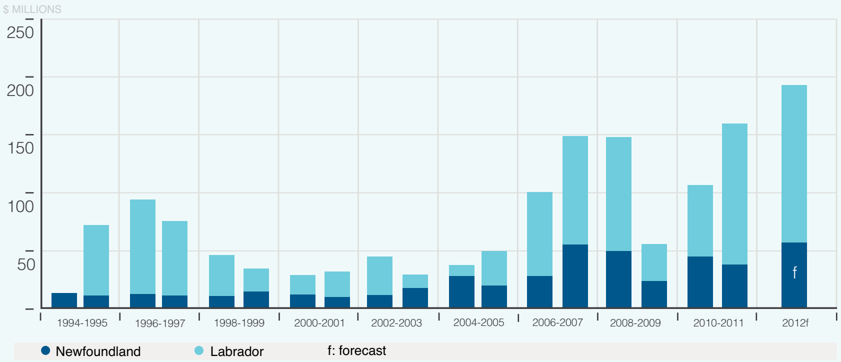
Diamond Drilling

Source: Department of Natural Resources – Newfoundland and Labrador



Exploration Expenditures

Source: Department of Natural Resources – Newfoundland and Labrador



GO

INTERVIEW WITH

George Ogilvie & Peter Mercer

GO: CEO
PM: VICE PRESIDENT OF CORPORATE DEVELOPMENT
RAMBLER METALS AND MINING PLC

Can you give us some background on Rambler's founding and your role in revitalizing the Baie Verte area?

PM: Rambler Metals and Mining PLC originally started and listed through a partnership between Altius Minerals and Harry Dobson with the goal of bringing the then dormant Ming mine back into production. In 2001, Altius consolidated the land package hosting the Ming Copper-Gold Mine, which was one of five deposits historically mined in the district from 1962 to 1982. The Ming mine was the deepest and richest of these five prospects and had a lot of remaining potential to be explored in several of its zones. Altius' initial thoughts for the property were to investigate the possibility of a bulk tonnage operation being developed using its Lower Footwall Zone, an ore zone that was for the most part, ignored by the previous operators.

Now that Rambler has achieved production at the Ming mine, what is the company's strategic vision going forward?

PM: Rambler's Strategic Vision is to become Atlantic Canada's leading mine operator and resource developer. Specifically, we prefer more advanced projects with known NI43-101 compliant resources with good infrastructure to support the project. Currently we have one mine in production but have processed a few smaller satellite deposits in the area within the last few years. With the Phase 1 high grade startup we have developed a good base for the Company to build off which will hopefully allow us to accomplish the goals that we have set out for ourselves. In these financial markets, there are a lot of acquisition targets for Company's, like Rambler, who are in production, profitable and realizing free cash flow from operations.

Can you provide us with an overview of the key facts and figures of your production and processing capacity at the Ming mine?

PM: We have developed a Phase I plan at the Ming mine, which is our high-grade low tonnage startup. Currently we have a copper concentrator and a gold hydromet at our Nugget Pond mill where we have the flexibility to produce from one or the other. The mill is a very key piece of our success today. We bought the gold hydromet mill in 2009 and built an expansion onto it for a copper concentrator. On the concentrator side, we are processing about 630 tonnes per day, at an average of 3.5% copper and 2 grams of gold. This produces a copper concentrate with an average grade of 28% Cu, 6 g/t gold and 55 g/t of Silver with no deleterious material making it a highly prized quality concentrate.

When producing only gold doré we processed on average 630 mt per day of better than 4 g/t gold recovering almost 15,000 oz gold over a five month period. For Phase I, which will be the initial five to six years of the mine, we will have an annual production of over 20,000 mt of copper concentrate and just less than 10,000 oz of gold. Phase II of our development will be moving into the bulk tonnage operation at the Lower Footwall Zone. We released a PEA last year on this zone and we continuing to optimize the project.

At the start of 2012, Rambler signed an off-take deal with Transamine Trading for the sale of copper concentrates. What is your plan to develop further agreements?

PM: Transamine Trading have been a good trading partner to work with and we have committed to them the sale of the first 85,000 mt of copper concentrate. Looking at an annual rate of production of 20,000 mt, this will be the first five to six years of Phase I. We have made no commitment on the copper concentrate from the Footwall Zone. Rambler has a Chinese investor, Tinma International, which joined our board last year because they saw that we were a low-risk, near-term producer and they liked the potential of the Footwall Zone. We have not committed to anything yet, but they will be considered when the time is right. Having no commitment on the sale of concentrates beyond 85,000 tonnes is a positive as the off-take for the Lower Footwall Zone may help with future financing requirements to bring this zone into production.

What is your outlook for Rambler within the next two to three years?

GO: We believe Rambler will continue to build on its initial success by remaining profitable and free cash flow positive. We'll do this by continuing to mine and explore for high grade gold and copper on the Ming Mine where there is significant potential with all zones still remaining open in multiple directions.

In addition we will continue to work on the optimization studies for the Lower Footwall Zone that if successful with only improve the Preliminary Economic Assessment for this expansion project. Hence, providing the Company with some opportunity for organic growth. The Government of Newfoundland and Labrador through the Research Development Council has recently providing us with some funding to advance these optimization studies recognizing the importance of extending the Ming Mine's life.

With free cash flow from operations we will continue to pay down any outstanding debt and will look for opportunities to strengthen our balance sheet at the appropriate time. Away from the Ming Mine we'll look to acquire both greenfield and brownfield projects that are within operating distance of the Ming Mine to leverage that strategic asset. If we can execute our plan over the next two to three years we should see Rambler becoming a significant player in the Newfoundland and Labrador mining sector." •

INTERVIEW WITH

Chad Wells

VICE PRESIDENT OF CORPORATE DEVELOPMENT
ALTIUS MINERALS CORP.

Can you introduce to Altius Minerals and the role that the company has played in the discovery of key projects in Newfoundland and Labrador?

We are a team of geoscientists who have been involved in project generation in the province for 15 years. We come up with raw geological concepts and ideas for different regions of Newfoundland and Labrador, and we then apply geological models to them in hopes of generating prospective exploration areas and targets. Altius has seldom drilled holes within its history as we prefer to invest a few hundred thousand dollars on a project to determine its merit. From there we seek out the most optimal partner that can advance the project technically and financially. Since inception we have done 60 such partnership arrangements here in Newfoundland and Labrador.

Altius has been innovative with the project generator model in two unique ways. 1) Our first big deal was the acquisition of a piece of the Voisey's Bay royalty in 2003 to effectively purchase a long term funding mechanism in the form of a world class royalty. Today that royalty provides us anywhere from $3 million to $5 million per year to fund all of the exploration work that we undertake, and thus we have not had to rely on equity markets or take on dilution to raise capital like our other project generator peers.

Altius has been involved with several key iron ore players, including Century Iron Mines, Rio Tinto and even the Ministry of Natural Resources on the Julienne deposit. Can you update us on the key highlights of these projects?

Altius went into the Labrador Trough with an exploration prerogative in 2003-2004, before we had seen the resurgence in the iron ore markets and general renaissance in the Trough. Therefore, we were able to go in before the competition and assemble some significant land masses. This has led to a collection of partnerships and joint ventures with several different companies. At the top of the heap is Alderon Iron Ore. Altius is a 25% shareholder in the business and we have a 3% underlying royalty covering the Kami project. Today we also have three active joint ventures with Century Iron Mines, a JV with North Star Minerals, a JV with RIO Tinto and a pseudo co-founding interest in Mamba Minerals who is actively drilling the Snelgrove Lake project. Last year collectively these companies spent approximately $10 million on those projects. We expect a similar expenditure this year, drilling and hopefully defining iron ore resources.

Julienne Lake is a very strategic opportunity for Altius. In 2003-2004, when we first walked into the belt and staked out these big land positions, Julienne Lake really stuck out on the map as a defined deposit with a mineral concession with the Ministry. We saw the opportunity to surround that asset in hopes that through exploration we could extend that historical known resource onto our claims. We seldom drill, but Julienne Lake was one of the cases where we did. Through drilling, we were able to verify that the deposit did extend onto our mineral claims. As all this was unfolding the Newfoundland Labrador government was updating their resource at Julienne Lake. Approximately nine months ago, they announced a call for expressions of interest and Altius has been on the front line of competing for the asset. Our strategy is to take our surrounding land position, which we believe contains an extension of the known Julienne Lake resource and consolidate it with the central deposit to create a larger resource and longer life mining opportunity to the benefit of all stakeholders including the province of Newfoundland and Labrador. We openly acknowledge that we are an active competitor in that process and we are confident in the value of our proposition.

Altius started off in a down-cycle situation similar to the current one, how has the company been able to apply lessons learned to the situation today?

The essence of the project generator business model is trying to mitigate risk and create longevity. The model shines in tough times because of low burn rates, and the leveraging of capital. We have been disciplined over time to be wise in our exploration investment levels while using the partnership money we attract to advance projects - its the backbone of our business. Altius built itself from the seeds it planted in the last down cycle when nobody was watching. I firmly believe we will do the same thing in this current market environment paired with the fact we also have the profits we generated to compliment our strategy.

Can you give us some details on your leading effort in the creation of the Roles project, for the cleanup of abandoned mine sites in the province?

Altius tries to be a leader as much in mineral exploration as in social corporate responsibility and environmental stewardship. André Gaumond at Virginia Mines undertook a similar project some years ago in Quebec. It proved as a model to what we are trying to do in Newfoundland and Labrador. Altius brought in a collection of other industry and service oriented businesses in our space to bolster the initiative. If we can lend our leadership, our track record and our relationships to leverage that into an initiative that leads to the betterment of our province as a whole, we are happy to do so. •

INTERVIEW WITH

John Baker

CHAIRMAN
OTTENHEIMER BAKER

How has the local mining industry evolved since you first began working within the sector in the 1970s?

