



BROSMAN PROJECT (1230)

Summary

The Brosman Property is adjacent to the town of Chibougamau and extends more than 6 km eastward. In addition to containing numerous gold and polymetallic showings, the 2013 43-101 resource estimate for the property's main deposit shows indicated resources of 97,200 t at 1.65 g/t Au, 10.5 g/t Ag and 0.35% Cu and inferred resources of 6,300 t at 0.85 g/t Au, 30.0 g/t Ag and 7,870 ppm Cu. Regionally, gold and base metal grades are associated with mineralized synvolcanic structures oriented NW-SE and/or N-S. These structures are an important metallogenic belt for the entire Chibougamau mining camp.

The most promising area of the property lies within the Lac Line porphyry intrusion and at its contact the Roberge Sill. This area, about 1 km north of the Brosman deposit, superimposes two types of mineralization: Au-Cu±Mo porphyry and epithermal polymetallic.



Numerous gold and polymetallic showings



Extends more than 6 km eastward of the town of Chibougamau



Drillhole 1230-02-32:
0.25 g/t Au and
0.09% Cu over 121.8m

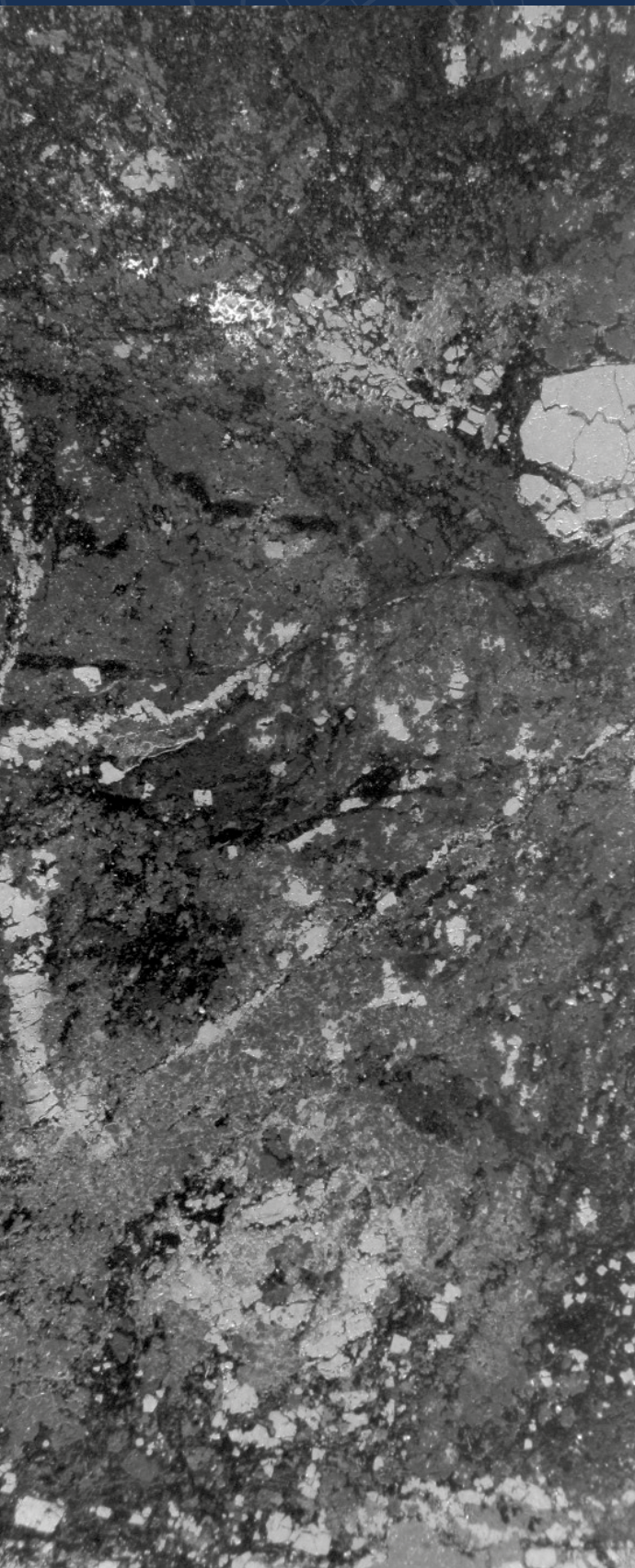


At the exploration drilling stage

ABOUT US • • •

SOQUEM, a subsidiary of Investissement Québec, is dedicated to promoting the exploration, discovery and development of mining properties in Quebec.

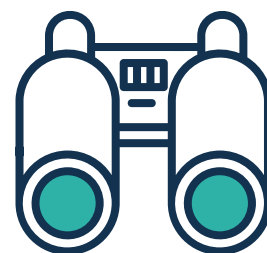
SOQUEM also contributes to maintaining strong local economies. A proud partner and ambassador for the development of Quebec's mineral wealth, SOQUEM relies on innovation, research and strategic minerals to be well-positioned for the future.



