

INDEPENDENT TECHNICAL REPORT

Charlevoix Silica Property, Baie-Saint-Paul, Québec

Prepared for
Quebec Silica Resources Corp.



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TABLE OF CONTENTS

1.0	SUMMARY.....	4
2.0	INTRODUCTION.....	4
2.1	TERMINOLOGY.....	5
2.2	UNITS.....	5
2.3	RONACHER MCKENZIE GEOSCIENCE QUALIFICATIONS	5
3.0	RELIANCE ON OTHER EXPERTS	6
4.0	PROPERTY DESCRIPTION AND LOCATION.....	7
4.1	OWNERSHIP	8
5.0	ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE, AND PHYSIOGRAPHY	10
5.1	ACCESS.....	10
5.2	CLIMATE.....	10
5.3	PHYSIOGRAPHY AND VEGETATION.....	10
5.4	INFRASTRUCTURE AND LOCAL RESOURCES.....	10
6.0	HISTORY	12
7.0	GEOLOGICAL SETTING AND MINERALIZATION	12
7.1	REGIONAL GEOLOGY	12
7.2	LOCAL GEOLOGY.....	15
7.3	PROPERTY GEOLOGY AND MINERALIZATION	15
	7.3.1 Structure.....	15
8.0	DEPOSIT TYPES.....	17
9.0	EXPLORATION.....	17
9.1	SAMPLING	17
9.2	MAPPING.....	23
9.3	VLF-EM SURVEY	25
9.4	INTERPRETATION.....	27
10.0	DRILLING.....	27
11.0	SAMPLE PREPARATION, ANALYSES AND SECURITY	27
11.1	CHECK SAMPLES.....	27
12.0	DATA VERIFICATION	28
12.1	SITE VISIT	28

13.0	MINERAL PROCESSING AND METALLURGICAL TESTING.....	37
14.0	MINERAL RESOURCE ESTIMATES.....	37
15.0	ADJACENT PROPERTIES	37
15.1	ROGUE RESOURCES INC.....	38
16.0	OTHER RELEVANT DATA AND INFORMATION	38
17.0	INTERPRETATION AND CONCLUSIONS	38
18.0	RECOMMENDATIONS.....	40
19.0	REFERENCES	41
20.0	STATEMENT OF AUTHORSHIP	43

FIGURES

Figure 4-1: Location of the Charlevoix property.....	7
Figure 4-2: Mineral claims of the Charlevoix property.....	9
Figure 5-1: Access to the Charlevoix property.....	11
Figure 7-1: Map showing the location of the property in the Grenville Province.....	13
Figure 7-2: Regional geology showing the Charlevoix property.....	14
Figure 7-3: Property geology map.....	16
Figure 9-1: Map showing the locations of the samples collected by Quebec Silica. The locations of the check-samples collected during the personal inspection are also shown.....	24
Figure 9-2: Dewalt SDS hammer drill 20V MAX with dust extractor D25303DH attached.....	25
Figure 9-3: Map showing the results of the VLF-EM survey.....	26
Figure 12-1: Map showing paved road #381, the ZEC gate, the claims (red), and the gravel roads (orange). The blue dots indicate the location of the samples collected during the site visit.....	29
Figure 12-2: ZEC des Martres gate UTM 369623E 5296050N, near road 381, looking E.....	30
Figure 12-3: Gravel road and forestry excavator near Lac Barley, looking E.....	30
Figure 12-4: Gravel road UTM 384563E 5294702N, claim 2404904, looking SE.....	31
Figure 12-5: Photo taken from UTM 384563E 5294702N, claim 2404904, looking SE.....	31
Figure 12-6: Geologist Jonathan Broadbent, typical bush, claim 2404904.....	32
Figure 12-7: Creek UTM 384313E 5294706N, claim 2404904.....	32
Figure 12-8: Geologist Tom Dyakowski drilling hole HDH-2 in quartzite (UTM 384531E 5294697N, claim 2404904) with the Dewalt hammer drill 20V MAX and dust extractor system D25303DH.....	34
Figure 12-9: Typical drill hole sample (HDH-1), quartzite powder collected by the dust extractor system D25303DH.....	34

Figure 12-10: Drill hole HDH-2 and grab sample E503352, quartzite, UTM 384530E 5294699N, claim 2404904. 34

Figure 12-11: Drill hole HDH-2 with dowell and labeled flag, quartzite, UTM 384531E 5294697N, claim 2404904. 34

Figure 12-12: Sample E503354, quartzite, UTM 384237E 5294668N, claim 2404904..... 35

Figure 12-13: Sample E503355, quartzite, UTM 384487E 5294704N, claim 2404904. The orange flag may be the 17207 sample flag of January 2017 36

Figure 17-1: Map showing the locations of adjacent properties. 39

TABLES

Table 4-1: List of claims that the property consists of..... 8

Table 6-1: List of historic exploration activities on the property.....12

Table 9-1: List of samples collected on the property in 202017

Table 9-2: Major element concentrations of the samples collected on the property..... 20

Table 9-3: Selected trace element concentrations of the samples collected on the property. 22

Table 12-1: Check samples collected during the personal inspection of the property.....33

Table 12-2: Selected major element analysis results of the check samples collected during the site visit..... 35

Table 12-3: Trace element analysis results of the check samples collected during the site visit 36

Table 12-4: Comparison of the check sample results with the current and historic sampling.....37

Table 18-1: Estimated cost for the recommended exploration program..... 40

APPENDICES

Appendix 1 – Certificates of Qualified Persons

1.0 SUMMARY

Quebec Silica Resources Corp. (“Quebec Silica”) entered into a purchase agreement with MacDonald Mines Exploration Ltd. to purchase mineral rights to six mining claims located ~40 km north of Baie-Saint-Paul, QC, and covering 346.98 hectares. The property has previously been explored for silica.

The property is located in the Grenville Province of the Canadian Shield and consists of Proterozoic metasedimentary and metavolcanic rocks, including paragneiss with quartzite and migmatite. Quartzites and impure quartzites form bands across the region of between 100 m and 260 m width.

Quartzite bands were mapped on the property; these bands were the focus of Quebec Silica’s reconnaissance exploration on the property, which was completed from September 2 to 14, 2020. The program consisted of sampling and a VLF-EM survey. A total of 82 rock samples and seven powder samples were collected. The silica content of the samples ranges from 96.28% to 99.22% SiO₂. The VLF survey delineated zones of high resistivity interpreted to be quartzite.

Based on the property geology, the personal inspection of the property by Dr. Luc Harnois and Quebec Silica’s exploration results the Qualified Persons conclude that the potential for significant quartzite exists on the property and that further exploration is warranted.

The Qualified Persons recommend line cutting, further VLF-EM and an resistivity survey to delineate the quartzite units and a detailed sampling program to determine the purity and homogeneity of the quartzite.

2.0 INTRODUCTION

Quebec Silica Resources Corp. (“Quebec Silica”) commissioned Ronacher McKenzie Geoscience (“Ronacher McKenzie”) to complete an Independent Technical Report according to the standards of the NI 43-101 (Standards of Disclosure for Mineral Projects) (“the report”) for Quebec Silica’s Charlevoix Silica property (“the property”) near Baie-St. Paul, Quebec, Canada.

The purpose of the report is to disclose relevant information about the property and for Quebec Silica to fulfill the requirements of getting listed on the Canadian Securities Exchange (“CSE”); in addition, the report will assist Quebec Silica to make informed decisions regarding the property.

The main source of information was Quebec Silica; Quebec Silica provided exploration data through its consultant, Waldo Sciences. Historic exploration data were obtained from assessment reports provided by the Quebec Ministry of Energy and Natural Resources. Geological data and literature were obtained from the public domain, dominantly the Quebec Ministry of Energy Natural Resources.

Following the completion of the reconnaissance level exploration program, Raymond Wladichuk, P.Geol., the Owner and Principal of Waldo Sciences accepted the CEO position with Quebec Silica.

The property was visited by Luc Harnois, PhD, P.Geo on Sep 10, 2020. Dr. Harnois assessed the access to the property, determined if outcrop existed, interacted with the geologists who completed surveys on the property and collected check samples.

2.1 Terminology

Asl: above sea level

Sedar: System for Electronic Document Analysis and Retrieval; mandatory document filing and retrieving system for companies trading on Canadian stock exchanges administered by the Canadian Securities Administrators.

CDC claim: “map designated claim” (claim désignée sur carte): cell claim

GESTIM: lands management website for claims in Quebec

SOQUEM: Société Québécoise d'exploration minière

VLF-EM: Very low frequency electromagnetic data. Radio transmissions at frequencies of 3 to 30 kHz, used for communication with submerged submarines and for long-range positioning, are used to induce secondary responses in conductive geological units.

ZEC: Zone d'Exploitation Contrôlée; zones of public land in Quebec where fishing and hunting activities are managed to ensure wildlife conservation; access to mineral explorers is granted

2.2 Units

The metric system of measurement is used in this report. Historic data are typically reported in imperial units and were converted for this report using appropriate conversion factors. One foot is 0.3048 m. One inch is 2.54 cm.

Area is measured in hectares (ha); 1 ha is 0.01 km².

Universal Transverse Mercator (UTM) coordinates are provided in the datum of NAD83, Zone 19N.

2.3 Ronacher McKenzie Geoscience Qualifications

Ronacher McKenzie Geoscience is an international consulting company with offices in Toronto and Sudbury, Ontario, Canada. Ronacher McKenzie's mission is to use intelligent geoscientific data integration to help mineral explorers make discoveries. We help a growing number of clients understand the factors that control the location and formation of mineral deposits.

With a variety of professional experience, our team's services include:

- Data Integration, Analysis and Interpretation
- Geophysical Services
- Project Generation and Property Assessment
- Exploration Project Management
- Resource Estimation and Independent Technical Reporting
- Project Promotion
- Lands Management

The primary Qualified Person and co-author of this Report is Dr. Luc Harnois, P.Geo. Dr. Harnois is a Senior Geologist with Ronacher McKenzie Geoscience. He is a graduate of Université du Québec à Montréal, Department of Earth Sciences, Montréal, 1980. He completed a M.Sc. (Université du Québec à Montréal, Department of Earth Sciences, Montréal, 1983) and a Ph.D. (Carleton University, Department of Geology, Ottawa, 1987). Dr. Harnois has been employed in the mineral exploration field world-wide for an aggregate total of 20 years, in gold and base metal exploration as well as silica deposits and in positions ranging from junior geologist to project manager. Dr. Harnois is a member in good standing of the Ordre des Géologues du Québec. Dr. Harnois is jointly responsible for the report and visited the property.

The other Qualified Person and co-author of this Report is Elisabeth Ronacher Ph.D., P.Geo. Dr. Ronacher is co-founder and Principal Geologist to Ronacher McKenzie Geoscience and a geologist in good standing of the Association of Professional Geoscientists of Ontario (APGO #1476). Dr. Ronacher has worked as a geologist since 1997 with academia and industry on a variety of exploration properties such as Au, Cu, base-metal, Cu-Ni PGE, U and nepheline syenite. Dr. Ronacher has co-written numerous Independent Technical Reports (NI 43-101) on a variety of deposit types. Dr. Ronacher is jointly responsible for this report (except Section 12.1 Site Visit) and did not visit the Property.

Certificates of Qualification are provided in Appendix 1.

3.0 RELIANCE ON OTHER EXPERTS

Ronacher McKenzie relied on information provided by Quebec Silica regarding land tenure and ownership. An independent assessment of land tenure was not completed by Ronacher McKenzie. Ronacher McKenzie reviewed the status of mineral claims on GESTIM, the claims management website of the Quebec Ministry of Energy and Natural Resources (<https://gestim.mines.gouv.qc.ca/>) on November 19, 2020.

While the purchase agreement between Quebec Silica and the claim owner were provided by Quebec Silica and were reviewed for this report, this report does not constitute nor is it intended to represent a legal or any other opinion to title.

4.0 PROPERTY DESCRIPTION AND LOCATION

The Charlevoix property is located in the Lac-Pikauba municipality, approximately 40 km north of Baie-Saint-Paul, Quebec and 120 km north of Quebec City (Figure 4-1, Figure 5-1). It consists of six contiguous mineral claims covering 346.98 hectares (ha) (Table 4-1, Figure 4-2).

The surface rights are held by the Crown.

Legal access to the property from Baie-Saint-Paul is on road #381 and on gravel roads maintained as part of the Quebec Zones d'Exploitation Contrôlée ("ZEC") Des Martres. Mining claim holders have free access to the roads.

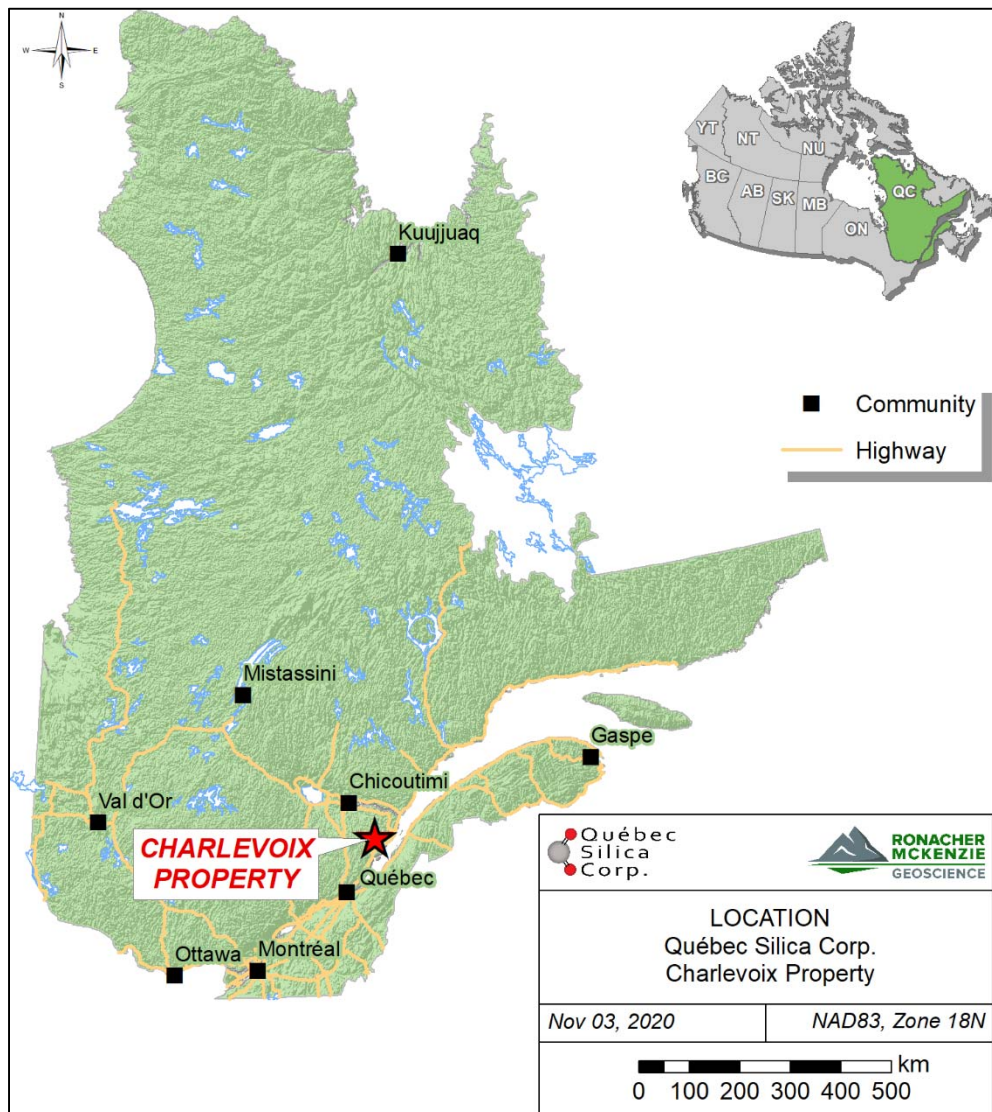


Figure 4-1: Location of the Charlevoix property.

