

Tuesday, May 31, 2011, Chibougamau (Club de golf de Chibougamau, 130 rue des Forces Armées)

Session 1: Geology and mineral potential of the Chapais-Chibougamau area

Session chairs: Sylvain Lacroix (Géologie Québec-MRNF) and Isabelle Milord (CÉAQ, TJCM)

Platinum Partner : Conférence régionale des élus de la Baie-James

Over a 50-year period, the Chapais and Chibougamau mining camps produced a total of more than 2.7 billion pounds of copper, 4.1 million ounces of gold, and 12.8 million ounces of silver, not to mention zinc, nickel and cobalt. Recent work on geology, the Quaternary, geophysics and metallogeny in the Chapais-Chibougamau area by Géologie Québec, the *Centre d'Étude appliquée du Quaternaire* (CÉAQ) and the industry have produced a new vision of the area's exploration potential.

8:30 – 8:50

Overview of the mineral potential of the James Bay territory and presentation of a new vision of the gold potential of the Chapais-Chibougamau area

Patrick Houle (SOR-MRNF)

The James Bay territory covers an area of 350,000 km² in the centre of the Superior Province and includes five geological subprovinces, from north to south, the La Grande, Opinaca, Nemiscau, Opatica and Abitibi subprovinces, consisting of volcano-plutonic and sedimentary assemblages. Each of these subprovinces contains a multitude of varied metallogenetic, likely to contain various substances (Au, Ag, Cu, Zn, Pb, Fe, Mo, Li, Ni, REE, U, PGE, Co, Cr, diamond), such as the Éléonore gold project (**Opinaca Mines Ltd., Goldcorp Inc.**), the Whabouchi lithium project (**Nemaska Exploration Inc.**) the Matoush uranium project (**Strateco Resources Inc.**), the MacLeod Lake copper-molybdenum-silver project (**Western Troy Capital Resources Inc.**), and the Renard diamond project (**Stornoway Diamond Corporation and SOQUEM inc.**).

This huge area at the eastern extremity of the Abitibi Subprovince contains the Chibougamau mining camp (Doré Lake and Chibougamau Lake sectors; historical production: 47.5 Mt at 1.72% Cu, 2.30 g/t Au, 1.6 billion pounds of copper and 3.2 million ounces of gold) and the Chapais mining camp (historical production: 24.2 Mt at 2.24% Cu, 1.13 g/t Au; 1.1 billion pounds of copper, 0.8 million ounces of gold and 8.2 million ounces of silver). However, there has been little in-depth exploration of most of the NW–SE shear zones (*Mine Shear, Cu-Au*) of the Chibougamau mining camp, not to mention that the intersection of some NW–SE shears with the Doré Lake Fault could represent targets to be tested for the discovery of large amounts of copper-, gold- and silver-mineralized siderite. In addition, the Chibougamau area's potential for epicrustal polymetallic gold deposits (e.g. Lac Berrigan), porphyritic Cu-Au-Mo deposits (e.g. Grandroy, Merrill, Devlin) and VMS deposits (e.g. Lemoine and Chapais) remains little known and underexplored.

Finally, recent fieldwork in the Chapais-Chibougamau area has revealed the existence of E–W deformation corridors whose gold potential has been underestimated, particularly the Palmer-Tippecanoe, France, Faribault and Caopatina-Guercheville deformation corridors. Known gold showings hosted by these deformation corridors are mostly spatially associated with porphyritic felsic intrusions and indicators of carbonate and albite alteration. Following analysis of favourable criteria for recognition of Au potential, the presentation will therefore highlight target areas in the search for gold in the region.

MRNF: Ministère des Ressources Naturelles et de la Faune du Québec

8:50 – 9:10

Projects for geological characterization of Quaternary surficial formations in support of the mineral exploration industry: 2003-2010 CÉAQ actions and accomplishments

Marc-André Bernier and Isabelle Milord (CÉAQ)

The *Centre d'étude appliquée du Quaternaire* (CÉAQ) [centre for applied Quaternary studies], a subsidiary of the James Bay Joint Action Mining Committee (TJCM), is the first organization of its kind in the Nord-du-Québec region to promote the use and development of Quaternary technology in support of the mineral exploration industry. The CÉAQ was created because the region's key economic and social stakeholders were committed to developing one of the James Bay territory's great natural resources, Quaternary surficial formations, as well as local expertise capable of supporting the development of the Nord-du-Québec region. In addition, there is a promising future for the development of Quaternary technology. The mineral exploration industry is increasingly moving toward neglected areas of the region, which are often covered by an unbroken layer of glacial deposits. The industry is also turning toward the search for new substances of a strategic nature (diamonds, energy minerals, rare earths).

The CÉAQ's mandate is to increase the geoscience knowledge base related to the Quaternary in the Nord-du-Québec region and develop innovative exploration techniques based on surficial formations. To achieve these objectives, the CÉAQ established a structure with four divisions: (A) acquisition of geoscience data; (B) research and knowledge development; (c) professional development; and (d) laboratory testing.

Since 2003, the CÉAQ has conducted a series of geoscience knowledge acquisition projects related to the Quaternary on behalf of mining companies and institutional clients. These consisted of regional or strategic mineralogical and lithological sampling projects, geomorphological and Quaternary mapping, and characterization of mineralized boulder trains. In all cases, the CÉAQ's work relies on the development of innovative and inexpensive approaches and on partnership with local government agencies, educational institutions, including the Centre d'études collégiales de Chibougamau (CECC), and mining companies.

In 2010, the TJCM entered into a collaborative agreement with the CECC, its partner since 2001, so that the strategic positioning of these two bodies established by the CÉAQ project could be the basis for an application for recognition of the Nord-du-Québec region's very first *Centre collégial de transfert de technologie* (CCTT) [technology transfer centre].

TJCM: Table jamésienne de concertation minière

9:10 – 9:30

Revised modeling of the volcanogenic massive sulphide potential of the Abitibi region in light of new geological, geochemical and geophysical data – update 2011

Daniel Lamothe and Charles Maurice (BEGQ-MRNF)

A favourability study of the Abitibi region's potential for hosting volcanogenic massive sulphide (VMS) deposits was updated in 2011. The work outlined 3,611 highly favourable zones, including 508 targets unstaked as of April 9, 2011. A favourability map at a scale of 1:500,000 was produced and published on the MRNF website. The favourability zones were integrated into GESTIM.