Summary (continuation)

Several drill holes encountered anomalous gold and molybdenum grades over thicknesses ranging from 50 m to more than 100 m, in addition to isolated higher grades of gold, copper, silver and zinc associated with structures oriented NW-SE or N-S. Holes 1230-04-44 and 1230-02-32 returned 0.15 g/t Au and 0.11% Cu over 81.5 m, and 0.25 g/t Au and 0.09% Cu over 121.8 m, respectively, inside the porphyry intrusion. Hole S-28, located approximately 600 m west of these holes, also returned several anomalous molybdenum grades (400 to 1,400 ppm Mo), supporting the porphyry model.

The property is at the exploration drilling stage. Mapping and geochemistry programs are envisioned for the areas that have seen little work since SOQUEM acquired the property.



Location

The Bruneau Property is located in the province of Quebec, Canada. Specifically, it is adjacent to Chibougamau, a town with skilled mining labour, and it extends more than 6 km to the east (Figure 1). A railway and a well-developed power grid pass close to Chibougamau and a few kilometres west of the property. The property is also about 5 km northwest of the Copper Rand mine site, which includes a copper-gold ore processing mill and tailings pond. The property is accessible year-round via a network of forestry roads. A regional airport between Chapais and Chibougamau is also part of the infrastructure. The nearest municipalities are the towns of Chibougamau and Chapais and the two Cree communities of Mistissini and Oujé-Bougoumou.

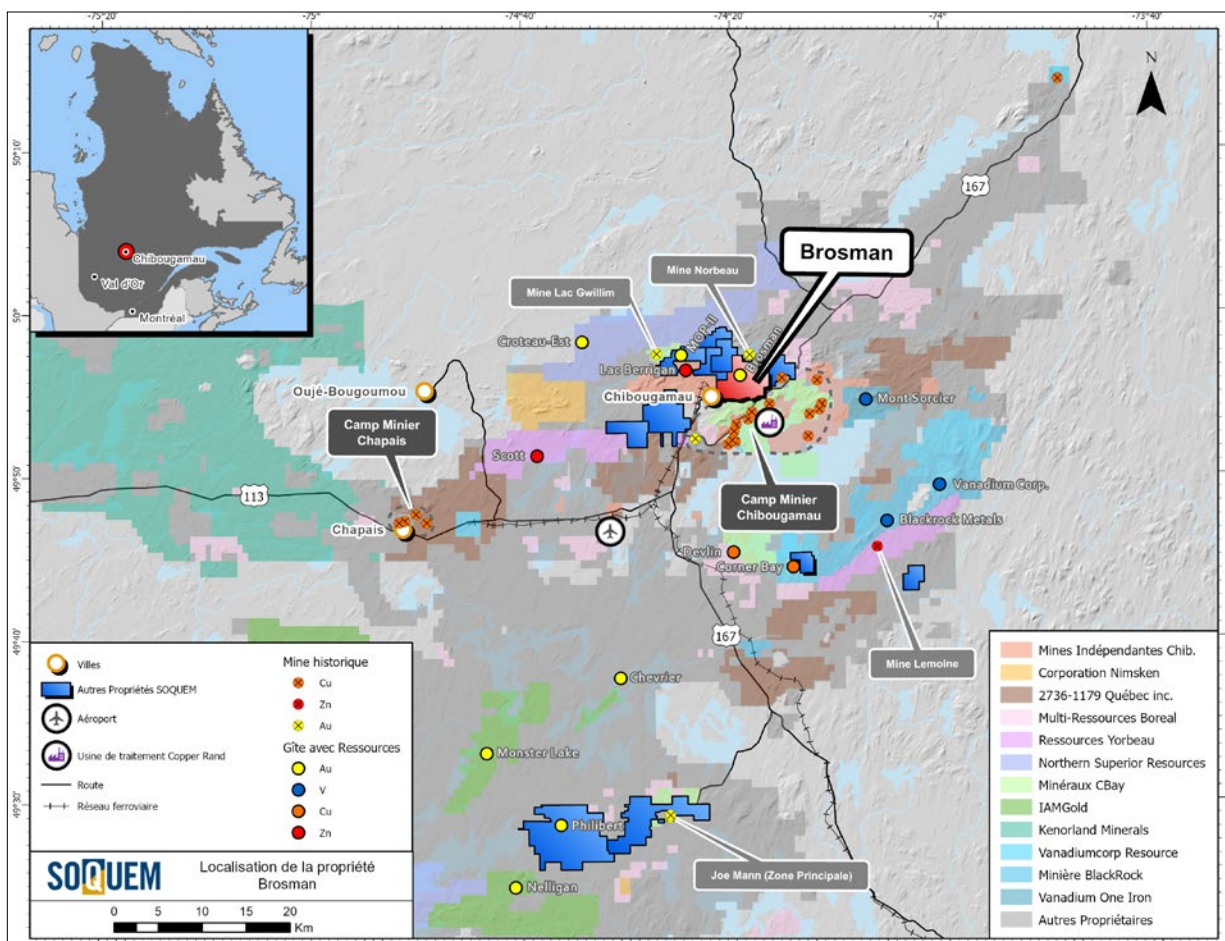


Figure 1
Location of the Property

Regional Geology

The Chibougamau mining camp is located northeast of the Abitibi Greenstone Belt in the Superior Province (Figure 2). The region, bounded to the east by the Grenville Front, is located in the polycyclic Northern Volcanic Zone linking the Matagami and Chibougamau mining camps. The Archean rocks of Chapais–Chibougamau are separated into two groups, Roy and Opémisca, by an erosional unconformity. They are overlain by Proterozoic sequences that include the rocks of the Chibougamau Formation (Figure 3).

