PRO 2008-06

NEW TARGETS FOR MINERAL EXPLORATION - 2008 GEOSCIENCE PROJECTS

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New targets
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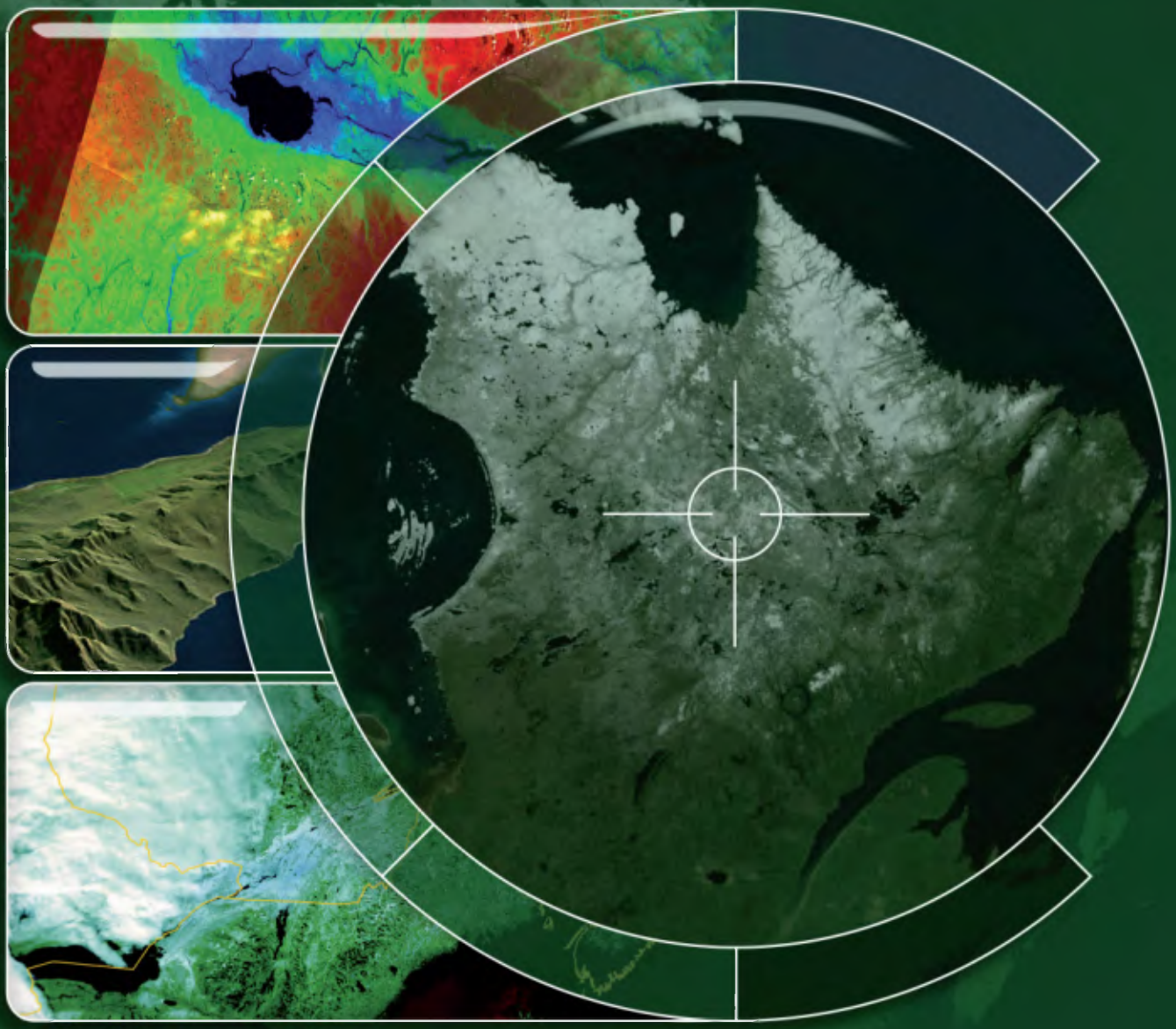

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Québec

New Mineral Exploration Targets 2008 Geoscience Projects

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Introduction

Géologie Québec presents all the targets of economic interest identified during its 2008 geoscience projects. Geoscience knowledge acquisition is one of the main missions of Géologie Québec. This knowledge is acquired in order to encourage the mining industry to develop Québec's mineral resources by increasing exploration activity and discovering new deposits.

