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Mining in Québec, Newfoundland and Labrador

Québec's mining tradition carries the sector through the storm as Newfoundland and Labrador charts new mining territory.

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Québec

A historic mining region's rallying cry for a stronger tomorrow

Beaufor mine, Val-d'Or. Photo courtesy of Richmont Mines Inc.

Over Québec's 150-plus year mining history, the industry has seen its fair share of highs and lows. The province's breed of cycle-hardened miners have learned to survive regime change, scarce capital and falling commodity prices, yet for the first time in recent history, the sector has had to survive the one-two punch of weak capital markets and a government hungry for more returns. These challenges have been felt on a global scale for the industry, but the two in concert have dealt the climate in Québec a considerable blow. In the last year, industry players have been forced to resort to resilience and creative thinking to stay afloat. With a strong culture of mining on its side and the mineral potential to support it, mining in La Belle Province may be tested but is far from knocked out.

Once an industry darling, the Fraser Institute rankings released in 2013 brought news that Québec had fallen out of the world's top 10 mining jurisdictions in its annual global survey of mining executives. After enjoying the survey's top spot from 2007 to 2010, Québec had fallen to 4th in 2011 and 5th in 2012. Its drop to 11th came in the wake of the autumn 2012 elections that ushered Parti Québécois (PQ) to power in a minority government. The PQ vowed to increase taxes on the industry as a part of its election platform and, while their rhetoric eased in the months following the election, they nonetheless announced in May 2013 a heightened tax regime based on gross value. The lead up and aftermath of the announcement has been heard far beyond provincial borders and the industry now has the new challenge of polishing its once sterling reputation as a mining destination.

"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," said Frank Mariage, partner at Fasken Martineau. "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."

Mining investments in Québec decreased to $4.8 billion in 2012 and are set to decrease further in 2013 with a forecast for the year closer to $4 billion. Though its annual tallies are softening, mining remains a chief economic contributor to the province, a fact they are keen to highlight as the sector faces governmental and public scrutiny. With iron ore and gold chief among its diverse mineral resources, the industry currently has 23 operating mines and an annual output valued at $8.2 billion in 2012. Over 200 mining exploration companies are active in the province, and 17,000 jobs in industry continue to provide tax income.

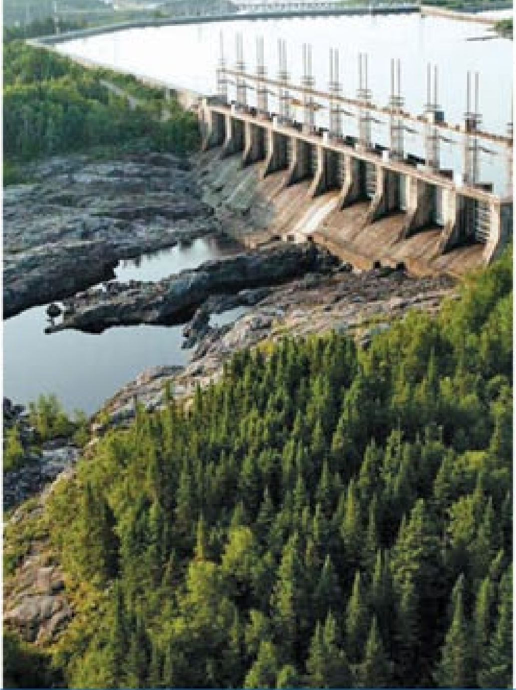
Valérie Fillion, executive director of Québec Mineral Exploration Association (QMEA).

"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," said Josée Méthot, president and CEO of the Québec Mining Association (AMQ).

According to the AMQ, of the $5 billion spent in Québec for mining projects in 2011, $2 billion of this amount went towards procurement and salaries.

Going forward, a key hurdle for the industry will be to embrace further transparency and engage with the general public. "There is a clear gap between what the industry brings to the economy, in terms of creation of wealth, and the perception that Québeckers have. Over the years the industry realized that it had to become more transparent," said Isabelle Poirier, executive director of Minalliance, a communications fund created by AMQ, the Québec Mineral Exploration Association (QMEA) and private sector stakeholders. "The general public did

Josée Méthot, president and CEO of the Québec Mining Association (AMQ).


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."