The first volcanic cycle comprises the Obatogamau Formation at its base, divided into three members, from bottom to top: lower, middle and David. The Obatogamau Formation is overlain by the Waconichi Formation, comprising volcanoclastic rocks, exhalites, turbidites, and rhyolitic to basaltic volcanics. The Waconichi Formation contains five members: Allard, Scott, Queylus, Andy, Lemoine. (RG201503). At the regional scale, the Waconichi Formation is known for its VMS fertility.

The second volcanic cycle consists of the Bruneau Formation overlain by the Blondeau Formation.

The rocks of the first cycle were intruded by the synvolcanic Lac Doré Intrusive Suite, whereas those of the second cycle were intruded by the sills of the Cummings Intrusive Suite. The anorthositic Lac Doré Intrusive Suite is found on the southern and northern flanks of the Chibougamau Anticline, the core of which is occupied by the Chibougamau Pluton. The Cummings sills are mainly found on the northern flank of the anticline.



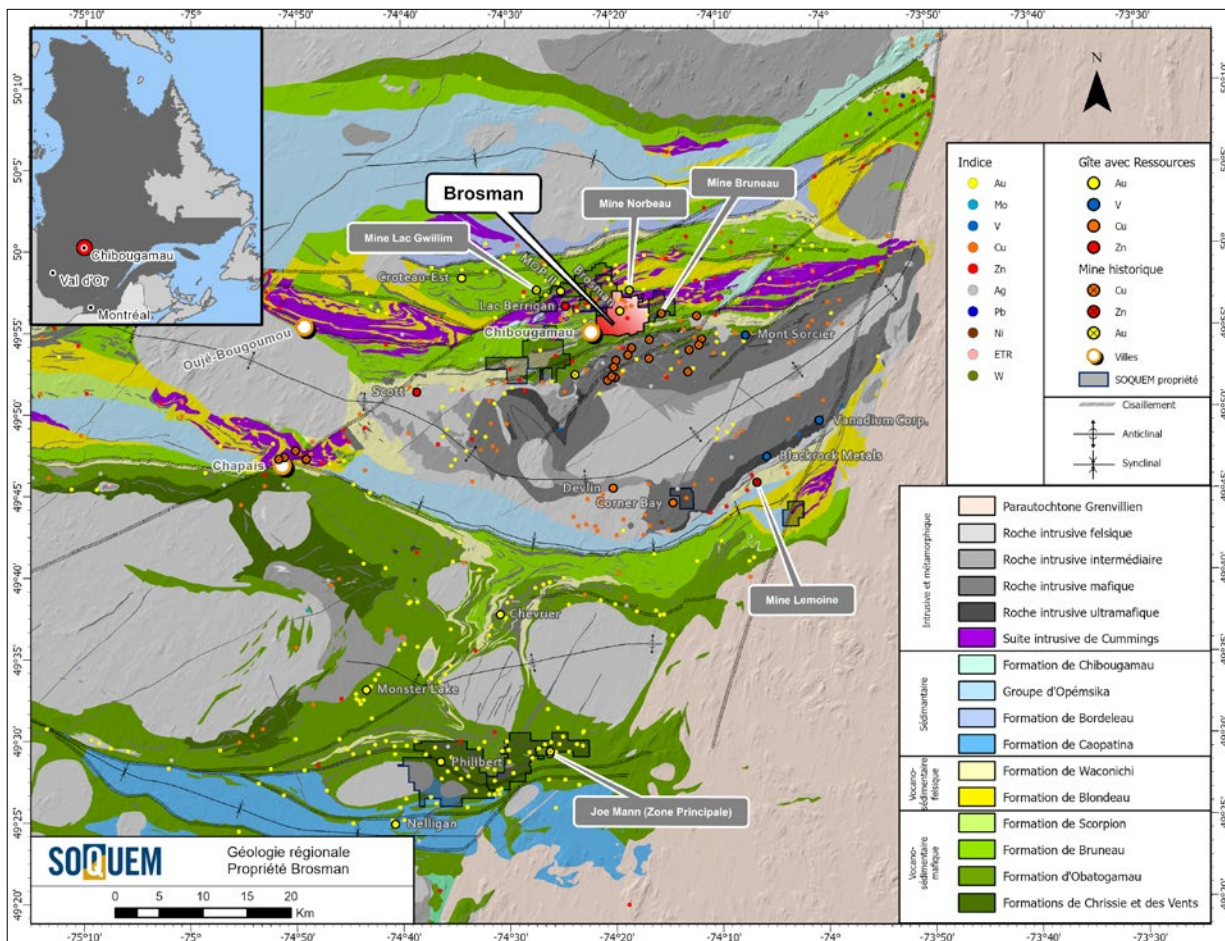


Figure 2
Regional geology

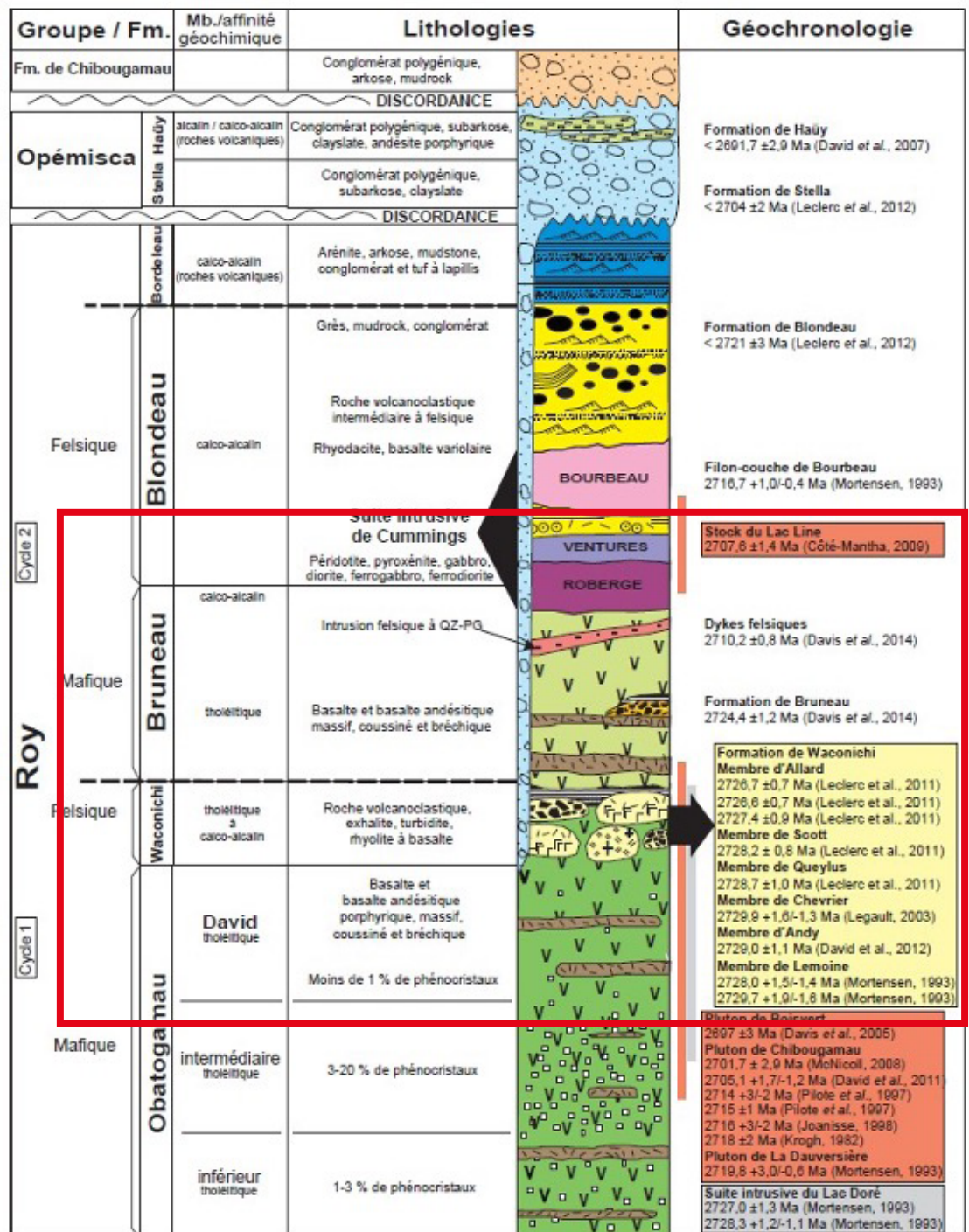


Figure 3
Stratigraphy of the
Chibougamau region
according to Leclerc
et al., 2017

Property Geology

The property is located on the northern flank of the Chibougamau Anticline at the contact between the volcanic units of the first and second cycles (Figure 4). The southern part of the property is marked by the transition between the predominantly basaltic David Member and the felsic to mafic volcanoclastic units of the Allard Member.

The centre of the property is underlain by the Bruneau Formation, which consists mainly of intermediate to mafic lavas locally intersected by gabbro dykes. A porphyritic felsic intrusion, likely part of the Lac Line stock, as well as intermediate to felsic volcanoclastics of the Blondeau Formation, are also present in the northern part of the property.

The Blondeau Formation was intruded by the Roberge, Ventures and Bourbeau sills (in stratigraphic order, from bottom to top) of the Cummings Intrusive Suite. The Roberge Sill is composed of ultramafic rocks ranging from dunite to pyroxenite and wehrlite.

The Ventures Sill consists of a basal unit of pyroxenite followed by foliated gabbro and poikilitic gabbro. The more evolved Bourbeau Sill comprises a basal unit of pyroxenite overlain by leucogabbro and a thick unit of ferrodiorite and quartz ferrogabbro. Stratigraphic tops face north and the lithological units generally trend E-W.