During their fieldwork, geologists of the Ministère des Ressources naturelles et de la Faune identified zones with a favourable geological setting for mineral exploration. These areas of interest have not been studied in detail but warrant further investigations by exploration companies. Newly acquired data on these areas of interest were processed in a preliminary fashion and will be made public during Québec Exploration 2008.

2008 Mineral Exploration Targets

In this document, a target corresponds to a zone where the geological setting is favourable for mineral exploration and where further exploration work is deemed relevant. The data provided on these targets are essentially based on field observations. These exploration targets are not, for the moment, archived in Québec's Geomining Information System (SIGEOM). They may eventually be classified as a "showing" once their economic value has been confirmed, notably by geochemical analyses.

As a result of the geoscience projects completed in 2008, 53 targets have been identified. There are three categories of targets: (1) **ponctual** targets measuring less than 100 metres, (2) **local** targets between 100 metres and 1 kilometre in size, and (3) **regional** targets greater than 1 kilometre in size.

Target locations are shown on the map of Québec. They are briefly described in a table, in which they are grouped by geological region and by mineral substance. The table also indicates their precise geographical location and their administrative region. Finally, the name of the project from which they originate and the corresponding poster number are also listed. For further information, those who plan to attend Québec Exploration 2008 are invited to consult the posters of knowledge acquisition projects and meet the project geologists, to find out more about these new exploration targets and about the mineral potential in Québec's various regions.

For further details concerning our geoscience knowledge acquisition projects, interested parties can inquire at the Bureau d'exploration géologique du Québec or communicate by e-mail with the project leaders:

Bureau d'exploration géologique du Québec
400 boulevard Lamaque, suite 102
Val-d'Or (Québec) J9P 3L4
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Project leader	Project	E-mail
Daniel Bandyayera, regional geologist	Mapping – Réservoir Opinaca area	daniel.bandyayera@mrnf.gouv.qc.ca
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Jean Goutier, regional geologist	Mapping and compilation – Blake River Group	jean.goutier@mrnf.gouv.qc.ca
Jean-Yves Labbé, metallogenist	Bottom-lake sediment geochemistry - MRC Sept-Rivières	jean-yves.labbe@mrnf.gouv.qc.ca
François Leclerc, regional geologist	Mapping and compilation – Chapais area	francois.leclerc@mrnf.gouv.qc.ca
Abdelali Moukhsil, regional geologist	Mapping – Lac au Brochet area	abdelali.moukhsil@mrnf.gouv.qc.ca
Pierre Pilote, metallogenist	Mapping and compilation – Malartic Group	pierre.pilote@mrnf.gouv.qc.ca
Pierre Rhéaume, metallogenist	Unconsolidated deposit and bedrock drilling – Rivière Octave area	pierre.rheaume@mrnf.gouv.qc.ca
Martin Simard, regional geologist	Mapping – Réservoir Caniapiscau area	martin.simard@mrnf.gouv.qc.ca

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www.mrnf.gouv.qc.ca/english/products-services/mines.jsp
Dépôt légal – Bibliothèque et Archives nationales du Québec, 2008