In order to keep the claims in good standing, Quebec Silica must complete exploration worth \$1,800 for a two year term per claim.

The Qualified Persons (“QPs”) are not aware of any royalties, back-in rights, payments, or other agreements and encumbrances to which the property is subject other than the ones listed above.

The property falls in a “habitat faunique” with a wildlife habitat restriction (#16862) related to caribou; exploration is allowed under certain conditions. The QPs are not aware of any other environmental liabilities.

In Quebec, permits must be obtained for line cutting if the lines are wider than 1 m, for trenching and for drilling. Quebec Silica does not hold exploration permits at this time.

The QPs are not aware of any other significant factors and risks that may affect access, title, or the right or ability to perform work on the property

Table 4-1: List of claims that the property consists of.

Claim Number	Claim Type	Expiry Date	Area (Ha)	Titleholder
2404899	CDC	29/05/2023	57.83	Macdonald Mines Exploration Ltd
2404900	CDC	29/05/2023	57.83	Macdonald Mines Exploration Ltd
2404901	CDC	29/05/2023	57.83	Macdonald Mines Exploration Ltd
2404902	CDC	29/05/2023	57.83	Macdonald Mines Exploration Ltd
2404903	CDC	29/05/2023	57.83	Macdonald Mines Exploration Ltd
2404904	CDC	29/05/2023	57.83	Macdonald Mines Exploration Ltd
TOTAL			346.98	

4.1 Ownership

On August 10, 2020 Purecanna Products Inc. (“Purecanna”) purchased the mineral rights of the six claims that constitute the Charlevoix property from MacDonald Mines Exploration Ltd. (“MacDonald Mines”) for 1,000,000 shares to be issued no later than 7 days after the approval of the terms of the agreement between Purecanna and MacDonald Mines by the regulatory authorities. On August 27, 2020, Purecanna changed its name to Quebec Silica Resources Corp.

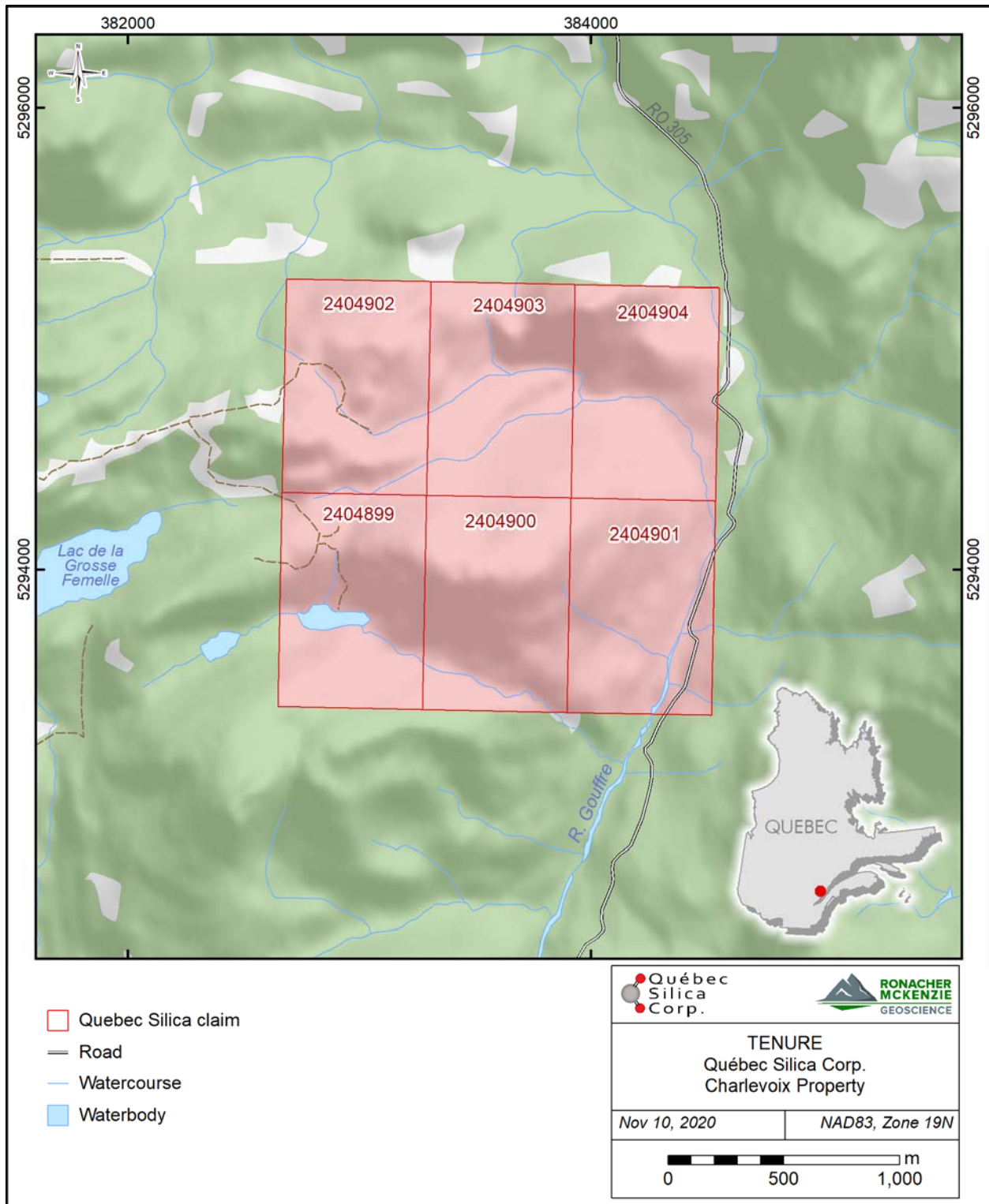


Figure 4-2: Mineral claims of the Charlevoix property.

5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE, AND PHYSIOGRAPHY

5.1 Access

The property is located 40 km north of the town of Baie-Saint-Paul, QC. Access to the property is on road #381 and a gravel road managed by ZEC (~54 km). The gravel roads are in fair to good condition and the property can be accessed easily by an all-wheel drive SUV or pick-up truck.

5.2 Climate

The climate in the area of the property is characterized by cold winters with January being the coldest month and July being the warmest (<https://climate.weather.gc.ca/>); the maximum temperature in January is between -5°C and -10°C and the minimum temperature is between -15°C and -20°C. The warmest month is July with maximum temperatures of approximately 25°C. The highest rainfall occurs between May and July (approximately 50-150 mm); December is the month with the highest snowfall (80-120 mm).

Exploration on the property is possible year-round.

5.3 Physiography and Vegetation

The property is located within the rugged Laurentian Mountains of the Canadian Shield; elevations range from 500 m to 950 m above sea level. The property is densely vegetated with jack pine, lodgepole pine, black spruce, white spruce, balsam fir, aspen, white birch, elm and balsam poplar being the main species (Broadbent et al., 2020). The number of outcrops is limited.

5.4 Infrastructure and Local Resources

The closest town is Baie-Saint-Paul with a population of about 7,146 (<https://www12.statcan.gc.ca/>). Baie-Saint-Paul is approximately 40 km south of the property and has motels, shops, banks, gas stations and a hospital. Skilled and unskilled labour is readily available in the area.

Water is available from one lake (Lac de l'Engoulevant; claim 2404899) and few local streams.

Power is available in the region with one power line located approximately 6.5 km west of the property and another powerline running north-south approximately 3.5 km east of the property.

The surface rights are owned by the Crown and are sufficient for any potential future mining activity.

The availability of potential tailings storage areas, potential waste disposal areas, heap leach pad areas and potential processing plants sites is not relevant for the project at this stage.

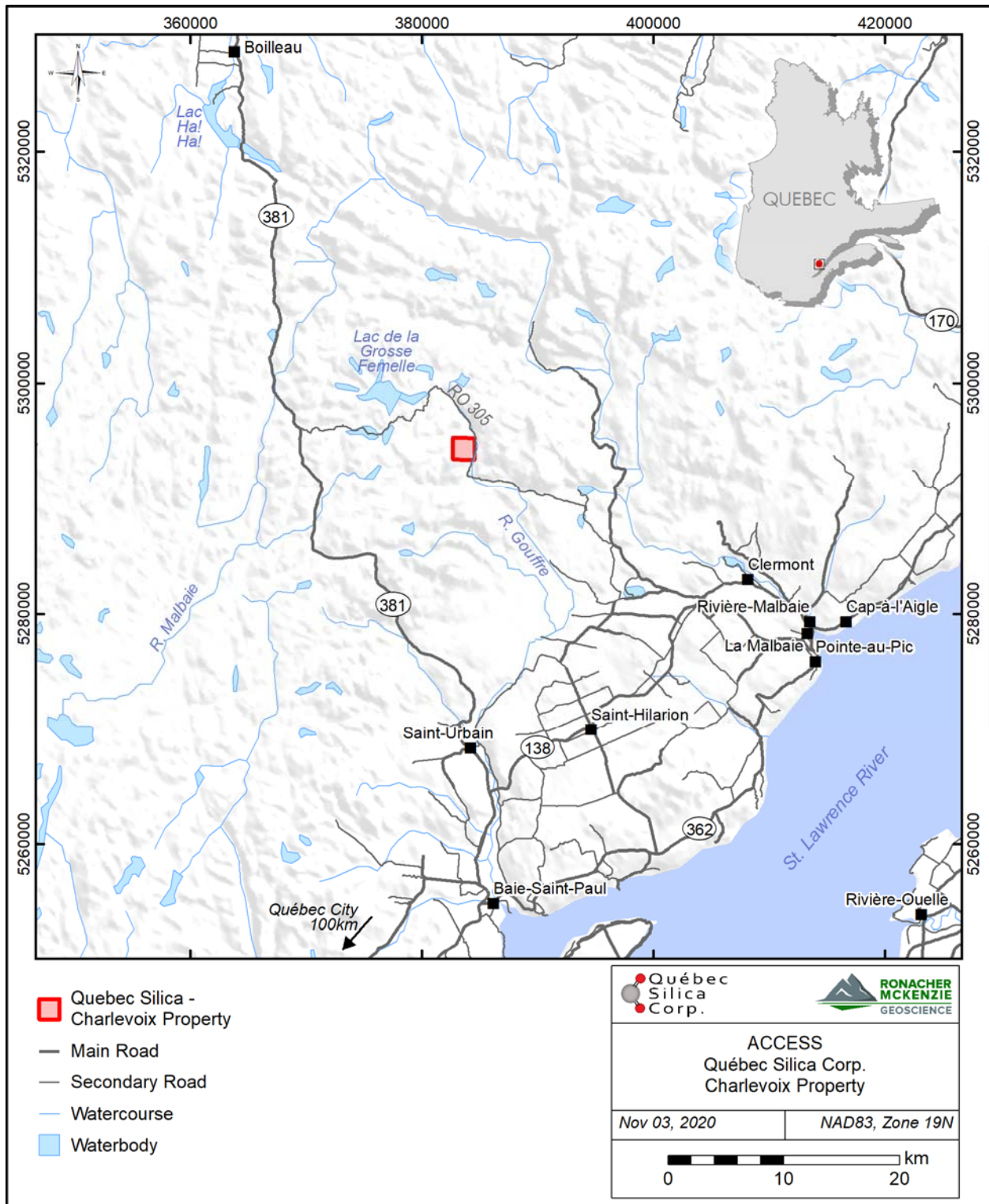


Figure 5-1: Access to the Charlevoix property.

6.0 HISTORY

The geology of the Lac des Martres area was mapped and described by Rondot (1971; RP601 and map 1729). This map at the scale 1:63 360 included the Property and quartzite was mapped. Since then, the Quebec Ministry of Energy and Natural Resources has completed regional mapping in the area, including the property, at the scale 1:20 000 (Rondot, 1989). SOQUEM geologists also mapped the quartzite and adjacent rocks in the area, including the property, at the scale 1:5 000 (Gilbert 1981). However, very little exploration has been completed on the property itself.

In 2014, Rogue Resources Inc. (“Rogue”) completed an airborne magnetic survey on their property, which is immediately adjacent to the Charlevoix property, and included in the area of the Charlevoix property in the survey. Rogue delineated northeast-southwest trending magnetic highs at the flanks of a magnetic low (Paul 2014).

In 2015, Rogue completed an airborne EM-VLF survey in the same area. The Quebec Silica claims are noted to have a low in the VLF total-field response and a high in the VLF quadrature response. The first vertical derivative of the magnetic field indicates a general ENE trend to the local magnetic fabric. The northern portion of the claims are magnetically quiet (Letourneau and Paul 2015).

In 2018, MacDonald Mines Exploration Ltd. (“MacDonald Mines”) completed a grab sampling program on claim 2404904 (St.-Pierre and Wray 2017). MacDonald Mines collected six quartzite samples for geochemical analysis. All samples contained >98.42% silica.

Table 6-1: List of historic exploration activities on the property.