My focus is still on exploration, but as projects have matured, there are a number of mines in the development stage, such as Alderon and Rambler. The industry is really maturing here in Newfoundland and Labrador. There will continue to be a lot of exploration, as we have only scratched the surface in Labrador. I have advocated to senior officials in government that they need to continue to encourage the sector because it will be the salvation of the economy of the province long after the oil industry has petered out. There is so much focus on oil right now because there is so much money being generated; however the same opportunity is there in mining.

On the mainland in Labrador, what are some of the new obstacles and challenges your clients are facing?

Aside from the infrastructure obstacles of power, rail and port access, aboriginal claims need to be honored, but cause slowdowns in development. Aboriginal claims are still in such a state of flux. The definitions of the rights of various aboriginal groups are still evolving, so they can be a major obstacle to mining development because mining companies do not really know what they are dealing with.

Evolving government demands for royalties have to be dealt with as well. We are in a fairly friendly jurisdiction compared to some governments in the world, but royalties still have to be negotiated, and that takes time. There are also benefit agreements to be negotiated as part of any mineral lease now, which includes employment benefits. All of that has to be worked through, and it is just part of the process.

Since the uranium moratorium was lifted in 2012, do you see other issues arising with exploration in this commodity?

A few years ago there was recognition that uranium mining, as long as safety was adhered to, is actually green development, to be preferred to oil or coal for the production of power. So there was generally encouragement of uranium exploration. In Labrador, however, the companies that jumped on that bandwagon and started to explore for uranium did not take the time to ensure that people's natural fears were assuaged.

The Nunatsiavut government imposed a three-year moratorium because they were frightened about what was happening and at the time they had no regulations to deal with it. There are still some uncertainties, particularly in light of some uranium disasters, but what took place in Japan was pretty exceptional. Uranium exploration results in Labrador have been tremendous and there is huge potential for development so long as the prices stay steady and the communities give their social license.

What key changes have you seen take place in the financing arena for exploration in the province in light of the mining downturn?

We have seen the impact of relationships with Chinese companies buying into projects at early stages. That is relatively new and novel. Development companies are not using royalty financing as much as they could be because they often just look at capital markets or debt financing. We are seeing more stream royalty financing now, and royalty companies are emerging. It was a very small sector five years ago.

What is your outlook for the industry in Newfoundland and Labrador in the medium term?

My outlook is very positive in terms of the potential for exploration. A positive supportive government is very helpful to the industry. World commodity prices are still generally robust. The only negative thing right now is the market sentiment toward the industry. Until we get an improvement in the capital markets it is a major obstacle here in Newfoundland and Labrador and worldwide. We are still a small province, and financing projects completely locally is not yet possible. •

Provincial Geology

Voisey's Bay and the island of Newfoundland

While the richness of iron ore has made the Labrador Trough famous, Labrador has also gained a name for its nickel, of which the province is Canada's second largest producer. When the Voisey's Bay nickel deposit was discovered on the North Coast of Labrador 20 years ago this fall, it led to one of the largest staking rushes seen in North America. It also proved Labrador's mineral potential beyond iron ore; a potential that had previously not been seen on any significant scale.

Two decades later, Vale operates a 6,000 mt/day mine and concentrator producing nickel and copper concentrates year-long. As part of its agreement with the provincial government to build a facility to process finished nickel in the province, Vale is also looking at mechanical completion of their Long Harbour hydrometallurgical nickel processing plant in the fourth quarter of 2013.

The hydrometallurgy facility, which commenced construction in early 2009, will have several key advantages over a conventional smelting and refining operation, including higher recoveries and lower energy demands. "The principle difference between hydromet and the smelting/refining process is that the hydromet flowsheet allows you to send feed straight from milling into the refinery. It allows you to bypass the parts of the smelting and refining process that lead to emissions. We are not making sulfuric acid and will actually be consuming various acids in our process," said Jeff McLaughlin, vice president of operations for Vale Newfoundland and Labrador. In March, Vale announced its plans to go underground at the mine, effectively extending their mining operations well into 2030-2035. "As we complete the Long Harbour project and get the underground mine going, our Newfoundland and Labrador operations are going to be one of the lowest cost nickel producers in the world and an extremely important part of Vale's Base Metals business," said McLaughlin.

The company's long-term investments in the region are a much needed vote of confidence in the area's potential. As a green field project, infrastructure needed to be built from the ground up and has required many years of high-level mobilization of remote engineering and construction expertise.

When construction firm H.J. O'Connell started work on the Voisey's Bay project in Labrador, there was little to no infrastructure in the area. "We even had to land one of our planes on an access road, as there was no airstrip in place yet. H.J. O'Connell has taken a leading role in developing transport networks to access some of the Labrador Trough since then, and the region's infrastructure has improved significantly," said Anoop Singh, district manager of construction company H.J. O'Connell.

Back on the island of Newfoundland, mining opportunities are not as large-scale, yet a long mining history and good infrastructure environment have made it a friendly climate for smaller operations.

Producers of gold, copper, zinc and a variety of industrial minerals operate on the island. A renewed interest in specialty materials has also sparked a 50/50 joint venture between Canada Fluorspar and the French specialty chemicals giant Arkema to reactivate Newfoundland's former St. Lawrence fluorspar mine.

The first significant mining operations on the island of Newfoundland started up in the 1860s at Tilt Cove, at the time one of the world's largest copper producers. Sporadic periods of activity have taken place across the island since then, in key areas such as Baie Verte for copper-gold and Bell Island in iron ore. Revitalizing these historic projects is offering juniors opportunities to re-approach deposits with the benefit of existing infrastructure.

Most notable of these efforts is Rambler Metals and Mining's reactivation of the Ming copper-gold mine, which ceased production in the 1980s. Entering into commercial production in the fall of 2012, Rambler is one of the recent success stories contributing to the province's growing importance on the national scene.

"Rambler's strategic vision is to become Atlantic Canada's leading mine operator and resource developer… Currently we have one mine in production but have processed a few smaller satellite deposits in the area within the last few years. With the Phase I high grade startup at the Ming mine we have developed a good base for the company to build off which will hopefully allow us to accomplish the goals that we have set out for ourselves," said Peter Mercer, vice president of corporate development at Rambler. •

Newfoundland and Labrador Fraser Institute Ranking

Source: Fraser Institute Annual Survey of Mining Companies

YEAR	SCORE	RANKING
2012/2013	76.8	18/96
2011/2012	77.0	16/93
2010/2011	74.6	13/79
2009/2010	78.3	8/72
2008/2009	84.6	5/71

"The Labrador City and Fermont mining camps benefit from an ore type that is 20 times coarser than the taconite ore that is found in the Schefferville mining camp, both having the same grade of approximately 30% iron. The coarseness of the ore minerals in the Fermont area makes it easier to liberate the iron from the gangue minerals, consuming less than 4 kilowatt hours per mt versus 28 to 30 kilowatt hours per mt for taconite ore. This is approximately 15% of the energy consumption comparatively. This is one of the reasons that it is very cheap to upgrade the Fermont ore to a 66% iron concentrate. Additionally, Schefferville ore has a higher rail transportation cost because of its greater distance from the port."

- Jean-Luc Chouinard, Vice President of Project Development,
Champion Iron Mines Ltd

"Hebei had many alternative options, including some in the Labrador Trough. At the end of the day, our ore has very high iron content at 65.2% and extremely low deleterious elements like alumina and phosphorus, which makes Alderon's product an ideal blending ore. Also, as this was Hebei's first foreign deal, they wanted to go to with a safe jurisdiction, which Canada is by any international measure. The Wuhan experience with Consolidated Thompson served as a good example for them. Finally, Hebei liked our management, which is important because ultimately that is whom you are backing."

- Mark Morabito, Executive Chairman,
Alderon Iron Ore Corp.

"Our Millennium Iron range, which is over 200 km long, is equivalent to the Mesabi Iron Range in Minnesota in geographical size, although our resources are already double theirs and we have fewer faults. Our advantage over the iron mines in the Labrador Trough built in the 1960s and 1970s is the opportunity to lower costs through the use of large scale and the most technologically advanced equipment. The recently idled Wabush pellet plant has three pelletizing lines with annual production capacity 2 million mt each, whereas a single line in our pellet plant will be capable of producing 8 million to 9 million mt per year. Magnetite requires half the energy of hematite to pelletize."

- Dean Journeaux, President & CEO,
New Millennium Iron Corp.

"Stewart McKelvey had an extensive involvement in the Voisey's Bay project since the outset, acting for the company, Archean Resources, which found the deposit. We were heavily involved in the staking rush that followed the discovery. No other significant deposits were discovered in the Voisey's Bay rush, but recent years have seen significant activities in the uranium industry, which were proceeding quite well until Fukushima. There has also been growing activity in rare earths, but the obvious poster child for Newfound and Labrador today is iron ore projects in the Labrador Trough, where most of the activity has been in the last couple of years. It has been a growth story for the province and very good for our practice too."

- Colm Seviour, Partner,
Stewart McKelvey

JM

INTERVIEW WITH

Jeff McLaughlin & Bob Carter

JM: VICE PRESIDENT OF OPERATIONS
BC: MANAGER, CORPORATE AFFAIRS
VALE NEWFOUNDLAND AND LABRADOR

This year marks the 20th anniversary of the discovery at Voisey's Bay. Can you introduce us to Vale's operations there as they have evolved over the years?