Number and Name	Size	Location (UTM NAD83)	NTS Sheet	Project	Poster	Project Leader(s)	Substance(s)	Description
Superior Province (Far North) – Nord-du-Québec administrative region								
(1) Beausac 1	Regional	**Zone 19** 446250 mE 6092575 mN	23K13	Mapping – Réservoir Caniapiscau area	154	Martin Simard Martin Parent Lynda Paquette	Au (Ag)	N310 trending plurikilometric ductile faults cutting paragneiss and tonalites from the Beausac Suite.
(2) Beausac 2	Local	**Zone 19** 446952 mE 6084620 mN	23K13	Mapping – Réservoir Caniapiscau area	154	Martin Simard Martin Parent Lynda Paquette	Au (Ag)	Mylonitized and mineralized (PO-PY ± CP ± AS) granodiorite and tonalite associated with a plurikilometric ductile fault.
(3) Beausac 3	Ponctual	**Zone 19** 446250 mE 6092575 mN	23K13	Mapping – Réservoir Caniapiscau area	154	Martin Simard Martin Parent Lynda Paquette	Au (Ag)	Mylonitized and mineralized (PY) tonalite associated with a plurikilometric ductile fault.
(4) Grosbois 1	Local	**Zone 19** 478660 mE 6038344 mN	23K06	Mapping – Réservoir Caniapiscau area	154	Martin Simard Martin Parent Lynda Paquette	Au	Paragneiss sequence with decimeter-scale silicified and chloritized horizons, 1-3% PO, 1% PY, tr. AS.
(5) Grosbois 2	Ponctual	**Zone 19** 467036 mE 5991426 mN	23K04	Mapping – Réservoir Caniapiscau area	154	Martin Simard Martin Parent Lynda Paquette	Au	Paragneiss sequence with meter-scale rusted and locally brecciated horizons, 2% PY, tr. AS.
(6) Calvet 1	Regional	**Zone 19** 475612 mE 6019620 mN	23K06	Mapping – Réservoir Caniapiscau area	154	Martin Simard Martin Parent Lynda Paquette	Cu, Ni, PGE	Ultramafic rock of the Calvet Suite (lac Lantagnac area) with 2% SF (PO-PY)
(7) Calvet 2	Ponctual	**Zone 19** 484005 mE 6040655 mN	23K11	Mapping – Réservoir Caniapiscau area	154	Martin Simard Martin Parent Lynda Paquette	Cu, Ni, PGE	Ultramafic rock showing a strong anthophyllite-biotite alteration and 1-10% PO.
(8) Calvet 3	Ponctual	**Zone 19** 503708 mE 6004267 mN	23K02	Mapping – Réservoir Caniapiscau area	154	Martin Simard Martin Parent Lynda Paquette	Cu, Ni, PGE	Ultramafic rock with 3% SF (PO-PY).
Superior Province (James Bay) – Nord-du-Québec administrative region)								
(9) FS-3292	Ponctual	**Zone 18** 438239 mE 5829119 mN	33B12	Mapping – Réservoir Opinaca area	155-156	Daniel Bandyayera Émilie Bédard Pierre Rhéaume Geneviève Robert	Émerald	Emerald crystal in a white tourmaline pegmatite.
(10) CM-2150	Ponctual	**Zone 18** 459963 mE 5844495 mN	33B12	Mapping – Réservoir Opinaca area	155-156	Daniel Bandyayera Émilie Bédard Pierre Rhéaume Geneviève Robert	Émerald	Emerald crystals in a pegmatite near an ultramafic boulder dispersion train.
(11) PR-6089	Ponctual	**Zone 18** 449819 mE 5849607 mN	33B13	Mapping – Réservoir Opinaca area	155-156	Daniel Bandyayera Émilie Bédard Pierre Rhéaume Geneviève Robert	Cr (PGE)	Two meters thick chromitite horizon in a peridotite from the Giard Ultramafic Suite.
(12) PR-6073	Ponctual	**Zone 18** 457619 mE 5833923 mN	33B12	Mapping – Réservoir Opinaca area	155-156	Daniel Bandyayera Émilie Bédard Pierre Rhéaume Geneviève Robert	U	Uranium minerals found in white pegmatites from the Janin Intrusive Suite.
(13) EB-5104	Ponctual	**Zone 18** 466416 mE 5872074 mN	33B13	Mapping – Réservoir Opinaca area	155-156	Daniel Bandyayera Émilie Bédard Pierre Rhéaume Geneviève Robert	U	Uranium minerals found in white pegmatites from the Janin Intrusive Suite, west of the Upinor project of Dios Expl.
(14) Giard Ultramafic Suite	Regional	**Zone 18** 440000 mE 5856000 mN to 466000 mE 5842000 mN	33B12-33B13	Mapping – Réservoir Opinaca area	155-156	Daniel Bandyayera Émilie Bédard Pierre Rhéaume Geneviève Robert	Cu, Ni (Cr, PGE)	Giard Ultramafic Suite: a suite of differentiated ultramafic intrusions hosted by the Laguiche Group metasedimentary rocks.
(15) Éléonore Extension	Regional	**Zone 18** 432000 mE 5828000 mN to 464000 mE 5826000 mN	33B12	Mapping – Réservoir Opinaca area	155-156	Daniel Bandyayera Émilie Bédard Pierre Rhéaume Geneviève Robert	Au	Newly recognized extension of the Low Formation showing the same alteration and mineralization types seen at the Roberto orebody.