	<p>The 2011 version of the VMS processing was entirely modeled in the ModelBuilder extension of ArcGIS 9.3. The process of calculating the Abitibi region's VMS potential is now completely programmed and can be performed automatically in a few hours. The possibility of quickly testing new parameters or different calibration sets is a significant improvement in the mineral potential assessment process for all metallogenic models developed by the MRNF's in the coming years.</p> <p>The current processing includes 23 parameters compared to the 26 parameters used in 2005. The weighting of parameters was calculated from a set of 51 VMS mines, themselves weighted according to productivity. Each parameter was weighted using a "weight of evidence" technique. The parameters were then combined using a fuzzy logic approach. A set of 12 mines not used in the weighting was used to validate the map's predictivity.</p> <p>The minimum threshold of favourability was established using a quantile-quantile diagram based on the favourability calculated for the VMS mines. This threshold, which includes 94% of VMS producers, was then used to create zones of high favorability. The portions of these zones unstaked on April 4, 2011, were subsequently identified as targets.</p>
<p>9:30 – 9:50</p>	<p>Structural and stratigraphic controls on magmatic, volcanogenic, and syntectonic mineralization in the Chapais-Chibougamau area, northeastern Abitibi, Canada François Leclerc (BEGQ-MRNF), Lyal B. Harris (INRS-ETE), Jean H. Bédard (GSC), Otto van Breemen (GSC) and Normand Goulet (UQAM)</p> <p>The structural geology of the Chapais-Chibougamau mining camp in the Abitibi Subprovince derived from new aeromagnetic data integrated with detailed field studies is a tool providing insight into factors controlling syngenetic and epigenetic mineralization. Discontinuities and offsets in regional magnetic anomalies correspond to synvolcanic and synmagmatic faults trending NW and NE. F1 folds with N-S axial surfaces (previously considered local) are common not only in volcanic rocks between the plutons but also within synvolcanic plutons, and fold the Kapunapotagen Shear Zone, which validates the early formation of this major regional shear zone. During the main deformation event (D2), NW dextral and NE sinistral shear zones cut E-W horizons and F2 folds and are transposed in E-W deformation corridors characterized by a finite deformation dominated by flattening. On the outcrop scale, veins extending N-S are spatially associated with oblique shears, implying the contemporary development of these structures in response to a comprehensive N-S shortening and E-W extension constraint during this event. The dragging and offset of isoclinal folds and regional magnetic anomalies indicate dextral displacement (reactivation?) along the Doré Lake and McKenzie shear zones during the E-W shortening in the third Archaean event (D3). The "compressive kink" folding of the E-W S2 foliation is also attributed to D3.</p> <p>VMS deposits are associated with mafic volcanic rocks of tholeiitic affinity and felsic volcanic rocks of transitional to calc-alkaline affinity at the top of the three volcanic cycles of the Roy Group in areas where structural analysis and interpretation of aeromagnetic data show the presence of synvolcanic faults. Fe-Ti-V deposits are associated with the Doré Lake Layered Complex, widening in areas where synmagmatic faults have been interpreted. Early polymetallic (Au-Ag-Cu-Zn) veins are spatially associated with offsets in regional magnetic anomalies interpreted as synmagmatic faults trending NNW to NNE. Chibougamau-type Cu-Au veins are associated with NW and NE shear zones, while Chapais-type Cu-Au veins occur in overturned regional anticlines, within the mafic sills of the Cummings Complex. Orogenic-gold-type deposits occur preferentially in E-W regional deformation corridors along sinistral shear zones trending NNE interpreted as Riedel-type shears associated with movement</p>

	<p>along NE-trending sinistral shears. NNE shear zones were subsequently reactivated during the D4 deformation event related to Mesoproterozoic convergence along the SE margin of the Superior Craton of the Grenville Orogen. The Archean tectonic fabrics near the Tectonic Zone of the Grenville Front are obliterated by D4 cleavage trending NE.</p>
9:50 – 10:10	<p>Exploration strategy for volcanogenic massive sulphides in the Chibougamau area. Gérald Riverin (President & CEO, Cogitore Resources Inc.)</p> <p>The Chibougamau area is well known for its historic production of over 1.6 billion pounds of copper and more than 3.2 million ounces of gold from various types of vein deposits. Recent work has highlighted the possible affiliation between these deposits and a porphyry copper system. This system, emplaced at depth in a regional-scale mafic layered complex, would be prior to regional deformation and possibly contemporary with the formation of volcanic edifices at the surface in the Chibougamau area. Such an environment is an indication, not only of a significant concentration of copper in the Earth's crust (copper province?) but also of a regional heat source capable of supporting synvolcanic hydrothermal systems and generating volcanogenic massive sulphide (VMS) deposits.</p> <p>Cogitore's VMS exploration strategy is based partly on the basic ingredients required for VMS formation and partly on the geological features of the Chibougamau mining camp. Regional geological data has long shown the presence of felsic volcanic rocks, while more advanced studies have revealed the presence of the large zones of hydrothermal alteration characteristically associated with VMS systems. In addition, recent lithogeochemical and dating data have highlighted strong similarities between some of the Chibougamau camp rhyolites and rhyolites associated with Matagami camp VMS deposits. In light of the size of the hydrothermal alteration zones, the chemical signature of the rhyolites, the presence of some small VMS deposits, and the analogy with the Matagami camp, the Chibougamau area has been identified and prioritized for its VMS deposit potential.</p> <p>The first step of Cogitore's strategy was to identify the so-called "high temperature" rhyolites, distinguished by their tholeiitic affinity and high yttrium content ("FIII-b rhyolites"). In a second step, copper-zinc showings and chlorite-sericite alteration zones were identified to select large properties. Finally, since VMS deposits are lens-shaped and rather small in size despite their high metal content, extensive drilling programs should be considered, including deep drilling supported by the latest borehole geophysics technology.</p>
10:10 – 10:30	<p>COFFEE BREAK</p>
10:30 – 10:45	<p>Architecture and origin of the polymetallic mineralization system in the Line Lake area, Chibougamau Olivier Côté-Mantha (Agnico-Eagle Mines Ltd.), Réal Daigneault (UQAC), Francis Chartrand (MDN Inc.), Damien Gaboury (UQAC) and Pierre Pilote (MRNF)</p> <p>The Lac Line area lies 3 km north of Chibougamau. It exhibits a mineralized Au-Ag-Cu system hosted by a sequence of weakly metamorphosed volcanosedimentary and plutonic rock belonging to the second volcanic cycle of the Roy Group, which occurred from ~ 2720 to ~ 2712 Ma. The Lac Line Stock, a porphyritic tonalitic calc-alkaline intrusion dated at 2707.6 ± 1.4 Ma (late-volcanic but pre-regional deformation age), occupies the heart of the area.</p> <p>Brittle deformation is ubiquitous in the Lac Line area and is expressed as synvolcanic fracture zones and brittle faults that mainly trend N-S and NW-SE. These discontinuities show a systematic spatial association with the mineralization and are usually accompanied</p>