Year	Company	Type of Exploration	Results	Reference
2018	MacDonald Mines	sampling: 6 samples collected on claim 2404904	all samples contain >98.43% SiO ₂	GM70552
2015	Rogue Resources	airborne VLF-EM	Delineated high VLF quadrature response	GM69339
2014	Rogue Resources	airborne magnetic survey	clear NE-SW trending of linear magnetic high delineated; centre of the property magnetic low	GM69341

No historical mineral resource or mineral reserve estimates exist on the property. No historic mining production was completed on the property.

7.0 GEOLOGICAL SETTING AND MINERALIZATION

7.1 Regional Geology

The property is located with the Grenville Province of the Canadian Shield. The Grenville Province is a ~1.1 Ga orogenic belt that forms the southeast margin of Laurentia (Easton 1992). It consists of southeast-dipping

allochthonous terranes and is divided into the Grenville Front Tectonic Zone, the Central Gneiss Belt and the Central Metasedimentary Belt. The Grenville Front separates the Grenville Province from the Superior Province (Sigeom 2020).

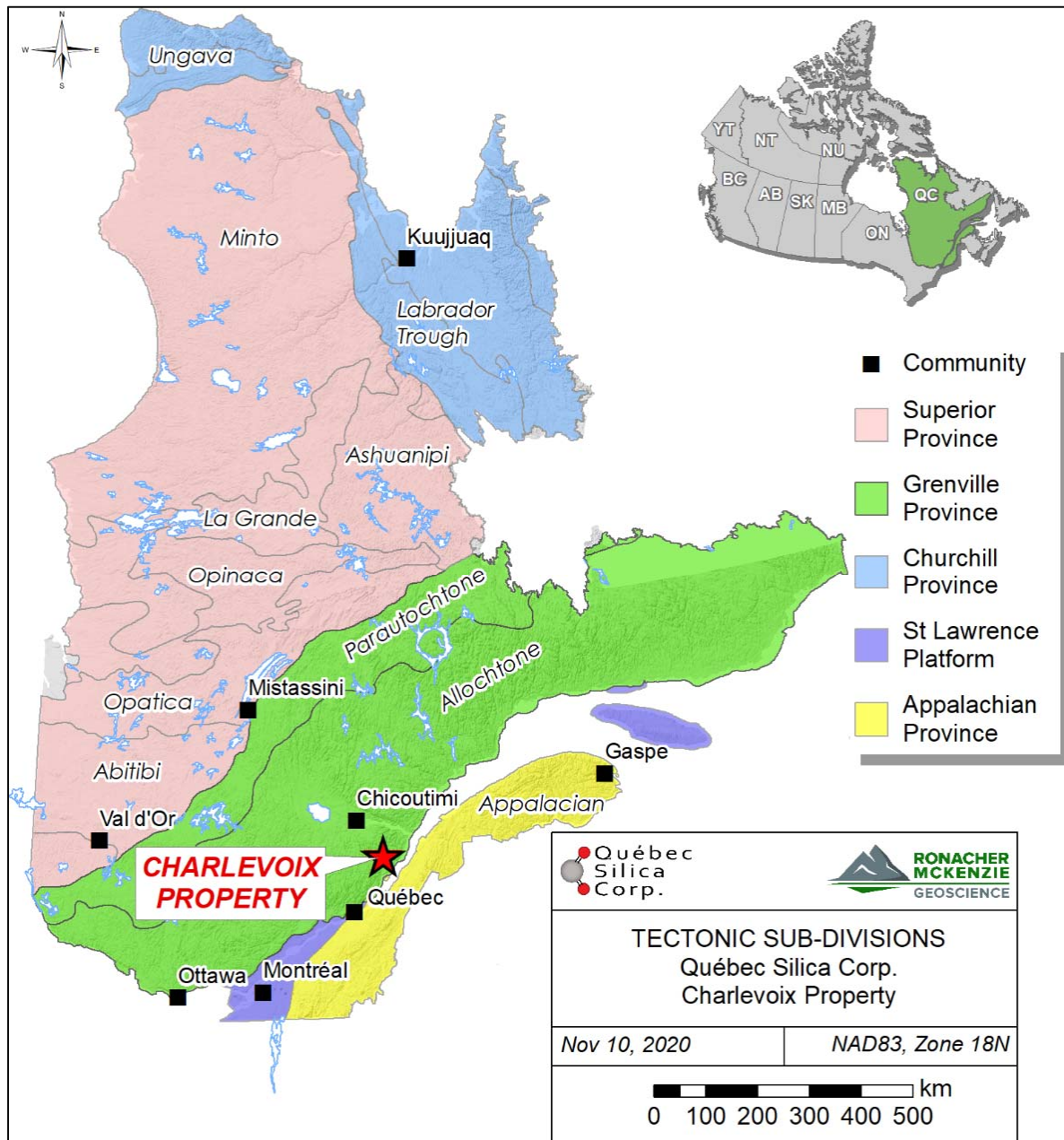


Figure 7-1: Map showing the location of the property in the Grenville Province.

Most parts of the Grenville Province were affected by the Grenville Orogeny (~1100-1170 Ma). Mafic dikes and alkalic and carbonatitic magmas were emplaced into rocks of the Grenville Province prior to weathering, erosion and subsequent deposition of Paleozoic sedimentary rocks (Easton 1992).

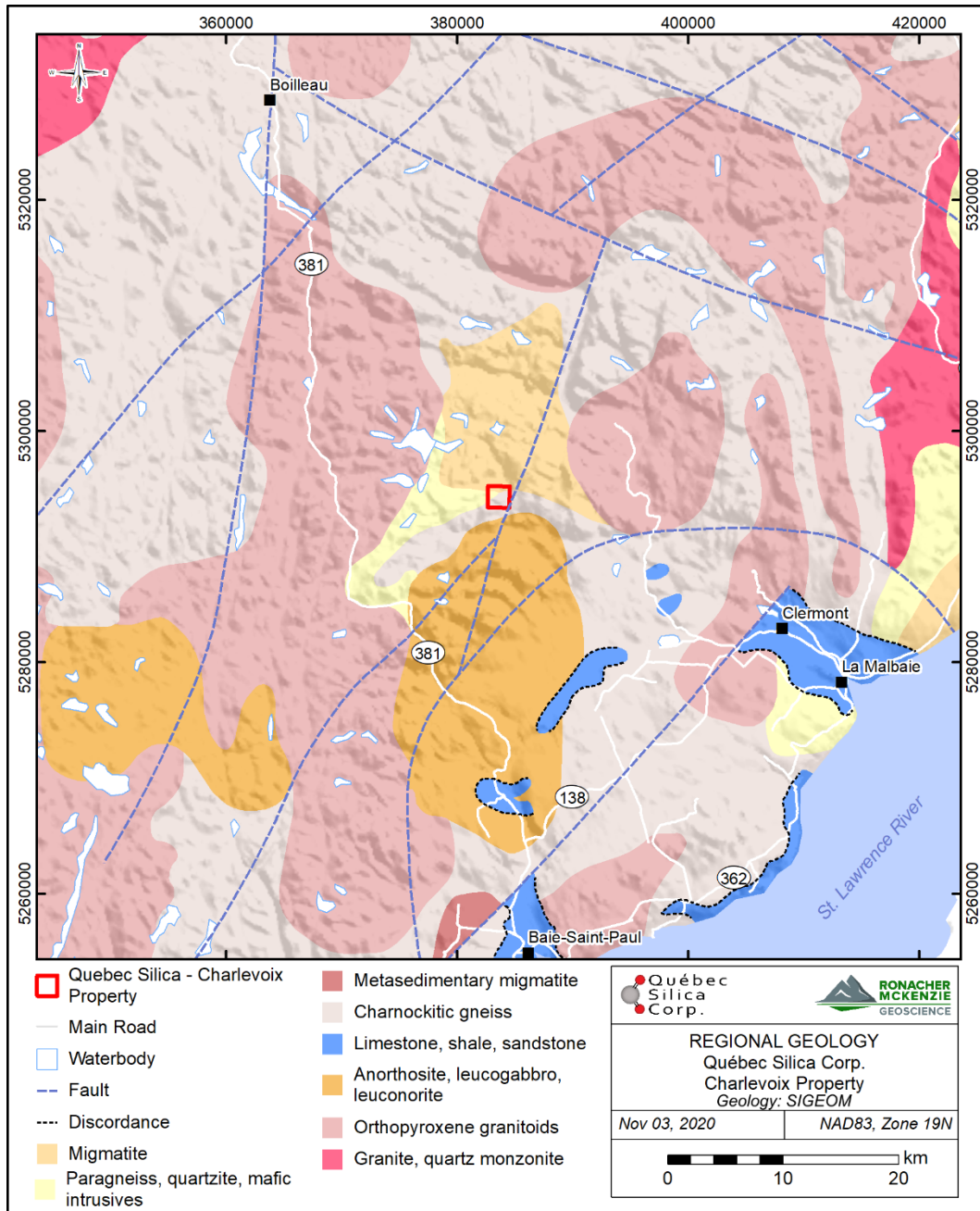


Figure 7-2: Regional geology showing the Charlevoix property.

7.2 Local Geology

The Charlevoix area consists of Proterozoic metasedimentary and metavolcanic rocks (J. Rondot 1979) including paragneiss with quartzite and migmatite (Rondot 1971) (Figure 7-3). The migmatites grade into charnockites. Ultramafic rocks occur locally.

Quartzites and impure quartzites form bands across the region of between 100 m and 260 m width.

North-northeast trending faults and older east-southeast trending faults characterize the region (Rondot 1971). The latter faults are cut off the NNE-trending faults. The NNE-trending faults typically dip very steeply to the west-northwest.

7.3 Property Geology and Mineralization

The geology of the area is characterized by pink, garnet-rich granitic migmatites in which domains of paragneiss with quartzite are preserved (Rondot, 1971). The rocks on the property belong to the Formation de la Galette; the rocks form an isoclinal fold on the property. The core of the fold consist of paragneiss and garnet gneiss of the upper Formation de la Galette (membre supérieur/upper member), followed by the Quartzite du Petit lac Malbaie (middle Formation de la Galette). The outer part of the fold limbs consists of paragneiss with sillimanite, garnet and locally cordierite and spinel (lower Formation de la Galette).

The northern part of the property is characterized by pink, garnet-phyric migmatite of the lower Formation de la Galette and the southern part by the Charlevoix charnockite complex. Minor amphibolite also occurs on the property.

Rondot (1979) described the quartzite of the Formation de la Galette to be very homogenous and very pure. Quebec Silica has completed insufficient work to determine the geological controls on the quartzite and the length, width, depth and continuity of the quartzite, which remain unknown at this stage.

7.3.1 Structure

The area is characterized by tight folds with the fold axes trending northeast and east-west (Rondot, 1971; Rondot, 1989).

Regional faults trend north-northeast and steeply dipping west-northwest (Rondot, 1971). Rondot (1971) observed a horizontal offset of 150 m to 200 m for the west-northwest trending faults. A vertical offset could not be determined. Older faults trend southeast and are cut off by the north-northeast trending faults.

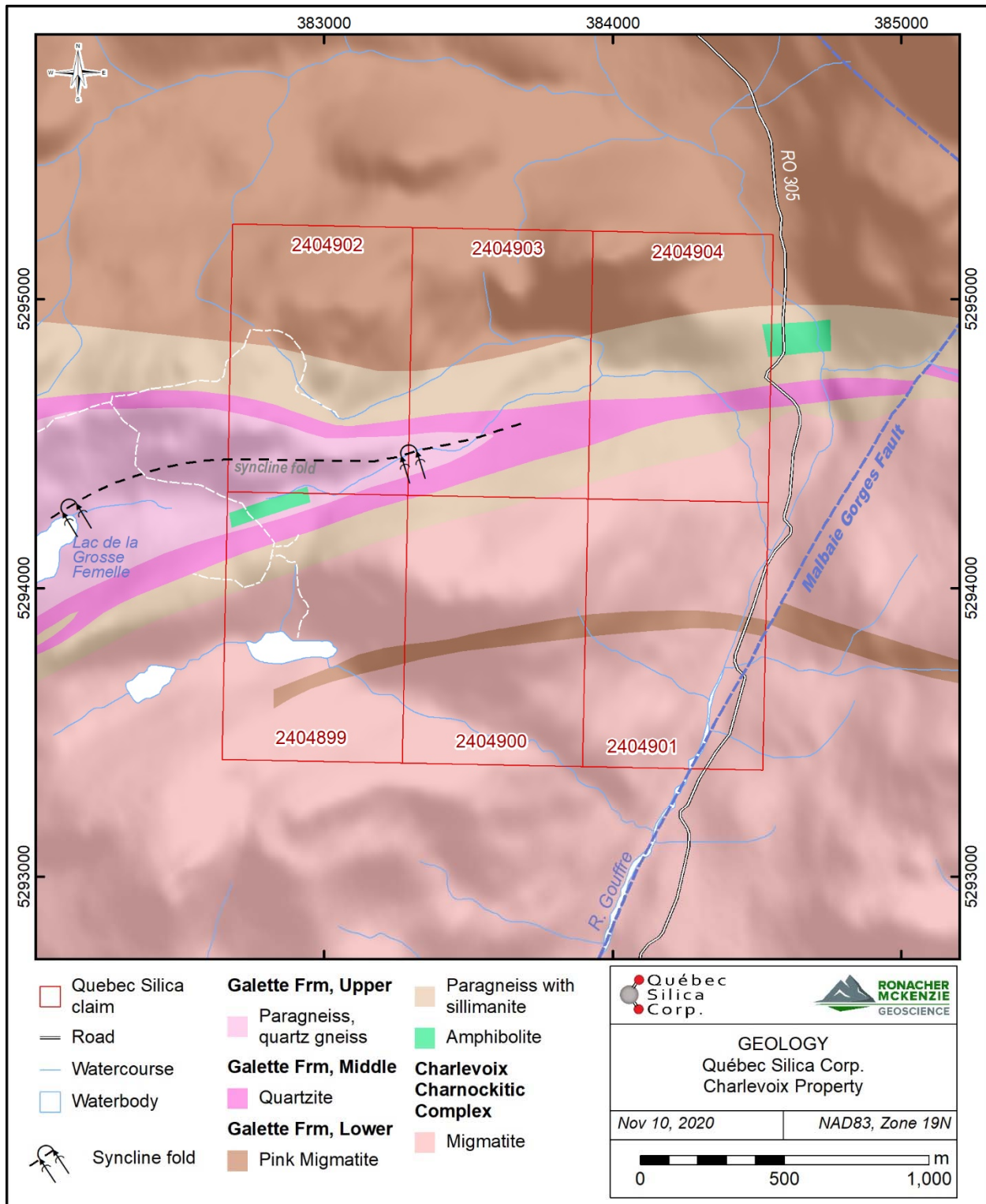


Figure 7-3: Property geology map.