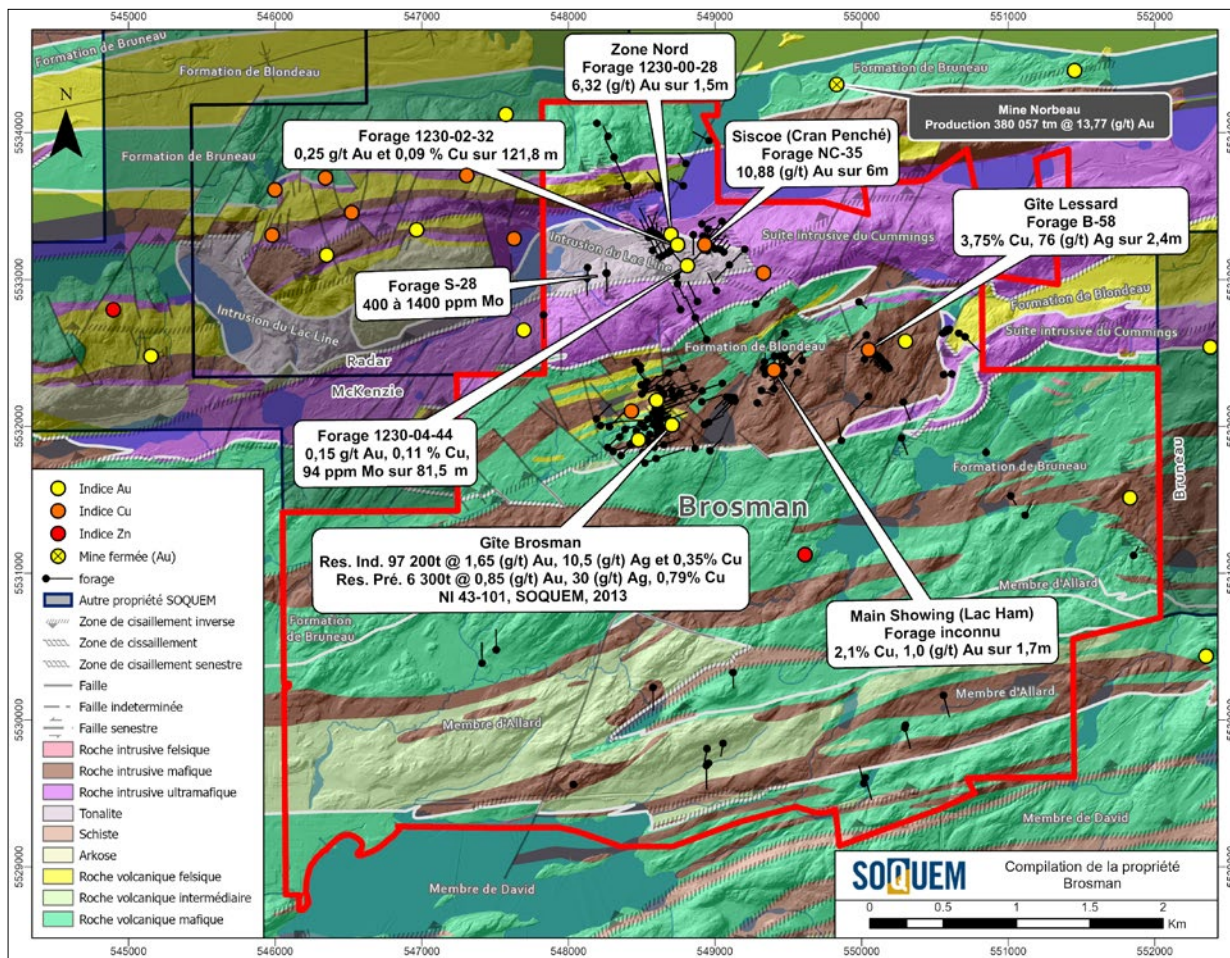
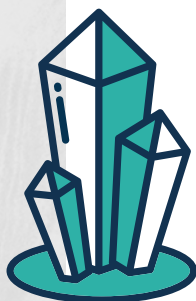


Figure 4
Property compilation map



1

Compilation and targeting

+

2

Regional data acquisition

- Secondary environment
- Airborne/helicopter geophysics

+

3

Basic Exploration

- Cartography/prospection
- Stripping
- Geophysics
- Drilling

+

+

4

Advanced Exploration

- Definition drilling
- Metallurgical test
- Resources estimate

+

5

Development

- Conversion drilling
- Preliminary economic assessment
- Bulk sampling
- Prefeasibility study
- Feasibility study

+

+

6

Construction and setting

+

7

Operation

+

8

Restoration



Mineralization, showings and target deposit types

The first target deposit type is epithermal polymetallic mineralization. Sulphides occur as disseminations, veinlets or veins within altered mafic volcanic rocks and gabbroic rocks. The gold and copper mineralization discovered in the Brosman Structure occurs in two subvertical structures trending N and NW. These structures have been traced for approximately 330 m and drilled to a vertical depth of approximately 950 m.

Pyrite and chalcopyrite mineralization has been documented in the southern part of the Brosman structure. The mineralization consists of fine disseminations, veinlets and veins varying from a few millimetres to a few centimetres thick, in the mafic rocks of the Bruneau Formation and the volcano-sedimentary rocks of the Blondeau Formation.

The gold-bearing envelope thickness varies from 30 to 50 m, with higher grades in the narrower areas. The polymetallic zone, in the northern part of the structure, consists of magnetite-pyrite-chalcopyrite veins containing copper and silver. The width of the magnetite-pyrite-chalcopyrite veins varies from a few centimetres to more than one metre in gabbroic rocks.