Though the year has proved more difficult than most, there is light at the end of the tunnel as a handful of success stories indicate the path to recovery: among them, the startup of Bracemac MacLeod, Glencore Xstrata's copper-zinc mine, Canada Lithium commencing production at Québec's first lithium mine, IAMGOLD's launch of production at Westwood, and strides towards completion both at Stornoway's Renard diamond mine and Goldcorp's behemoth Éléonore. For the province's engineers and manufacturers, the downturn has been a time for innovation, diversification and global expansion. As the markets have taken their toll, Québec's industry has cleaned house; rationalizing budgets and divesting noneconomic projects in pursuit of a brighter tomorrow.

Riding the PQ's learning curve

The prevailing concern among Québec's mining firms in 2013 has been the uncertainty caused by the Parti Québecois as it attempts to formulate a mining industry platform. Mine operators, investors, and service providers alike have expressed a fear that policy changes, particularly in the area of taxation, and mixed signals 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-Francois 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.

Mine (pronoun)

By Katia Opalka, Partner, Lavery

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.There seems to be some concensus that it will take a majority government to put a new law on the books.

First, in the bill, environmental requirements were extended. 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 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.

Since patriation of the Constitution in 1982, courts in Canada have been spelling out consultation and accommodation required when a project might infringe on First Nations aboriginal and treaty rights. 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.

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 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, Bill 14, 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.

Extracting benefit for the people

Interview with Québec's Minister of Natural Resources, Martine Ouellet

What are the government's initiatives for the mining sector?

There are three elements to our plans for the mining sector: a new mining law, a new royalty regime, and the development of the North. The government plans to put into place a clear framework to improve the public consultation process.

Where do you see room for improvement in the current public consultation processes?

Very large projects in the industry hold public consultations; however we want to extend this practice to every project. This will be organized by the Bureau d'Audience Publiques sur l'Environnement (BAPE). We want to improve the transparency of this process. The Québécois will be able to know exactly what resources are being mined and what the value is on the market as well as be informed of all developments throughout the mine life. Local Committees will be established to monitor the environmental effects of a mine and to ensure that maximum economic benefit for the people is being extracted. Confidence on the part of communities comes from transparency and the availability of information.

What objectives does the government hope to achieve with the implementation of a new royalty regime?

We aim to adopt a framework that will permit the miners to receive a reasonable return for the risk of their investment, but will also allow for the population to share equally in the wealth of Québec's collective natural resources. What we are proposing is a hybrid proposition with a guaranteed minimum revenue tax and an additional royalty tax for exceptionally profitable projects. Québec's citizens should benefit during periods of high prices.

How is the government working towards integrating Québec's mining and manufacturing sectors?

The government plans to encourage more transformation in Québec, which can create four times as many jobs as extraction. This will create more structure in Québec's economy and allow us to create bridges between the mining and manufacturing. We aim to develop transformation for non-traditional metals like lithium, as well as traditional metals such as nickel and iron.

How does the current government intend with Plan Nord?

The backbone of development in the North is the question of infrastructure. The government is currently in the process of defining the model for infrastructure development. Our first goal is to create a stable and predictable climate so that all enterprises have access to infrastructure. We are in the process of studying the model of the access to water at Sept-Îles, which is the number one stake for the development of Québec's most northern region. The government is determined that the large mines that will benefit from the new roads and infrastructure are also involved in paying for them. New roads will be open for all to access, but the mines that are the principle users of these roads should contribute to their costs accordingly.

Québec recently slipped in the Fraser Institute's rankings; what are the principal reasons behind this downgrading?

We see this as temporary, and when we look at the countries that are at the top of the ranking, Finland and Sweden, these are regions where there are regimes that permit collective benefits within their regulatory, environmental and social frameworks. Their industries are supported by stability and acceptance from the population. This is what we want to create in Québec with our new royalty regime, the new mining law, and also with a new model for the construction of infrastructure.

Gold: Québec's Crowning Resource

Exploring for remaining potential in the prolific Abitibi

Goldcorp's Éléonore project, located in the James Bay region of Québec. Photo courtesy of Goldcorp Inc.

The Abitibi Greenstone belt that straddles Ontario and Québec, having produced over 150 million oz since 1900, has solicited speculation that it is well past its maturity. Many argue, however, that the area's potential at depth has scarcely been developed. Challenging market dynamics have spurred more juniors to opt for well known, proven sites in the Abitibi. By utilizing historic data and experts' knowledge of the different sites' geologies, 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, 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."

