



**HPQ SILICON RESOURCES INC.**

**MANAGEMENT DISCUSSION AND ANALYSIS**

**For the Quarter ended March 31, 2021**

## **INTRODUCTION**

---

This management discussion and analysis (“MD&A”), prepared as at May 26, 2021, contains information as at March 31, 2021, and should be read in conjunction with the unaudited Consolidated Financial Statements for the periods ended March 31, 2021, of HPQ Silicon Resources Inc (“HPQ-Silicon”, the “Corporation” or “HPQ”). The Notes referred to in this MD&A refer back to the Notes in the Consolidated Financial Statements. The Consolidated Unaudited Financial Statements are presented in compliance with the IAS 34 standards “Quarterly Financial Information” which calls for critical accounting estimates. They also demand of Management the exercise of its judgement in the application of the accounting methods used by HPQ Silicon. Note 5 of the Financial Statements outlines the particularly complex areas where such judgement is required as well as the hypotheses and estimates where such hypotheses and estimates have a major effect on the Consolidated Financial Statements. The consolidated Financial Statements were not adjusted in regard to the accounting value of Assets and Liabilities, Revenues and Expenses and to the classification used in the preparation of the Consolidated Cash Flow Statement under the hypothesis of the Corporation’s ability to continue as a going concern. These adjustments could be significant. All amounts are in Canadian dollars.

The consolidated Financial Statements of March 31, 2021, were prepared by management and not audited.

In March 2020, the World Health Organization declared the COVID-19 epidemic a pandemic. The situation is constantly evolving, and the measures put in place have numerous economic repercussions at the global, national, provincial and local levels. These measures, which include travel bans, confinement or quarantine, voluntary or not, and social distancing, have caused significant disruption among businesses, globally and in Canada, due to the economic slowdown. Governments and central banks responded by implementing monetary and fiscal measures to stabilize the world economy; however, the current difficult economic climate may cause adverse changes in cash flow, the level of working capital and / or the search for future financing, which could have a direct impact on the Company’s future financial position.

HPQ Silicon Resources Inc. was incorporated on December 20, 1996, under the Canada Business Corporations Act. The Corporation’s shares are part of the Emerging Corporation category and are publicly traded on the TSX-Venture Exchange (“TSX-V”) under the symbol: “HPQ”. It is a reporting issuer under the securities laws of the provinces of Quebec, Alberta and British Columbia. Since March 16, 2021, the Company’s shares have been traded on the OTCQX Best Market under the symbol “HPQFF”. HPQ Silicon’s Head Office is located at 3000, Omer-Lavallée Street, Suite 306, Montréal, Québec, Canada, H2Y 1R8.

The Corporation regularly presents supplementary information on its activities which are filed on (SEDAR) ([www.sedar.com](http://www.sedar.com)).

## **FORWARD LOOKING STATEMENTS**

---

This MD&A contains forward-looking statements that are based on the Company’s expectations, estimates and projections regarding its business, the mining industry in general and the economic environment in which it operates as of the date of the MD&A. These statements are reasonable but involve a number of risks and uncertainties, which are identified in the regular filings done by the Corporation with the Canadian Regulatory Authorities and there can be no assurance that they will prove to be accurate and the final results as well as future events could vary in a material manner and contradict the results expected under these Statements.

## **FORWARD LOOKING STATEMENTS (continued)**

---

Therefore, actual outcome and results may differ materially from those expressed in or implied by these forward-looking statements.

The Forward Looking Statements are influenced by a variety of risks, uncertainties and other factors which could significantly alter the results and actual events. When used in this document the words such as “could”, “plan”, “estimate”, “intention”, “potential”, “should” and similar expressions are Forward Looking Statements.

Even though the Corporation believes that the expectations expressed in these Forward Looking Statements are reasonable, these statements are subject to risks and uncertainties and there is no assurance given by the Corporation that the expected results will correspond to the Forward Looking Statements.

Many risks exist which could render these Forward Looking Statements erroneous such as the price movements in the metals markets, the fluctuations in the foreign exchange and interest rate, of under or over estimated reserves, environmental risks (ever increasing regulations), unforeseen geological situations, negative extraction conditions, changes in government regulations and policies, the inability to obtain the needed patents, permits and government approvals, First Nations issues, or any other risk tied to exploration and development.

The Corporation's ability to continue its operations is subject to securing additional financings needed to continue the exploration of its mineral properties and to the continuous support of suppliers and creditors. Even though the Corporation was able to secure such financings in the past there is no guarantee it will be able to do so in the future.

**The Corporation commits to update its Forward-Looking Statements and to advise its shareholders if circumstances, estimates or opinions issued by Management must be changed.**

## **NATURE OF ACTIVITIES**

---

The Corporation's activities are centred on: a) developing the *PUREVAP™ “Quartz Reduction Reactor” (QRR)* (patent pending), a new green and low-cost process that will allow HPQ to transform Quartz (SiO<sub>2</sub>) into Silicon Metal (Si) and b) developing the *PUREVAP™ “Nano Silicon Reactors” (NSiR)* (patent pending), a new process that will allow HPQ to go higher up into the Silicon value chain, by transforming the Silicon produced by the *PUREVAP™ QRR* into the nanomaterials that batteries and EV manufacturers are looking for.