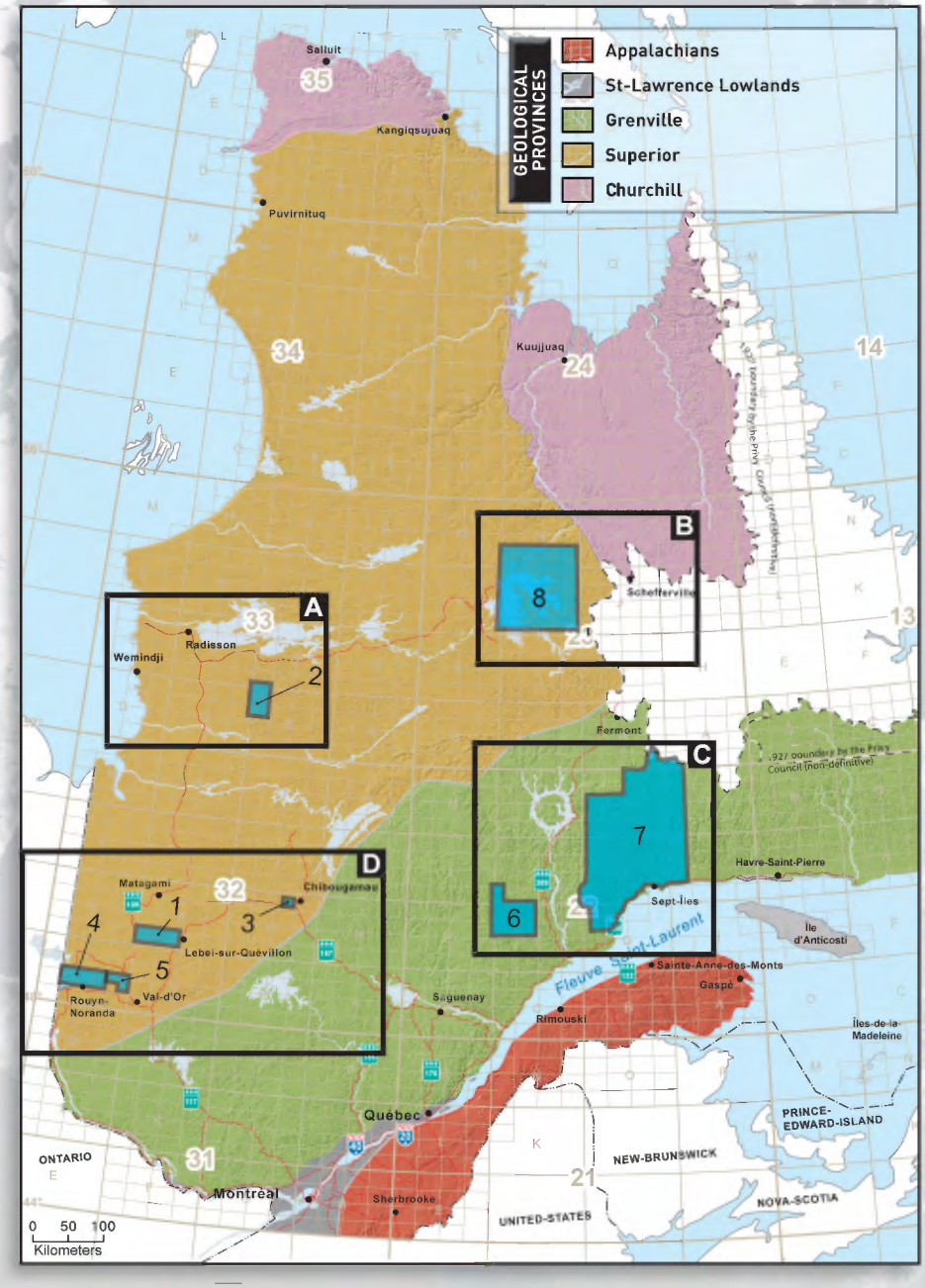
Number and Name	Size	Location (UTM NAD83)	NTS Sheet	Project	Poster	Project Leader(s)	Substance(s)	Description
Superior Province (Chapais) – Nord-du-Québec administrative region								
(16) Croteau-MO	Ponctual	**Zone 18** 530221 mE 5536334 mN	32G15	Mapping and compilation – Chapais area	161	François Leclerc	Mo	Strongly-dipping E-W shear zone with QZ-CB ± FC veins with disseminated to ribbonned MO mineralization.
(17) Noël Shear Zone	Ponctual	**Zone 18** 531034 mE 5534450 mN	32G15	Mapping and compilation – Chapais area	161	François Leclerc	Au	E-W shear zone showing strong AK-SR alteration and PY mineralization in fold closures.
(18) Dimanche North	Ponctual	**Zone 18** 519545 mE 5525935 mN	32G15	Mapping and compilation – Chapais area	161	François Leclerc	Cu, Zn	Semi-massive sulfide (PY-SP-CP) boulder found near a rhyolitic dome with flow-top breccia.
(19) 15-06	Ponctual	**Zone 18** 527803 mE 5528610 mN	32G15	Mapping and compilation – Chapais area	161	François Leclerc	Cu, Zn	Polygenic tuffs with sulfide fragments, breccia with sulfidic (PY-PO) matrix, silicified mudstones with replaced horizons (PY).
Superior Province (Lebel-sur-Quévillon) – Nord-du-Québec administrative region								
(20) RO-132	Ponctual	**Zone 18** 300746 mE 5438521mN	32F04	Unconsolidated deposit and bedrock drilling – Rivière Octave area	149	Pierre Rhéaume	Au, Cu, Zn, Ag	Altered volcanic rock (12.1 g/t Ag).
(21) RO-147	Ponctual	**Zone 18** 312253 mE 5433177 mN	32F04	Unconsolidated deposit and bedrock drilling – Rivière Octave area	149	Pierre Rhéaume	Au, Cu, Zn, Ag	Altered volcanic rock (10.2 g/t Ag).
(22) RO-192	Ponctual	**Zone 18** 330914 mE 5439110 mN	32F03	Unconsolidated deposit and bedrock drilling – Rivière Octave area	149	Pierre Rhéaume	Au	Sheared metasedimentary rock altered in SR-QZ-TL in a deformation zone.