Marco Gagnon, president and CEO of Adventure Gold.

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 lesser part 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

Copper was first extracted from the Horne mine during December 1927. Photo courtesy of Falco Pacific Resource Group.

Granada mine site. Photo courtesy of Gold Bullion Development Corp.

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 has also set its sights on Abitibi properties with historically demonstrated 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.

Exploring further along the Abitibi Greenstone Belt

Further northwest in the Abitibi, Falco Pacific Resource Inc., established in 2010, controls over 700 km^2 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 lb 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 no initial drilling required on the Horne 5 deposit to obtain our first resource estimate, which is a

Core room at Balmoral's La Martinière camp. Photo courtesy of Balmoral Resources.

Paul Carmel, president and CEO of Richmont Mines.

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.

Abitibi producers tighten belts as gold drops

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.


George Burns, EVP and COO of Goldcorp Inc.


Headframe of the West mine, Casa Berardi. Photo credit Paul Brindamour, courtesy of Aurizon Mines Ltd.

"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 $1,300/oz, gold miners are focusing all efforts on reducing 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.

James Bay: a new world-class mining camp with industry-leading practices

Chartering new territory in gold production for Québec, James Bay is emerging as a promising area with blue sky potential. The discovery that started it all, Goldcorp's Éléonore mine, is 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

Paul Dumas, president and CEO, Bowmore Exploration.

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."

Reviving past mining camps: Chibougamau and beyond

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 which 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 10-20 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.

Québec's North

Paving the Way to World-Class Resources

Salluit community, Nunavik region. As a regional airline, Air Inuit provides vital passenger, charter, cargo and emergency air transport services throughout northern Québec. Photo courtesy of Air Inuit.

Given the high costs of operating in Québec's north, the fall in commodity prices has led many developers to reconsider the feasibility of their northern project portfolios. The highly publicized Plan Nord, a bid for northern Québec mining and energy infrastructure development, had generated excitement in the industry when it was devised in 2011 by former premier, the Liberal Party's Jean Charest. Following the PQ accession to power, however, expectations have cooled. The PQ re-launched the plan under the name of "le Nord pour tous" in 2013, though llike 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 production, 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.

Transportation and logistics: Remote site solutions in a harsh climate

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.

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.

New region, new agreements: Improving the public consultation process

Beyond technological challenges in the North, the Québec government is also reviewing its First Nations 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 km^2 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.

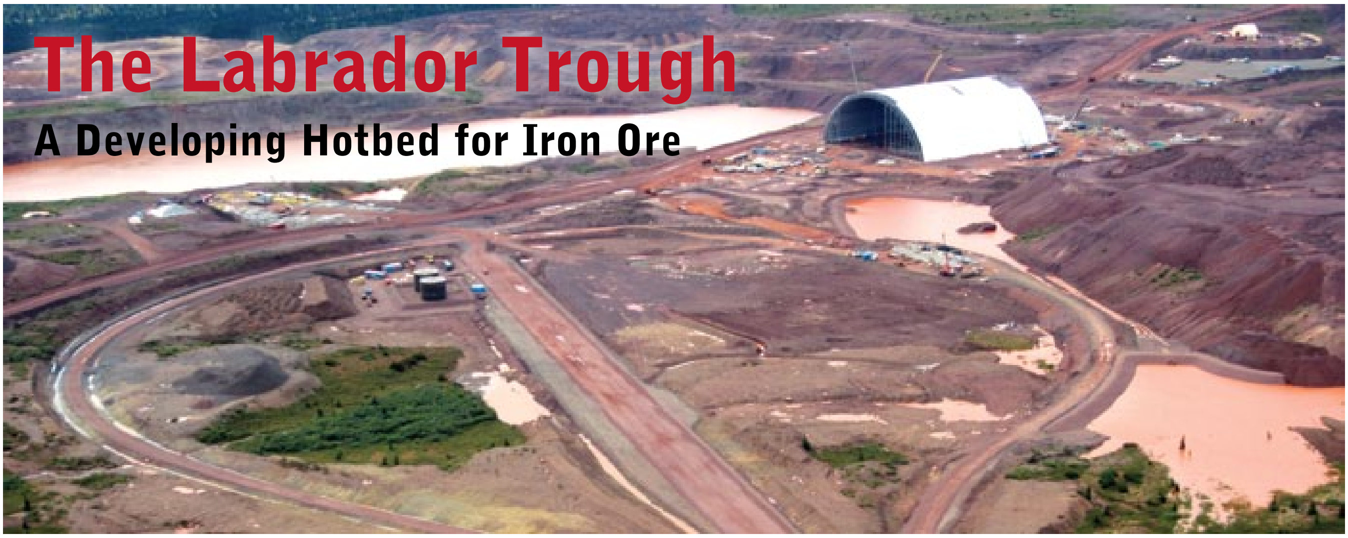
The fund, called Fonds Restor-Action Nunavik, has been recognized on provincial and national levels with environmental awards. "For this cleanup, the Inuit people were hired, first of all to provide jobs, and also because they know the territory, so they are able to clean it up well. The results were 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.