To date HPQ Silicon hasn't determined if the Quartz mineral properties it is currently exploring contain mineral reserves which could be extracted profitably; if it will be able to secure the needed financing to continue the development of its exploration assets, completed the development of its technologies needed to start commercial production, or determined whether it will realize profits from the sale of such assets.

## **OVERALL PERFORMANCE DURING THE FIRST QUARTER OF 2021**

---

- On February 25, 2021, HPQ announced that it has received the TREKHY® system, a portable hydrogen-based mini-power generator, jointly developed by the French companies Apollon and Pragma Industries SAS (“Pragma”). HPQ signed a Memorandum of Understanding with Apollon and Pragma to study the commercial potential of the TREKHY® autonomous power generator in Canada.
- On February 4, 2021, HPQ announced the sixth renewal of its agreement with Apollon. The duration of the renewal period, until June 30, 2021.
- On January 21, 2021, HPQ announced, through its wholly – owned subsidiary, HPQ NANO, the milestones achieved during ongoing Gen1 PUREVAP™ NSiR commissioning tests conducted by technology provider PyroGenesis.
- For the first quarter ending March 31, 2021, 9,215,000 common shares were issued following the exercise of: 6,465,000 warrants and 2,750,000 options. For an amount totaling \$ 1,456,250, the weighted average cost of the issued shares was \$ 0.16 per share.
- For the first quarter ending March 31, 2021, the Company paid patents of \$ 16,625 and an amount of \$ 10,026 for equipment under construction as well as \$ 93,882 for its alliance with Apollon Solar.

## **SUMMARY OF CURRENT ASSETS AND EXPLORATION WORK**

---

- As at March 31, 2021, the Corporation held cash in an amount of \$ 3,114,064, \$ 1,692,000 in marketable securities in a quoted company, \$ 22,378 in Goods and Services tax receivables, \$ 50,000 royalties receivable, \$20,000 investment tax credits receivable and \$ 119,255 in prepaid expenses.
- For the period ending March 31, 2021, HPQ did not perform any exploration work on the properties.

## **EXPLORATION ACTIVITIES AND PROJECTS**

---

### **QUARTZ/SILICON**

#### **PROJECT: RONCEVAUX**

The Roncevaux property is made-up of 27 map designated cells (“CDCs”) covering a total of 2,068 ha in 2 blocks. The main block covers some 24 CDCs for a total area 1,895.76 hectares and is host to the Roncevaux quartz vein occurrence. The second block consists of 3 CDCs covering 172.40 hectares some 2.2 km north of the main block. The property is located in the Matapedia region of Gaspé about 75 km south of Causapscal.

#### PROJECT: RONCEVAUX (continued)

The Roncevaux Project lies within the southern domain in the central portion of the Connecticut Valley-Gaspé synclinorium. It is bound to the north by the Shickshock-South fault and to the south by the Restigouche fault. This basin is filled with fine to very coarse grained siliciclastic rocks, various types of limestones, felsic to mafic volcanic and intrusive rocks. The rocks of the Roncevaux vein area belong to the Fortin Group and the few outcrops visited by the INRS-ETE technical team in September 2015, were made-up of sandstones and siltstones with lesser units of shales and mudstones. The rocks are folded faulted and fractured. Bedding (So) appears sub-vertical (85o) with an average strike of N231o.

During the last quarter of the year of 2017, the Corporation completed a 2,000 meters diamond drilling program. This program consisted in 32 holes, each to a depth of 50 m, along the known 400 meter Quartz outcrop. Assays and characterization tests will be undertaken on the drill cores.

During the year 2018, the Corporation granted to Beauce Gold Fields Inc. the Roncevaux Specific Mining and exploration rights except for Quartz in exchange for 100,000 shares at a deemed price of \$ 0.10 each and a 5% NSR. Up to 4% of this royalty can be bought back by paying \$ 100,000 for each 0.10% NSR up to a maximum of \$4 million.

During for the period of 2021, the Corporation did not perform any exploration work on the property.

#### PROJECT: MARTINVILLE

The Martinville Property (the “Property”) is located in the Eastern Townships 180 km east of Montreal and 30 km south of Sherbrooke. Private forests and small farms mostly cover the region. The property consists of 4 claims of which an area of 2.42 km<sup>2</sup> is available for exploration. The initial 2 Claims cover the area where the exploration work has been carried out and they host quartz veins that were historically worked on.

The quartz is made up of Schist encased hydrothermal quartz veins. A 1995 geophysical survey shows an exploration potential of more than 1,000,000 tonnes SiO<sub>2</sub> using a surface length quartz vein of 200 m, averaging 2 to 23 meters in width while assuming a depth of up to 30 m (GM53696 : Pierre Vincent, “géosciences de l’établissement” 1995). While pertinent this data is non-NI 43-101 compliant.