(23) RO-184	Ponctual	**Zone 18** 321251 mE 5440924 mN	32F03	Unconsolidated deposit and bedrock drilling – Rivière Octave area	149	Pierre Rhéaume	Au	QZ-AB alteration zone (>200 ppm Sb).
(24) RO-178	Ponctual	**Zone 18** 329158 mE 5446707 mN	32F03	Unconsolidated deposit and bedrock drilling – Rivière Octave area	149	Pierre Rhéaume	Kimberlite	Two relatively proximal G10 garnets in till, with preserved kelyphitique border.
(25) RO-194	Ponctual	**Zone 18** 334281 mE 5440571mN	32F03	Unconsolidated deposit and bedrock drilling – Rivière Octave area	149	Pierre Rhéaume	Au	Five arsenopyrite grains in till overlying a sericitized felsic tuff in a regional deformation zone.
(26) Rivière Bigniba Dispersion Train	Regional	**Zone 18** 304000 mE 5440000 mN to 320000 mE 5445000 mN	32F03-32F04	Unconsolidated deposit and bedrock drilling – Rivière Octave area	149	Pierre Rhéaume	Cu	Chalcopyrite grains in till indicating a WSW glacial dispersion train. The source is located upflow to the drillhole RO-112.
(27) Harricana Deformation Zone	Regional	**Zone 18** 300000 mE 5440000 mN to 336000 mE 5451000 mN	32F03-32F04	Unconsolidated deposit and bedrock drilling – Rivière Octave area	149	Pierre Rhéaume	Au	Regional deformation zone associated with a strong CB alteration, QZ-CB-TL veining and Au anomalous values.
(28) Laflamme South Deformation Zone	Regional	**Zone 18** 300000 mE 5432000 mN to 318000 mE 5430000mN	32F03-32F04	Unconsolidated deposit and bedrock drilling – Rivière Octave area	149	Pierre Rhéaume	Au	Regional deformation zone associated with a strong CB alteration, QZ-CB-TL veining and Au anomalous values.
(29) Laflamme North Deformation Zone	Regional	**Zone 18** 300000 mE 5434000 mN to 338000 mE 5440000 mN	32F03-32F04	Unconsolidated deposit and bedrock drilling – Rivière Octave area	149	Pierre Rhéaume	Au	Regional deformation zone associated with a strong CB alteration, QZ-CB-TL veining and Au anomalous values.