8.0 DEPOSIT TYPES

Silica is mined from various types of silica-bearing materials, including quartzite (massive quartz), sand, gravel and chert (Murphy 1960). The type of silica at the Charlevoix property is quartzite. The quartzite formed during high-grade metamorphism when silica was segregated and formed bands within the paragneiss and migmatite.

Quartzite at Charlevoix is a part of the rock sequence and can be explored by following existing silica bands and by searching for additional bands. The exploration program was designed to test the extent and purity of the known quartzite.

Silica occurs in various degrees of purity. Murphy (1960) considers material with a silica content of 95% as pure. However, certain uses of silica required a higher purity with minimal amounts of aluminum, iron oxide, titanium and sulfur (Murphy 1960).

9.0 EXPLORATION

Quebec Silica retained Waldo Sciences Inc. (“Waldo Sciences”) to complete an exploration program on the property from September 2 to 14, 2020. Exploration consisted of:

- Collecting grab samples
- Collecting hammer drill samples
- Structural mapping
- VLF-EM survey

9.1 Sampling

Waldo Sciences collected a total of 82 rock samples and seven powder samples to assess the quartzite on the property (Table 9-1). Sample locations are shown on Figure 9-1. The rock samples were collected using hammer and chisel and bagged into a plastic bag with a pre-numbered sample tag. The powder samples were collected using a Dewalt 20V Max hammer drill with dust collector and ¾”-diameter, 12” carbide tip (Figure 9-2). Powder was collected to obtain a representative sample of a bigger volume of rock. The vacuum system and the filter were cleaned thoroughly after taking each sample to prevent cross-contamination. The drilled hole was filled with a wooden dowel to mark the sample location. The extent of the area that was sampled is shown on Figure 9-1.

All samples were of good quality; they are representative of the immediate area from where the samples were collected. The QPs did not observe any sampling biases.

Table 9-1: List of samples collected on the property in 2020

Sample ID	Sample Type	Rock Type	Easting	Northing	SiO2 (%)
B498001	Rock Sample 1	Quartzite	384528	5294700	98.21

Sample ID	Sample Type	Rock Type	Easting	Northing	SiO2 (%)
B498002	Rock Sample 2	Quartzite	384528	5294701	98.47
B498003	Rock Sample 3	Quartzite	384528	5294702	98.71
B498004	Rock Sample 4	Quartzite	384528	5294703	98.90
B498005	Rock Sample 5	Quartzite	384528	5294704	98.47
B498006	Rock Sample 6	Quartzite	384528	5294705	98.73
B498007	Rock Sample 7	Quartzite	384488	5294702	98.42
B498008	Rock Sample 8	Quartzite	384469	5294700	98.17
B498009	Rock Sample 9	Quartzite	384312	5294685	97.87
B498010	Rock Sample 10	Quartzite	384289	5294699	97.15
B498011	Powdered Sample 1	Quartzite	384525	5294699	98.15
B498012	Powdered Sample 2	Quartzite	384531	5294697	98.01
B498013	Powdered Sample 3	Quartzite	384533	5294696	98.30
B498014	Powdered Sample 4	Quartzite	384529	5294701	97.55
B498015	Powdered Sample 5	Quartzite	384527	5294702	97.72
B498016	Rock Sample 11	Quartzite	384516	5294690	96.28
B498017	Rock Sample 12	Quartzite	384516	5294693	98.81
B498018	Powdered Sample 6	Quartzite	384515	5294701	98.11
B498019	Powdered Sample 7	Quartzite	384505	5294694	96.82
B498020	Rock Sample 13	Quartzite	384501	5294691	97.86
B498021	Rock Sample 14	Quartzite	384501	5294696	98.45
B498022	Rock Sample 15	Quartzite	384501	5294700	98.57
B498023	Rock Sample 16	Quartzite	384477	5294696	98.07
B498024	Rock Sample 17	Quartzite	384473	5294692	97.93
B498025	Rock Sample 18	Quartzite	384475	5294694	98.09
B498026	Rock Sample 19	Quartzite	382732	5294603	97.68
B498027	Rock Sample 20	Quartzite	383675	5294597	98.57
B498028	Rock Sample 21	Quartzite	383675	5294594	98.00
B498029	Rock Sample 22	Quartzite	383674	5294590	97.39
B498030	Rock Sample 23	Quartzite	384675	5294589	97.30
B498031	Rock Sample 24	Quartzite	383682	5294600	98.31
B498032	Rock Sample 25	Quartzite	383686	5294602	98.83
B498033	Rock Sample 26	Quartzite	383685	5294605	98.11
B498034	Rock Sample 27	Quartzite	383684	5294608	98.21
B498035	Rock Sample 28	Quartzite	383686	5294607	98.76
B498036	Rock Sample 29	Quartzite	383688	5294608	98.32
B498037	Rock Sample 30	Quartzite	383657	5294614	99.00
B498038	Rock Sample 31	Quartzite	383690	5294611	97.83
B498039	Rock Sample 32	Quartzite	383699	5294625	99.27
B498040	Rock Sample 33	Quartzite	383699	5294622	97.56
B498041	Rock Sample 34	Quartzite	383706	5294632	98.61
B498042	Rock Sample 35	Quartzite	383706	5294629	97.72
B498043	Rock Sample 36	Quartzite	384526	5294699	98.53
B498044	Rock Sample 37	Quartzite	384252	5294675	98.29
B498045	Rock Sample 38	Quartzite	384533	5294691	97.97
B498047	Rock Sample 39	Quartzite	384257	5294679	97.43
B498048	Rock Sample 40	Quartzite	384259	5294681	97.96

Sample ID	Sample Type	Rock Type	Easting	Northing	SiO2 (%)
B498049	Rock Sample 41	Quartzite	384262	5294682	97.92
B498050	Rock Sample 42	Quartzite	384255	5294674	97.18
B498051	Rock Sample 43	Quartzite	384251	5294676	98.05
B498052	Rock Sample 44	Quartzite	384250	5294677	98.12
B498053	Rock Sample 45	Quartzite	384248	5294675	96.90
B498054	Rock Sample 46	Quartzite	384238	5294667	97.83
B498055	Rock Sample 47	Quartzite	384234	5294667	98.14
B498056	Rock Sample 48	Quartzite	384238	5294665	97.40
B498057	Rock Sample 49	Quartzite	384234	5294671	97.81
B498058	Rock Sample 50	Quartzite	384235	5294670	97.43
B498059	Rock Sample 51	Quartzite	384235	5294668	98.03
B498060	Rock Sample 52	Quartzite	384234	5294668	98.31
B498061	Rock Sample 53	Quartzite	384233	5294667	97.39
B498062	Rock Sample 54	Quartzite	384235	5294669	97.44
B498063	Rock Sample 55	Quartzite	384529	5294696	98.51
B498064	Rock Sample 56	Quartzite	384221	5294665	97.52
B498065	Rock Sample 57	Quartzite	384215	5294667	97.67
B498066	Rock Sample 58	Quartzite	384211	5294665	97.96
B498067	Rock Sample 59	Quartzite	384208	5294663	98.47
B498068	Rock Sample 60	Quartzite	384204	5294663	97.90
B498069	Rock Sample 61	Quartzite	384534	5294692	98.67
B498070	Rock Sample 62	Quartzite	384534	5294692	98.31
B498071	Rock Sample 63	Quartzite	384530	5294690	96.83
B498072	Rock Sample 64	Quartzite	384524	5294701	98.41
B498073	Rock Sample 65	Quartzite	384523	5294700	98.64
B498074	Rock Sample 66	Quartzite	384522	5294698	97.23
B498075	Rock Sample 67	Quartzite	384512	5294697	97.86
B498076	Rock Sample 68	Quartzite	384461	5294692	97.65
B498077	Rock Sample 69	Quartzite	384461	5294693	97.81
B498078	Rock Sample 70	Quartzite	384461	5294693	98.61
B498079	Rock Sample 71	Quartzite	384454	5294691	98.37
B498080	Rock Sample 72	Quartzite	384452	5294694	98.00
B498081	Rock Sample 73	Quartzite	384452	5294698	97.22
B498082	Rock Sample 74	Quartzite	384452	5294694	98.07
B498083	Rock Sample 75	Quartzite	384319	5294681	98.28
B498084	Rock Sample 76	Quartzite	384305	5294684	98.33
B498085	Rock Sample 77	Quartzite	384303	5294686	97.86
B498086	Rock Sample 78	Quartzite	384301	5294688	98.03
B498087	Rock Sample 79	Quartzite	384301	5294689	97.44
B498088	Rock Sample 80	Quartzite	384297	5294690	97.91
B498089	Rock Sample 81	Paragneiss	382805	5294903	78.67
B498090	Rock Sample 82	Paragneiss	382718	5294648	70.99

Eighty-three of the 87 quartzite sample consisted of >97.00% SiO₂ (Table 9-1); the average SiO₂ concentration of all quartzite samples is 98.01%. The major element concentrations in the samples is shown in Table 9-2. The main impurities are Al and K, potentially indicated mica, and Fe, suggesting the presence of iron oxides.

Table 9-2: Major element concentrations of the samples collected on the property.

SAMPLE ID	Al ₂ O ₃ (%)	BaO (%)	CaO (%)	Cr ₂ O ₃ (%)	Fe ₂ O ₃ (%)	K ₂ O (%)	MgO (%)	MnO (%)	Na ₂ O (%)	P ₂ O ₅ (%)	SO ₃ (%)	SiO ₂ (%)	SrO (%)	TiO ₂ (%)	Total (%)
B498001	0.58	0.01	0.02	<0.01	0.38	0.11	0.02	<0.01	0.02	0.01	<0.01	98.21	<0.01	0.07	99.5
B498002	0.45	0.01	0.01	<0.01	0.45	0.14	0.03	<0.01	0.01	0.01	<0.01	98.47	0.01	0.05	99.73
B498003	0.37	0.01	0.02	<0.01	0.4	0.12	0.02	<0.01	0.02	0.01	0.01	98.71	<0.01	0.04	99.82
B498004	0.38	0.01	0.01	0.01	0.59	0.09	0.01	<0.01	0.02	0.02	<0.01	98.9	<0.01	0.05	100.1
B498005	0.53	0.01	0.01	<0.01	0.64	0.11	0.02	<0.01	0.02	0.01	<0.01	98.47	<0.01	0.04	99.93
B498006	0.47	0.01	0.01	0.01	0.53	0.1	0.01	0.01	0.03	0.01	<0.01	98.73	<0.01	0.07	100.05
B498007	0.54	0.01	0.01	<0.01	0.58	0.21	0.02	0.01	0.03	0.01	<0.01	98.42	<0.01	0.07	99.95
B498008	0.88	0.01	0.02	0.01	0.61	0.1	0.02	0.01	0.21	0.01	<0.01	98.17	<0.01	0.06	100.15
B498009	0.47	0.01	0.02	<0.01	0.56	0.22	0.01	0.01	0.02	0.01	<0.01	97.87	<0.01	0.06	99.26
B498010	1	0.01	0.06	<0.01	1.17	0.15	0.15	0.02	0.05	0.04	<0.01	97.15	0.01	0.06	99.82
B498011	0.46	0.01	<0.01	<0.01	0.26	0.06	0.01	<0.01	0.02	0.01	<0.01	98.15	<0.01	0.05	99.16
B498012	0.54	0.01	0.01	<0.01	0.48	0.17	0.01	<0.01	0.05	0.01	<0.01	98.01	<0.01	0.05	99.5
B498013	0.33	0.01	<0.01	0.01	1.1	0.08	<0.01	0.01	0.01	0.01	<0.01	98.3	<0.01	0.05	99.93
B498014	1.01	0.01	0.03	0.01	0.75	0.32	0.02	0.01	0.07	0.02	0.01	97.55	<0.01	0.06	100.15
B498015	0.49	0.01	0.02	0.01	0.87	0.12	0.02	0.01	0.04	0.01	<0.01	97.72	<0.01	0.06	99.94
B498016	1.77	0.02	0.02	0.01	0.83	0.41	0.02	0.01	0.07	0.01	<0.01	96.28	<0.01	0.12	99.77
B498017	0.39	0.01	<0.01	0.01	0.6	0.12	<0.01	<0.01	0.01	0.01	<0.01	98.81	0.01	0.05	100.05
B498018	0.63	0.01	0.01	<0.01	0.4	0.07	<0.01	<0.01	0.01	0.01	<0.01	98.11	<0.01	0.08	99.68
B498019	1.03	0.01	0.01	0.01	1	0.05	<0.01	0.01	0.01	0.01	<0.01	96.82	<0.01	0.14	99.65
B498020	0.41	0.01	<0.01	<0.01	0.64	0.06	<0.01	0.01	0.01	0.01	<0.01	97.86	<0.01	0.1	99.14
B498021	0.34	0.01	0.02	<0.01	0.56	0.08	<0.01	<0.01	0.01	0.01	<0.01	98.45	<0.01	0.05	99.58
B498022	0.57	0.01	0.01	<0.01	0.57	0.21	<0.01	<0.01	0.03	0.01	<0.01	98.57	<0.01	0.04	100.05
B498023	0.54	0.01	0.01	<0.01	0.53	0.06	<0.01	<0.01	0.01	0.01	<0.01	98.07	<0.01	0.07	99.67
B498024	0.64	0.01	0.01	<0.01	0.47	0.08	<0.01	<0.01	0.05	0.01	<0.01	97.93	<0.01	0.05	99.4
B498025	0.75	0.01	0.01	0.01	0.52	0.2	<0.01	<0.01	0.11	0.01	<0.01	98.09	<0.01	0.05	99.75
B498026	1.01	0.02	0.01	<0.01	0.58	0.09	0.02	0.01	0.02	0.02	<0.01	97.68	<0.01	0.09	100
B498027	0.53	0.01	0.02	<0.01	0.67	0.11	0.07	0.01	0.03	0.02	<0.01	98.57	<0.01	0.07	100.2
B498028	0.77	0.01	0.03	<0.01	0.62	0.19	0.05	0.01	0.05	0.02	<0.01	98	<0.01	0.09	99.89
B498029	0.92	0.01	0.02	0.01	0.7	0.25	0.08	0.01	0.04	0.01	<0.01	97.39	<0.01	0.1	99.69
B498030	0.66	0.01	0.03	0.03	0.97	0.14	0.24	0.01	0.04	0.02	<0.01	97.3	<0.01	0.1	99.85
B498031	0.42	0.01	0.01	<0.01	0.67	0.09	<0.01	0.01	0.04	0.01	<0.01	98.31	<0.01	0.07	99.76
B498032	0.47	0.01	0.01	<0.01	0.58	0.13	<0.01	0.01	0.01	0.01	<0.01	98.83	<0.01	0.05	100.25
B498033	0.61	0.01	0.01	<0.01	0.67	0.16	0.02	0.01	0.04	0.01	<0.01	98.11	<0.01	0.06	99.81
B498034	0.63	0.01	0.01	0.01	0.73	0.07	0.02	0.01	0.01	0.01	<0.01	98.21	<0.01	0.05	99.81
B498035	0.31	0.01	<0.01	<0.01	0.65	0.04	<0.01	0.01	<0.01	0.01	<0.01	98.76	<0.01	0.05	99.88
B498036	0.25	0.01	<0.01	<0.01	0.52	0.07	<0.01	<0.01	<0.01	0.01	<0.01	98.32	<0.01	0.03	99.16
B498037	0.24	0.01	<0.01	0.01	0.59	0.03	0.02	0.01	0.03	0.01	<0.01	99	0.01	0.05	99.92
B498038	0.35	0.01	0.01	<0.01	1.18	0.03	0.05	0.01	<0.01	0.02	<0.01	97.83	<0.01	0.06	99.56
B498039	0.12	0.01	0.01	<0.01	0.62	0.01	0.01	0.01	0.01	0.01	<0.01	99.27	<0.01	0.04	99.88
B498040	0.42	0.01	0.01	0.01	1.16	0.11	0.03	0.01	0.01	0.01	<0.01	97.56	<0.01	0.04	99.21
B498041	0.33	0.01	0.01	<0.01	0.69	0.06	0.03	0.01	0.01	0.01	<0.01	98.61	<0.01	0.04	99.77
B498042	0.34	0.01	0.02	<0.01	0.77	0.06	0.04	0.01	0.01	0.01	<0.01	97.72	<0.01	0.04	99.17
B498043	0.33	0.01	<0.01	0.01	0.61	0.11	0.01	0.01	0.02	0.01	<0.01	98.53	<0.01	0.05	99.64
B498044	0.48	0.01	0.01	<0.01	0.6	0.14	0.03	0.01	0.05	0.01	<0.01	98.29	<0.01	0.06	99.65
B498045	0.69	0.01	<0.01	0.01	0.55	0.12	0.04	<0.01	0.01	0.01	<0.01	97.97	<0.01	0.09	99.54
B498047	0.96	0.01	0.01	<0.01	0.67	0.18	0.04	0.01	0.02	0.01	<0.01	97.43	<0.01	0.08	99.57
B498048	0.65	0.01	0.01	<0.01	0.58	0.18	0.04	0.01	0.08	0.01	<0.01	97.96	<0.01	0.09	99.64