During the last year the 2019, the Corporation did not perform any exploration work on the property and the devalued for \$ 262,565.

### HIGH PURITY QUARTZ/SILICON

---

Silicon (Si), also known as silicon metal, is one of today’s key strategic materials needed for the decarbonization of the economy and the Renewable Energy Revolution (“RER”). However, silicon does not exist in its pure state and must be extracted from quartz (SiO<sub>2</sub>) in what has historically been a capital and energy-intensive process.

HPQ is proposing innovative silicon (Si)-based solutions and is developing a unique portfolio of high value-added silicon (Si) products sought after by battery and electric vehicle manufacturers. The goal being able to deliver to market high value speciality Silicon products using technologies that will reduce energy consumption, GHG’s, and carbon footprint.

## HIGH PURITY QUARTZ/SILICON (continued)

HPQ mission is that of being a "Silicon Solution Incubator". The following flow chart present our main development axes with at its core the *PUREVAP™* QRR vertical integration route and HPQ value added route with the *PUREVAP™* NSiR.



Working with PyroGenesis Canada Inc, ("PyroGenesis") a high-tech company that designs, develops, manufactures and commercializes plasma - based processes, HPQ is developing the *PUREVAP™* "Quartz Reduction Reactors" (QRR), an innovative process (patent pending), which will permit the one-step transformation of quartz (SiO<sub>2</sub>) into high purity silicon (Si) at reduced costs, energy input, and carbon footprint that will propagate its considerable renewable energy potential. Through its 100% owned subsidiary, HPQ NANO Silicon Powders Inc., ("HPQ NANO") is developing the *PUREVAP™* Nano Silicon Reactor (NSiR) is a new proprietary process that can will use the Battery grade Silicon (Si) produce by the *PUREVAP™* QRR as feedstock, to make a wide range of nano/micro spherical powders of different sizes and nanowires.

HPQ continues working with industry leader Apollon Solar of France ("Apollon"), and to develop the hydrogen generation potential of Silicon nanopowders for use with the Gennao™ system and to commercialize, exclusively in Canada, and non-exclusive in the U.S.A., the TREKHY H2, a portable hydrogen-based mini-power generator system and the chemical powders required for the hydrolysis production of hydrogen ("H<sub>2</sub>").

## **HIGH PURITY QUARTZ/SILICON (continued)**

---

Below you will find a summary of the latest progress achieved during fiscal 2020 and subsequent period on our ongoing development of our PUREVAP™ project:

On February 25, 2021, HPQ announced that it has received the TREKHY® system, a portable hydrogen-based mini-power generator, jointly developed by the French companies Apollon and Pragma Industries SAS ("Pragma"). While continuing to work with Apollon on the development of new generations of more efficient silicon powders for hydrogen production, HPQ signed a Memorandum of Understanding with Apollon and Pragma to study the commercial potential of the TREKHY® autonomous power generator in Canada.

On February 4, 2021, HPQ announced the sixth renewal of its agreement with Apollon to continue developing nanoscale and porous silicon materials for energy storage, hydrogen production and high value-added applications. The duration of the renewal period, until June 30, 2021.

On January 21, 2021, HPQ announced, through its wholly – owned subsidiary, HPQ NANO, the milestones achieved during ongoing *Gen1 PUREVAP™ NSiR* commissioning tests conducted by technology provider PyroGenesis.

Key take away from these first results, the material produced, under the less than optimum operating conditions of the first commissioning tests, was analysed by scanning electron microscope (SEM) imaging combined with X-ray diffraction (XRD) and yielded the following information:

- Gen1 NSiR system performance exceeded design and modelling expectations:
  - > Successfully produced sub 100 nm silicon - based spherical nanopowders & nanowires.
  - > Computer models suggested that the size limit of the material produced would be between 100 nm and 200 nm.
- SEM-XRD analysis indicates that the < 100 nm Si base spherical nanopowders & nanowires material could be used as anode material for Li-ion batteries, combined with graphite or not.
- Samples from these commissioning tests have been sent to Professor Lionel ROUÉ of the Centre Énergie Matériaux Télécommunications (EMT) for electro-chemical evaluation.
- Using results from data collected during these preliminary tests, PyroGenesis technical team are improving the design of the system and the operational parameters of the reactor.

On December 29, 2020, HPQ announced that promising results from electrochemical performance tests made with silicon-based by-products manufactured by the *GEN2 QRR* motivated the company to file a provisional patent application regarding their manufacturing, assembly and usage as anode materials for Lithium-ion batteries.

- Although preliminary, the results obtained are more than promising since the silicon-based by-product made with the *Gen2 PUREVAP™ QRR* maintained a gravimetric capacity  $\geq 1,200$  mAh/g for more than 100 charge/discharge cycles, a capacity 3-4 times greater than that of graphite currently used in commercial Li-ion batteries.
- The patent application follows the completion of a series of tests made on the material produced by the *GEN2 PUREVAP™ QRR* at the Centre Énergie Matériaux Télécommunications (EMT) of the INRS by Professor Lionel ROUÉ under an NSERC Engage Grant and a NSERC Engage plus Grant.