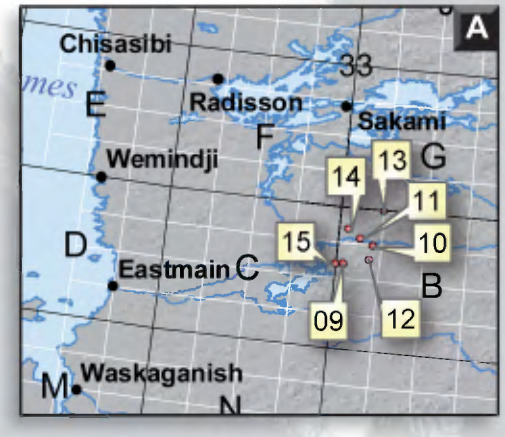
Number and Name	Size	Location (UTM NAD83)	NTS Sheet	Project	Poster	Project Leader(s)	Substance(s)	Description
Superior Province (Lebel-sur-Quévillon) – Nord-du-Québec administrative region								
(30) La Femelle Deformation Zone	Regional	**Zone 18** 307000 mE 5439000 mN to 336000 mE 5452000 mN	32F03-32F04	Unconsolidated deposit and bedrock drilling – Rivière Octave area	149	Pierre Rhéaume	Au, Cu, Zn, Ag	Possible extension of the synvolcanic hydrothermal environment seen in the Comtois area, W of the Beehler Stock, in the vicinity of a synvolcanic gabbro intrusion.
(31) Comtois west	Regional	**Zone 18** 320000 mE 5440000 mN to 336000 mE 5444000 mN	32F03	Unconsolidated deposit and bedrock drilling – Rivière Octave area	149	Pierre Rhéaume	Au	Regional deformation zone associated with QZ-CB-CL ± AB ± PY veining.
(32) Lac à la Femelle Dispersion Train	Regional	**Zone 18** 304000 mE 5440000 mN to 320000 mE 5445000 mN	32F04	Unconsolidated deposit and bedrock drilling – Rivière Octave area	149	Pierre Rhéaume	Kimberlite	Kimberlite indicator minerals train (G10, G9 and G3 garnet, Ca-forsterite, DG chromite, kosmochlor-diopside) in till.
Superior Province – Abitibi-Témiscamingue administrative region								
(33) Fabie Fold	Regional	**Zone 17** 622720 mE 5366930 mN	32D06	Mapping and compilation – Blake River Group	164	Jean Goutier Claude Dion	Cu, Zn (Ag)	Reinterpretation of a synclinal structure suggesting a possible eastward extension of the mineralized zones of the Fabie Mine.
(34) Aldermac Fold	Regional	**Zone 17** 631590 mE 5343070 mN	32D03	Mapping and compilation – Blake River Group	164	Jean Goutier Claude Dion	Cu, Zn (Ag)	Reinterpretation of a synclinal structure suggesting a possible NNE extension of the mineralized zones of the Aldermac Mine. This extension would be in part masked by the Aldermac Syenite.
(35) Tarsac	Regional	**Zone 17** 616490 mE 5356240 mN	32D06	Mapping and compilation – Blake River Group	164	Jean Goutier Claude Dion	Au, Cu	Possible existence of Upper Beaver mineralization style in an area characterized by a high magnetic susceptibility in the metasomatised zone surrounding the Tarsac Syenite.
(36) Don Rhyolites	Regional	**Zone 17** 650200 mE 5348950 mN	32D07	Mapping and compilation – Blake River Group	164	Jean Goutier Claude Dion	Cu, Zn (Ag)	Structural reinterpretation of the area following a new U-Pb age determination; this part of the Blake River Group is contemporaneous to the Mine Sequence.
(37) NW Segment of the La Pause Fault	Regional	**Zone 17** 666600 mE 5363400 mN to 685550 mE 5351000 mN	32D07	Mapping and compilation – Malartic Group	172-173	Pierre Pilote	Au (Cu, Mo)	Zone located up to 1200 m north of La Pause Fault; greater abundance of mineralized and altered (albitized) monzonitic to tonalitic dykes and stocks.
(38) E-W Segment of the La Pause Fault	Regional	**Zone 17** 685550 mE 5351000 mN to 704100 mE 5348000 mN	32D08	Mapping and compilation – Malartic Group	172-173	Pierre Pilote	Au (Cu, Mo)	Zone located up to 800 m north of La Pause Fault; greater abundance of mineralized and altered (albitized) monzonitic to tonalitic dykes and stocks.
(39) ENE Segment of the Manneville North Fault	Regional	**Zone 17** 670000 mE 5365300 mN to 685550 mE 5368200 mN	32D07	Mapping and compilation – Malartic Group	172-173	Pierre Pilote	Cu, Zn, Au, Ag	Zone located up to 1200 m north and 300 m south of the Manneville North Fault. Mineralizations: (1) orogenic-Au type in tonalite-monzonite-syenite intrusions and ultramafic-mafic volcanic rocks; and (2) VMS deposits type near rhyolitic edifices with potential for Cu-Zn.
(40) E-W Segment of the Manneville North Fault	Regional	**Zone 17** 685550 mE 5368200 mN to 703300 mE 5371100 mN	32D08	Mapping and compilation – Malartic Group	172-173	Pierre Pilote	Cu, Zn, Au, Ag	Zone located up to 1200 m north and 300 m south of the Manneville North Fault. Mineralizations: (1) orogenic-Au type in tonalite-monzonite-syenite intrusions and ultramafic-mafic volcanic rocks; and (2) VMS deposits type near rhyolitic edifices with potential for Cu-Zn.