The following table presents the 2013 resource estimate (NI 43-101) for the Brosman deposit:

Brosman	Tonnage (t)	Grade Au (g/t)	Grade Ag (g/t)	Grade Cu (%)
Indicated Resources	97,200	1.65	10.5	0.35
Inferred Resources	6,300	0.85	30.0	0.79

Figure 5 shows a plan view of the Brosman deposit and Figure 6 shows a cross-section view of the gold zone at level L100+00S.

At the regional scale, fracture zones (mainly N-S trending) and synvolcanic faults are useful guides in the search for mineralized faults. Synvolcanic faults are identified by continuity breaks in the highly magnetic rocks of the Cummings Intrusive Suite. Fracture zones are identified by magnetic lineaments consisting of multiple conductors. Magnetite veins and stockworks produce isolated magnetic highs.

The second target deposit type is Au-Cu±Mo porphyry mineralization. This type is represented by NW/SE and N/S epigenetic fractures in broad zones of propylitic, phyllitic and potassic alteration carrying gold and copper with variable amounts of molybdenum as disseminated sulphides. It is distal to other mineralized zones in the Chibougamau mining camp.

Various results obtained by SOQUEM confirm the potential for this type of system on the property. For example, holes 1230-04-44 and 1230-02-32 in the Lac Line porphyry returned 0.15 g/t Au and 0.11% Cu over 81.5 m and 0.25 g/t Au and 0.09% Cu over 121.8 m, respectively.

Hole S-28, located approximately 600 m west of the holes above, also returned several anomalous molybdenum grades (400 to 1,400 ppm Mo) supporting the porphyry model. The Mop-II deposit on the Roger Property, described below and jointly owned by SOQUEM and QC Copper & Gold, is an example of the deposit type that could be explored for in the northern part of the Brosman Property.

Finally, at the regional level, the Waconichi Formation, which includes the Allard Member, is recognized for its VMS fertility. The Lemoine mine (historical production of 757,585 t at 9.52% Zn, 4.18% Cu, 4.56 g/t Au and 82.26 g/t Ag) is hosted in the Lemoine Member, which is equivalent to the Allard Member of the Waconichi Formation.