## **HIGH PURITY QUARTZ/SILICON (continued)**

---

On December 17, 2020, HPQ announced, through its wholly – owned subsidiary, HPQ NANO, that technology provider PyroGenesis had informed HPQ NANO that phase 1 of the Gen1 *PUREVAP™ NSiR* development program has reached the commissioning stage.

On November 19, 2020, HPQ announced that Apollon has delivered a first batch of carbon coated nano silicon powders to Professor Lionel Roué team at the Institut National de la Recherche Scientifique (INRS) for evaluation.

On November 5, 2020, HPQ announced, through its wholly – owned subsidiary, HPQ NANO, that technology provider PyroGenesis updated HPQ NANO on the following *PUREVAP™ NSiR* development program milestones:

Process and mechanical engineering designs for the Gen1 *PUREVAP™ NSiR* have been completed, on time and on budget;

GEN1 fabrication will start in the week starting November 9, 2020, and that project is on schedule for a December 2020 commissioning and start.

On October 22, 2020, HPQ, through its wholly-owned subsidiary, HPQ Nano announced that a major automobile manufacturer that demonstrated an interest in the Spherical Nano Silicon powders to be produced by the *PUREVAP™ NSiR* (Sept. 30 2020 release) has submitted to HPQ NANO a formal Purchase Order for the material. This represent HPQ NANO first ever nanopowders order. The manufacturer is well aware that HPQ NANO will only fulfill once the system is operational and, as such, this order is simply a way for them to guarantee to be first in queue for the material. The automobile manufacture's name shall remain anonymous for competitive and confidential reasons.

On September 17, 2020, HPQ announced the extension, until December 31, 2020, of the Development Agreement signed with Apollon in 2017. This fifth renewal will be focused on extremely promising venues for both the renewable energy sector and the decarbonization of the economy, mainly:

1. **Energy Storage** development of a new generation of Lithium-ion batteries made using Porous Silicon manufactured by the transformation of HPQ *PUREVAP™ Quartz Reduction Reactor "QRR"* Silicon (Si) with Apollon patented process;
2. **Clean Renewable Hydrogen Production** using Apollon Solar Gennao H2™ 200W, a fuel cell - based system that can produce hydrogen by hydrolysis simply by combining water with an environmentally friendly<sup>1</sup> chemical powder. Replacing the chemical powder presently used with nano silicon powders, such as those about to be produced by the HPQ NANO *PUREVAP™ NSiR*, could significantly increase the hydrogen generation capacity of the system.

---

1 Non-toxic and recyclable



## **HIGH PURITY QUARTZ/SILICON (continued)**

---

On August 18, 2020, HPQ announced that HPQ Nano Silicon Powders Inc (“HPQ NANO”), a 100% owned HPQ subsidiary, and PyroGenesis signed a development agreement covering the *PUREVAP™ Nano Silicon (Si) Reactor (“NSiR”)* development program and the future commercialisation of nano silicon materials made with this new, proprietary and low cost manufacturing process. The process will transform Silicon (Si) into spherical Silicon nanopowders and nanowires for use in Li-ion batteries.

The key areas covered by the agreement between HPQ NANO and PyroGenesis are:

1. *PUREVAP™ NSiR* process development program, schedule and cost assumed by HPQ NANO;
2. Acquisition of the *PUREVAP™ NSiR* Intellectual Property as it relates to the manufacturing of Nano Silicon powders and nanowires by HPQ NANO;
3. Revenue distribution between HPQ NANO and PyroGenesis from the sales of Nano Silicon materials made with the *PUREVAP™ NSiR*.

Process development program Phase 1:

- The main goal of Phase 1 is modifying the existing *GEN2 PUREVAP™ QRR* reactor into the *Gen1 NSiR* for the purpose of producing nano silicon materials. The resulting new *Gen1 NSiR* will be a batch process system with a design production capacity of 30 kg/month of nano silicon powders. In order to meet the aggressive Phase 1 timeline agreed by the Parties, HPQ NANO will pay \$200,000 to PyroGenesis over the next 15 weeks needed to complete the process engineering, mechanical engineering, fabrication and system commissioning.
- Once the *GEN1 NSiR* is operational, a series of test runs will be done in order to produce nano Silicon materials. In addition to producing samples for potential customers, the nano Silicon material produced will be analysed and characterized in order to define important process parameters, fine tune operating parameters and assess the performance of all the components of the systems. HPQ NANO and PyroGenesis have agreed that each series of 10 tests would cost HPQ NANO \$132,000.