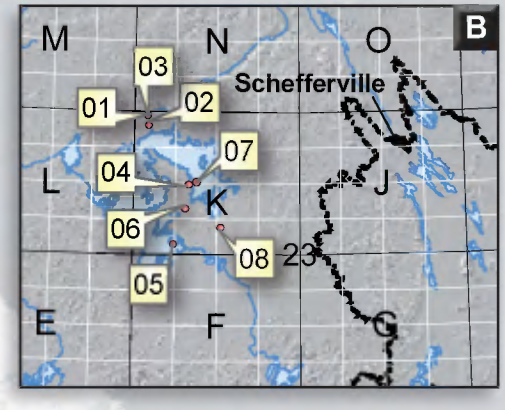
Number and Name	Size	Location (UTM NAD83)	NTS Sheet	Project	Poster	Project Leader(s)	Substance(s)	Description
Grenville Province – Côte-Nord administrative region								
(41) Granite	Ponctual	**Zone 19** 491062 mE 5510037 mN	22F11	Mapping – Lac au Brochet area	163	Abdelali Moukhsil	Dimension stone	Pink granite, foliated, porphyric with little fracturation.
(42) Fleury1	Regional	**Zone 19** 440261 mE 5528084 mN	22F13	Mapping – Lac au Brochet area	163	Abdelali Moukhsil	Fe, Ti; Fe, Ti, P	Fe-Ti oxydes and/or apatite gabbronorite (Oxydes Apatite Gabbronorite = OAGN).
(43) Fleury2	Regional	**Zone 19** 440261 mE 5528084 mN	22F13	Mapping – Lac au Brochet area	163	Abdelali Moukhsil	Fe, Ti; Fe, Ti, P	Fe-Ti oxydes and/or apatite gabbronorite (Oxydes Apatite Gabbronorite = OAGN).
(44) Boily	Local	**Zone 19** 461998 mE 5536576 mN	22F13	Mapping – Lac au Brochet area	163	Abdelali Moukhsil	Cu, Ni, PGE (Au)	Leuconorite with 1 % disseminated sulfides (PO, CP, PY).
(45) Nald	Ponctual	**Zone 19** 498097 mE 5495120 mN	22F11	Mapping – Lac au Brochet area	163	Abdelali Moukhsil	Fe, Ti; Fe, Ti, P; Ni, Cu	Fe-Ti oxydes and sulfides mineralizations associated with multiple lithologic facies (gabbronorite, paragneiss, mangerite).
(46) Dodier	Local	**Zone 19** 469992 mE 5485407 mN	22F11	Mapping – Lac au Brochet area	163	Abdelali Moukhsil	U, Th, REE	Uranium mineralization (<3200 cps) associated with smoky quartz pink granite.
(47) Convent	Ponctual	**Zone 19** 466834 mE 5517891 mN	22F14	Mapping – Lac au Brochet area	163	Abdelali Moukhsil	U, Th	Uranium mineralization (<3200 cps) associated with a whitish pegmatite dyke (15 cm/3m).
(48) Riverin	Local	**Zone 19** 442922 mE 5492932 mN	22F12	Mapping – Lac au Brochet area	163	Abdelali Moukhsil	Th, REE	Tourmaline-bearing pink pegmatite dyke (30 cm): 2409 ppm Th, 56 ppm U, 7561 ppm La and 16192 ppm Ce.
(49) Boudart	Regional	**Zone 19** 657000 mE 5723000 mN	22O10	Lake sediment geochemistry – MRC Sept-Rivières	162	Jean-Yves Labbé	Au, Cu, Ag	Bottom-lake sediment geochemistry regional anomaly (PRO 2008-08).
(50) Walker North	Regional	**Zone 19** 627500 mE 5602000 mN	22J11	Lake sediment geochemistry – MRC Sept-Rivières	162	Jean-Yves Labbé	U	Bottom-lake sediment geochemistry regional anomaly (PRO 2008-08).
(51) Adrien South	Regional	**Zone 19** 673000 mE 5612000 mN	22J10	Lake sediment geochemistry – MRC Sept-Rivières	162	Jean-Yves Labbé	U, Nb	Bottom-lake sediment geochemistry regional anomaly (PRO 2008-08).
(52) Moisie-Nipissis	Regional	**Zone 19** 710000 mE 5616000 mN	22J09	Lake sediment geochemistry – MRC Sept-Rivières	162	Jean-Yves Labbé	U	Bottom-lake sediment geochemistry regional anomaly (PRO 2008-08).
(53) Nipisso North-East	Regional	**Zone 19** 735000 mE 5665000 mN	22P04	Lake sediment geochemistry – MRC Sept-Rivières	162	Jean-Yves Labbé	U, REE, Y, Nb	Bottom-lake sediment geochemistry regional anomaly (PRO 2008-08).