	<p>by significant disruptions of the stratigraphic sequence (fracturing, breaks in continuity, slope megabreccias, etc.). The evidence of ductile deformation is more local and amounts to the heterogeneous development of an E–W subvertical penetrative schistosity due to regional deformation (~ 2703 Ma). The spatial association between ductile deformation and mineralization is an exception rather than the rule, occurring only in some of the most altered zones.</p> <p>The mineralized showings mainly occur in N-S or NW-SE synvolcanic fracture zones and consist of a variable combination of magnetite-sulphide veins, sulphide veins with silicate gangue, and/or disseminated sulphides. The overall geochemical signature includes Au, Ag, Cu, Zn, Mo, As, Bi, Co, Hg, Ni, Pb, Sb, Se and Te. The showings have the typical characteristics of mineralization formed in a tensional regime at high levels in the crust and are associated with various styles of alteration (mainly propylitic, sodic to potassic, chloritic and sericitic) characterized by mineral assemblages and mass changes similar to those of submarine volcanogenic systems. Some showings, especially those which are richer in Au than Ag and Cu, have a close spatial association with intermineral breccias and dykes potentially related to the Lac Line Stock, arguing for a link between hydrothermal activity and late-volcanic intermediate to felsic plutonism.</p> <p>The relative chronological relationships between volcanic, plutonic, hydrothermal, regional deformation and metamorphic events confirm the synvolcanic origin of the mineralized system.</p> <p>UQAC: Université du Québec à Chicoutimi MRNF: Ministère des Ressources Naturelles et de la Faune</p>
<p>10:45- 11:00</p>	<p>The Au-Cu-Mo Mop II deposit, Chibougamau: an example of archean mineralization of porphyritic type Sylvain Lépine (Cogitore Resources Inc.), Michel Jébrak (UQAM)</p> <p>The Au-Cu±Mo MOP-II deposit (now called MCGold) lies 5 km northwest of Chibougamau. Reconnaissance work by SOQUEM inc. and MDN inc. is underway on the deposit. An NI 43-101 compliant resource calculation was prepared in 2010 by Scott Wilson Roscoe Postle, which estimated the following inferred resources: 3,240,000 tonnes grading 1.61 g/t Au and 0.04% Cu, for a total of 167,200 ounces of gold. The deposit, with a minimum area of 800 metres by 150 metres, is hosted by a quartz-feldspar porphyry (QFP) intrusion, tonalitic in composition and of calc-alkaline affinity. This intrusion, measuring approximately 2.7 km by 0.5 km, was emplaced between the basalts of the Gilman Formation and the ultramafic rocks of the Roberge Sill. Strong hydrothermal silica, sericite, chlorite and carbonate alteration obliterates the primary features of the porphyry and makes it difficult to identify the contact between the tonalite and adjacent felsic volcanic facies.</p> <p>Five facies have been recognized within the QFP:</p> <ol style="list-style-type: none"> 1) unaltered QFP; 2) silicified QFP with visible feldspar and unfolded mineralized veinlets; 3) silicified and sericitized QFP, with completely sericitized feldspar phenocrysts and gently folded mineralized veinlets; 4) chloritized QFP with chlorite veinlets, a high proportion of calcite, and tightly folded molybdenite veinlets; and 5) quartz-sericite mylonite in which primary porphyritic texture is completely obliterated by a large amount of late green sericite and which contains mineralized veinlets completely

	<p>transposed into the main schistosity. In addition, two sets of felsic dykes, white and pink, show strong sericite, albite and ankerite alteration.</p> <p>The gold and copper mineralization occurs in seven forms:</p> <ol style="list-style-type: none"> 1) millimetric quartz, sericite, pyrite and chalcopyrite veinlets; 2) millimetric quartz, chlorite, pyrite and chalcopyrite veinlets; 3) decimetric pyrite, chalcopyrite and bismuth-mineral veins. 4) disseminated pyrite and chalcopyrite associated with highly silicified facies; 5) disseminated pyrite and chalcopyrite observed within highly chloritized facies; 6) quartz veins; and 7) breccias with fragments of mineralized porphyry and of mineralized quartz veins. <p>The zonation of the various alteration and mineralization facies is clearly defined. The core of the deposit is sericitized and silicified (phyllic alteration) and contains the main gold envelopes. The periphery of the deposit is chloritized and carbonatized (propylitic alteration) and contains the principal copper and molybdenum mineralization. Outside the mineralized envelopes, there is a barren pyritic halo.</p> <p>MOP-II is interpreted as a deformed Archean gold-copper-molybdenum porphyry deposit.</p>
<p>11:00 – 11:20</p>	<p>The Doré Lake Complex, a new perspective Charles Perry (Consulting Geol. Eng.), Jean Rainville (Blackrock Metals Inc.), Denis Simoneau (Consulting Geologist)</p> <p>Since 2008, Blackrock Metals has been assessing the mineral potential of the Doré Lake Layered Complex. Our property, located 20 km southeast of Chibougamau covers a major magnetic anomaly over a strike length of 17 km. This anomaly reflects the presence of ferrogabbro containing 10 to 60%, with an average of 25%, titaniferous magnetite, which is a significant source of iron, vanadium and titanium.</p> <p>Historically, the Doré Lac Complex has been the focus of an impressive number of surveys and analyses by several companies, which failed to identify an economically viable situation.</p> <p>Since 2008, BlackRock's work has included an airborne magnetometer survey, detailed mapping, analysis of trench samples and channel samples, and nearly 25,000 m of diamond drilling. The work mainly focused on two mineralized portions of the property, the SW Zone and the Armitage Zone, which both cover about 3 km.</p> <p>The iron-bearing mineralization forms a 75- to 150-m thick band associated with the layered sequence at the top of the Doré Lake Complex. The mineralized zones strike N050° for the SW Zone and N080° for the Armitage Zone, with a steep dip to the southeast. Their variable thickness is mainly due to late anorthositic dyke injection and to tectonic deformation resulting in boudinage of the more resistant ferrogabbro layers. The associated deformation and alteration processes also had a concentrating effect on iron, titanium and vanadium levels. Iron oxides were not affected, but silicates were locally leached, producing layers of massive magnetite.</p> <p>The Chibougamau area has excellent infrastructure, including roads, railways and power availability. So far, our feasibility study is based solely on the resources of the SW Zone. Initial production is expected to be from 2.0 to 2.5 Mt/yr of concentrate. The Fe-V-Ti deposit</p>