BC: Today Vale operates a mine and concentrator in Voisey's Bay, which is located on the North Coast of Labrador. The initial discovery at Voisey's Bay was made in the mid-1990s by Diamond Fields Resources, a Vancouver-based exploration company that had been looking for diamonds. Following the discovery of the nickel-copper-cobalt deposit, there was quite a frenzied amount of claim staking and green field exploration in the area. By 1996, there had been a considerable amount of delineation drilling done at which time Inco purchased Diamond Fields and in 2006, Vale bought Inco.

JM: What is unique about the site is its location. At the time of the discovery Voisey's Bay was an area subject to unresolved overlapping land claims by the Innu and Inuit of Labrador. In order for development to begin, impact and benefits agreements had to be put into place with each of the aboriginal groups, environmental assessments had to be conducted, and a development agreement with the Province of Newfoundland and Labrador had to be negotiated. It took almost six years to complete the regulatory reviews and to conclude negotiations on the various agreements. Construction began in 2002 and the first nickel concentrate was shipped in late 2005.

Vale is set to start operations at the Long Harbour processing facility at the end of this year. What factors went into the decision to build this plant?

BC: As part of our agreement with the provincial government, Vale agreed to build a facility to process finished nickel in the province. While we initially looked at building a conventional smelter and refinery, the ore body was not large enough to support the level of capital investment required, so we agreed to look at alternative processing methods. We undertook a $200 million research and development program aimed at resolving whether nickel concentrate could be processed using hydrometallurgy technology. In 2008 we successfully completed the R&D program and we began construction on the Long Harbour plant in early 2009.

What are the advantages of a hydrometallurgy plant over a refiner and smelter operation?

JM: Hydrometallurgy is a solution-based extraction process. We have byproducts of copper and cobalt that we will extract and plate out as final product at the Long Harbour facility. Overall, we have a very low impact process with respect to gaseous discharges. The recoveries from hydrometallurgy for nickel and cobalt are generally higher than a smelting and refining operation and the energy demands are lower as well.

The principle difference between hydromet and the smelting/refining process is that the hydromet flowsheet allows you to send feed straight from milling into the refinery. . It allows you to bypass the parts of the smelting and refining process that lead to emissions. We are not making sulfuric acid and will actually be consuming various acids in our process.

Vale also announced earlier this year that your mining operations will be going underground. What is your projected timeline for the start-up of the underground mine?

JM: Vale is currently completing a FEL 3 study, which is the detail engineering for the underground mine. This work will be completed in 2015 at which time we will be requesting Board approval for the project. The construction phase is scheduled to begin late 2015 and we will start mine development the following year with a three-year timeline to get to the ore body. By late 2019 we should be mining in the underground. There should be a two-year overlap with our current open-pit operations so by 2022 the Ovoid mine will be exhausted. The underground operations will give us almost 18 years of additional life.

What are some of the challenges and the solutions you have developed to deal with operating in Labrador?

JM: As a green field project, we had to build the necessary infrastructure to support our operation. One of the key challenges we had to overcome involved developing a shipping protocol with the Inuit that would allow us to access the site by sea during the winter months. During the winter the sea ice is frozen and residents of the local communities use the ice for transportation access between communities and to access traditional hunting areas. The Inuit were very concerned that if the sea ice was broken up by ships coming into and out of Voisey's Bay it could be very disruptive and dangerous for local residents.

To address these concerns we entered into a shipping agreement which limited the number of transits that could occur during the winter months and also established two blackout periods of six weeks each when the sea ice is forming and when it is breaking up. We built an ice-breaking vessel, the Umiak 1, to support our operations in Labrador and we have a storage facility at our port site with sufficient capacity to house the concentrate during the blackout periods when we cannot ship.

What is your vision for the evolution of Vale's operations in Newfoundland and Labrador within the medium term?

JM: Vale will enter into fully integrated operations in 2016-2017 as we ramp up Long Harbour. As we complete the Long Harbour project and get the underground mine going, our Newfoundland and Labrador operations are going to be one of the lowest cost nickel producers in the world and an extremely important part of Vale's Base Metals business. •

INTERVIEW WITH

Phillip Walford

PRESIDENT & CEO
MARATHON GOLD CORP.

You recently acquired full interest in the Valentine Lake property, which had previously been explored by everyone from Noranda to BP and Richmont. What interested these groups in the area, and what led Marathon Gold to advance the project?

Although Valentine Lake has a history of exploration, it is actually not a long one compared to other greenstone belts in Canada. Things started with the discovery of a gold occurrence on the shore of Leprechaun Pond. Richmont Mines, Noranda and others worked on the property but moved onto other projects without pulling the geology together. Through the experience of our team, Marathon Gold has gained a true understanding of what we are dealing with. Marathon Gold Corp. is a spin-off from a Marathon PGM Corp. which was acquired by Stillwater Resources in December 2010; we took the gold assets and are now focused purely on that commodity.

How has your acquisition of Mountain Lake Resources last year strengthened your position in the area?

The acquisition of Mountain Lake has streamlined our approach in that we no longer have to go through a joint venture committee to create a budget or work program. It is also makes it a lot easier to raise money when you own 100% interest in a project.

You have plans for a 43-101 update. What other exploration targets do you have for 2013?

Last fall Marathon Gold raised $5.5 million dollars. We spent several million from January to March, 2013 on drilling, from which we are estimating a new resource at Valentine East and updating the Leprechaun Gold deposit resource. The focus is on expanding the underground portion of the Leprechaun deposit as well as new satellite zones. It is an orogenic deposit, similar to those found in other greenstone belts throughout the world, which can extend to kilometers of depth. This, along with the fact it is a very large system, is what initially attracted me to the property.

Most of the previous work has been on Leprechaun, but this year we drilled about 2,000 m on a potential satellite deposit, Valentine East, which is located 13 km on strike from the Leprechaun Deposit. At Valentine East we have built an initial resource there of 40,000 oz measured and indicated at 1.67 g/t Au, and 10,000 oz inferred at 1.47 g/t Au. We now have four or five additional areas with potential for open-pit and underground resources, so the rest of the year will be spent outlining these targets to make them drill-ready. For now Marathon Gold's focus is on developing more open-pit targets, because it has been relatively inexpensive – $8/oz – to find new resources at Valentine East. There is a current 17 km strike length at Valentine Lake with drill targets, and it just gets bigger.

You now have 682,000 oz gold, measured and indicated at a grade of 2.22 g/t Au, at Leprechaun. What volume of resource would you need to make a mine?

There are also 145,000 oz inferred at a grade of 2.29 g/t Au at Leprechaun. We are in the process of updating the resource using the 2013 drill results. The open-pit grades at Leprechaun, at over 2g/mt, are quite good, but at 2.8g/mt the underground grades from the October 2012 resource were not sufficient. However, these ounces were derived from the open pit block model and are not constrained to underground mining, so Marathon Gold is now remodeling the underground material by using a higher cutoff grade to reflect underground mining costs. We have an internal economic study which shows we are progressing in the right direction. Our goal is to define enough resources to give a 10 year mine-life. I have no doubt about Valentine Lake's potential to be a multi-million ounce property.

Marathon Gold also has a joint venture in Idaho. How does the working environment there compare to Newfoundland?

Our projects in Newfoundland and Idaho are very different. The Idaho property is not as large, but it is a former mine that shut down around 1910. One advantage is that we are in Idaho's Coeur d'Alene mining district, so mining is not an issue. Permitting is a lot less difficult there because we are on private land. However, Marathon Gold has a very good relationship with the Newfoundland government, which has been very welcoming and helpful. We have maintained our own road at Valentine Lake. There is power 25 km away; if a mine is developed we will definitely put a line in, but right now we use a generator. Most of our employees on site are from western and central Newfoundland or St. John's, and we use local services and suppliers as much as possible. We find working in the province to be a real pleasure.

What is your vision for Marathon Gold over the next two to three years?

Besides Valentine Lake, we have two other properties in Newfoundland at the grassroots stage. At Valentine Lake Marathon Gold has more environmental work to do, although most of the baseline study is complete. The current economic conditions have derailed us a little, but there is a plan to develop enough resource to conduct a PEA and within a few years progress to the feasibility stage. We have been ticking all the boxes off, like doing metallurgical work; the market does not really appreciate it, but it puts us in a very good position for a positive feasibility study and permitting. I have been through these economic conditions before: it is a matter of preserving capital, doing what we can with what we have, and surviving into better times. •

Enabling Progress:

Service Companies and HSE Standards

“Big projects in the province are faced with a lack of infrastructure and logistics. The power question is about to get resolved with Lower Churchill, and aboriginal issues are much better understood than they were five years ago. It comes back down to logistics and the building of roads and railroads. The province is just not ready for it, which was the same issue 20 years ago for the oil and gas industry. Mining infrastructure will need to develop and it is happening as each new mine opens up. Labrador has the potential to be a third great place from which to get iron ore. The driver for a logistics solution will be finding more big deposits. The feeling is quite clear that Labrador is just waiting.”

- Lee Shinkle, Regional Business Development Leader, STANTEC

Courtesy of Vale

A Model Support Sector

Advancing HSE standards

Despite the huge success of the mineral sector in Newfoundland and Labrador, the province is not the easiest place to explore or mine. A wide diversity of climatic and geographical conditions, combined with the remoteness of many sites, means that miners in Newfoundland and Labrador face a variety of health, safety and environmental issues that require specialized solutions.

Fortunately, a ready and waiting support sector has grown around the mineral industry, either moving in from outside the province or locally established. Utilizing long experience and knowledge of the province to offer industry-leading practices and innovative technologies, these companies now form a major component of Newfoundland and Labrador's attractiveness as a mining jurisdiction.