Process development program Phase 2:

- Phase 2 main objective is validating the commercial scalability of the *PUREVAP™ NSiR*. Using data collected during *GEN1 NSiR* testing phase a completely new *GEN2 NSiR* system will be designed and built. 35 weeks will be needed to complete the process engineering, mechanical engineering, fabrication and system commissioning and HPQ NANO will pay \$210,000 to PyroGenesis for this phase.
- The *GEN2 NSiR* will be a semi-continuous process system with a design production capacity of 300 kg/month (or about 3,5 MT/year) of nano silicon powders or nanowires, giving HPQ NANO a large enough production capacity to be able to start selling nano silicon materials. In addition to producing nano Silicon material, a series of *GEN2 NSiR* tests will be done to define the important process parameters and operating parameters required to allow the process and the systems to be scaled up to a commercial production capacity of about 2,500 MT of Nano-Silicon powders per year.

## **HIGH PURITY QUARTZ/SILICON (continued)**

---

### Acquisition of the *PUREVAP™ NSiR* Intellectual Property

- The agreement also covers HPQ NANO acquisition of the intellectual property rights to the *PUREVAP™ Nano Silicon (Si) Reactor* process as it relates exclusively to the production of Micron size and Nano size Silicon Powders and Silicon Nanowires (the “Field”) from PyroGenesis. The acquisition cost of the *PUREVAP™ NSiR* IP is CAD\$2,400,000 and HPQ NANO has 30 days from the effective date of the agreement to make the payment to PyroGenesis.
- PyroGenesis will retain a royalty-free, exclusive, irrevocable worldwide license to use the process for purposes other than the production of Micron size and Nano size Silicon Powders and Silicon Nanowires. Should PyroGenesis be approached by any other parties for any research and development or commercial purposes outside of the Field, HPQ NANO shall have a right of first refusal, provided that, however, HPQ NANO exercise its right of first refusal within thirty (30) days of PyroGenesis receiving a bona-fide offer.

### Revenue distribution between HPQ NANO and PyroGenesis

HPQ NANO Silicon Powders Inc, is a stand-alone Corporation that will finance the Research and Development programs and manage the future commercialisation of Nanoscale Silicon (Si) materials made with the *PUREVAP™ NSiR*.

- HPQ NANO will pay PyroGenesis, on an annual basis, and until conversion, the following minimum royalty (Nano-Royalty) on the gross sales of nano materials produced with the *PUREVAP™ NSiR* Process and Systems:
  - > For 2021, the greater of 10% of HPQ NANO gross sales or fifty thousand dollars (CDN\$50,000);
  - > For 2022, the greater of 10% of HPQ NANO gross sales or one hundred thousand dollars (CDN\$100,000);
  - > For 2023, the greater of 10% of HPQ NANO gross sales or one hundred and fifty thousand dollars (CDN\$150,000);
  - > For 2024 and beyond, the greater of 10% of HPQ NANO gross sales or two hundred thousand dollars (CDN\$200,000).
- PyroGenesis is being granted the right to convert, at any time and at its sole discretion, its Royalty into a 50% equity stake in HPQ NANO.

On June 11, 2020, HPQ announced that it had signed a non-disclosure agreement (“NDA”) with an advanced materials developer for the purposes of exchanging technical information and sending silicon samples produced by the *PUREVAP™ NSiR* for energy storage applications testing. For industry competitive reasons, and according to the terms of the NDA, the identity of the advanced materials developer must remain confidential.

## **HIGH PURITY QUARTZ/SILICON (continued)**

---

On April 15, 2020, HPQ announced promising results emanating from electrochemical performance tests performed on materials produced with our *GEN2 PUREVAP™ QRR*.

- Tests conducted at the Institut National de Recherche Scientifique (INRS), on material produced with the *GEN2 PUREVAP™ QRR* ("*GEN2*"), demonstrated its potential to advantageously replace graphite in Lithium-ion (Li-ion) batteries while limiting the disadvantages inherent to silicon anodes.
- The tests on material produced with the GEN2 are part of a series of initiatives being undertaken by HPQ in order to become a producer of silicon (Si) materials suitable for the next generation Li-ion batteries. The tests were completed at the Centre Énergie Matériaux Télécommunications (EMT) of the INRS by Professor Lionel ROUÉ under an NSERC Engage Grant and a NSERC Engage plus Grant.
- The exact composition of the material produced with the GEN2 as well as how the electrodes used in the tests were prepared are trade secrets of HPQ. HPQ will take the necessary steps to protect this invention. As part of this research project, HPQ retains all intellectual property rights in relation to this invention.

On January 15, 2020, HPQ announced that the *PUREVAP™ GEN 2 QRR* was used to do a proof-of-concept test that validated its capability of successfully producing spherical nano-powders from silicon metal with a primary size <500 nanometers (<0.5 µ).

As per the scheduling established the *PUREVAP™ QRR* for the design, manufacturing, assembly, cold start-up and the start of operations, no remittance has been made by the Company. The follow-up stages will consist of the hot start-up of the equipment for \$520,000, and the 10 months start-up and breaking-in phase for a value of \$2,310,000. The total investment was \$5,240,000 as of December 31, 2018 of which \$1,000,000 for the acquisition of the intellectual property. During August 2018, the Corporation made a \$1,950,000 deposit to be used as payment for the start-up of the equipment.