	<p>is scheduled to go into production in late 2013. Negotiations are underway with Chinese steelmakers to enter into a distribution agreement, which should be signed by the end of this year. In the medium term, our goal is to become a partner in a ferrovanadium plant, while remaining attentive to developments in the market for vanadium batteries and for other elements required by the steel industry.</p>
<p>11:20 – 11:40</p>	<p>Dollier, a new gold sector in the Chibougamau area Raphael Doutré (Project Geologist, Cartier Resources Inc.)</p> <p>The Dollier property is located at the boundary between the Chibougamau segment, in the Abitibi Subprovince, and the Grenvillian Parautochthon, 30 km SE of Chibougamau. The main mineralization consists of gold with local copper, silver and zinc. The best gold intersections graded up to 9.17 g/t Au over 1.1 metres included in an interval that returned 3.85 g/t Au over 3.2 m from channel samples, and 11.17 g/t Au over 0.4 metres included in an interval yielding 2.96 g/t Au over 2.45 metres from drilling. The host rocks are basalts metamorphosed to amphibolite facies affected by intense circulation of sulphides and hydrothermal fluids. The mineralized zones consist of lenses of disseminated to massive sulphides from three to eleven metres wide and several kilometres in length. These zones are associated with highly sheared and silica-sericite-carbonate altered corridors. Sampling shows that some sulphide zones contain gold and zones of enrichment, while others do not appear to be gold bearing. The summer 2011 drilling will target the extensions of gold-rich zones.</p>
<p>11:40 – 12:00</p>	<p>SOQUEM's main exploration projects in the Nord-du-Québec region Yvon Trudeau (Director, SOQUEM INC.) and the SOQUEM INC. team</p> <p>In response to the <i>Symposium Mines Baie-James 2011</i> organizing committee's request to promote the mineral potential of the Nord-du-Québec region, SOQUEM will present a review of its main activities in the area, especially in the immediate vicinity of Chibougamau-Chapais.</p> <p>Since moving its head office to Val-d'Or in 2006, SOQUEM now has more than twenty employees in Val-d'Or and its regional office in Chibougamau. Its focus is mainly on the discovery of new mineral showings which, when significant, will be converted by drilling into mineral resources, thereby participating in the development of Québec's mining industry. Since these activities require major exploration and development budgets, SOQUEM prioritizes partnerships to benefit from the expertise of its partners while reducing the associated risks.</p> <p>SOQUEM's contribution to developing exploration can be summarized as:</p> <ol style="list-style-type: none"> 1) conducting exploration work throughout Québec; 2)- diversifying Québec's mineral base by identifying new substances that can be mined in Québec; 3)- supporting junior exploration companies to enable them to maintain exploration activities in Québec; and 4) promoting advanced research to develop new methods and technologies that will enhance the efficiency of mineral exploration for all substances. <p>Over the past 4 years, over 2/3 of SOQUEM's exploration budget has been allocated and invested in the Nord-du-Québec region. We will briefly present the investments made by SOQUEM and its partners. We will also review work on various projects, including MCGold (formerly MOP II), Fenton, Moblan, Philibert, Joe Mann, and other exploration projects</p>