New mines opening up are subject to strict provincial regulations when it comes to health and safety, and are in need of assistance for compliance. "New mines will need to complete health hazard assessments to comply with provincial regulations and develop industrial hygiene systems for ongoing monitoring of worker exposure to contaminants," said Bruce Rogers, CEO of Rogers Enterprises Limited (REL), a company providing safety management, industrial hygiene and training services to the local industry.

Courtesy of East Coast Catering

A challenge salient in Newfoundland and Labrador, silica dust is a major component of the province's geology. "We have somewhere between 25% to 30% crystalline silica in the rock here, which leads to potential exposure during drilling, blasting, crushing and milling. This means mines need to put into place extensive engineering controls and ongoing monitoring to ensure the protection of the workers," said Rogers.

The province has adopted a stringent allowable exposure limit for silica of .025%, on the recommendation of the American Industrial Hygiene Association. REL has been instrumental in helping clients to meet these standards. "Through our work with a mining operation in Newfoundland, we have reached air levels below that standard. The industrial hygiene program that REL has put in place for the client has scored the highest overall in the corporate audit," said Rogers.

The local industry has also upheld stringent regulations when it comes to environmental management practices. Given Labrador's infrastructure and public consultation challenges, local companies have been successful in leveraging their intimate knowledge of the area. Sikumiut Environmental Management Ltd. (SEM), a company that grew out of its monitoring work at the Voisey's Bay site, has now become Newfoundland and Labrador's largest locally-owned environmental company. SEM provides the mining sector with a full range of environmental consulting services from baseline studies to environmental assessments approvals, effects monitoring and regulatory compliance.

In addition to its key range of services, SEM is also focused on community engagement, including collection of aboriginal knowledge, planning for a project and addressing potential issues and concerns within communities.

"With Voisey's Bay, marine shipping was an important component of that undertaking, and there were stringent conditions put into place with that agreement. SEM has been part of monitoring how well they are working. We also won an environmental award from the professional engineering association in Newfoundland for our work in developing and building the pontoon ice bridge at Voisey's Bay. The work was done by the community of Nain and part of Vale's agreement to minimize the impact of their ice-breaking vessel," said Bevin LeDrew, partner at SEM.

SEM is not the only company to have grown out of the Voisey's Bay development. While companies operating in the Labrador Trough can arguably import relevant knowledge from just across the border in Québec, Voisey's Bay represents a more unusual and province-specific proposition, which requires more province-specific solutions. Many of Newfoundland and Labrador's home-grown service companies can trace their involvement with the mining industry to work at Voisey's Bay.

East Coast Catering (ECC), a company that started off providing catering and accommodation services to the offshore drilling sector in the 1980s and early 1990s, is one such example. "ECC started working on the Voisey's Bay project when it was first beginning, and we have been there ever since. The Inuit First Nation has been our partner for that project since the very beginning. We employed 300 Inuit during the course of the construction and about 70% of our operations staff is Inuit today," said Patrick O'Callaghan, president and CEO of ECC.

ECC now derives roughly 40% of its business in mining: an expansion from the oil and gas to the mineral sector that serves as a microcosm of the wider service industry. •

INTERVIEW WITH

Bevin LeDrew

PARTNER
SIKUMIUT ENVIRONMENTAL MANAGEMENT LTD.

How has Sikumiut Environmental Management (SEM) expanded since you began working with the Voisey's Bay nickel project in 2002?

Sikumiut Environmental Management (SEM) was founded in 2002. We started out doing some of the monitoring work at Voisey's Bay and have grown from there. We have expanded the number and range of clients as well as the geography that we cover. We have an office in Nain, which is where we began working. We have a logistics office in Goose Bay and our main office is in St John's. One of our most important clients continues to be the Voisey's Bay site. We also do a fair bit of work for Vale's nickel processing site at Long Harbour. SEM works with exploration companies in Labrador, helping them in setting up and providing environmental services to them, as well as with producers. For mines, we tend to be involved in the approval process, environmental assessments, and permit acquisition. We have done a lot of work on fish habitat compensation. In addition to Labrador, we have done work in Nova Scotia and Sweden, including concept and design for fish passage facility.

Within the services that you offer to the mining industry, what are your main areas of expertise?

Fish habitat compensation is one of our key services. This includes getting fisheries' authorization to operate and completing the baseline description of a fishery's marine environment. One aspect that has grown tremendously for SEM is geomatics, which is the whole exercise of collecting data, having a good knowledge of its location, and being able to geo-spatially project that information. This imbues all of our work, as most of what we do is based on field data we have to collect. SEM is also strong in community engagement, including collection of aboriginal knowledge, planning for a project and addressing some of the potential issues and concerns within communities.

How are the socioeconomic services that SEM offers implemented in the mining industry?

There are a number of mechanisms for implementing SEM's socioeconomic services. In northern projects this includes negotiating and putting Impact Benefit Agreements into place. With Voisey's Bay, marine shipping was an important component of that undertaking, and there were stringent conditions put into place with that agreement. SEM has been part of monitoring how well they are working. We also won an environmental award from the professional engineering association in Newfoundland for our work in developing and building the pontoon ice bridge at Voisey's Bay. The work was done by the community of Nain and part of Vale's agreement to minimize the impact of their ice-breaking vessel.

In terms of the provincial aboriginal consultation process, how do you see the government's recent changes to the policy impacting the process?

It is clearly necessary that there be policies put into place and then into practice. Application is where the proof of it working out will be. Some people feel that the government's policy puts too heavy a burden on the industry and holds them to a higher standard than what it can achieve itself. The government needs to have a policy that it can truly implement without compromising cost and schedule for planning and projects. That will be difficult to achieve.

What do you see as the main environmental challenges for the many grassroots explorers here in Newfoundland and Labrador?

Activity levels go up and down tremendously, and often the timeline for carrying out work is pretty prescribed both by budgets and market conditions. In this environment, getting permits and approvals in a timely fashion can be a challenge. There is also a legacy issue, especially in Labrador, where past exploration activities have left behind abandoned camps. Fortunately the industry is aggressively helping to clean up some of those legacy problems because it certainly does affect the public image of the industry. •

INTERVIEW WITH

Lee Shinkle

REGIONAL BUSINESS DEVELOPMENT LEADER
STANTEC

Could you give us some background on Stantec's history in Newfoundland and Labrador?

Stantec's initial acquisition in the province was through Jacques Whitford, a Canadian-wide company known for its environmental assessment and permitting capacity as well as its geotechnical engineering. Stantec's provincial practice has since expanded through our purchase of a mechanical and electrical engineering firm called QuadraTec and an architectural firm called PHB. In that process we have grown our provincial compliment of people to about 250.

The disciplines we offer in Newfoundland and Labrador are not a mirror image to Stantec throughout the rest of the country because we focus more on the mining and oil and gas sectors. We have offices throughout Newfoundland and Labrador and two aboriginal joint ventures: one in Nunatsiavut called Aivek, and one in Happy Valley called Stassinu. All of our activities in Labrador are managed through our aboriginal joint ventures.

What is the significance of the local mining industry to your practice in the province?

Stantec created a group internally about three years ago focused solely on mining. We felt strongly that the local mining industry offered us a lot of opportunity because of the skill sets we could bring to the table. Corporately, we have a tendency to go after the bigger players, but on the local level we have been spending a lot of time meeting smaller players. When we first met with Alderon, they were not a big operation at all. Our strategy is to meet companies while they are small and ride the wave with them. The wave has crested for now and a lot of the smaller companies are having difficulties finding money to do anything. Our attitude is that now is the time to make stronger relationships with those companies so that we can be there when the resources come back into play.

What are your main areas of expertise when it comes to the mining industry?

In this province, our main activities are environmental assessment and permitting and geotechnical engineering. That includes the whole range of socioeconomic assessments, including impact and benefit agreements. As we move into the mining cycle, we get more into industrial engineering, building engineering, and mine design. We have a large global center of excellence here in open-pit mining and geotechnical engineering. Another strong part of our program is waste rock and tailings. We can do preliminary economic assessments, feed studies and scoping studies, and we can bring in the expertise of our power and transportation groups.

We have two big labs here in the province. One is a materials QA/QC lab, which tests concrete, asphalt, and soils. It is the biggest practice in the province in that regard. We also have the only private toxicity lab in the province. In the mining sector we do produced water testing to make sure their produced water is up to standard.

How has your multidisciplinary practice come into play in the Labrador Trough?

Stantec did the feasibility study for Alderon in conjunction with BBA, where they did mine design and metallurgy and we did everything else. Stantec was in charge of the assessment, geotech, power, transportation, port work, rehabilitation and closure, and railway. We had six provinces and 10 different professional areas involved in the Alderon feasibility study. It was a perfect example of the breadth of capability that we can bring to the table. From the client's perspective they had to deal with only two people: Stantec and BBA, rather than going out and dealing with 10 different subcontractors. We worked well with BBA and integrated our studies into one final feasibility study.

Considering your focus on working with juniors here in Newfoundland and Labrador, how is Stantec introducing cost control measures to help clients in the current downturn?

Twelve months ago the attitude was to get it done now, whatever the cost. Now people are much more concerned about how much money is being spent. Stantec has a specific division that does nothing but project and program management, which we bring in for larger projects. Our project and program management is helped by the fact that our clients are nowhere near as frantic as getting to market as they were. Now you have time to think. We can help them introduce cost controls and drive down operational costs.

What are the biggest challenges for the mining industry here in Newfoundland and Labrador?

Big projects in the province are faced with a lack of infrastructure and logistics. The power question is about to get resolved with Lower Churchill, and aboriginal issues are much better understood than they were five years ago. It comes back down to logistics and the building of roads and railroads. The province is just not ready for it, which was the same issue twenty years ago for the oil and gas industry. Mining infrastructure will need to develop and it is happening as each new mine opens up. Labrador has the potential to be a third great place from which to get iron ore. The driver for a logistics solution will be finding more big deposits. The feeling is quite clear that Labrador is just waiting.