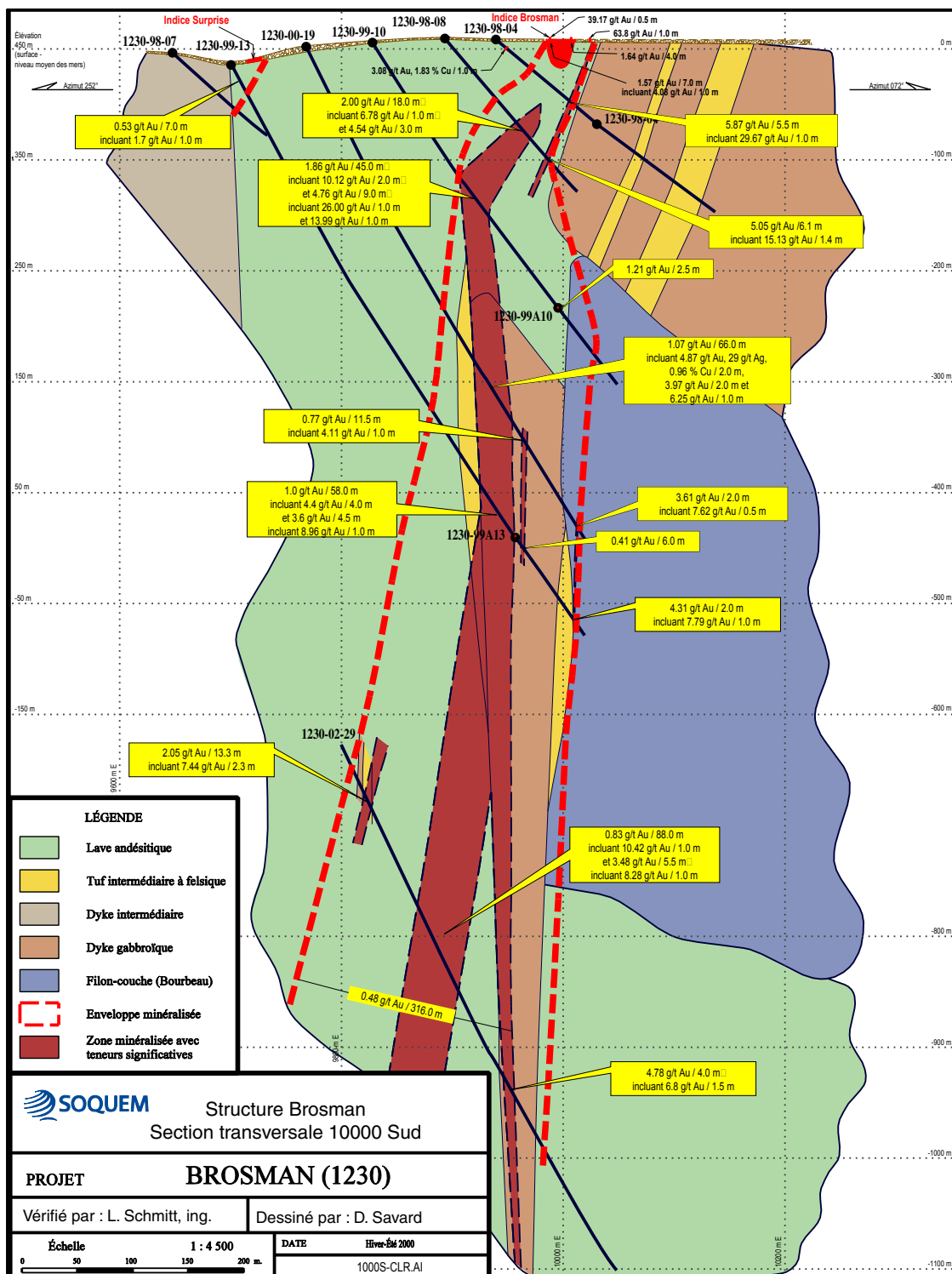


Figure 6

Cross-section of the gold zone in the Brosman deposit at line 100+00 South

Historical resources and economic geology of the area

Mop-II Deposit

The Mop-II deposit on SOQUEM's Roger Property is a joint venture project with QC Copper & Gold, located 7 km northwest of the Brosman Property. The following table presents the most recent mineral resource estimate for the deposit (43-101 Technical Evaluation Report on the Roger (1206) Property – 09-10-2018):

Mop-II	Tonnage (t)	Grade Au (g/t)	Grade Ag (g/t)	Grade Cu (%)	Contained AuEg (oz)
Indicated resources	10,900,000	0.85	0.80	0.06	333,000
Inferred resources	6,569,000	0.75	1.18	0.11	202,000

In the Mop-II sector, several Cu-Au showings in the form of veins and veinlets have been collected from felsic QFP intrusions. The latter exhibit characteristic porphyry system alterations. The felsic porphyry hosting the deposit underwent penetrative hydrothermal alteration causing intense silicification, sericitization, carbonation and chloritization.

In the Chibougamau area, Au-Cu±Mo porphyry mineralization is typically associated with breccia and fracture zones at the contact between early diorites and late-phase equigranular or porphyritic tonalite and trondhjemite intrusions of the Chibougamau Pluton. Mineralization generally occurs as disseminated sulphides, including pyrite, chalcopyrite and accessory molybdenite. Several generations of millimetric to metric veins and veinlets form fairly dense and regular networks (stockworks) composed of magnetite, pyrite, chalcopyrite and various gangue minerals.

Bruneau Mine

The Bruneau mine, which ceased operations in 1967, is located less than 4 km east of the property centre. The following table presents the grades and tonnage for the mine's historical production and the 1979 estimate of the geological potential (non 43-101 compliant).

Bruneau Mine	Tonnage (t)	Grade Au (g/t)	Grade Ag (g/t)	Grade Cu (%)
Historical production (1966-1967)	62,900	0.69	15.09	1.52
Geological potential (1979)	33,100	0.69	-	1.47

This deposit was historically classified as an epigenetic copper-gold vein. The mapping completed by Leclerc et al., 2008, identified lapilli and block tuffs at surface overlain by a MG-PY iron formation and a unit of bedded chert, suggesting a local hiatus in mafic volcanism.

The mine is the only instance of VMS mineralization mined in the rocks of the second volcanic cycle. The mineralization consists mainly of chalcopyrite, pyrite, pyrrhotite and magnetite in the form of veins, veinlets or disseminations. Chalcopyrite-pyrite veins are generally oriented along an N-S to NNE-SSW shear zone and range from 30 to 150 m long and 1 to 3 m wide.



Berrigan Lake Deposit

The Berrigan Lake deposit is located approximately 6 km west of the property. The following table presents the 2005 historical resource estimate (not compliant with NI 43-101):

Berrigan Lake Deposit	Tonnage (t)	Grade Au (g/t)	Grade Zn (%)
Geologic potential (Larouche 2012)	1,390,000	1.77	3.17

The area of the Berrigan Lake deposit hosts Archean epithermal Zn-Au-Ag ± Pb-As-Cu mineralization closely linked to a fault system associated with a synvolcanic collapse basin. Podiform lenses of remobilized massive sulphides (sphalerite, pyrrhotite, pyrite, chalcopyrite, galena) are present in fractures and shears hosted by the mafic-ultramafic rocks of the Roberge and Bourbeau sills. A semi-massive to massive sulphides horizon is found in tuffaceous volcanics and altered sediments near their contacts with the same sills.

It has been determined that the Northern Main Zone is represented by typical zinc-silver VMS mineralization within the basal units of the Blondeau Formation. A portion of the massive sulphide mineralization appears to have been remobilized along the NE-SW deformation zones, enriching them in gold. The genesis of the mineralized zone can be explained by an epithermal mineralizing event related to a porphyry system contemporaneous with volcanic activity.



Targets and summary of proposed work

Untested modelled structures were identified on the property when Fathom Geophysics reprocessed historical magnetic data in 2021. The original data were from the MERN's regional survey covering the entire Chibougamau region.