The Labrador Trough

A Developing Hotbed for Iron Ore



View of Tata Steel Minerals Canada's DSO project construction site, showing process plant dome, rail loop, and product storage and load out areas. Photo courtesy of New Millennium Iron Corp.

The infrastructure challenges of northern development are felt acutely in the Labrador Trough, home to Canada's only iron ore producers. 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

Camp in the Fire Lake North project. Photo courtesy of Champion Iron Mines Ltd.

Jean-Luc Chouinard, vice president of project development at Champion Iron Mines Ltd.

Alan Gorman, president and COO, Oceanic Iron Ore Corp.

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."

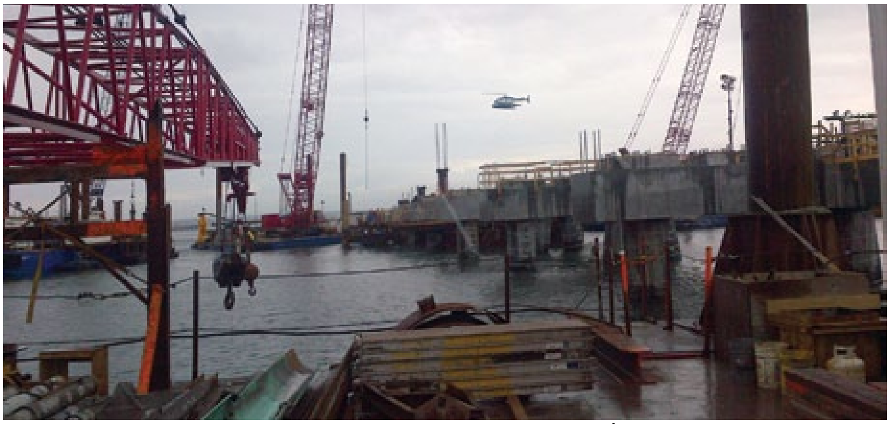
New Millennium Iron Corp, which is developing taconite projects on either side of the Trough in both Québec and Labrador, had devised an original plan to use a ferroduct to transport their concentrate in slurry form from the mining-beneficiation stage to the pellet plant."Because we make such a fine 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."

A multiuser port for a new era in the Trough

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

Rajesh Sharma, CEO & managing director, Tata Steel Minerals Canada Limited.



Construction of the new multi-user dock. Photo courtesy of Port of Sept-Îles.

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 multiuser 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 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," 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.

Pierre Gagnon, president and CEO of Port of Sept-Îles.

A New Era for Strategic Materials

Quebec diversifies its mineral portfolio

Lac Brisson in the background with the B Zone in the foreground. Photo courtesy of Quest Rare Minerals Ltd.

Helping to diversify Quebec's mining activity beyond gold and iron ore, strategic commodities with robust market dynamics are paving the way to more balanced mineral wealth in the province.

Lithium and the promise of vertical integration

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 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."

To graphite, phosphate and beyond

Another rising commodity for the province is graphite, which is also benefitting 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% Cgr. 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,

Drilling at Mason Graphite's Lac Guéret property in northeastern Quebec. Photo courtesy of Mason Graphite.

Gary Economo, president and CEO of Focus Graphite Inc.

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%."

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."