What goals do you have for Stantec in Newfoundland and Labrador over the next two to three years?

As the leading mining consultant in Atlantic Canada, we feel very strongly that we can build on what we have already and use the strength of our national practice to translate to other areas. We are committed to the mining industry. Even in the down cycle, we will be as big a part of the mining industry this year as we were last year and moving forward. •

INTERVIEW WITH

Bruce Rogers

CEO
ROGERS ENTERPRISES LIMITED (REL)

Can you provide us with a brief overview of the key services that REL provides to the mining industry in Newfoundland and Labrador?

REL provides three main services to the mining industry. First, we provide safety management, where we help clients interpret legislation, particularly if they have had orders or directives issued against the property. We assist them in identifying how they meet and comply with those orders.

Industrial hygiene is another big part of what we do for the mining industry. REL develops, implements and runs comprehensive industrial hygiene programs to deal with the health side of the mining sector. We develop systems that run the whole gamut from air quality testing for dust and silica to noise testing and mold testing.

REL recently acquired the assets of Emergency Response Concepts Inc. (ERCI). How do you plan to integrate their expertise into REL's operations?

Our firm was doing occupational safety training, and ERCI was doing first aid training through the Red Cross. It was a natural fit for us and a lot of their clients were our clients. Taking them into REL, we can now provide clients with one point of contact for all occupational safety and occupational first aid training.

What critical health and safety challenges does the province face?

The province has moved forward in the last year, amalgamating the mining regulations with the occupational regulations, making it easier for mining companies to have one document that they are complying with. You always have the challenge in mining from a safety standpoint working around mobile, heavy equipment. Some of the fatalities that we have seen, particularly in mining, are in maintenance operations, in the mills and working at heights.

Since the 1980s, we have known about the occupational illnesses from exposure to contaminants. For a new mine opening up, the province is looking for a formal risk assessment on safety and health issues. Last year, there were 20 fatalities due to safety, versus 200 industrial deaths from occupational cancers. There are 10 times more people dying from occupational disease than safety fatalities. That is across the board of industries in the province, but 65% of fatalities from 2003-2010 were in mining.

Newfoundland and Labrador has some very stringent legislation. We have adopted the allowable exposure limit for silica of .025, on the recommendation of the American Industrial Hygiene Association. Through our work with a mining operation in Newfoundland, we have reached air levels below that standard. The industrial hygiene program that REL has put in place for the client has scored the highest overall in the corporate audit.

Can you tell us more about the development process of your trademarked technology system, SMARTPro?

REL has developed a web-based safety-tracking program, called SMARTPro, standing for Safety Management and Records Tracking Program. The program is in the testing phase and we are looking at amalgamating the product with a mainland IT-focused company and rolling it out within six months to a year. SMARTPro would allow companies to easily electronically track safety management programs. Clients can use pre-developed inspection programs to track trending information, such as how many types of deficiencies are found in a month or quarter, what type of deficiencies they were, how many were complied with and how many are outstanding. The program can be tailored to a mining site and helps to take a risk from the hazard assessment and tie in into a proper inspection format that prompts personnel to look for it.

What is your outlook for REL's growth in the next two to three years?

REL's outlook is very positive. We have always stressed quality service with flexible timelines at a competitive price. Our model is to be where the client is, or within two hours of that client. REL is investing in infrastructure and personnel so that we can still provide a high quality of service at even more flexible timelines. We have also multi-disciplinary personnel that can look at safety and hygiene issues, as well as provide training. We are trying to be cost-effective for the client. •

Aboriginal Consultation in Labrador

Colm St. R. Seviour and Steven A. Scruton of Stewart McKelvey's Labrador Practice Group

ABORIGINAL INTERESTS IN LABRADOR

In Labrador, the three principal Aboriginal groups are: (1) the Labrador Inuit (as represented by the Nunatsiavut Government); (2) the Labrador Innu (as represented by the Innu Nation); and (3) the Inuit peoples of southern and central Labrador as represented by the NunatuKavut Community Council Inc. (formerly the Labrador Métis Nation). In addition, there are also a number of Innu groups based in Québec - the Naskapi Nation of Kawachikamach and the communities of Matimekush-Lac John, Uashat mak Mani-Utenam, Ekuanitshit, Nutakuan, Unamen Shipu and Pakua Shipi - which assert interests in Labrador based on their traditional spheres of activity.

THE CROWN DUTY TO CONSULT AT COMMON LAW

These aboriginal groups are entitled to be consulted in relation to resource projects in areas to which they have either formally recognized aboriginal title and rights (as in the case of the Labrador Inuit and the Labrador Innu) or asserted land claims. The Supreme Court of Canada has determined the key principles which will govern aboriginal consultation rights and processes. The Government of Newfoundland and Labrador's recently-announced Aboriginal Consultation Policy has formalized, and to a certain extent expanded, such aboriginal consultation rights and processes.

In the 2004 decision of Haida Nation v. British Columbia (Minister of Forests) ("Haida Nation") the Supreme Court of Canada firmly established a Crown duty to consult Aboriginal peoples when undertaking a decision or action which might impact asserted Aboriginal rights or title. The Court held that the consultation duty derives from the special historical relationship between the Crown and the Aboriginal peoples of Canada and the honour of the Crown when dealing with such peoples.

The Court ruled that the duty to consult arises when the Crown has either real or constructive knowledge of the potential existence of an Aboriginal right or title, and is contemplating some conduct which might adversely affect it. On the other hand, the Court noted that "[t]he content of the duty, however, varies with the circumstances", and that "[a] dubious or peripheral claim may attract a mere duty of notice, while a stronger claim may attract more stringent duties".

Because the duty to consult is derived from the honour of the Crown when dealing with Aboriginal peoples, the Court specifically recognized that it did not apply to private third parties. Thus, while the Crown may (and frequently does) delegate aspects of the consultation process to industry proponents, the Court stated that "[t]he Crown alone remains legally responsible for the consequences of its actions and interactions with third parties, that affect Aboriginal interests", and that "[t]he honour of the Crown cannot be delegated".

Of course, in many cases, proponents choose to undertake consultation steps themselves, including by voluntarily entering into an impact and benefits agreement. Pro-active steps of this kind may reflect a practical understanding of the value in working with Aboriginal interests from an early stage. While the Crown will bear the direct legal consequences of a failure to properly consult Aboriginal groups, the indirect impacts on a proponent can be very significant, including delays in obtaining required permits or approvals, or the need to modify the scope or design of the project.

THE NEW PROVINCIAL CONSULTATION POLICY

The Government of Newfoundland and Labrador has recently sought to address the issue of Aboriginal consultation directly, and in April 2013, it released its "Aboriginal Consultation Policy on Land and Resource Development Decisions" (the "Policy"). The Policy is put forth as a statement of principles, intended to provide a framework for the development of more detailed processes and timelines under further Consultation Guidelines which are presently being developed by Government. This new Policy is the product of consultations with Aboriginal groups, industry stakeholders and the public. It is intended to clarify Government's role in consultation with impacted Aboriginal groups respecting land use and resource projects and developments, as well as wildlife management, and to outline Government's expectations of industry proponents and Aboriginal groups in this process.

Given the status of their recognized land claims, the Policy is not contemplated to apply to either of the Labrador Inuit or Labrador Innu. It will instead apply to those aboriginal groups which have asserted claims in Labrador which have not been recognized or accepted for negotiation. Such groups include the NunatuKavut Community Council, the Québec-based Naskapi Nation of Kawachikamach and the communities of Matimekush-Lac John, Uashat mak Mani-Utenam, Ekuanitshit, Nutakuan, Unamen Shipu and Pakua Shipi (all of whom are specifically named in the Policy).

Significantly, the Policy generally shifts the bulk of the consultation burden over to project proponents. Under the Policy, proponents are expected "to resolve any outstanding issues between the proponent and Aboriginal organization(s)", and during the consultation process, a proponent is expected to discuss project-specific opportunities with the Aboriginal group being potentially impacted "with the goal of achieving a positive, sustainable and mutually beneficial outcome". Also significantly, the Policy places the burden of providing capacity funding directly onto proponents, requiring them to provide "any consultation supports or capacity funding reasonably required by Aboriginal organizations" in the consultation process. Although not specifically defined under the Policy, it is clear that the required capacity funding will include the obligation of a proponent to fund an impacted Aboriginal group's assembly of information relevant to the potential impacts of project activities.

These requirements evidently place a substantial onus on proponents. Not only does the requirement to provide capacity funding create an immediate financial burden, but the stated expectation of "achieving a positive, sustainable and mutually beneficial outcome" may create expectations within Aboriginal groups of some larger form of accommodation (such as via an impact and benefits agreement), which might not otherwise be contemplated in the circumstances.

On the other hand, the Policy's focus on proponent-led consultations may also prove to be a positive development for proponents, insofar as it may give them a greater measure of control over the process, to ensure that permitting and approvals are not delayed or forestalled on account of consultation-based disputes or litigation.

It is expected that the Government of Newfoundland and Labrador will release its detailed Consultation Guidelines by year-end. •

Colm St. R. Seviour *is a senior natural resources law partner practicing at the St. John's office of the Atlantic law firm Stewart McKelvey. His practice focuses in the areas of mining, oil and gas, forestry and environmental law matters, and includes both transactional and litigation experience in these areas. He currently serves as the inaugural Chair of Stewart McKelvey's Labrador Practice Group.*

Stewart McKelvey *is an innovative, client-driven law firm committed to providing the highest quality of ethical legal services, earning clients' trust and meeting and striving to exceed their needs. Since becoming the first regional law firm over 20 years ago, Stewart McKelvey has grown to become one of the 20 largest law firms in Canada with more than 220 lawyers in six locations in Atlantic Canada.*

INTERVIEW WITH

Patrick O'Callaghan

PRESIDENT & CEO
EAST COAST CATERING

Can you provide us with a brief overview of East Coast Catering's evolution and its key milestones since it began in 1984?