SAMPLE ID	Al ₂ O ₃ (%)	BaO (%)	CaO (%)	Cr ₂ O ₃ (%)	Fe ₂ O ₃ (%)	K ₂ O (%)	MgO (%)	MnO (%)	Na ₂ O (%)	P ₂ O ₅ (%)	SO ₃ (%)	SiO ₂ (%)	SrO (%)	TiO ₂ (%)	Total (%)
B498049	0.74	0.01	0.01	<0.01	0.66	0.13	0.02	0.01	0.02	0.01	<0.01	97.92	0.01	0.08	100.05
B498050	0.75	0.01	0.01	0.01	1.26	0.15	0.03	0.01	0.02	0.01	<0.01	97.18	<0.01	0.08	99.73
B498051	0.45	0.01	0.01	<0.01	0.75	0.1	0.03	0.01	0.01	0.01	<0.01	98.05	<0.01	0.07	99.81
B498052	0.77	0.01	0.01	0.01	0.77	0.13	0.03	0.01	0.02	0.01	<0.01	98.12	<0.01	0.08	99.98
B498053	1.15	0.01	0.01	0.01	0.67	0.26	0.03	0.01	0.07	0.01	<0.01	96.9	<0.01	0.09	99.23
B498054	0.83	0.01	<0.01	0.01	0.69	0.08	0.02	0.01	0.01	0.01	<0.01	97.83	0.01	0.08	99.64
B498055	0.69	0.01	<0.01	0.01	0.61	0.12	0.02	<0.01	0.01	0.01	<0.01	98.14	<0.01	0.08	99.84
B498056	0.82	0.01	0.01	0.01	0.78	0.14	0.04	0.01	0.04	0.01	<0.01	97.4	<0.01	0.08	99.38
B498057	0.76	0.01	<0.01	<0.01	0.83	0.12	0.02	0.01	0.01	0.01	<0.01	97.81	<0.01	0.09	99.52
B498058	0.62	0.01	<0.01	<0.01	0.89	0.13	0.03	0.01	0.01	0.01	<0.01	97.43	<0.01	0.09	99.25
B498059	0.69	0.01	0.01	0.01	0.7	0.13	0.03	0.01	0.03	0.01	<0.01	98.03	<0.01	0.07	99.61
B498060	0.53	0.01	0.01	<0.01	0.95	0.13	0.04	0.01	0.01	0.01	<0.01	98.31	<0.01	0.09	100
B498061	1.24	0.02	0.01	0.01	0.88	0.26	0.06	0.01	0.09	0.01	<0.01	97.39	<0.01	0.1	100.1
B498062	0.82	0.01	0.01	0.01	1.07	0.16	0.06	0.01	0.03	0.01	<0.01	97.44	<0.01	0.11	99.71
B498063	0.38	0.01	0.01	0.01	0.77	0.1	0.02	0.01	0.01	0.01	<0.01	98.51	<0.01	0.05	99.83
B498064	0.94	0.01	0.01	0.01	0.96	0.26	0.05	0.01	0.05	0.01	<0.01	97.52	<0.01	0.07	99.73
B498065	0.63	0.01	0.01	<0.01	0.85	0.18	0.04	0.01	0.03	0.01	<0.01	97.67	<0.01	0.07	99.39
B498066	0.63	0.01	0.01	<0.01	0.62	0.15	0.02	0.01	0.04	0.01	<0.01	97.96	<0.01	0.08	99.64
B498067	0.43	0.01	0.01	0.01	0.62	0.15	0.02	0.01	0.04	0.01	<0.01	98.47	<0.01	0.06	99.71
B498068	0.42	0.01	0.01	0.01	0.69	0.13	0.03	0.01	0.06	0.01	<0.01	97.9	<0.01	0.05	99.23
B498069	0.29	0.01	<0.01	0.01	0.72	0.09	0.01	0.01	0.01	0.01	<0.01	98.67	<0.01	0.06	99.71
B498070	0.35	0.01	0.01	<0.01	0.58	0.09	0.02	<0.01	0.01	0.01	<0.01	98.31	<0.01	0.05	99.35
B498071	1.2	0.01	0.01	<0.01	0.84	0.53	0.02	0.01	0.03	0.01	<0.01	96.83	<0.01	0.09	99.58
B498072	0.28	0.01	<0.01	0.01	0.69	0.07	0.02	0.01	0.02	0.01	<0.01	98.41	<0.01	0.05	99.57
B498073	0.49	0.01	<0.01	0.01	0.71	0.18	0.02	<0.01	0.02	0.01	<0.01	98.64	<0.01	0.05	100.15
B498074	0.93	<0.01	0.01	<0.01	0.71	0.12	0.02	0.01	0.04	0.01	<0.01	97.23	0.01	0.07	99.27
B498075	0.49	0.01	0.01	<0.01	0.78	0.16	0.02	0.01	0.02	0.01	<0.01	97.86	<0.01	0.05	99.45
B498076	0.75	<0.01	<0.01	<0.01	0.89	0.12	0.03	0.01	0.01	0.01	<0.01	97.65	<0.01	0.07	99.53
B498077	1.17	<0.01	0.01	<0.01	0.94	0.08	0.05	0.01	0.06	0.01	<0.01	97.81	<0.01	0.11	100.25
B498078	0.3	0.01	<0.01	<0.01	0.69	0.06	0.02	0.01	0.02	0.01	<0.01	98.61	<0.01	0.06	99.68
B498079	0.45	<0.01	<0.01	0.01	0.66	0.12	0.02	0.01	0.03	0.01	<0.01	98.37	<0.01	0.04	99.64
B498080	0.35	<0.01	<0.01	<0.01	0.66	0.11	0.01	0.01	0.01	0.01	<0.01	98	<0.01	0.04	99.12
B498081	0.93	0.01	0.03	<0.01	0.87	0.32	0.06	0.01	0.12	0.01	<0.01	97.22	<0.01	0.08	99.64
B498082	0.54	0.01	0.01	0.01	0.57	0.11	0.02	0.01	0.06	0.01	<0.01	98.07	<0.01	0.06	99.46
B498083	0.36	0.01	0.01	<0.01	0.85	0.07	0.02	0.01	0.04	0.01	<0.01	98.28	<0.01	0.09	99.88
B498084	0.44	0.01	0.01	<0.01	0.64	0.15	0.01	0.01	0.03	0.01	<0.01	98.33	<0.01	0.06	99.88
B498085	0.68	0.01	0.01	<0.01	0.55	0.19	0.03	0.01	0.11	0.01	<0.01	97.86	0.01	0.05	99.61
B498086	0.37	0.01	0.01	<0.01	0.54	0.15	0.02	0.01	0.04	0.01	<0.01	98.03	<0.01	0.06	99.17
B498087	0.77	0.01	0.01	<0.01	0.73	0.32	0.05	0.01	0.1	0.01	<0.01	97.44	<0.01	0.07	99.32
B498088	0.66	0.01	0.01	<0.01	0.63	0.19	0.02	0.01	0.11	0.01	<0.01	97.91	<0.01	0.13	99.69
B498089	10.65	0.04	0.73	<0.01	2.49	3.42	0.65	0.03	2.35	0.02	<0.01	78.67	0.01	0.23	99.39
B498090	14.07	0.07	0.99	0.01	6.39	3.19	2.18	0.08	0.84	0.04	0.01	70.99	0.02	0.72	99.76

Detailed analysis of the trace element data indicated that those samples that were collected with the hammer drill contained strongly anomalous W, Cu and Co values of up to 0.2% W (Table 12-3). These elevated values are attributed to the hammer drill bit.

Table 9-3: Selected trace element concentrations of the samples collected on the property.

SAMPLE	Th (ppm)	U (ppm)	V (ppm)	W (ppm)	Zr (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)	Mo (ppm)	Ni (ppm)	Pb (ppm)	Zn (ppm)
B498001	2.54	0.52	6	1	143	<1	<1	10	<1	<1	<2	<2
B498002	2.26	0.55	<5	1	99	<1	<1	<10	<1	<1	<2	<2
B498003	2.92	0.55	5	1	119	<1	<1	10	<1	1	<2	<2
B498004	5.99	0.73	6	1	103	<1	1	10	<1	1	2	2
B498005	4.1	0.71	<5	<1	86	<1	<1	10	<1	1	<2	<2
B498006	0.4	0.21	6	1	156	<1	<1	10	<1	<1	<2	<2
B498007	0.95	0.49	5	1	236	<1	<1	10	<1	<1	<2	<2
B498008	1.42	0.81	5	1	99	<1	<1	20	<1	<1	<2	<2
B498009	1.2	0.4	8	1	126	<1	<1	<10	<1	<1	<2	<2
B498010	6.98	0.78	8	1	104	<1	<1	<10	<1	<1	<2	3
B498011	2.21	0.39	5	347	56	32	33	10	1	1	<2	<2
B498012	3.34	0.68	<5	1760	161	166	33	10	4	3	<2	<2
B498013	2.86	0.47	<5	1350	45	123	62	10	14	11	<2	<2
B498014	2.44	0.55	7	595	105	66	143	10	6	7	<2	<2
B498015	2.45	0.62	7	2020	51	251	483	10	7	15	<2	<2
B498016	2.33	0.77	9	1	147	<1	<1	10	<1	1	<2	<2
B498017	4.9	0.57	7	1	85	<1	<1	10	<1	<1	<2	<2
B498018	3.03	0.42	7	485	135	48	27	10	3	3	<2	6
B498019	4.28	0.61	8	1470	120	146	69	10	8	8	<2	2
B498020	1.84	0.48	8	2	249	<1	<1	10	<1	<1	<2	<2
B498021	2.74	0.63	5	1	190	<1	<1	10	<1	<1	<2	<2
B498022	2.33	0.38	5	1	48	<1	<1	<10	<1	1	<2	<2
B498023	1.99	0.46	10	1	87	<1	<1	10	<1	<1	<2	<2
B498024	2.28	0.68	11	1	64	<1	<1	10	<1	<1	<2	<2
B498025	2.39	0.56	5	1	70	<1	<1	10	<1	<1	<2	<2
B498026	2.91	0.35	9	1	67	<1	<1	10	<1	<1	<2	<2
B498027	3.2	0.45	7	1	74	<1	<1	<10	<1	<1	<2	4
B498028	2.49	0.39	11	1	136	<1	<1	10	<1	1	<2	2
B498029	1.67	0.26	9	1	112	<1	<1	10	<1	1	<2	3
B498030	3.72	0.41	9	1	111	<1	<1	10	<1	2	<2	16
B498031	1.86	0.29	7	1	87	<1	<1	<10	<1	1	<2	<2
B498032	1.86	0.28	5	1	73	<1	<1	<10	<1	<1	<2	<2
B498033	1.74	0.32	9	1	77	<1	<1	10	<1	<1	<2	<2
B498034	2.54	0.53	6	1	94	<1	<1	10	<1	1	<2	<2
B498035	2.41	0.38	<5	1	121	<1	<1	<10	<1	<1	<2	<2
B498036	1.82	0.22	<5	1	44	<1	<1	<10	<1	<1	<2	<2
B498037	2.6	0.61	7	1	80	<1	2	<10	<1	3	3	2
B498038	3.27	0.73	9	1	76	<1	<1	<10	<1	1	<2	<2
B498039	1.65	0.25	<5	1	52	<1	<1	<10	<1	1	<2	<2
B498040	2.36	0.3	<5	1	65	<1	<1	<10	<1	<1	<2	<2
B498041	2.03	0.27	6	1	62	<1	1	<10	<1	1	<2	<2
B498042	2.83	0.4	64	2	133	<1	<1	10	<1	<1	<2	3
B498043	3.51	0.49	10	1	63	<1	<1	<10	<1	<1	<2	<2
B498044	5.66	0.57	5	1	105	<1	<1	<10	<1	<1	<2	<2
B498045	1.8	0.46	19	1	112	<1	<1	<10	<1	<1	<2	<2
B498047	4.55	0.62	10	1	54	<1	<1	<10	<1	<1	<2	<2
B498048	3.94	0.51	8	1	180	<1	<1	<10	<1	<1	<2	<2
B498049	3.03	0.52	9	1	91	<1	<1	<10	<1	1	<2	<2
B498050	4.46	0.64	88	1	71	<1	<1	<10	<1	<1	<2	<2
B498051	2.48	0.4	5	1	94	<1	<1	<10	<1	1	<2	<2
B498052	3.6	0.54	15	1	104	<1	<1	<10	<1	<1	<2	<2
B498053	5.65	0.81	7	1	100	<1	<1	<10	<1	<1	<2	<2