Rare earth elements: rushing to fill China's supply gap

As the rare earth craze has sparked exploration interest across the globe, Québec players have assembled teams to partake in the race to production. Global rare earth demand was projected to grow over 60% from 2008 to 2014 by 68,000 mt/y, from 112,000 mt/y to 180,000 mt/y, according to the Industrial Minerals Company of Australia. For Québec to succeed in filling this supply gap, however, time and metallurgy will be of the essence.

"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 flow-sheet 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.


Peter Cashin, president and CEO of Quest Rare Minerals Ltd.

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."

Clean-tech Processing: Fueling Québec's metallurgical expertise

Recognizing the need for strategic minerals, other juniors have adapted to the market dynamics by effectively changing their stripes. 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

Benoît Couture, CEO and Raymond Simoneau, vice president, both founders of Seneca.

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.

Accessing Capital

Québec's Framework for Raising Funds

Though a distance from Toronto and Vancouver and their financing hotspots, Quebec is not without its advantages when it comes to financing solutions for the its mining industry. Although mining 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 R&D. A strong tradition of institutional lenders further assists the sector as a strong financing ally.

Institutional investors in Québec lend support

In pursuit of financing, Québec's mining sector has benefited substantially 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 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 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.

Downturn survival: exploration benefits

Exploration and mining companies have also benefited 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.

Once again, limits to these financing solutions remain. “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,” 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

Dany Pelletier, investment director, Caisse de Dépôt and Carl Gilbert, investment director, Sodémex Développement Fund.

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."

Getting Creative: Offsetting capital market constraint

Necessity being the mother of invention, the down cycle has set off alternative financing solutions on the part of explorers and the financial industry alike.

"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, mind-sets, 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 & Experimental Development (SR&ED) 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 R&D programs.

Engineering, Manufacturing and Construction

Moving the Industry Forward

Rio Tinto Iron and Titanium's Sorel-Tracy metallurgical complex. Photo courtesy of Hatch.

As Quebec's mines continue to produce, the industry's support sector has continued to flourish to the point which Quebec mining service expertise is sought out globally. Known for its technical expertise and sustainable approach, the service sector is an asset worthy of export.

Environmental practices grow as industry standards rise

From another angle, R&D has taken on a more important role in Québec's mining sector from the perspective of social acceptability. Service providers have been instrumental in bringing new technologies into the field that minimize environmental and social impact. As a company's social license to enter into production becomes just as important as its mining license, industry service providers are honing their expertise accordingly to meet heighted environmental, health and safety standards.

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 Laval University, Biogénie operates worldwide bringing its biological soil treatments to many industrial sites. 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," said Thomassin-Lacroix.

To assist with environmental work, stakeholder communication expertise is also an increasingly important asset for a service provider. Roche, a Quebec-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 industry receives a high amount of public criticism, but in the past 30 years great strides have been made in minimizing impact, as evidenced by the increase in demand for environmentally-friendly products. EPCMs and equipment providers have brought innovative solutions to answer these growing needs. "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.

Equipment suppliers assist in the down-cycle

The current downturn has severely impacted the support sector, as many of its players had mobilized for high capacity and expansion in the upswing of 2010-2011. 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.

To help clients through this hunker-down phase, equipment providers are looking for new solutions to cost control. For Hewitt Equipment, which launched their D-tech Condition Monitoring Center in 2011, the investment was well-timed to assist in 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 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 Rene 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.

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.


Pierre Fréchette, principal at Golder Associates.

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 Fréchette, 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.

New frontiers

Service providers export their expertise

Photo courtesy of Hewitt.

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

James Siddorn, a principal consultant at SRK Consulting Canada.


Screenshot of a typical SmartEXEC mine 3D diagram with control capability. Photo courtesy of SimSmart.


Cowan modulating actuator in the oil sands. Photo courtesy of Cowan Dynamics.

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 Frechette 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.

Conclusion: The Climb Back to Number One

While 2013 has been a quest for survival for most, a brighter outlook is ahead as the industry hopes for a turnaround by the summer of 2014. The PQ's mining policies have been unveiled and moved to the parliament floor, easing in part the cloud of uncertainty that has plagued the sector this year. Given the substantial role of mining in the provincial economy, the industry remains hopeful for a more favorable climate going forward.

"The government is mindful that their Fraser Institute ranking is not what it used to be. They also know that raising funds for mining companies is more difficult at the moment. Additionally, they are a minority government. All of these factors together will hopefully act to mitigate the government's initial proposals," said Vitale Santoro of Osler.