East Coast Catering (ECC) started off providing services to the offshore drilling sector in the 1980s and early 1990s until the industry took its downturn. After that, our first remote surface camp was in Labrador with PCL Construction. It was the first remote camp where we encountered serious logistical problems. There was essentially one basic little airstrip and the rest of the supplies had to come by sea, which is closed for seven months of the year. It was a great learning experience for us. When the offshore oil industry rebounded, ECC retained its presence servicing remote camps, but again turned attention to offshore Newfoundland, where today it provides about 75% of the offshore services in Eastern Canada.

ECC is very active within Newfoundland and Labrador but also some other provinces. What is the spread geographically for your business and where do you see the most opportunities for growth?

We operate from British Columbia right through to Ireland. We house approximately 5,300 people a day and serve approximately 26,000 meals a day. In the near future, we see growth opportunities in our home territory of Labrador. There is the Alderon project, the Millenium, Quest Minerals and the larger camp at Muskrat Falls, and, of course, other smaller projects that can grow quickly.

We also have one operation in Lac Des Iles, Ontario, just north of Thunder Bay, where we have been for 15 years. In Manitoba, we work at Snow Lake where we purchased two apartment buildings and used them as a camp while they were renovating the Hudson Bay Gold Mine. Over the past three years, both buildings have been completely renovated and fully furnished, and we have leased a restaurant there as well. When opportunities like that come along, we go after them.

What are the main challenges to providing catering and accommodation in Labrador?

The remote location certainly poses its share of challenges, particularly with Voisey's Bay. Every fall we used to begin the rigorous process of building up our warehouse with roughly six months' worth of food in preparation for the winter months, when freight is almost non-existent. It takes roughly 10.5 pounds of raw product to feed one person for a day, which is multiplied by 1,000 or 1,500. Shipping by air can be extremely costly, while shipping by sea is a much more viable option. Today, materials are coming in fairly well the whole year round because of the ice breaking iron ore carrier that comes through. This has changed the whole dynamic completely. As for nearly all the other projects, shipping by train and then back transferring by road is manageable. In Labrador City, there are good trucking routes available.

ECC has two aboriginal partners, the Innu in Labrador and the Naskapi in Québec. What role do these partners play within your operations?

ECC is the managing partner in both partnerships. Our boards of directors share what they need from the communities. We invested about $100,000 into the building of a hockey arena in each of the communities, and these have been very successful in introducing their youth to outsiders through visiting teams. One of my big objectives from day one was to get the youth used to outside society, as many have never travelled outside of their reservations. In Natuashish, we were the first to bring a barge in when the site was first set up. We provided all of the camp and installed a hotel and general store. We operated them up to two years ago, at which point the community took them over. It has been a good learning experience for the community to have the opportunity to go out and work and see how things are done. •

INTERVIEW WITH

Roy Slack

PRESIDENT
CEMENTATION CANADA

How active is Cementation in Quebec and eastern Canada?

Cementation has always been active throughout Canada, but we recognize that Quebec is a key growth market. Until now, Cementation's work in the province has been mainly engineering work and studies. However, this year we are opening an office in Rouyn-Noranda. Cementation's main service offering in Quebec is its complete design/build service, which we have employed at both Picadilly and Young Davidson for a number of years, for example.

The east coast has always been a busy area for Cementation. In Voisey's Bay, we did some engineering for Vale's project, which we are watching with keen interest as it develops in the years to come. We also had a long term presence at the Brunswick Mine carrying out a wide range of mine development work and are now finishing up the twin shafts for Potash Corp on the Piccadilly project at Sussex, New Brunswick.

What are some of the fundamentals of Cementation's approach to projects in northern Quebec and Labrador?

Cementation approaches its work in the far northeast of Canada, like our work with IOC for example, like other remote projects. All of the planning and procurement is done in advance, and we get a relatively small window in which to complete an operation as precisely as possible. In some northern areas like Voisey's Bay, port and air access are tricky and we rely on our experiences in arctic mining to help us find solutions. Every project is different, but we can certainly draw similarities and lessons from our other operations to help us carry out our work in Northern Quebec.

One of the major challenges for engineering contractors in northern Quebec and Labrador is balancing their employment obligations to First Nations communities with their need for skills and experience in the workforce. Could you tell us about how Cementation addresses that issue?

Cementation, along with the industry in general, has developed an increasingly responsible approach to social acceptability throughout the years. One area in which we make a lot of effort is our relationship with aboriginal communities. We have a number of companies founded in partnership with First Nations groups across Canada, and have a few currently being negotiated in Quebec and Newfoundland & Labrador.

To address the issue of skills development, Cementation has created an innovative program called the New Miner Training Program. It was not developed specifically with the First Nations in mind, but rather as a tool for bringing new recruits into our industry. Nonetheless, we found that it was a very good model for working with our First Nations partners. One of the keys to Cementation's program is that our partners are responsible for the selection process, and then we provide the experts, curriculum, and training. Our training is primarily in mining, but we also offer mechanical and electrical apprenticeships.

Cementation was named one of Canada's Top 100 Employers in a nationwide competition last year, the sixth time the company has won this award. It is part of our mission statement to be not only a contractor of choice, but also an employer of choice. Participation in the competition not only gave us proof of what we have achieved so far, but also afforded us the opportunity to learn about what other companies are doing to raise the quality of life of their employees.

What is Cementation's project management philosophy?

Cementation works on a variety of projects around the world and has seen all kinds of project management models. It sounds obvious that a team should tailor its planning and procurement models to each project, but unfortunately this is often not the case. Communication is also a key to success. Cementation likes to work in an integrated team environment, which means maintaining open communication with the project owner. It is very difficult for any one party to address problems on its own. Finally, we manage our performance with realistic schedules and budgets. We often see overly ambitious proposals submitted to win approval, only for reality to set in later on, and this is not a trap that Cementation allows itself to fall into.

What are some of Cementation's ambitions for its market presence in Quebec going forward?

At Cementation, we see a lot of potential to expand our large diameter raise boring services, which we do in a lot of local and international projects, in Quebec. You may recall the high-profile rescue of Chilean miners some years ago. Our boring services played a major role in the success of that operation. Additionally, we want to build on the success of Cementation's design/build approach. At the same time, we will continue to serve as a traditional, all-service mining contractor interested in any underground development project the market offers.

Do you have a final message for the readers of the Engineering & Mining Journal on Cementation's Quebec and eastern Canadian presence?

I am excited to have Cementation establish a strong presence in Quebec. My career started at a salt mine in Quebec, and I have been involved in projects in the province for many years since. We have brought together a good team of experienced, safety-conscious staff that are going to be the foundation for the work that Cementation does there. Regardless of the current state of the market, Cementation has always had a long-term view, and we will apply that view to our permanent presence in Quebec. •

INTERVIEW WITH

Keith Phelan

VICE PRESIDENT
NFLD. HARD-ROK INC.

Can you provide us with an overview of Hard-Rok's operations in Newfoundland and Labrador?

On the island, we are the foremost drill blast supplier contractor. We supply and service most of the local quarry market and construction market and maintain a fleet of drills for surface drilling. On the mining side, in Labrador we supply the Vale mine site. We operate an explosives plant at Voisey's Bay in Labrador and we have an emulsion plant in Corner Brook, Newfoundland that serves the local island market. We are currently supplying Labrador Iron Mines through their contractor, Municipal Construction out of Halifax and we have worked with the Tata-New Millennium mine and expect to continue doing so. Hard-Rok is now preparing for the underground phase at Voisey's Bay to come on stream.

Hard-Rok is a 50/50 joint venture company with Dyno Nobel. Through this partnership, customers get all of the advances in technology available through the global support of Dyno Nobel, in addition to the local knowhow of Hard-Rok's Management team, which understands the nuances of the market.

We have seen the global explosives market consolidate in recent years. How has that impacted your position locally?

About 10 years ago, there were four suppliers fighting for the market on the island, which is not very big. Now we have two major suppliers – Orica and Dyno Nobel. In the Labrador Trough, Hard-Rok has its foot in the door with Labrador Iron Mines and the Tata-New Millennium mine. We are also in the process of targeting Alderon as they enter into the construction phase late this year. We were recently awarded the business for Baffinland Iron Mines, which is out of our territory, but was an opportunity for Dyno Nobel to take advantage of Hard-Rok's remote northern experience.

Have you seen increasing applications for new blasting technologies within the mining community?

There is an interest for new technologies in the sector. Homogenization in practice has resulted in reducing the amount of nitrate leach into the groundwater and everyone has adopted this practice. I do not know of a single account that has tried it and gone back to the old way.

Trying to find skilled labor that is prepared to travel to remote locations in Labrador can be a challenge. What are some of your labor initiatives to mitigate this challenge?

Hard-Rok has engaged Work Global Canada to see if we can bring in source some workers from outside of Canada. In Newfoundland we have a particular problem with licensed blasters because they are licensed by the province. They go through community colleges, but we have not had any new blood come out of these schools for a long time. We have no new licensed blasters coming into the system and we lose three to five every year to retirement. Within five to seven years, there is going to be a real crunch.

Have you been able to cultivate a deeper work force pool through Hard-Rok's aboriginal affiliate companies?

The two aboriginal companies we have are InuINNU majority owned businesses. One was set up exclusively to solicit business for the Lower Churchill project, in which we have been fairly successful. We have adopted the principal of adjacency for all of our operations. We encourage local hiring and joining forces with local aboriginal groups so that they have a meaningful participation in the economic opportunities in their areas.