SAMPLE	Th (ppm)	U (ppm)	V (ppm)	W (ppm)	Zr (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)	Mo (ppm)	Ni (ppm)	Pb (ppm)	Zn (ppm)
B498054	3.27	0.47	8	1	84	<1	<1	10	<1	<1	<2	<2
B498055	2.92	0.6	7	1	121	<1	<1	10	<1	1	<2	<2
B498056	2.42	0.51	27	1	111	<1	<1	10	<1	<1	<2	<2
B498057	2.88	0.48	6	1	122	<1	<1	<10	<1	<1	<2	<2
B498058	2.05	0.51	5	1	95	<1	<1	<10	<1	<1	<2	<2
B498059	2.93	0.47	11	1	88	<1	<1	10	<1	<1	<2	<2
B498060	2.72	0.69	7	1	95	<1	<1	<10	<1	<1	<2	<2
B498061	2.99	0.97	9	1	130	<1	<1	10	<1	<1	<2	<2
B498062	3.09	0.65	8	1	113	<1	<1	<10	<1	<1	<2	<2
B498063	3.29	0.31	<5	1	78	<1	<1	<10	<1	<1	<2	<2
B498064	3.8	0.5	7	1	90	<1	<1	<10	<1	<1	<2	<2
B498065	3.05	0.4	<5	<1	90	<1	<1	<10	<1	<1	<2	<2
B498066	3.56	0.46	6	1	90	<1	<1	<10	<1	<1	<2	<2
B498067	4.86	0.49	5	1	106	<1	<1	<10	<1	<1	<2	<2
B498068	2.57	0.27	6	1	50	<1	<1	<10	<1	<1	<2	<2
B498069	1.64	0.47	6	1	98	<1	<1	<10	<1	<1	<2	<2
B498070	2.28	0.44	6	1	73	<1	<1	10	<1	<1	<2	<2
B498071	0.95	0.77	46	1	142	<1	<1	10	<1	<1	<2	<2
B498072	2.01	0.31	7	1	42	<1	<1	10	<1	<1	<2	<2
B498073	2.51	0.65	10	1	93	<1	<1	<10	<1	<1	<2	<2
B498074	2.31	0.56	6	<1	158	<1	2	10	1	3	3	4
B498075	3.45	0.65	5	1	74	1	1	10	<1	2	<2	<2
B498076	3.34	0.55	5	<1	52	1	1	10	<1	1	2	<2
B498077	2.08	0.54	12	1	237	<1	1	10	<1	1	<2	3
B498078	1.26	0.47	<5	<1	87	1	1	<10	<1	<1	<2	<2
B498079	3.68	0.73	<5	<1	66	<1	1	10	<1	3	2	<2
B498080	1.49	0.31	<5	1	53	<1	1	<10	<1	2	<2	<2
B498081	1.35	1.25	6	<1	225	<1	1	10	<1	2	<2	2
B498082	0.87	0.54	<5	1	61	1	1	10	<1	3	<2	<2
B498083	3.3	0.72	6	1	55	1	1	<10	1	2	<2	<2
B498084	1.03	0.53	<5	<1	173	<1	1	<10	<1	<1	<2	<2
B498085	1.07	0.29	<5	<1	95	<1	1	<10	<1	1	<2	2
B498086	0.97	0.34	<5	<1	128	1	1	<10	<1	1	<2	<2
B498087	5.47	1.23	<5	<1	183	1	1	<10	<1	3	<2	2
B498088	1.83	0.59	5	<1	397	1	1	10	<1	1	<2	2
B498089	2.6	1.04	18	<1	233	3	1	10	5	6	28	46
B498090	5.75	0.52	87	<1	360	10	17	10	<1	12	9	102

9.2 Mapping

Mapping consisted dominantly of collecting strike and dip measurements and describing the quartzite. The quartzite is typically blocky and breaks along joints when struck with a hammer. The quartzite is homogeneous between the outcrops that Waldo Science mapped and sampled. The mapping of the limited outcrops on property confirmed that the local geology map is accurate, at least where outcrops were available.

Strike and dip measurements were collected throughout the property. Quartzite outcrops typically strike between 65° and 85° and dip between 40° and 60° to the north.

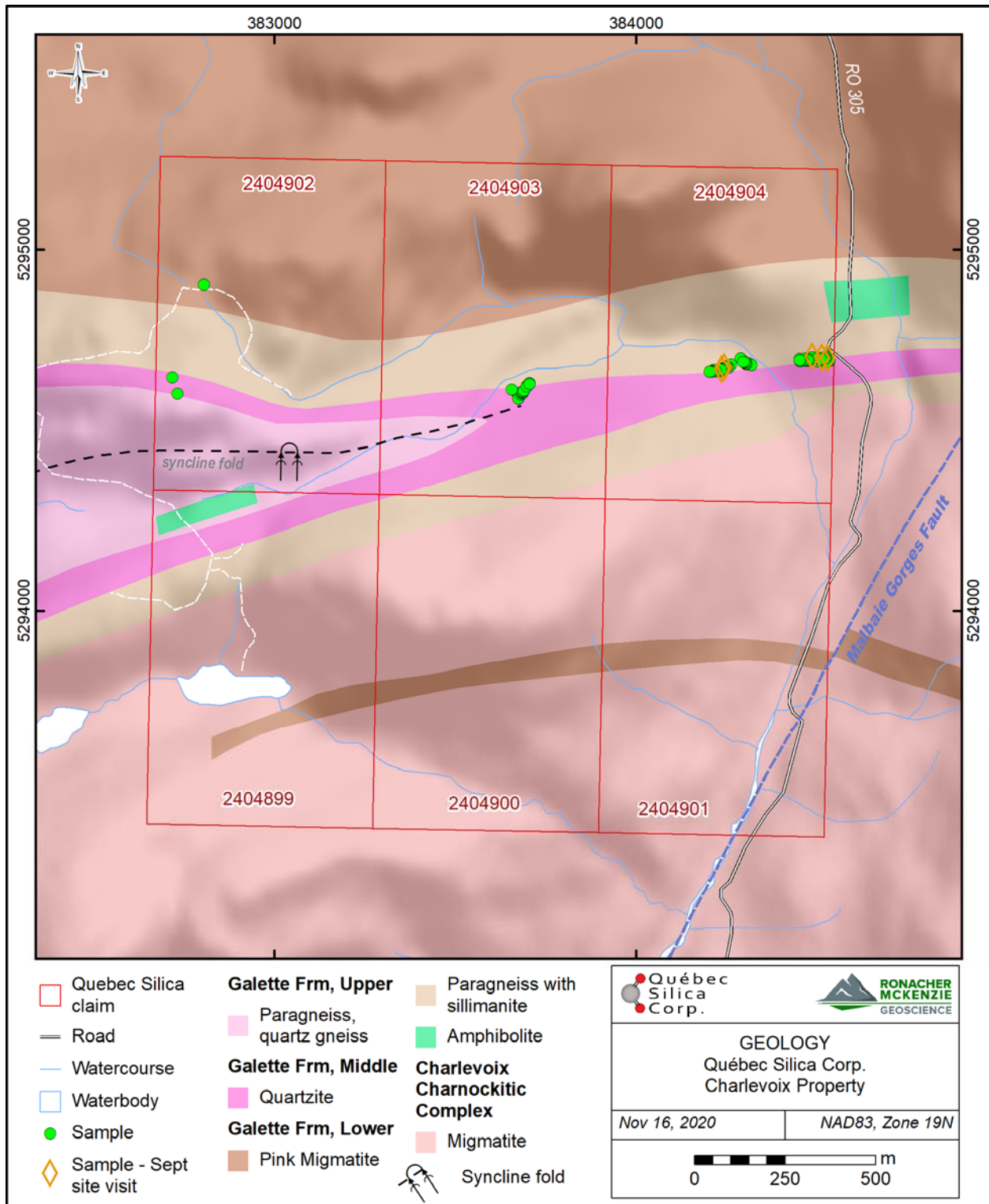


Figure 9-1: Map showing the locations of the samples collected by Québec Silica. The locations of the check-samples collected during the personal inspection are also shown.



Figure 9-2: Dewalt SDS hammer drill 20V MAX with dust extractor D25303DH attached.

9.3 VLF-EM Survey

The VLF-EM survey (very low frequency electromagnetic) is a tool used for identifying conductive and resistive geological units. It measures the vertical deflective component produced by local conductors in an otherwise undisturbed horizontal electromagnetic field emanating from a VLF transmitter. This measurement is known as the “dip-angle”.

The VLF-EM survey was conducted using a Sabre Model 27 VLF-EM receiver unit in conjunction with a Garmin GPS 60 handheld GPS receiver. The VLF receiver was set to obtain a VLF transmission from the U.S. Naval transmitter located in Cutler, Maine, broadcasting at a frequency of 24.0 kHz. The Sabre Model 27 VLF-EM receiver displays readings in analog form, which is manually recorded by the operator.

Once the unit registered a positive signal from Cutler, Maine, the relative field strength was calibrated against areas of known observable outcrop and the gain recorded. This calibration procedure was conducted each day before a survey line was walked on the eastern side of the property along line A-A' line shown in Figure 9-3, in order to authenticate that the VLF-EM unit was registering correctly.

Dip-angle, relative field strength, and GPS coordinates were recorded at 25 metre intervals on the calibration line and the five survey lines (Figure 9-3). No line cutting was completed prior to the survey, the survey lines are not on a grid.

The VLF-EM survey appears to have been successful in differentiating between quartzite and surrounding rocks. Abrupt changes in resistivity were recorded at the quartzite contacts. However, a more detailed survey is required to delineate the quartzite in more areas on the property than the current survey covered.

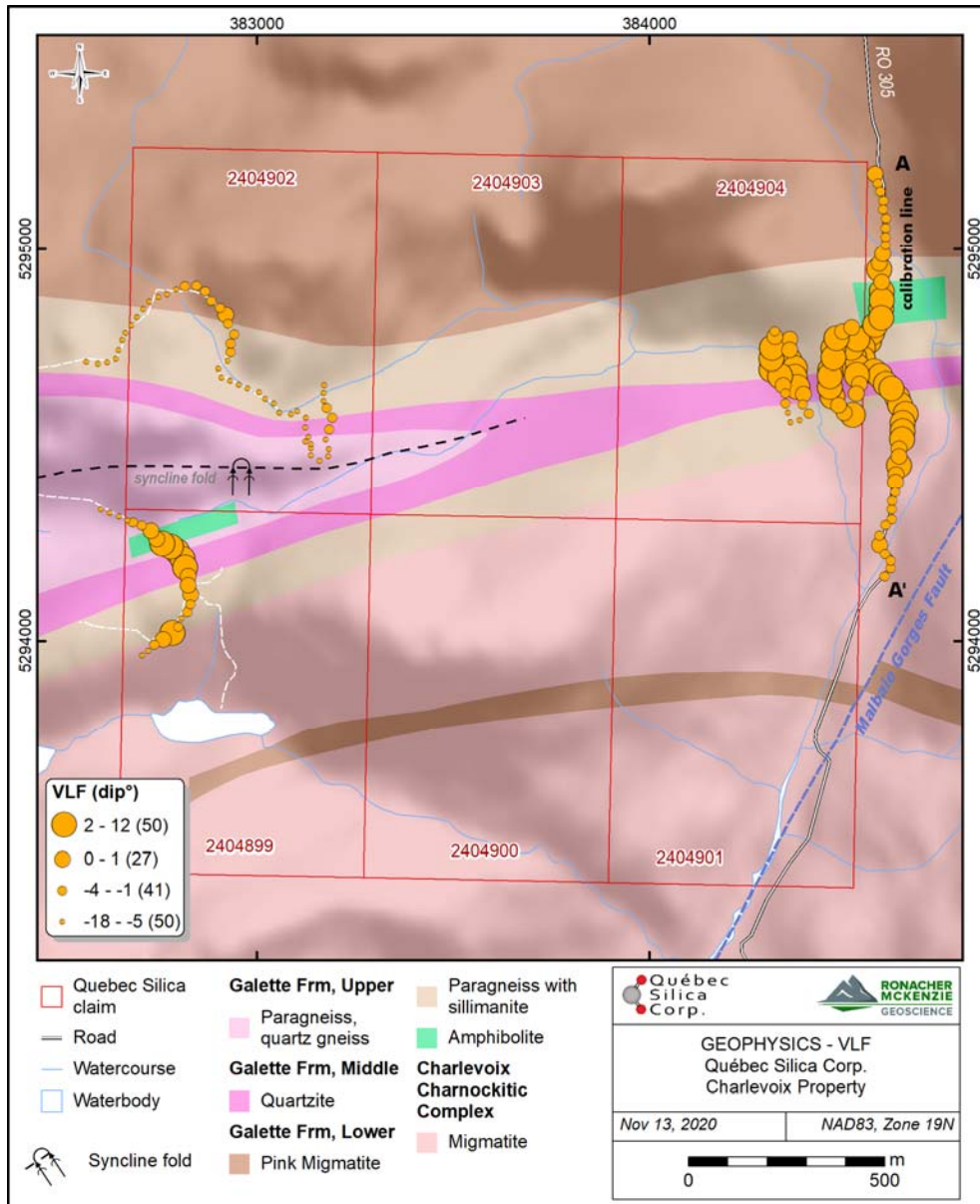


Figure 9-3: Map showing the results of the VLF-EM survey.