	<p>active in 2010, as well as the significant involvement and efforts of SOQUEM employees in the Mines Arnaud project in the Sept-Iles area.</p> <p>Finally, it should be noted that SOQUEM has more than 80 exploration projects in Québec, which will be reviewed over the coming years to assess their full potential in light of growing demand for metals and substances of all kinds. SOQUEM has also developed a special niche that involves generating new projects using its extensive geo-referenced databases with new research tools and models. Whenever possible, the “generating” is done with first-rate partners who are experts in the target commodities.</p>
12:00 – 13:30	<p>LUNCH SEMINAR</p> <p>Chief Richard Shecapio, Mistissini Manon Cyr, Mayor of Chibougamau</p>
<p>Session 2: Geology, mineral potential and social issues in the Troilus-Nemaska-Éléonore areas</p>	
<p>Session chairs: Johanne Morasse (CRÉBJ) and Pierre Folco (SDBJ)</p> <p>Platinum Partner: Société de développement de la Baie-James</p>	
<p>The huge territory stretching from James Bay eastward to the Grenville Province has very high mineral potential for the discovery of a multitude of substances such as base metals (Troilus), lithium, rare earth elements (Nemaska) and gold (Éléonore). It would therefore seem to be a good time to examine geological and metallogenic developments in these areas in light of recent geological work by Géologie Québec and the industry, as well as various viewpoints related to the social challenges of sustainable development.</p> <p>This contribution to the development of the region looks just as promising thanks to, among others, technological innovations that make mining work more efficient while minimizing the environmental footprint, to high prices of minerals, as well as the exceptional growth of demand for emerging minerals that abound in the territory. Added to these success factors is the social acceptability, both local and regional, that forms the foundation for structuring the harmonious development of mining projects with the communities.</p>	
13:40 – 14:00	<p>Recent and future geoscientific work in the James Bay territory</p> <p>Sylvain Lacroix, Isabelle D’Amours, Jean Goutier, Daniel Bandyayera, Pénélope Burniaux and Claude Dion (BEGQ-MRNF)</p> <p>The area east of James Bay reveals fascinating geology and is the foremost emerging region for mineral exploration in Québec. From north to south, it includes six Archean geological subprovinces (Bienville, La Grande, Ashuanipi, Opinaca, Nemiscau and Opatica) and Proterozoic sedimentary units (Otish, Mistassini, and Sakami basins) that collectively cover an area three or four times the size of the Abitibi Subprovince. This area has a longer geological history than the Abitibi region, with narrower volcanic belts associated with larger sedimentary and plutonic-gneissic domains.</p> <p>Compared to the Abitibi region, the assessment of this area’s mineral potential is still at a preliminary stage, but the main types of mineralization known are both comparable and more diversified than in Abitibi. The area includes deposits of gold and copper (Troilus mine), high-grade and in some cases high-tonnage gold (Eleanor, Eastmain), zinc, copper, silver and gold (Coulon), copper and molybdenum (Lake MacLeod), uranium (Matoush Lavoie), diamond (Renard), and lithium and beryllium (Cyr Lithium Moblan, Whabouchi).</p> <p>Géologie Québec fully recognizes the area’s mineral potential and allocates large budgets to acquiring geoscience data there. Accordingly, government work has amounted to more than \$32 million since 1990, including \$17 million for the Moyen Nord program (1994–2003, 10</p>

	<p>years) and \$15 million for more recent work (2007–2011, 5 years).</p> <p>The recent acceleration of knowledge acquisition in this area is mainly due to the major aeromagnetic geophysical and gamma ray spectrometry surveys conducted since 2007 at a cost that now exceeds \$10 million. The new surveys have already covered nearly 100,000 km², or 107 map sheets at a scale of 1:50,000, including 37 sheets also covered by gamma ray spectrometry. This approach is intended to provide the region with regional geophysical coverage comparable to what is available in the Abitibi geological region.</p> <p>For twenty years, Géologie Québec has also been carrying out geological mapping programs at a scale of 1:50,000, mainly targeting the La Grande, Opinaca and Nemiscau subprovinces. The areas north of the major hydroelectric reservoirs, between the 54th and 55th parallels, have also recently been covered by mapping at a scale of 1:250,000.</p> <p>The next geoscience work planned by Géologie Québec is meant to complete mapping of the La Grande Subprovince and geophysical coverage of the James Bay territory.</p>
<p>14:00 – 14:20</p>	<p>Contribution of new data from lake-bottom sediments to exploration for lithium pegmatites in the James Bay territory Charles Maurice and Daniel Lamothe (BEGQ-MRNF)</p> <p>Despite the significant amounts of lithium produced from brines in South America, 25% of the global supply is still from rare-element peraluminous pegmatites. In Québec, there are numerous Li deposits within the Superior Province in the Abitibi-Témiscamingue region and the James Bay territory. However, few of them contain complex, zoned rare-element mineralization such as that occurring in the Tanco (Manitoba, Li-Cs-Ta) or Greenbushes (Australia, Li-Sn-Ta) mines.</p> <p>Archived lake-bottom sediment samples taken in the James Bay territory have been re-analyzed. The samples were originally collected in an area that included most of the La Grande and Opinaca subprovinces, the southern Bienville Subprovince, the southwestern Ashuanipi Subprovince and the eastern portion of the Opatoca Subprovince. New results were obtained for a series of 53 elements using a single analytical method (inductively coupled plasma-mass spectrometry) with lower detection limits and better accuracy than those previously used in this area (atomic absorption, neutron activation and plasma emission).</p> <p>The database now has the added benefit of results for chemical elements whose values frequently fell below detection limits in the past (e.g. Be, Bi, Cd, Cs, Sb, W) or which had never been analyzed (e.g. Nb, Cs, Se, Sn). Among these elements, tin (Sn), niobium (Nb) and cesium (Cs) are ideal for developing exploration models to discover lithium-bearing pegmatites with more complex mineralization than those currently documented in the James Bay territory.</p>
<p>14:20 – 14:40</p>	<p>Matoush Exceptional Uranium Project Jean-Pierre Lachance (Executive & Exploration Vice-President, Strateco Resources Inc.)</p> <p>The Matoush uranium exploration project owned by Strateco Resources Inc. (“Strateco”) is located in the Otish Mountains, about 275 kilometres north of Chibougamau and 210 kilometres northeast of the Cree community of Mistissini. With the exception of some projects in Saskatchewan’s Athabasca Basin, the Matoush project is considered one of the</p>