To generate priority drilling targets, the high-resolution magnetic survey of the Brosman area should be reviewed to incorporate the new results generated by an automatic detection algorithm for magnetic structures (Fathom-2021). Particular attention should be paid to the areas described below.

Lac Line Intrusion (Stock) - Exploration by Drilling

In the northern part of the property, investigate and demonstrate the potential of a Cu-Au-Mo porphyry model superimposed with polymetallic synvolcanic mineralization oriented NW-SE and N-S. Historical drill core in this area has been poorly sampled and more recent drilling by SOQUEM demonstrates the presence of anomalous gold grades over thicknesses of up to 100 m. The objective will be to discover low-grade, high-tonnage mineralization.

Roberge Sill - Basic exploration by geophysics and drilling

Investigate the structure at the contact between the Lac Line porphyry intrusion and the Roberge Sill. The objective will be to explore for Berrigan-type mineralization. The anomalous Cu, Au and Zn grades observed in this area, associated with semi-massive sulphide ribbons or veins in ultramafic sequences, show several similarities with the mineralization of the Berrigan Lake deposit. NW-SE and N-S structures are priority targets.

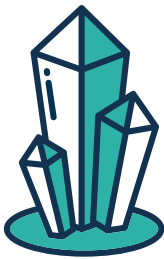
Allard Member - Basic exploration by mapping

Interest should be paid to the volcanic sequences in the western and central parts of the property for VMS mineralization, particularly near the contact between the Allard Member and the Bruneau Formation. A lithogeochemistry fertility test could be useful in these sequences. No geochemical data are available for this area.



Other recommended work

Reinterpret the Brosman deposit resource model by reviewing geological and structural interpretation. It would be worth assessing the deposit's value using updated parameters (metal price, cut-off grade, etc.). The objective would be to evaluate the potential of an open pit model for a wider low grade orebody, rather than modeling several small lenses.



Claim status

Number of mining titles: **48**

Credits available: **\$1,506,255**

Enough credits for more than 10 renewals.

- Eight mining titles (2437546; 2437627; 2437624; 2437610; 2437536; 2437601; 2437537; 2437538) are subject to a 1% NSR (net smelter return) royalty in favour of Mr. Julien Gadoury. This non-redeemable NSR is linked to an obligation to notify the holder when the mining titles are abandoned or change owner.

[The claim map is presented in Appendix 2.](#)

[A detailed legal history is available on request.](#)



Other documents and information available

SOQUEM's Geotic database:

- 242 holes drilled for 40,304 m
- 13,095.66 m sampled for metals and/or lithogeochemistry, for a total of 10,632 samples collected

ArcGIS data compilation.

[Appendix 1 summarizes the historical work on the property.](#)

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CONTACT AND INFORMATION

Tony Brisson, CEO

Head office

1740, chemin Sullivan
Suite 2000
Val-d'Or (Québec) J9P 7H1



soquem.qc.ca soquem.abitibi@soquem.qc.ca 819 874-3773



Appendix 1

Summary of historical work

Date	Company	Drill hole		Géophysics		Trenches		Statutory Work
		No.	(m)	Method	(km)	No.	(m²)	GM
2013	SOQUEM	Technical Report on the Brosman Project, Chibougamau, Quebec, Canada – NI 43-101 Resource Estimate Report, by RPA						Public
2009	SOQUEM	17	2,849					
2006	SOQUEM			Rosco Evaluation				Internal
2004	SOQUEM	6	1,797					GM62614
2004	SOQUEM	12	2,358	IP	48.1			GM61789, GM 61790
				MAG	48.35			
2003	SOQUEM					21	3,570	GM60739
2003	SOQUEM	4	2,390			11	2,042	GM60154
2001	SOQUEM			IP	6.8	35	7,928	GM59188
				MAG	6.8			
2000	SOQUEM	11	3,055	IP	53	13	4,649	GM58069, GM58682
				MAG	49.1			
1999	SOQUEM	8	2,831			44	15,227	GM57828, GM59221
1998	SOQUEM	9	1,185	IP	32.2	24	8,971	GM57406, GM56364 and GM56365
				MAG	23.3			
	TOTAL SOQUEM	67	16,464		267.65	148	42,387	

Date	Company	Drill hole		Géophysics		Trenches		Statutory Work
		No.	(m)	Method	(km)	No.	(m ²)	GM
1993–1994	Noranda Exploration			Geology, Lithogeochem, Geophysics				
1988–1989	Les Mines Camchib	11	2,725					GM48689
1981–1984	Camchib Resources	1	?					Not filed
1976–1988	Campbell Chibougama	1	82	MAG and EMH				GM34931
1951–1970	Brosman Chibougama Mines	60	6,718	MAG, EM, VLF and resistivity				GM04077B, GM25806
1964–1966	Amalgamated Beau-Bell	3	306					GM03005A
1956–1966	Normandy Chibougama Mines	28	4,797					GM20118
1956	Québec Smelting and Refining	4	571	MAG, resistivity				GM03849B
1952–1957	Beau Chibougama Mines	7	230	MAG, EM				GM3005B
1950–1956	Québec Yellowknife Mines	9	1,340	MAG, resistivity				GM04674
1949	Belle Chibougama Mines	3	767					GM00551
	TOTAL (SOQUEM + historical)	194	33,998					

Appendix 2

Claim map