9.4 Interpretation

The sampling program was successful in that a quartzite unit was delineated across three of the six claims. The SiO₂ content of the samples ranges from 96.27 to 99.27%. The main impurities are Fe and Al; five of the 87 quartzite samples contain >1.00% Fe₂O₃. The quartzite sampled to date is considered relatively pure although not ultra-pure (>99% SiO₂). Sampling focused on accessible areas on the property. Future sampling that covers a larger area will provide further insight into the consistency of the quartzite unit.

The VLF-EM survey was successful in that it determined resistive zones that were mapped as quartzite and sampled.

Based on the results of the 2020 reconnaissance exploration program the QPs conclude that further exploration for quartzite is warranted on the Charlevoix property.

10.0 DRILLING

No drilling has been completed by Quebec Silica on the property as of the effective date of this report.

11.0 SAMPLE PREPARATION, ANALYSES AND SECURITY

The samples collected during the field program were bagged in plastic sample bags together with pre-numbered sample tags. The bags were closed with zip ties and placed in rice bags. Certified reference materials (“CRM”) and blanks were not included. Samples were delivered to ALS Laboratories (“ALS”) in Val d’Or by Waldo Sciences’ field crew. At Val d’Or ALS crushed the samples to 70% <2 mm and pulverized an aliquot of 250 g to 85% <75 µm. Extra cleaning of both the crusher and pulverizer were completed after each sample. The samples were analyzed by ALS in Vancouver by XRF (ALS code ME-XRF26) for major elements and by Li-borate fusion (ALS codes ME-MS81/ME-4ACD81) for metals and trace elements. ALS is accredited to ISO/IEC 17025:2017 standards for ME-XRF26 and ME-MS81. ALS is independent of Quebec Silica.

ALS included internal standards, blanks and duplicates, which were reviewed by the QPs. Standard BCS-516 was included in the XRF analysis and all values for SiO₂, Al₂O₃ and Fe₂O₃ fell within three standard deviations. All blanks passed. Three duplicates were run by ALS; all duplicates performed reasonably well for SiO₂, Al₂O₃ and Fe₂O₃. Concentrations of most other elements were close to or below the detection limit.

11.1 Check Samples

Five check samples were collected during the site visit (12.1 Site Visit). The grab samples were collected in plastic bags with pre-labeled sample tags. One quartz blank was added. The samples were transported from the property to Montreal by one of the authors of this report (Luc Harnois). In Montreal, the samples were dropped off at AGAT Laboratories (“AGAT”). AGAT shipped the samples to their facility in Mississauga, ON, where they were prepared and analyzed.

The check samples were crushed to 70 % <2 mm; 250 g was split using a riffle splitter and pulverized to 85 % passing 75 µm (AGAT analysis code 200-001). Extra cleaning of the crusher and pulverizer was requested after each sample (AGAT analysis code 200-018). The samples were then analyzed by XRF (lithium borate fusion) for major elements (AGAT analysis code 201-676) and by lithium borate fusion, 4-acid digest and ICP-MS finish for trace elements (AGAT analysis code 201-078).

AGAT is accredited to ISO/IEC 17025 for certain analyses, including the analyses used for the check samples (201-676, 201-078). AGAT is independent of Quebec Silica.

One blank was included in the suite of check samples. The blank material contained 99.30% SiO₂ and no significant trace element concentrations.

The QPs are of the opinion that the sample preparation, security and analytical procedures were adequate for the purpose of this report. However, CRM and blanks should be included in any future sampling program.

12.0 DATA VERIFICATION

12.1 Site Visit

Luc Harnois, Ph.D., P.Geo., visited the Charlevoix Silica Property on September 10, 2020. Dr. Harnois accessed the property from Baie-Saint-Paul by public paved road #381 (54 km; 45 minutes), then by a ZEC-operated gravel road to claim 2404904 (23 km; 47 min) or to claim 2404902 (24 km; 50 min) (Figure 12-1 to Figure 12-4). The gravel road connects to paved road #381 at UTM 369424E 5296112N. The gravel roads shown on Figure 12-2, Figure 12-3 and Figure 12-4 are fair to good. The Property can easily be accessed by an all-wheel drive SUV.

The Property is located within the Laurentian Mountains of the Canadian Shield and the rolling mountains dominate the view (Figure 12-4 and Figure 12-5). The bush is thick (Figure 12-6 and Figure 12-7) and the number of quartzite outcrops is low.

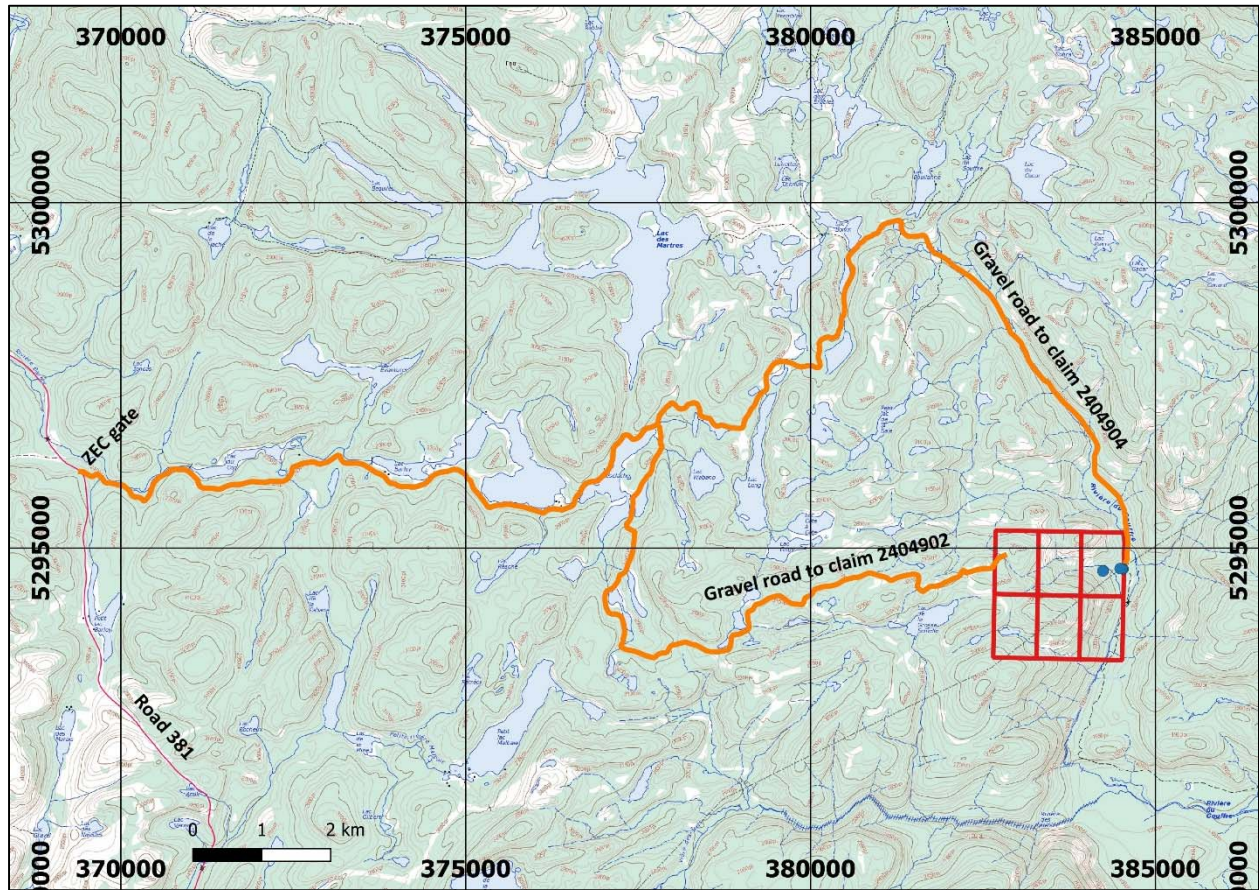


Figure 12-1: Map showing paved road #381, the ZEC gate, the claims (red), and the gravel roads (orange). The blue dots indicate the location of the samples collected during the site visit.



Figure 12-2: ZEC des Martres gate UTM 369623E 5296050N, near road 381, looking E



Figure 12-3: Gravel road and forestry excavator near Lac Barley, looking E.



Figure 12-4: Gravel road UTM 384563E 5294702N, claim 2404904, looking SE



Figure 12-5: Photo taken from UTM 384563E 5294702N, claim 2404904, looking SE



Figure 12-6: Geologist Jonathan Broadbent, typical bush, claim 2404904



Figure 12-7: Creek UTM 384313E 5294706N, claim 2404904

At the time of the site visit, two Waldo Sciences geologists (Jonathan Broadbent and Tom Dyakowski) were sampling the quartzite and doing a VLF-EM survey on the property. They were drilling samples 30-40 cm deep and 3/4 inch (1.9 cm) in diameter in the quartzite with a Dewalt 20V MAX hammer drill equipped with the D25303DH dust extractor system (Figure 9-2, Figure 12-8). They were also collecting grab samples next to each hole and at other locations (Figure 12-9 to Figure 12-11).

There was no physical grid (such as a baseline and rows of pickets) on the property. The VLF-EM survey was completed by taking readings at 25 m intervals (determined with a hand-held GPS) along virtual lines perpendicular to the expected lithological contacts of the quartzite in selected areas. The very low response of the quartzite compared to the adjacent garnet-sillimanite-cordierite-spinel paragneiss allows for the location of the lithological contact. The VLF-EM receiver used is Model 27 manufactured by Sabre Electronic Instruments Ltd of Burnaby, B.C.

During the site visit, five grab samples of quartzite were collected to verify previously published analytical results relevant to the quality of this silica deposit (Table 12-1; Figure 12-12, Figure 12-13).

Sample results are listed in Table 12-2 and Table 12-3. The check sample results are consistent with the results obtained by St. Pierre and Wray (2017) and with Quebec Silica’s sampling (Table 12-4).

The QP concludes that the data presented in this report are adequate for the purpose of the report.

Table 12-1: Check samples collected during the personal inspection of the property.

Sample	Easting	Northing	Rock type	Historic sampling*	Comment
E503356	NA	NA	Blank		
E503351	384530	5294699	Quartzite	17205	Hole HDH-2 (Sept 2020)
E503352	384515	5294701	Quartzite	Between 17205 and 17207	Hole HDH-6 (Sept 2020)
E503353	384245	5294674	Quartzite	Near 17208	
E503354	384237	5294668	Quartzite	17208	
E503355	384487	5294704	Quartzite	17207	

* St.-Pierre and Wray, 2017



Figure 12-8: Geologist Tom Dyakowski drilling hole HDH-2 in quartzite (UTM 384531E 5294697N, claim 2404904) with the Dewalt hammer drill 20V MAX and dust extractor system D25303DH



Figure 12-9: Typical drill hole sample (HDH-1), quartzite powder collected by the dust extractor system D25303DH.



Figure 12-10: Drill hole HDH-2 and grab sample E503352, quartzite, UTM 384530E 5294699N, claim 2404904.



Figure 12-11: Drill hole HDH-2 with dowel and labeled flag, quartzite, UTM 384531E 5294697N, claim 2404904.

Table 12-2: Selected major element analysis results of the check samples collected during the site visit

Sample	Al ₂ O ₃ (%)	CaO (%)	Cr ₂ O ₃ (%)	Fe ₂ O ₃ (%)	K ₂ O (%)	MgO (%)	MnO (%)	Na ₂ O (%)	SiO ₂ (%)	TiO ₂ (%)	LOI (%)	Total Oxides (%)	Historic SiO ₂ (%)*
E503356	0.13	0.01	<0.01	0.07	<0.01	0.02	<0.01	0.02	99.30	0.01	0.27	99.80	
E503351	0.34	<0.01	0.03	0.37	0.09	0.02	<0.01	0.05	99.10	0.05	0.15	100.00	98.43
E503352	0.53	<0.01	0.04	0.43	0.07	<0.01	<0.01	0.04	98.80	0.06	0.17	100.00	
E503353	0.52	0.01	0.05	0.59	0.18	0.02	<0.01	0.08	97.60	0.07	0.22	99.30	
E503354	0.85	<0.01	0.04	0.69	0.11	0.07	<0.01	0.06	97.70	0.11	0.19	99.80	98.96
E503355	0.46	0.01	0.04	0.43	0.13	0.06	<0.01	0.05	98.80	0.08	0.23	100.00	99.39

*Results reported by St.-Pierre and Wray (2017)



Figure 12-12: Sample E503354, quartzite, UTM 384237E 5294668N, claim 2404904.



Figure 12-13: Sample E503355, quartzite, UTM 384487E 5294704N, claim 2404904. The orange flag may be the 17207 sample flag of January 2017

Table 12-3: Trace element analysis results of the check samples collected during the site visit

Sample No	Ag (ppm)	Ba (ppm)	Ce (ppm)	Co (ppm)	Cs (ppm)	Dy (ppm)	Er (ppm)	Eu (ppm)	Gd (ppm)	Hf (ppm)
E503356	1.00	13.80	3.10	<0.5	<0.1	0.42	0.28	0.08	0.39	1.00
E503351	<1	14.30	22.00	<0.5	0.10	0.60	0.19	0.09	1.33	1.00
E503352	<1	12.30	31.50	<0.5	0.10	0.70	0.22	0.15	1.76	1.00
E503353	<1	19.90	43.50	<0.5	<0.1	2.44	1.77	0.26	3.30	<1
E503354	<1	14.40	21.70	0.50	0.20	1.77	0.79	0.23	1.91	1.00
E503355	<1	14.50	9.70	0.50	0.50	0.47	0.29	<0.05	0.72	<1

	Ho (ppm)	La (ppm)	Lu (ppm)	Mo (ppm)	Nd (ppm)	Ni (ppm)	Pr (ppm)	Rb (ppm)	Sm (ppm)	Sr (ppm)
E503356	0.08	1.80	<0.05	<2	2.00	<5	0.47	<0.2	0.40	2.80
E503351	0.08	10.00	<0.05	<2	10.00	<5	2.67	5.80	1.70	1.40
E503352	0.11	14.50	<0.05	<2	16.00	6.00	3.97	4.10	2.60	1.10
E503353	0.54	18.20	0.31	<2	21.00	6.00	5.14	6.50	3.90	2.50
E503354	0.31	10.10	0.08	<2	10.00	5.00	2.56	6.90	1.90	1.50
E503355	0.10	4.30	0.06	<2	5.00	6.00	1.19	6.50	0.80	1.90

	Ta (ppm)	Tb (ppm)	Th (ppm)	Tl (ppm)	Tm (ppm)	U (ppm)	V (ppm)	W (ppm)	Y (ppm)	Yb (ppm)	Zr (ppm)
E503356	<0.5	0.05	1.30	<0.5	<0.05	0.27	<5	<1	2.20	0.30	61.00
E503351	<0.5	0.14	2.50	<0.5	<0.05	0.56	<5	<1	2.10	0.20	72.00
E503352	<0.5	0.20	3.30	<0.5	<0.05	0.55	<5	<1	2.50	0.20	85.00
E503353	<0.5	0.44	5.50	<0.5	0.27	0.68	<5	<1	14.80	2.10	74.00
E503354	<0.5	0.31	3.40	<0.5	0.09	0.52	7.00	<1	8.30	0.70	100.00
E503355	<0.5	0.07	2.40	<0.5	0.05	0.42	6.00	<1	3.10	0.40	91.00

Table 12-4: Comparison of the check sample results with the current and historic sampling...