As per the established deadline for the *RSiN PUREVAP™* design, manufacture, assembly and hot start of the equipment for \$ 542,000. The Company made a payment of an amount of \$ 80,000.

## **EXPLORATION AND EVALUATION EXPENSES**

---

There were no deferred exploration expenses for the quarter ending on March 31, 2021, and 2020.

## SELECTED FINANCIAL INFORMATION FOR THE QUARTER

The following table presents Selected Financial Information for the last eight quarters.

	Financial Period 2021	Financial Period 2020				Financial Period 2019		
Quarter finishing on:	03/31	12/31	09/30	06/30	03/31	12/31	09/30	06/30
	\$	\$	\$	\$	\$	\$	\$	\$
Operating	306,642	334,241	260,895	283,944	209,291	513,279	280,828	288,221
Net Loss (income)	(506,319)	529,234	(60,744)	54,639	268,462	229,086	296,783	491,046
Loss per share (basic and diluted)	0.00	(0.01)	0.00	(0.00)	(0.00)	(0.01)	(0.00)	(0.00)
Current Assets	5,017,697	2,963,648	3,026,367	979,999	2,252,826	2,294,572	2,420,938	2,424,188
Total Assets	19,794,947	17,662,836	16,682,482	12,028,083	10,901,529	10,854,176	11,168,641	10,946,356
Current Liabilities	535,990	523,075	615,393	903,558	935,449	656,765	881,085	868,070
Non-Current Liabilities	4,793,584	4,651,082	3,678,526	3,825,355	3,689,545	3,665,427	3,372,391	3,954,275
Shareholders' Equity	14,465,373	12,488,679	12,388,563	7,299,170	6,276,535	6,531,984	6,555,165	6,484,011

## DISCUSSION ON THE FINANCIAL INFORMATION OF THE SELECTED QUARTER

- TOTAL PERFORMANCE**

For the first quarter of 2021, the Company saw decrease in its Net Loss of \$ 774,781 (\$ -506,319 vs \$ 268,462), while operational costs increased by \$ 97,351 (47 %) (\$ 306,642 vs \$ 209,291) while during the last seven quarters the respective averages were \$ 258,358 and \$ 310,100.

## DISCUSSION ON THE FINANCIAL INFORMATION OF THE SELECTED QUARTER (continued)

### • NET LOSS ANALYSIS

The decrease in Net loss of \$ 774,781 (-\$ 506,319 vs \$ 268,462), in comparison to the same period in 2020, corresponds to the increase in the costs operations of \$ 97,351 (47%) (\$ 306,642 vs \$ 209,291) and the increase in other income and expenses by \$ 872,132 (\$ 812,961 vs \$ -59,171).

There was a increase in costs operations of \$ 97,351 (47%) (\$ 306,642 vs. \$ 209,291). This increase is linked to several elements; office expenses decreased by \$ \$ 4,905 (63%) (\$ 12,667 vs \$ 7,762) which represents the increase in insurance to directors, Shareholder information increased by \$ 29,978 (230%) ( \$ 43,010 vs \$ 13,032) which represents the increase in TSX venture costs which is calculated based on our market value as at December 31, 2020, and salaries and employee benefits expenses increased by \$ 31,264 (37 %) which represents the social charges relating to the exercise of options by directors and officers.

The increase in other income and expenses of \$ 872,132 (\$ 812,961 vs. - \$ 59,171) primarily reflects the increase in the change in the fair value of listed securities of \$ 970,000 during the quarter.

## SELECTED FINANCIAL INFORMATION FOR THE 2021 PERIOD

The following table presents Selected Financial Information for fiscal 2021, 2020, 2019 and 2018.

	FISCAL 2021	FISCAL 2020	FISCAL 2019	FISCAL 2018
	03/31/21	03/31/20	03/31/19	03/31/18
	\$	\$	\$	\$
Operating expenses	306,642	209,291	257,294	294,794
Net income (loss)	506,319	(268,462)	(367,426)	(189,458)
Results per share (basic and diluted)	0.00	(0.00)	(0.00)	(0.00)
Current Assets	5,017,697	2,252,826	2,775,249	2,805,441
Total Assets	19,794,947	10,901,529	11,231,970	9,693,622
Current Liabilities	535,990	935,449	851,244	512,003
Non-current Liabilities	4,793,584	3,689,545	3,493,778	2,342,814
Shareholders' Equity	14,465,373	6,276,535	6,886,948	6,838,805

## **GENERAL DISCUSSION ON FINANCIAL INFORMATION FOR THE 2021 PERIOD**

---

- **OVERALL PERFORMANCE**

In 2021, in comparison to 2020, the Company saw a decrease in its Net Loss of \$ 774,781 (\$ -506,319 vs \$ 268,462), while operational costs increased by \$ 97,351 (47%) (\$ 306,642 vs \$ 209,291) while during the last three previous periods these costs averaged respectively \$ 275,115 and \$ 253,793.