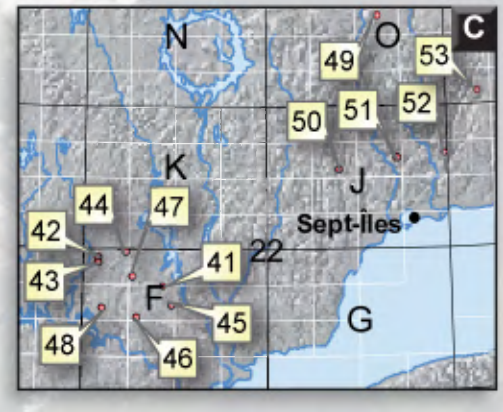
Coordinates indicate the centre of the exploration target.

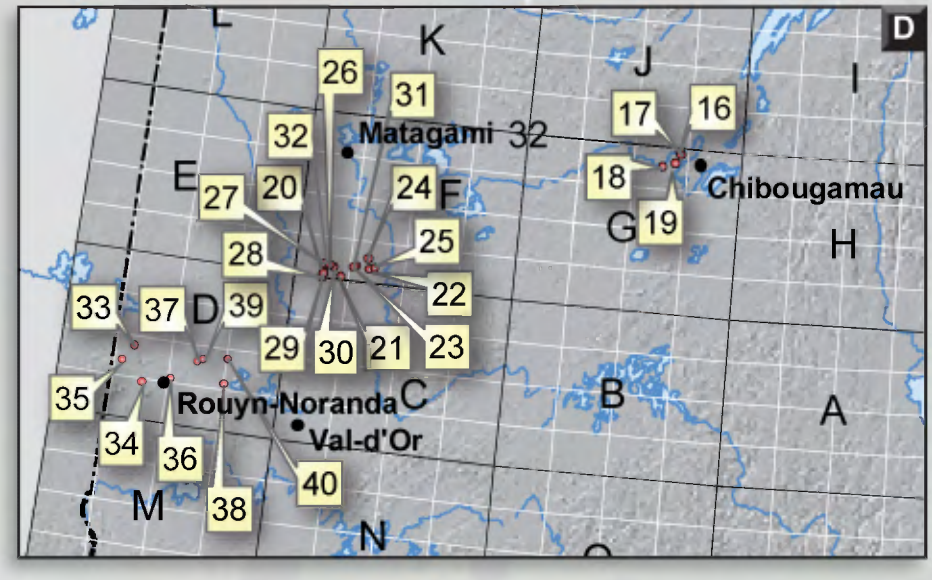
Certain targets are represented by a linear trace, in which case the coordinates represent both ends.











PROJECTS

1. Unconsolidated deposit and bedrock drilling – Rivière Octave area
2. Mapping – Réservoir Opinaca area
3. Mapping and compilation – Chapais area
4. Mapping and compilation – Blake River Group
5. Mapping and compilation – Malartic Group
6. Mapping – Lac au Brochet area
7. Bottom lake sediment geochemistry – MRC Sept-Rivières
8. Mapping – Réservoir Caniapiscau area

Target

Ressources naturelles
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