	<p>highest-grade uranium projects in the world.</p> <p>Uranerz Exploration and Mining Ltd. discovered the Matoush showing in 1980. In 2006, Strateco set out to explore the Matoush project, consisting of the wholly-owned Matoush, Matoush Extension and Eclat properties, as well as the Pacific Bay-Matoush property, where Strateco has an option to acquire a 60% interest.</p> <p>Strateco has drilled more than 215,000 metres since work first began, leading to the discovery of a significant quantity of uranium ore. The mineral resource is contained in the AM-15, MT-22 and MT-34 lenses.</p> <p>The most recent resource estimate, prepared by Scott Wilson Roscoe Postle Associates Inc. ("Scott Wilson RPA") and dated September 1, 2009, determined that the Indicated mineral resource at the Matoush property had doubled within a 12-month period to 436,000 tonnes grading 0.78% U₃O₈ containing 7.46 million pounds of U₃O₈. The Inferred mineral resource was estimated at 1.16 million tonnes grading 0.50% U₃O₈ containing 12.78 million pounds of U₃O₈.</p> <p>Scott Wilson RPA also issued a report in April 2010 with an updated economic assessment of the Matoush property, which once again confirmed the project's extremely robust financials.</p> <p>These excellent results support the need to excavate an exploration ramp and conduct advanced exploration for the Matoush project development. Excavation of this ramp, which requires a licence delivered by the Canadian Nuclear Safety Commission, will enable Strateco to explore and delineate the mineral resource and then determine the feasibility of a large mining project at Matoush.</p> <p>Strateco's activities in Northern Quebec mean major economic benefits for the region, particularly in terms of direct and indirect job creation and sourcing of local products and services. Strateco believes in uranium project development that incorporates health, safety, environmental protection and social acceptability.</p>
<p>14:40 – 15:00</p>	<p>The Camie-Beaver and Otish South projects and the uranium potential of the Otish sedimentary basin Alexandre Aubin (Project Geologist, Cameco Corporation)</p> <p>Since 2004, Cameco Corporation has been actively exploring the Otish basin on 2 projects, its wholly-owned Otish South project, and Camie-Beaver, a joint venture project with AREVA Resources Canada. Historical work conducted in the early 1980's had highlighted mineralization at Camie River (unconformity type) and Beaver Lake (vein type). Recent work on the Camie River block has confirmed the presence of historical mineralization and also extended it laterally, with grades ranging up to 13.6% U₃O₈ over 50 cm. The mineralization is associated with graphitic and sulphidic horizons within the greenstone belt in the basement. The sedimentary sequence above the mineralization is characterized by strong albitization and illitization, along with lead isotope anomalies. The basement rocks associated with the mineralization are usually weakly sheared and weakly altered. The mineralization at Camie River is found in both basement rocks and basin rocks.</p> <p>Work on the Otish South project focused on unconformity-type and Matoush-type</p>

	<p>mineralization. In 2009, one drill hole confirmed the projection of the Matoush structure on the property, with associated dyke and alteration. A subsequent geophysical survey in 2010 highlighted several additional Matoush-like features on the project. Work for unconformity-type mineralization has been focused on conductors located near the basin edge, and recent drilling was successful in intersecting favourable alteration and radioactivity, the highlight being hole OTS-14 that intersected 2.35% U₃O₈ over 15 cm, associated with a graphitic and sulphidic unit that appears to be the projection of the conductor system hosting the mineralization at Camie. This mineralization is located 25 vertical meters below the unconformity.</p> <p>The Beaver Lake block is located entirely within basement rocks and the mineralization is hosted in fractures and breccias within biotite gneisses. Although no recent work has been conducted on the property, historical work returned reserves of 467,000 lbs at 0.11% U₃O₈ (historical calculation, not NI 43-101 compliant).</p> <p>With already 4 different styles of mineralization identified from past and recent work (Camie River - unconformity; Beaver Lake – basement fractures and breccias, Matoush – dyke/fault, and Lavoie/Epsilon – gabbro/carbonates/siltstone) and other styles possible, the Otish basin holds a lot of uranium potential. The key to successful exploration and potential future development in this area is a close collaboration between the exploration companies, local communities, and the governments.</p>
15:00 – 15:20	<p>COFFEE BREAK</p>
15:20 – 15:40	<p>Sustainable development: viewpoint of an industry stakeholder and the Éléonore gold project experience Guy Belleau (Opinaca Mines Ltd, Goldcorp Inc.)</p> <p>Éléonore is a world-class gold mining project in the James Bay territory. Over \$800 million was invested during the exploration phase and, on February 24, 2011, Goldcorp confirmed that it intended to go ahead with construction of the Éléonore mine by authorizing an additional \$1.4 billion to proceed with development of the deposit. With this major investment, Éléonore will undoubtedly become one of Goldcorp’s main assets and a mining industry leader in using cutting-edge technology and contributing to the sustainable prosperity of its workers and partners.</p> <p>Accordingly, we are about to mark a major turning point in the history of mine development and corporate social responsibility in Québec. Construction of the Éléonore mine will represent one of the largest private investments in the history of Québec and will provide the province and the Nord-du-Québec region with unprecedented benefits. For example during the four years of its construction, the Éléonore project will support more than 1450 direct and indirect jobs and over 1,200 during its 15 years of commercial production. Of course, these jobs will produce very significant benefits in the surrounding communities, which will be given preference for jobs and the purchase of goods and services.</p> <p>Finally, consultation, communication and transparency are at the heart of our social acceptability and regional outreach strategy. We are very proud to contribute to the development of the Nord-du-Québec region in an approach that combines sustainable development principles and the highest standards of corporate social responsibility.</p>
15:40 – 16:00	<p>Social acceptability: the Jamesian viewpoint René Dubé (Mayor of Matagami and CRÉBJ member)</p>

	<p>Developing for living, that is the vision and aspiration of Jamesians. Developing natural resources and, mainly, the human resources of our region, developing to provide all residents of the region with access to the same services and opportunities. Developing to live in an environment where we have put down roots, raised our children and built our lives. Developing with our friends, neighbours and partners, like an extended family. Developing with respect for the environment and the cultures of this beautiful region: Eeyou Istchee to some, Jamésie to others, but we all call it home.</p> <p>The region's great mineral potential provides the opportunity we need to work together. Recognizing our strengths and weaknesses, we have to be united, not divided, in our efforts to achieve a great common goal, improving and building the future for our communities.</p> <p>The incredible strength of unity is the greatest asset we have to positively influence developments in the near future. This strength is called social acceptability. Agreeing to work together, accepting our differences and, mostly, having the courage and willingness to accept our similarities. Yes, we believe it is possible, even profitable, to link the needs of people and of businesses. There is only one way to achieve our goal, and that is through cooperation, transparency and communication, to which this symposium can contribute.</p>
16:00 – 16:20	<p>Social acceptability : A Cree community viewpoint and the experience of the Lithium Whabouchi Project of Nemaska Exploration Inc. Robert Kitchen (Cree community of Nemaska)</p>
16:20 – 17:00	<p>Social stakes of the sustainable development: reconciling viewpoints Round table</p>

Wednesday, June 1, 2011, Mistissini (Neoskweskau Sports Complex, 206 Main Street, Mistissini)

Session 3: Status report on advanced projects in the Otish Mountain area

Session chairs: Jim McLeod (CMEB) and Ghislain Poirier (AEMQ)

Platinum Partner: Cree Mineral Exploration Board

A great deal of mineral exploration activity is underway in the Otish Mountains area for a multitude of substances (copper, molybdenum, gold, silver, diamond, uranium). Mining potential is also high, including the possibility of developing Québec's first diamond mine (the Stornoway Diamond Corporation and SOQUEM INC. consortium's Renard project) and first uranium mine (Strateco Resources Inc.'s Matoush project). Consequently, with the upcoming construction of a multi-resource access road, various advanced projects could move on to the operation phase.