How difficult is to manage safety at your Newfoundland and Labrador projects?

It is not difficult, but it is expensive. Hard-Rok has a full time dedicated health and safety people on staff whose sole responsibility is health, safety, regulatory compliance, and licensing. We have reduced lost time injury rates through some of the initiatives that we have undertaken in the past 24 months. Our primary focus last year was with regard to dust. All of our drillers wear respirators and receive respirator training and mandatory mask fittings. This reduces productivity and adds to the expense side of things, but it is important that all of our employees are well trained in these areas.

What sort of outlook do you have for the coming years for the mining industry in Newfoundland and Labrador?

The Labrador Trough is one of the key areas of growth for Hard-Rok. In Labrador, we have advanced projects like Alderon that are almost ready to go. The underground expansion at Voisey's Bay will also bring significant growth for HardRok.

In the next two to three years, what growth objectives do you have for Hard-Rok?

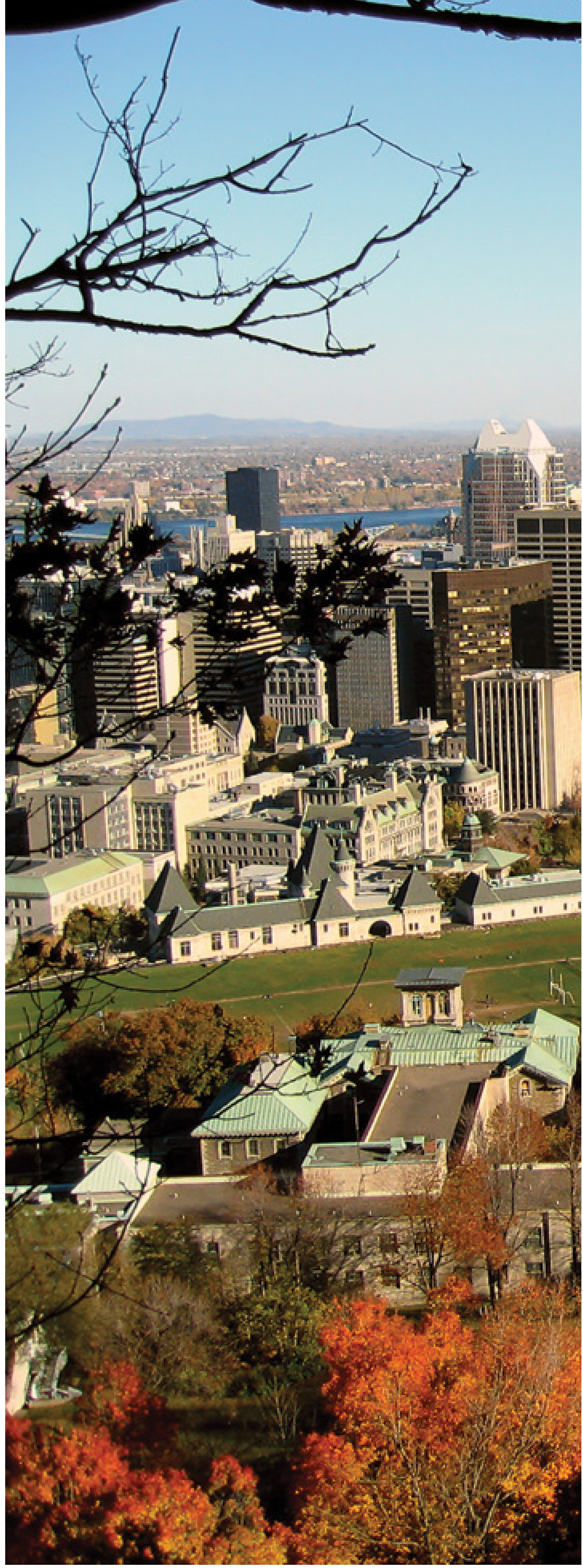
We would like to get some of the Labrador Trough opportunities in the win column for Hard-Rok. The construction industry across the island has slowed down recently, but overall our markets have been steady for the past four or five years. There is always a project on the horizon that we have to strive to pick up. We are firmly planted on the island and have been here since 1987. We are looking forward to grow the company and maintain the employees we have on a more full-time basis. •

Final Thoughts:

Index, Company Guide, Travel and Credits

"We have grown in the past few years because of changes in the environmental regulatory framework and the development of mineral resources in the North. The impact of climate change has also influenced how mines manage water, design their facilities and manage their mine waste. As social acceptability has become the norm, we see more consultation and meetings with communities. The time where mining was done in isolation without consulting the communities is behind us."

- Vital Boulé, Director, Environment, ROCHE



Source: Shutterstock

"Here in Quebec we have no sense of what will come next. It does not mean we will not continue to work here however; Globex is heavily invested in Quebec. Even at its worst, Quebec is better than a great many places in the world but the management of our resources by opinion polls and lack of understanding of our industry is disheartening… In the bad times like this, the opportunity is to acquire assets dirt cheap and we have been doing that. In a positive market, our opportunities are to joint venture and make deals. This year, we have to take projects back from our partners because they cannot do anything due to lack of funds. We know the market is cyclic; however it is longer and deeper than most right now. Some of us will fall and some of us will thrive. Time will tell who thrives and who falls."

- Jack Stoch, Director, President & CEO, Globex Mining Enterprises Inc.

"Being here in the Abitibi and surrounded by so many talented contractors and service providers, we have the capacity to go from being a junior to a full-fledged producer. In other jurisdictions, the hill would be too steep to climb. Osisko, Detour Gold and Agnico-Eagle are all beautiful examples of companies that were once small that actually made it. Cartier by design wants to be able to seize that opportunity. However, if en route an offer from a third party is very attractive, we will always seek the prime benefit to our shareholders and employees. If we did bring in a partner, we would take an enhanced JV-model approach and bring them in when the project is drill ready. If the offer is not there, Cartier has the capacity to go the full nine yards. In Quebec, the government supports this with a good dosage of savvy resource nationalism. They realize that most of the funding for the industry comes from abroad, so they like to keep a healthy interest in moving projects forward."

- Philippe Cloutier, President & CEO, Cartier Resources Inc.

"Careful equipment planning and scheduling was not part of the culture of underground mining at all for a long time. Today, many of our customers, including Agnico Eagle and Aurizon, understand the importance of our planning methodologies. Now we are starting work with Goldcorp, helping them to establish their long-term strategy. It involves a change in culture for more experienced managers who are not familiar with newer methods. For that reason, we have found that the best place to start our work is at the leadership level, to lay the foundation for technical work later on. Some of our clients only saw success on their open-pit sites - up to 20% improvement in the availability of their fleet - after they replaced their managers. 20% translates into a lot of money, especially considering that no capital investment is required."

- Erich Moisan, Director of Canadian Operations, GPAllied

"It is our promise to engage with local communities here for a long time to come, whether through educational, training, cultural, or infrastructure initiatives. These are found in the impact benefits or corporation agreements that we have signed with various indigenous groups. Those accords stipulate the creation of implementation committees, which allow for a free flow of information and discussion with the communities on the continued improvement of our operations in the future and on strengthening our cordial relations with those groups."

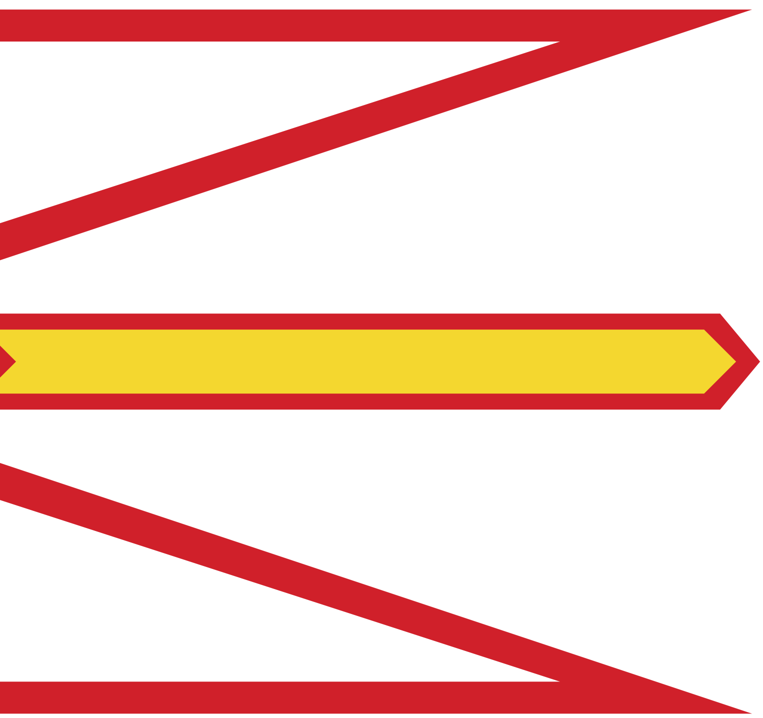
- Armand MacKenzie, Senior Director, Government and Stakeholders Relations, Tata Steel Minerals Canada

“We see several opportunities for HJ O’Connell to expand within Quebec, particularly in working more with clients that operate open pit mines. We want to reach more areas of the province beyond our current presence in the Labrador Trough. We can use our experience in northern areas, such as the James Bay region, to operate in many different kinds of environments in Quebec. Planning a job in the north is not the same as planning a job in an urban environment. The stakes are very high and the lack of local supplies and infrastructure means that being ill prepared can be very costly. We can also use our infrastructure building expertise to service junior companies.”