Now it is up to the industry to kick start after a prolonged winter and push forward projects in mining camps old and new. "When the dust settles, people will realize that not a lot has changed. The robustness of the databases and fertility of the Abitibi area remains. Savvy investors will always go there because of the lower risk and the regime is transparent, stable and predictable. The main challenge now for juniors and mining companies is to communicate with local jurisdictions and populations and work out concerns together," said Philippe Cloutier of Cartier Resources and QMEA.

Beyond Québec's gold resources, there is vast ground for the exploration sector to cover. "We have only explored 15% of Québec's underground potential, so we still have a lot of exploring to do. Approximately 6% of Québec is under claim and we have very favorable geology," said Valerie Fillion, executive director of QMEA.

With promising projects in lithium, graphite and rare earths standing out

Data collection activities at Dumont project. Photo courtesy of Royal Nickel Corp.

amongst the province's growing mineral portfolio, Quebec's mining potential is far from tapped. While gold miners have struggled to adapt to the new lower price environment and iron ore developers continue to troubleshoot infrastructure solutions, the province's mineral diversification has come at an ideal time. While even these strategic commodities struggle to access financing in the mining downturn, the province should see projects gain momentum as markets pick up in the year ahead. The long traditions for gold and iron ore, as well as base metal, production in the province, while facing constraints, also show no signs of abating as a healthy junior interest remains.

"Quebec is still a good place to do business in mining, emphasized Champigny of Minallianace. "We have very well-qualified workers, an approval process for mining projects that is very well streamlined and some very good tax incentives for raising funding."

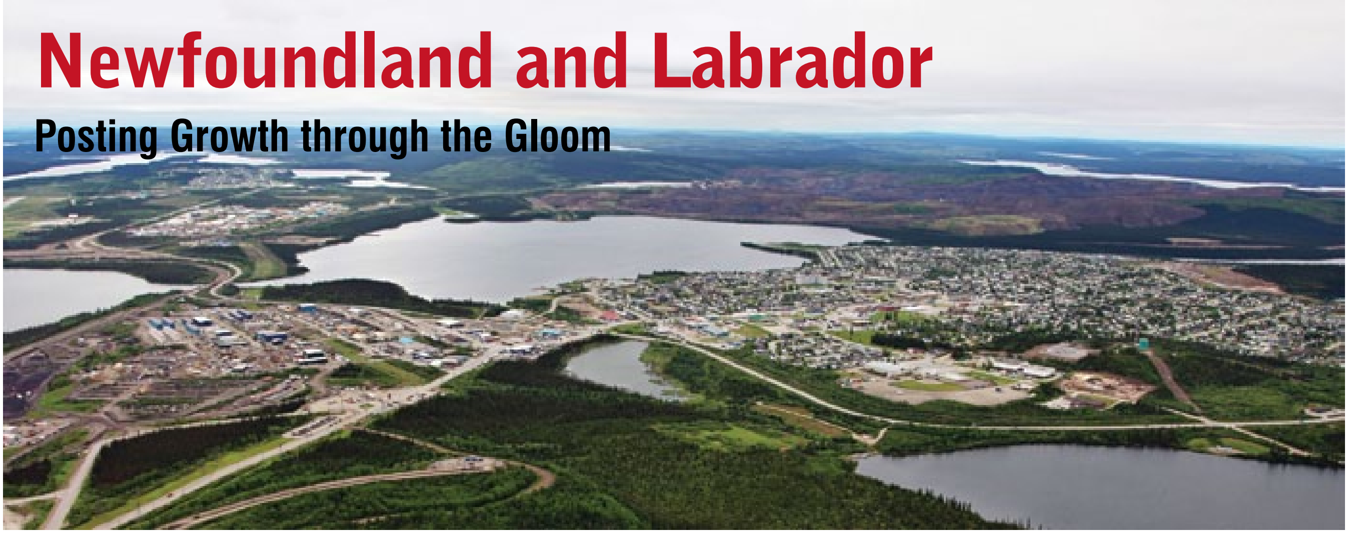
The future of the sector depends increasingly on public perception, which has helped to shape this year's policy debates. With the leadership provided by the sector's associations, miners in Quebec have succeeded in presenting a unified front. Striving to work more closely with stakeholders and improve health, safety and environmental standards, the industry has made significant progress in recent years and has given testament to its will to continue improving.