Check Sample No	Historic Sample No.	Quebec Silica Sample No.	Check Sample SiO2 (%)	Historic SiO2 (%)	Quebec Silica SiO2 (%)
E503351	17205	Powdered Sample 2 (B498012)	99.1	98.43	98.01
E503352	between 17205 and 17207	Powdered Sample 6 (B498018)	98.8		98.11
E503353	near 17208		97.6		
E503354	17208		97.7	98.96	
E503355	17207		98.8	99.39	

13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

No mineral processing and/or metallurgical testing has been completed on the property by Quebec Silica.

14.0 MINERAL RESOURCE ESTIMATES

No resource estimates have been completed by Quebec Silica.

15.0 ADJACENT PROPERTIES

The quartzite band on the Charlevoix property extends beyond the property in the east and southwest (Figure 17-1). The claims to the east of the property are held by private individuals. The claims to the west are held by Rogue Resources Inc. and Sitec Amérique du Nord.

15.1 Rogue Resources Inc.

Rogue Resources Inc. (“Rogue”) holds six cell claims immediately adjacent to the Charlevoix property (Figure 17-1). In 2014, Rogue completed an airborne magnetic survey over the property (Paul 2014) and in 2015 Rogue completed a helicopter-borne VLF-EM survey (Letourneau and Paul 2015). In 2016, Rogue completed reconnaissance mapping, sampling and prospecting in an attempt to determine the extent of the quartzite band (Beauregard and Gaudreault 2016). Rogue identified several structures and delineated the extent of the quartzite units in some detail; however, Rogue noted that further exploration is required to determine potential extensions of the quartzite. No information about Rogue’s exploration on these claims was available after the report by Beauregard and Gaudreault (2016).

The QPs have been unable to verify this information and the information is not necessarily indicative of the presence of quartzite on the property that is the subject of this report. The QPs distinguish between the information on the adjacent property and the information from the property that is the subject of this report.

Claims to the southwest of Rogue Resources’ claims is held by Sitec Amérique du Nord. No detailed information about exploration on these claims was available.

16.0 OTHER RELEVANT DATA AND INFORMATION

The Qualified Persons are not aware of any other relevant data, information or explanation that would make this report understandable and not misleading.

17.0 INTERPRETATION AND CONCLUSIONS

A quartzite unit that was previously mapped (Gilbert, 1981; Rondot, 1971; Rondot, 1989) and partly sampled (St.-Pierre and Wray 2017) was investigated in a reconnaissance exploration program by Quebec Silica in September 2020. Quebec Silica confirmed the presence of the unit on three of its six claims. The quality of the quartzite was tested by collecting samples; however, given the lack of suitable outcrop, sampling concentrated on certain areas and was not possible along the entire anticipated trend of the quartzite.

The sampling results indicate a silica content of >98% SiO₂ of the quartzite. The main impurities are Al, Fe and K. The VLF-EM survey was successful in delineating resistive zones interpreted to be quartzite.

Based on the geology of the area and the preliminary exploration completed by Quebec Silica in 2020, the QPs conclude that there is potential for quartzite deposits on the Charlevoix property. In particular, the fold nose indicated on map MB 89-12 (Rondot, 1989) and Figure 7-3 suggests a thickening of the quartzite layer and hence increased possibility of delineating economic widths of quartzite. The purity of the quartzite in the fold nose has not been determined due to a lack of outcrop.

No significant risks and uncertainties that could reasonably be expected to affect the reliability or confidence in the exploration information are noted other than that Quebec Silica’s exploration was early-stage and reconnaissance in nature. The information collected is reliable. The impact associated with a reconnaissance program can be mitigated by executing a detailed exploration program (see 18.0 Recommendations).

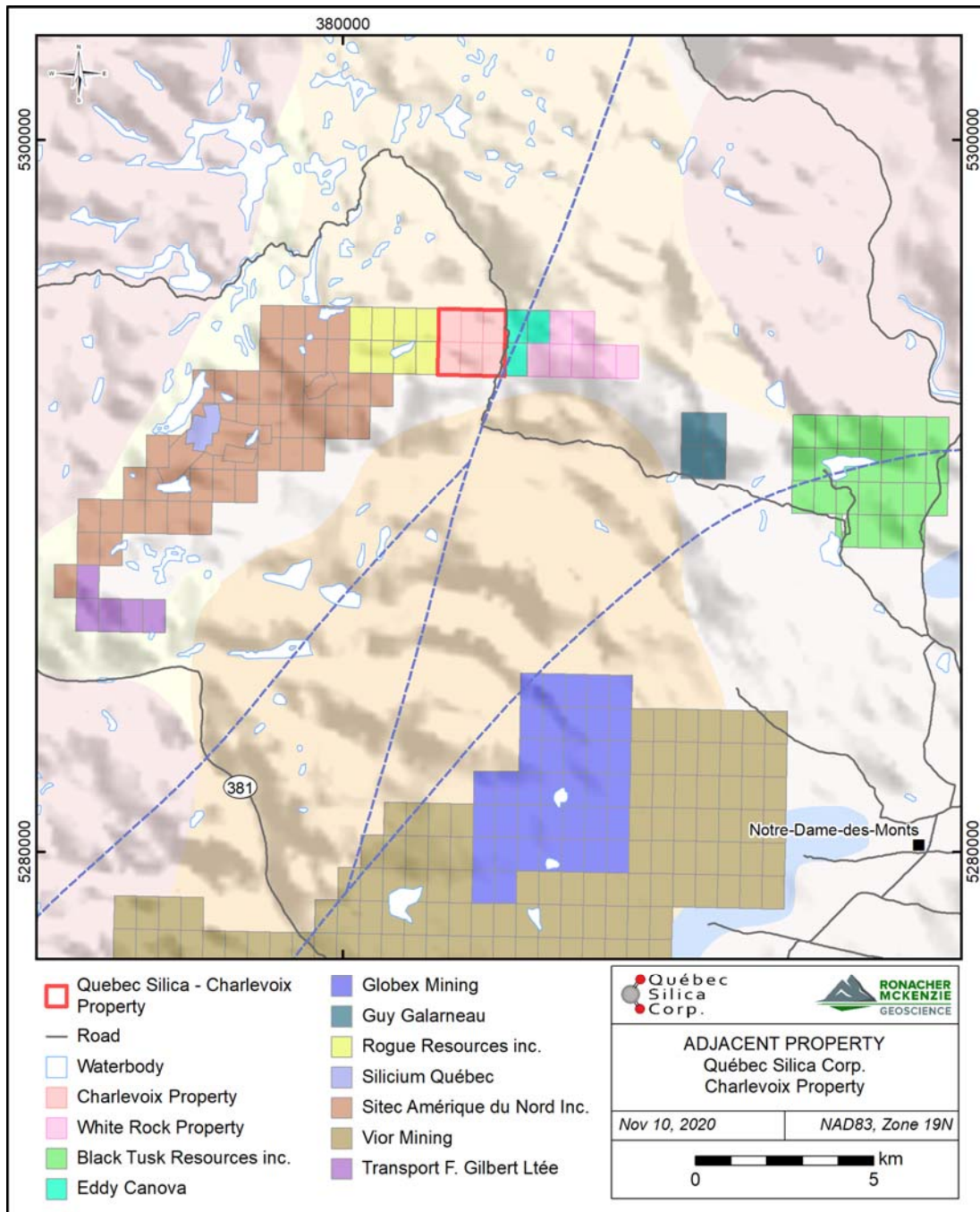


Figure 17-1: Map showing the locations of adjacent properties.

18.0 RECOMMENDATIONS

Quebec Silica completed a reconnaissance exploration program on the Charlevoix property and further work is required to assess the property's full potential. The 2020 field program showed that the property is covered by dense vegetation. Any future work should include extensive line cutting and stripping. The following program is recommended:

- Line cutting
- Mapping along the cut lines
- Additional VLF-EM in a grid to determine the lateral extent of the quartzite units
- Resistivity survey to determine highly resistive quartzite units and their depth extent
- Trenching where geophysical surveys delineate resistive units
- Sampling of stripped quartzite outcrops using a channel saw

Line cutting will be required for the geophysical survey and for mapping. The purpose of the geophysical surveys is to delineate the contact between the quartzite unit and the surrounding rocks and to determine the thickness of the quartzite.

It is recommended that the quartzite layer be stripped and sampled in detail to determine the purity and homogeneity of the quartzite. Sampling should occur along the entire length of the quartzite layer.

An exploration permit will be required for line cutting.

An estimated cost for this program is shown in Table 18-1.

It is recommended to add certified reference materials and blanks to the samples in order to be able to quantify any impurities accurately.

Table 18-1: Estimated cost for the recommended exploration program.

Item	Unit	No of Units	Cost/Unit	Total Cost
Line Cutting	km	35	\$850	\$29,750
Mapping	day	10	\$1,000	\$10,000
VLF-EM	line km	35	\$250	\$8,750
Resistivity	line km	5	\$1,000	\$5,000
Trenching				\$15,000
Sampling	day	10	\$1,000	\$10,000
Sample analysis	sample	400	\$50	\$20,000
Transportation				\$3,000
Accommodation/Meals				\$4,000
TOTAL				\$105,500

19.0 REFERENCES

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20.0 STATEMENT OF AUTHORSHIP

This report, titled “Independent Technical Report – Charlevoix Silica Property, Baie-Saint-Paul, Quebec”, dated November 19, 2020 and prepared for Quebec Silica Resources Corp., was completed and signed by the following authors:

“Signed and sealed”

Luc Harnois, PhD, P.Geol.
November 19, 2020
Montreal, QC

“Signed and sealed”

Elisabeth Ronacher, PhD, P.Geol.
November 19 2020
Sudbury, ON

Appendix 1 – Certificates of Authors

CERTIFICATE OF QUALIFICATIONS

Luc Harnois
Ronacher McKenzie Geoscience
Montreal, QC, Canada
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☎ 514-237-7003

I, Luc Harnois, do hereby certify that:

1. I am Senior Geologist at Ronacher McKenzie Geoscience.
2. I am jointly responsible for all sections of the report titled “Independent Technical Report – Charlevoix Silica Property, Baie-Saint-Paul, Quebec” dated November 19, 2020, and prepared for Quebec Silica Resources Corp.
3. I am a graduate of Université du Québec à Montréal, Department of Earth Sciences, Montréal, 1980. I completed a M.Sc. (Université du Québec à Montréal, Department of Earth Sciences, Montréal, 1983) and a Ph.D. (Carleton University, Department of Geology, Ottawa, 1987).
4. I am a member in good standing of Ordre des Géologues du Québec (OGQ; member #478).
5. I have been employed in the mineral exploration field world-wide for an aggregate total of 20 years, in gold and base metal exploration as well as silica deposits, in positions ranging from junior geologist to project manager. I have read the definition of “qualified person” set out in National Instrument 43-101 (“NI 43-101”) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements as a Qualified Person for the purposes of NI 43-101.
6. I visited the property on September 10th, 2020. I also mapped and sampled similar silica deposits nearby in the early 1980s.
7. I have no direct or indirect interest in the Property, nor do I expect to receive any direct or indirect interest in the Property. I am independent of the issuer of this report applying all the tests in section 1.5 of National Instrument 43-101, other than providing consulting services.
8. I have no prior involvement with the property that is subject of this report other than that I mapped nearby in the early 1980s.
9. I have read the National Instrument 43-101 and this report has been prepared in compliance with this Instrument.
10. That, as of the date of this technical report, to the best of my knowledge, information, and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Dated this 19th Day of November 2020

“Signed and sealed”

Luc Harnois, Ph.D., P.Geo.
Ronacher McKenzie Geoscience

CERTIFICATE OF QUALIFICATIONS

Elisabeth Ronacher
Ronacher McKenzie Geoscience
Sudbury, ON, Canada
elisabeth.ronacher@rmgeoscience.com
☎ 705-419-1508

I, Elisabeth Ronacher, do hereby certify that:

1. I am the Principal Geologist at Ronacher McKenzie Geoscience.
2. I am jointly responsible for the report titled “Independent Technical Report – Charlevoix Silica Property, Quebec”, dated November 19, 2020, and prepared for Quebec Silica Resources Corp., except for section 12.1-Site Visit.
3. I hold the following academic qualifications: M.Sc. Geology (1997), University of Vienna, Vienna, Austria; Ph.D. Geology (2002), University of Alberta, Edmonton, Canada.
4. I am a member in good standing of the Association of Professional Geologists of Ontario (APGO, member # 1476), the Society of Economic Geologists (SEG) and the Society for Geology Applied to Mineral Deposits (SGA). I received a Special Authorization from the Ordre des Géologues du Québec to practice in Quebec temporarily. I am qualified as a “Qualified Person” for the purpose of this report by virtue of my education, affiliation to a professional association and past relevant work experience.
5. I have worked on exploration projects worldwide (including Canada, Mongolia, China, Austria) and on a variety of commodities including Au, Cu, base-metal, Cu-Ni PGE and U deposits since 1997.
6. I did not visit the property.
7. I am independent of the issuer as described in section 1.5 of the National Instrument 43-101.
8. I have no prior involvement with the property that is subject of this report.
9. I have read the National Instrument 43-101 and this report has been prepared in compliance with this Instrument.
10. That, as of the date of this technical report, to the best of my knowledge, information, and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Dated this 19th Day of November 2020

“Signed and sealed”

Elisabeth Ronacher, Ph.D., P.Geol.
Ronacher McKenzie Geoscience