- Anoop Singh, District Manager LECQ - HJ O’Connell

"If the generative approach is done right, it is the least risky approach, for both the explorers and the investors. Azimut has chosen to develop new ideas in under-explored regions, looking for the big find, instead of looking for incremental discoveries in established mining camps. We think this is the best way for us to create significant and sustainable value. At first glance, going grassroots appears risky. In reality, though systematic data processing coupled with true exploration expertise and persistence yields the best chances. Risk is further reduced by developing partnerships at an early stage.”

- Jean-Marc Lulin, President & CEO, Azimut Exploration Inc.



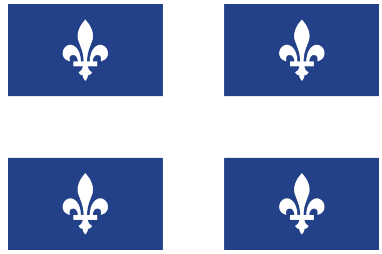
“Historically, in Newfoundland and Labrador, the sector had been developed by holders of large scale grants of lands. Mining was very big here in the 1800s and mining rights blocks were held, sometimes along with forestry rights, in blocks covering anything up to 2,000 miles. In the late 1970s and early 1980s, legislation changed to require people who were holding mineral rights to do something with them, or to give them back, by imposing increasing tax or exploration burdens unless the rights were put in use. I think it would be helpful from a development perspective to tweak the provinces approach to development. We focus unduly on local benefits and job creation when frankly the industry here is very good and capable of surviving on its own, and Government would be better served by concentrating on expediting projects.”

- James Thistle, Partner, McInnes Cooper

“Along with the mines already in operation in western Labrador and at Voisey’s Bay, up to $15 billion of investment in Labrador mining projects may be realized over the next decade. Future mining developments in Labrador, particularly in the resource-rich Labrador Trough, signal a bright future for Labrador and the rest of the promise.”

- The Hon. Tom Marshall, Minister of Natural Resources, Newfoundland and Labrador

Québec Travel at a Glance



Source: Shutterstock

Travel in Québec City

With the expansion of the Congress Center (Palais de Congrès), a grand total of 16,800 hotel rooms, and the ongoing $225 million expansion of its airport, Québec City is an increasingly attractive destination for business events. The capital may lack the reputation or size of Montreal, yet it is rapidly carving out its own niche. The expanded Congress Center will have a total capacity of 2,000, and is the location of the annual Québec Mines conference.

Travel in Montreal

Montreal claimed the title of top host destination in America for international association events for the second year running in 2013, according to the Union of International Associations' official rankings. The Palais de Congrès, boasting over 51,000 m2 of space spread over 113 rooms and venues, has over 12,000 hotel rooms within a five-minute walk. Montreal may not host the sheer quantity of junior explorers of Vancouver or Perth, and may lack the financial strength of Toronto, but the breadth and depth of industry expertise in all areas justified its status as host of the 2013 World Mining Congress this summer.

Exchange Rates

Currency: Canadian Dollar (CAD)
1 CAD = 0.96 USD
1 CAD = 0.71 EUR
1 CAD = 0.60 GBP
1 CAD = 0.82 CAD
1 CAD = 1.02 AUD

Dialing Codes and Useful Numbers

Canada Country Code: +1
Montreal Area Code: 514
Montreal Suburbs Code: 450
Quebec City: 418
Police: 911
Emergencies/Ambulance/Fire: 911

Convention Centers in Québec

Centre des Congrès de Sept-Îles
3 meeting rooms
Capacity: 450

Hôtel du Vieux Quai, Sept-Îles
4 meeting rooms
Capacity: 140

Gouverneur Hotel, Sept-Îles
5 meeting rooms
Capacity: 150

The Tadoussac Hotel, Tadoussac
5 meeting rooms
Capacity: 400

l'Hôtel Le Manoir, Baie-Comeau
7 meeting rooms
Capacity: 450

Québec City Convention Centre
30 meeting rooms
Capacity: 7,500

Centre de Foires de Québec, Québec City
10 multifunctional rooms
Capacity: 18,500

Château Mont Sainte-Anne, Beaupré
19 meeting rooms
Capacity: 700

Palais des Congrès de Montréal
113 meeting rooms
Capacity: 12,696

Fairmont The Queen Elizabeth, Montreal
30 meeting rooms
Capacity: 2,500

Centre Mont-Royale, Montreal
17 meeting rooms
Capacity: 800

Le Centre Sheraton Hotel, Montreal
31 meeting rooms
Capacity: 1,835

Hilton Montreal Bonaventure, Montreal
33 meeting rooms
Capacity: 1,440

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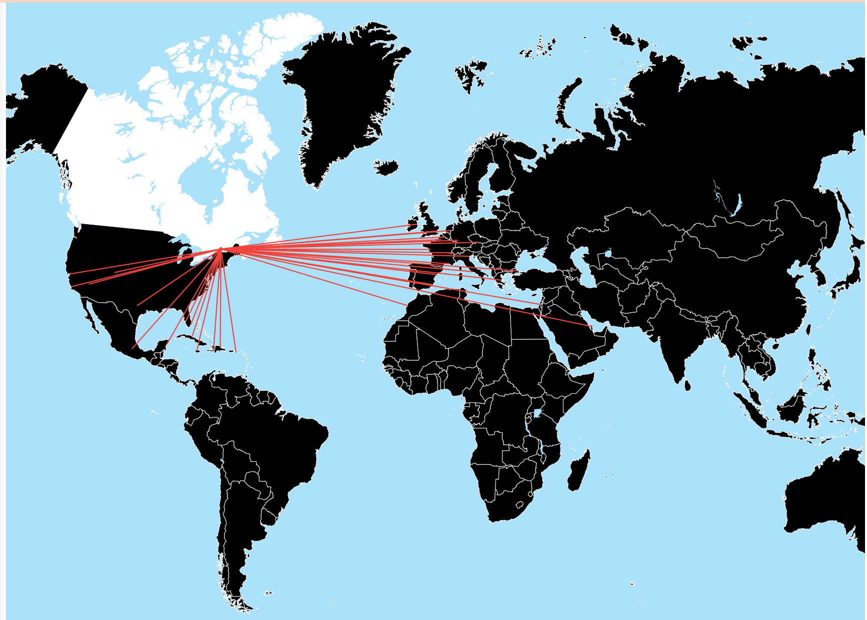

MONTREAL

Hôtel Intercontinental Montréal
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Tel: +1 514 987 9900
www.ihg.com

The InterContinental Montreal flaunts the perfect alliance of rich historical heritage and fresh contemporary design. Also, the hotel offers the best of both worlds with an intimate boutique hotel atmosphere and the peerless service of a luxurious 5-star property. While staying in this elegant hotel you will enjoy modern guestrooms and spacious suites, delicious Provencal cuisine at Osco! restaurant, unique cocktails at the Sarah B. absinthe bar and a multitude of services including the InterContinental Club Lounge and the health center. The hotel also offers 21 function rooms allowing you to receive your guests in a unique building, recognized for its history, magnificent woodwork and large windows.

Elegantly overlooking the international business area, the hotel is located above the Montreal World Trade Centre, at the gateway of downtown and Old-Montreal. Connected to the underground city, the Montreal Convention Centre and close to the International Airport, you will be ideally positioned for a business trip or cultural getaway.

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www.omnihotels.com

QUÉBEC CITY

Auberge Saint-Antoine
8 Saint-Antoine St, Québec City, Québec G1K 4C9, Canada
Tel: +1 418 692 2211
www.saint-antoine.com

Hotel du Vieux Québec
1190 Rue Saint-Jean, Québec City, QC G1R 1S6, Canada
Tel: +1 418 692 1850
www.hvq.com

A touch of history for those staying in the Hotel du Vieux Québec, which is located in the 18th century ramparts of the historic Latin quarter of Old Québec. Yet alongside the beautiful rooms and range of restaurants, the hotel is also geared to business travellers, with meeting space provided for groups of up to 45 people and state-of-the-art audio-visual and telecommunications equipment.

Auberge Le Vincent
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+1 418 523 5000
www.hotellevincent.com

Fairmont Le Château Frontenac
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Tel: +1 418 692 3861
www.fairmont.com

The Fairmont Le Château Frontenac, located in the Old Québec, is a landmark of Québec City. It is currently undergoing extensive refurbishment and expansion, which will see around 100 rooms redesigned by New York interior designers Wilson & Associates. The renovations of the hall, expansion of the boutique Hotel Fairmont Or and reopening of the restaurant Champlain are all expected in winter 2014.

COMPANY NAME	WEBSITE	PAGE
	Engineering, Project Management and Consulting	
Golder Associates	www.golder.com	104, 105, 115, 116, 120, 178
GP Allied	gpallied.com	171
H.J. O'Connell	www.hjoc.com	100, 154, 170
Hatch	www.hatch.ca	102, 120, 134
InnovExplo	www.innovexplo.com	41
MISA Group	www.legroupemisa.com	
MRB & Associates	www.mrbweb.com	122, 135, 137
Roche Ltd	www.roche.ca	100, 106, 107, 168, 178
Seneca	www.seneca.ca	70, 71
Services Technominex Inc.	www.technominex.com	78
Sikumiut Environmental Management Ltd	www.sikumiut.ca	160, 161
SRK Consulting	www.srk.com	115, 117, 120
Stantec	www.stantec.com	158, 162
Terrapex Environnement	www.terrapex.ca	
Tetra Tech	www.tetratech.com	
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5N Plus Inc.	www.5nplus.com	
BEST H20 Inc.	www.best-corp.com	
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Cavotec	www.cavotec.com	
CDC Export	www.cdcexport.com	
COREM	www.corem.qc.ca	72, 95
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Dux Machinery Corp.	www.duxmachinery.com	109, 114
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