9:00 – 9:20	<p>Welcome and presentation of the day's agenda Chief Richard Shecapio</p>
9:20 – 9:40	<p>Presentation about the Cree communities of Mistissini and Oujé-Bougoumou Chief Richard Shecapio, Mistissini and Chief Louise Wapachee, Ouje-Bougoumou</p>
9:40 – 10:00	<p>Geology, Genesis and Resource of the Moblan Lithium Pegmatite. Sergio Gelcich (Perilya Ltd), Joanie Béland, Laury Schmitt, Yvon Trudeau (SOQUEM INC.), Gary Pearse (Equapolar Consultant)</p> <p>The Moblan Lithium Bearing Pegmatite project is located 110 km north of Chibougamau, Quebec (Latitude: 50°55'; Longitude: 74°44'; WGS 84). The area is underlain by the Frotet-</p>

	<p>Evans greenstone belt composed of tholeiitic to andesitic volcanics and intercalated metasediments, intruded by gabbro, ultramafic and granitic plutons.</p> <p>The Moblan West pegmatite is comprised of three parts: 1) the Main Sill, a northerly dipping sheet ca. 25 to 50 m thick; 2) the Southwest Dyke: main magma feeder; and 3) the Stacked Sills that are the extension of the Main Sill to the eastward. The Main Sill is zoned, with a metre-thick albite-rich (50-90%) wall zone at both contacts with quartz, dark green mica and variable K-feldspar. These zones bound a central, spodumene-quartz core zone with concordant subzones in the form of feldspar-rich bands.</p> <p>The emplacement of the Moblan pegmatite sills was favored by primary stratification in the volcanic-metasedimentary sequence which provided planes of weakness that facilitated entry of, and hydraulic dilation by, late-stage pressurized rare metal bearing fluid. The layering also provided a barrier to the escape of the volatile fluids from which the final rare metal pegmatites crystallized. Zoning in the pegmatite occurred from continued crystallization of the rock forming minerals from the cooler contacts inward and the final super-enriched fluid crystallizing in a core of spodumene and quartz. Drilling to date includes over 14,000 meters and has outlined a near-surface 25 to 50 metre thick, 700 meter long, 200 meter wide (along dip) pegmatite of high quality spodumene mineralization. QEMSCAN™ mineralogical studies show that spodumene is the main lithium mineral and that it is well liberated (>80%). Preliminary metallurgical testing indicates that a 7.2% Li₂O spodumene concentrate could be produced. The current (2008) Inferred Resource of 5.3 million tonnes grading 1.51% Li₂O at a cut-off grade of 0.43% Li₂O was based on 12 diamond drill holes completed in 2007. The 2010 drilling program (13,000 meters) confirmed the continuity of the deposit along strike and extended the average mineralized sill depth from 50 to 100 meters. An updated mineral resource estimate is being prepared and will be used as the basis for open pit mining, metallurgy and environmental assessments to evaluate the economic development of the deposit.</p>
<p>10:00 – 10:20</p>	<p>Cree mineral Exploration Board Jack Blacksmith (President, CMEB)</p> <p>The Cree Mineral Exploration Board is born after the agreement between the government of Quebec and the Crees of Quebec called “La Paix des Braves”.</p> <p>Mining is not in the culture of the Cree nation and the mineral resources of Eeyou Istchee were all property of the mining industry. The Creation of the CMEB permits the participation of the Crees to the mining activity in the territories. Agreement concerning the mineral development in the James Bay Region has been executed between the CRA, CMEB and GOQ.</p> <p>The main purposes of the Mineral Exploration Board consist of (a) assist the Crees in accessing mineral exploration opportunities, (b) facilitate the development of mineral exploration activities by Cree Enterprises, (c) facilitate and encourage the access by the Crees and Cree Enterprises to regular Quebec program funding and other encouragements for mineral exploration activities, (d) act as an entry mechanism for offers of services by Crees and Cree Enterprises in the field of mineral exploration.</p> <p>Furthermore, the CMEB acts as an intermediate between the mining industry and the Crees to resolve matters concerning mineral resources and the land. The board has the mandate to develop the mining activity and answer to environmental needs of the Cree trapelines. It supports and funds also consistent projects for the all communities and specifically the Cree prospectors.</p>

	<p>Concerned by the regional development, the CMEB collaborates with several entities, Cree and non-Cree; and these collaborations are having a large success.</p> <p>CMEB program and projects are managed by his board. This latest evaluates the administrative structure and also compares with what is known elsewhere in Canada and in the rest of the world in the trend to ameliorate and reach the excellence.</p>
10:20 – 10:40	COFFEE BREAK
10:40 – 11:00	<p>Beaufield Resources Inc.'s Troilus-Frotet project Jens Hansen (President & CEO, Beaufield Resources Inc.)</p>
11:00 – 11:20	<p>Cree mining policies Abel Bosum (Negotiator, Cree-Québec Relations)</p>
11:20 – 11:40	<p>The Renard project is on track to become the Québec's first diamond mine Patrick Godin (Chief Operating Officer, Stornoway Diamond Corporation)</p> <p>The Renard Diamond Project located in northern Quebec region, is presently completing the studies required for the development of the Québec's first diamond mine. The presentation will therefore focus on the characteristics, challenges and opportunities being addressed by the stakeholders to optimize the feasibility of the project considering aspects such as economics, environmental impacts and social sustainability.</p>
12:00 – 13:30	LUNCH SEMINAR
Platinum Partner: Cree Human Resources Development Department	
13:40 – 14:00	<p>Presentation about the Cree communities of Nemaska and Waswanipi Chief Matthew Wapachee, Nemaska, and Chief Paul Gull, Waswanipi</p>
14:00 – 14:20	<p>Western Troy's MacLeod Lake copper-molybdenum Project Rex Loesby (CEO, Western Troy Capital Resources Inc.)</p> <p>Western Troy controls 100% of the MacLeod Lake Molybdenum-Copper. The project is located approximately 275 kilometers north of Chibougamau, Quebec, near the Eastmain River.</p> <p>A Scoping Study (Preliminary Assessment) was completed in March of 2008. The study was prepared Roscoe Postle Associates, Inc (RPA). of Toronto, Ontario. Using a molybdenum price of US\$17.00 per pound and a copper price of US\$2.25 per pound, the study indicates a surface mining operation on the Main Zone will generate a pre-tax net present value (NPV using a 10% discount Rate) of C\$156 million and a pre-tax internal rate of return (IRR) of 32%.</p> <p>At the anticipated open pit production rate of 6,000 tonnes per day or 2.1 million tonnes per year, the project will provide for a mine life of approximately 9.4 years. Life of mine metal production is forecast to be 217 million pounds of copper, 32 million pounds of molybdenum, 800,000 ounces of silver and 7,000 ounces of gold. The mine is expected to employ approximately 235 people during operations.</p>