"We have successfully put in place the conditions that will continue the growth and development of the mineral sector in Quebec in the best economic interests of Quebec. QMEA will continue to disseminate best practices among our members to contribute to the vitality of our industry with innovative ideas. Our mineral resources have the potential to attract investors, but we must take into account external factors and cycles to ensure the recovery and ensure a transparent, predictable and stable framework," urged Fillion.

Considering Québec's tremendous geological prospects, it is unlikely that political changes will be enough to keep investment out of the province. Québec's recent challenges have taught the industry valuable lessons in project planning, cost control and financing creativity. Even a bump down in its Fraser Institute rankings cannot detract from the province's highly-skilled workforce, adept support sector and remaining underground potential. For the foreseeable future, mining in La Belle Province is here to stay.

Newfoundland and Labrador

Posting Growth through the Gloom



Alderon Iron Ore Corp. is developing the Kami project, located close to the mining towns of Wabush and Labrador City. The project, which is slated for production beginning in Q4 2015, is being developed within a framework of sustainability. Photo courtesy of Alderon Iron Ore Corp.

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.

The Labrador Trough: New producers emerge in a tough climate

The mainstay of mining in Labrador, the Labrador Trough, has to date produced more than 2 billion mt of iron ore over the half century that it has been mined. The lack of necessary infrastructure is the area's most significant development hurdle, making it near impossible for companies to remain independent long into the development process. As with many other mining jurisdictions struggling to raise capital in the global downturn, many trough players are placing their hope in Asian investors


Mark Morabito, executive chairman at Alderon Iron Ore Corp.


John Kearney, chairman & CEO of Labrador Iron Mines Holdings Limited.


Jeff McLaughlin, vice president of operations for Vale Newfoundland and Labrador.

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 more than $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.

Voisey's Bay mobilizes large-scale expansion

Aside from its iron ore, however, Labrador has also become famous for its nickel. 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. The world-class nickel resource was the first confirmation of Labrador's potential beyond iron ore. 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.

Mining and exploration on the Rock

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 reapproach 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.

A model support sector: Advancing EH&S standards

While the mining industry has taken off, a ready and waiting support sector has appealed to the sector with industry-leading practices and innovative technologies. In addition to remote site challenges, miners in Newfoundland and Labrador face a variety of environmental, health and safety issues that require specialized providers.

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.

A challenge salient in Newfoundland and Labrador, silica dust is a major component of the province's geology. "We have somewhere between 25-30% 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


Pressure oxidation leach (POL) building under construction at the Long Harbour processing plant. Photo courtesy of Vale.


Members of the Inuit Nations make use of the pontoon bridges that SEM has developed to ensure their safe crossing of the ice tracks made by the Umiak ship of Vale's Voisey's Bay mine. Photo courtesy of Sikumiut Environmental Management Ltd. (SEM).

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 which 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.

Not only has Voisey's Bay initiated a long list of innovative approaches to mine development, but it is also to credit for the growth of many of Newfoundland and Labrador's service companies. East Coast Catering (ECC), a company which started off providing catering and accommodation services to the offshore drilling sector in the 1980s and early 1990s, now derives roughly 40% of its business in mining. "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.

Conclusion: Success breeding success

Considering the modest growth rates posted by the province's mining 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.

Immense Potential, Yet Challenges Persist

Interview with Newfoundland and Labrador's Minister of Natural Resources, Tom Marshall

Newfoundland and Labrador has been forecasted to lead the pack in economic growth amongst Canadian provinces this year at a growth rate of 6%. What is the role that the mining sector can play?

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.

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.

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?

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.

Newfoundland and Labrador is known for its great mineral potential, how can this be maximized?

Along with the Geological Survey Division, Newfoundland and Labrador is home to a vibrant prospecting community. Prospectors are closely tied to the mineral exploration phase which in turn can lead to the discovery of new viable mineral deposits. A close look at the mineral industry in the province, both historically and in more recent times, reflects the important role the prospecting community has played in the discovery of major deposits. Examples include Beaverbrook Antimony Mine, Teck Duck Pond Operations, Rambler, Buchans and Voisey's Bay.