- **DISCUSSION ON NET INCOME (LOSS)**

The decrease in Net loss of \$ 774,781 (-\$ 506,319 vs \$ 268,462), in comparison to the same period in 2020, corresponds to the increase in the costs operations of \$ 97,351 (47%) (\$ 306,642 vs \$ 209,291) and the increase in other income and expenses by \$ 872,132 (\$ 812,961 vs \$ -59,171).

There was a increase in costs operations of \$ 97,351 (47%) (\$ 306,642 vs. \$ 209,291). This increase is linked to several elements; office expenses decreased by \$ \$ 4,905 (63%) (\$ 12,667 vs \$ 7,762) which represents the increase in insurance to directors, Shareholder information increased by \$ 29,978 (230%) ( \$ 43,010 vs \$ 13,032) which represents the increase in TSX venture costs which is calculated based on our market value as at December 31, 2020 and salaries and employee benefits expenses increased by \$ 31,264 (37 %) which represents the social charges relating to the exercise of options by directors and officers.

The increase in other income and expenses of \$ 872,132 (\$ 812,961 vs. - \$ 59,171) primarily reflects the increase in the change in the fair value of listed securities of \$ 970,000 during the quarter.

- **LIQUIDITIES AND CAPITAL RESOURCES**

The Corporation for the period ending in 2021 with a working capital of \$ 4,481,707 (\$ 2,440,573 as at December 31, 2020). The current assets totalled \$ 5,017,697: cash on hand \$ 3,114,064 (\$ 1,888,282 as at Dec. 31, 2020), marketable securities in a quoted company \$ 1,692,000 (\$ 722,000 as at Dec. 31, 2020), HST tax receivables \$ 22,378 (\$ 183,366 as at Dec. 31, 2020), Royalties receivable \$ 50,000 (\$ 50,000 as at Dec. 31, 2020), Investment tax credits receivable \$ 20,000 (\$ 20,000 as at December 31, 2020) and prepaid expenses of \$ 119,255 (\$ 100,000 as at Dec. 31, 2020).

The marketable securities in a quoted company for a value of \$ 1,692,000 represent an investment in PyroGenesis. The HST receivable for \$ 22,378 comes from the payment of bills related mainly to suppliers during first quarter. The royalty receivable of \$ 50,000 represents the NSR according to the agreement with Beauce Gold Fields. The prepaid expenses of \$ 119,255 represents miscellaneous fees and a payment for Testing of the System as well as insurance for directors and officers.

- **LIQUIDITIES AND CAPITAL RESOURCES** (continued)

During the period of 2021, the company acquired property and equipment of \$ 10,026 as well as intangible assets valued at \$ 110,507. The deposit on contract of \$ 1,950,000 represents a part of the cost related to the break-in of test equipment that was postponed for the long term following the covid-19 epidemic.

Current liabilities totalling \$ 535,990 (\$ 523,075 as at Dec. 31, 2020) were made up of amounts owed to trade and other payables of \$ 192,993 (\$ 191,001 as at Dec.31, 2020), due to Directors of \$ 116,750 (\$ 116,750 at Dec. 31,2020) and royalties payable of \$ 226,247 (\$ 215,324 at Dec. 31, 2020). The non-current liabilities of \$ 4,793,584 (\$ 4,651,082 as at Dec. 31, 2020) represent due to Directors, Officers and a company controlled by a Director \$ 1,030,275 (Nominal value \$ 1,088,141) (\$ 1,022,322 as at Dec. 31, 2020), the convertible debenture and derivative financial liabilities and including accrued interests for a value of \$ 1,923,160 (nominal value \$ 2,053,548) (1,874,220 at Dec. 31, 2020) as well as royalties payable of \$ 1,840,149 (\$ 1,754,540 as at Dec. 31, 2020).

- **WORKING CAPITAL**

As at March 31, 2021, the Corporation had a cash flow of \$ 3,114,064 (\$ 42,903 for 2020).

The Cash Flow used for operational activities was \$ 101,671. The use of cash flow for operations is made up of the Net income of \$ 506,319. The other non-cash elements that have no influence on cash flow are composed of various accretion of \$ 174,055, Share of loss from equity-accounted investment for \$ 27,128, gain on the decrease of our participation in Beauce Gold Fields of \$ 23,514, Financial costs of \$ 25,111, the change in fair value of the derivative liability of \$ \$ 20,630 as well as the variation in the value of the shares of a publicly traded company of \$ 970,000 as well as amortization of intangible assets of \$ 38,857. The change in cash flow for operational working capital represents an amount of \$ 166,114 which comes from: the decrease in HST receivables of \$ 160,988, increase in the prepaid expenses of \$ 19,255 as well as the increase in trade and other payables of \$ 24,381.

The use of cash flow for investing activities of \$ 128,797 consists of: addition to property and equipment of \$ 10,026 and addition to intangible assets of \$ 118,771.