	<p>In early 2009, Western Troy received the final metallurgical study results from SGS Lakefield following a detailed analysis of the MacLeod Lake ore samples. SGS found that Western Troy should expect to recover approximately 96 percent of the copper and 85 percent of the molybdenum at MacLeod Lake. These results are much better than the recoveries used in the Scoping Study (92% for copper and 85% for molybdenum).</p> <p>The Otish Mountain Road is projected to pass within 70 kilometers of Western Troy's MacLeod Lake Project. The MacLeod Lake spur is planned to branch off the Otish Mountain Road at kilometer 104 and the road construction is planned to be complete to that location in the summer of 2012.</p> <p>Western Troy has retained GENIVAR to produce a bankable feasibility study and to obtain all permits for the mine. The work is expected to be completed in 2012. While it is conceivable mine construction could begin in the summer of 2012, it is more likely construction will begin in 2013.</p>
<p>14:20 – 14:40</p>	<p>Community Engagement: Virginia Mines Inc. & the Cree communities André Gaumond (President & CEO, Virginia Mines Inc.)</p> <p>Virginia Mines is a highly regarded junior mining company that has been aggressively exploring properties throughout northern Quebec for more than 15 years. From the beginning, Virginia made sure to establish communication procedures with First Nations communities to inform them of its exploration activities. Virginia's goal was to develop a constructive long-term relationship with the communities living on the territory.</p> <p>Virginia's working philosophy is to keep local Cree communities fully informed of its activities including the Band Council and Chief, the Economic Development Officer, the tallyman, the CTA, and address their concerns. Virginia has put a great deal of effort into encouraging the local workforce and entrepreneurs, using local facilities and promoting partnership with the Crees. Many contracts, jobs and services have been contracted with the local communities over the years to a point that economic benefit to the communities has been in the order of several millions dollars.</p> <p>Incidentally, a report from the 2005 Mining Session at Wemindji noted that "Virginia Mines has an extensive history in Eeyou Istchee and has established a very good system of communication with the Cree over the years. It was suggested that this system be adopted and become the standard. This system ensures that the families, the chief and council, the tallyman of the Cree trappers association are informed of any and all activities. This system ensures that good relations are created and maintained."</p> <p>Furthermore, much of Virginia's exploration activity takes place near or above the tree line. Because of severe climate conditions, the environment in these areas takes a long time to heal if damaged. At Virginia we believe that we have the responsibility to ensure as little damage as possible is caused, and Virginia is committed to encouraging the best exploration practices in order to fulfill this responsibility. This is a commitment to our shareholders, the local communities and with society in general.</p> <p>Virginia is committed to working with the Cree and First Nations and to promoting partnerships, employment and contracts. One of the best examples of partnership with the Crees is the Wemindji Strategic Alliance with WEMEX. Under this agreement, Virginia and WEMEX, are jointly exploring a large area in the Wemindji region in order to identify and</p>

	<p>prospect volcanic greenstone belts and mineralized zones. The 50-50% joint venture covers an area of interest of more than 5,122 km². This partnership shows the type of new relationship that can be developed between the mining industry and the First Nations of Quebec.</p>
14:40 – 15:00	<p>Building for the future at Eastmain Mine Donald Robinson (President & CEO, Eastmain Resources Inc.)</p>
15:00 – 15:20	<p>COFFEE BREAK</p>
15:20 – 15:40	<p>Cree Trappers' Association Thomas Coon (Vice President, CTA)</p>
15:40 – 16:00	<p>The multi-resource road project – extension of the 167 North Road: A great challenge Denis Blais (Nord-du-Québec Director, Transports Québec)</p> <p>The 242-km extension of Highway 167 toward the Otish Mountains is a major project. In 2006, the James Bay Joint Action Mining Committee proposed building a multi-resource road initially to develop mine projects northeast of Lake Mistassini.</p> <p>This presentation will review the project from the beginning to where it is today, including the major studies conducted, the process for selecting the proposed route, and the extensive consultations ensuring that the project is carried out in keeping with sustainable development principles.</p> <p>Social acceptability, a major component of the project, has been incorporated into all phases of planning, from road design to construction, not to mention follow-up. In addition to social considerations, building a new road in the backcountry is a technical challenge. The design stage had to incorporate a range of variables, including a variety of users, to refine the various options and propose an optimum project. The construction (number of road sections and work sites) also has to be planned in consideration of an extremely tight schedule, in order to provide Stornoway with winter access in 2012-2013.</p> <p>Post-construction follow-up is also needed to respond to the public's social and environmental concerns. Finally, the MTQ must ensure that all users (companies, tourism organizations, Cree trappers, etc.) can share the road safely.</p> <p>MTQ: Ministère des Transports du Québec</p>
16:00 – 16:20	<p>Regulations and Environment Committee Philip Awashish (COMEX/COMEV Cree Representative)</p>
16:20 – 17:00	<p>Question period Round table</p>