The cash flow from financing activities of \$ 1,456,250 includes the exercise of warrants for \$ 690,250 and the exercise the stock option for \$ 766,000. The Company increase in cash flow of \$ 1,225,782 during the period.

The Corporation average quarterly cash requirements should vary between \$ 225,000 and \$ 250,000 according to each period's activities excluding exploration and evaluation costs and the addition to property equipment and intangible assets, as well as for restructuring costs.

As long as the Corporation is in an exploration and evaluation mode it will not generate cash flow from operations. The Corporation's ability to satisfy its current obligations and continue its development is fully dependent on Management's ability to raise the needed funds from private placements and other financing programs through the issuance of share capital.

- **WORKING CAPITAL** (continued)

Management is of the opinion that as long as important negative events do not occur on the financial markets, during the next year, the Corporation should be able to complete the needed placements and financings to advance its various projects.

In conclusion, the financial statements do not reflect the needed adjustments that would need to be made in the event it could not raise the funding to continue its activities. Investors are hereby advised that if such changes are needed, they could be material.

## **FINANCIAL COMMITMENTS, CONTINGENCIES AND SUBSEQUENT EVENTS**

---

The Company entered into agreements with subscribers whereby the Company had to incur \$ 245,000 of Canadian Exploration Expenses ("CEE") before December 31, 2012. The Company had incurred \$ 163,875 in CEE before December 31, 2012 and an approximate balance of \$77,000 of CEE renounced to the investors was not been incurred as at December 31, 2012 and was used for other purposes than exploration expenses. The maximal contingency for the Company, in relation to non-compliance with its obligations with subscribers, is approximately \$55,000. As at February 28, 2014, the Company had produced the reductions forms related to the amount of \$77,000 in CEE renounced to the investors and that have not been incurred as at December 31, 2012. As at December 31, 2020, an amount of \$ 8,131 pertaining to part XII.6 taxes is included in trade accounts.

The Company entered into agreements with subscribers whereby the Company had to incur \$1,245,000 of Canadian Exploration Expenses ("CEE") before December 31, 2017. The Company had incurred \$919,296 in CEE before December 31, 2017 and an approximate balance of \$293,000 of CEE renounced to the investors was not been incurred as at December 31, 2017, and was used for other purposes than exploration expenses. The maximal contingency for the Company, in relation to non-compliance with its obligations with subscribers, is approximately \$220,000. As at February 28, 2018, the Company had produced the reductions forms related to the amount of \$293,000 in CEE renounced to the investors and that have not been incurred as at December 31, 2017. As at December 31, 2020, an amount of \$34,642 pertaining to part XII.6 taxes is included in trade accounts.

The Company agreed a new agreement with AGORACOM. The Company will issue shares for services rendered by AGORACOM in exchange for the online advertising, marketing and branding services. The number of shares to be issued at the end of each period will be determined by using the closing price of the shares of the Company on the TSX Venture Exchange at the date of issued invoice.

The term of the agreement is 12 months starting on July 15, 2020, and the services totalizing \$50,000 must be paid by the Company at the end of each quarter for the amount of \$12,500 plus TVH.

On September 28, 2015, the Corporation concluded a Development and Exclusivity Agreement with PyroGenesis. In return for the Exclusive Right to use the PyroGenesis-developed technology, it must make the following payments:

- 2021, the highest between 10% of Si sales or \$200,000;
- 2022 and after, the highest between 10% of Si sales or \$250,000.



## **FINANCIAL COMMITMENTS, CONTINGENCIES AND SUBSEQUENT EVENTS (continued)**

---

On August 18, 2020, the Company acquired with PyroGenesis the PUREVAP™ NSiR technology for the fabrication of nano silicon materials. Pursuant to the purchase agreement, the Company is committed to pay to the seller the greater of an annual royalty equal to 10% of net revenues (as defined in the agreement) generated from the exploitation of the acquired technology or the minimum amounts per the agreement. Also, the seller is being granted the right to convert, at any time and at its sole discretion, its royalties into a 50% equity stake of HPQ Nano.

- 2021, 10% of nano silicon materials sales or \$ 50,000;
- 2022, 10% of nano silicon materials sales or \$ 100,000;
- 2023, 10% of nano silicon materials sales or \$ 150,000;
- 2022 and after, 10% of nano silicon materials sales or \$200,000.

As at March 31, 2021, the remaining total commitment for the purchase of the Pilot Plant Equipment was approximately \$2,992,000 of which an amount of \$1,950,000 is a deposit on a contract for the PUREVAP™ QRR.

On November 17, 2017, the Company entered into a service agreement with Apollon Solar in the development of its Silicon SoG production project. Under this agreement, the Company undertakes to pay fees of € 188,000 over a period of 10 months from January 2018. On October 5, 2018, and September 6, 2019, an amendment was signed between the parties extending the contract for an additional period of 5 months and 4 months respectively. On August 28, 2020, an addendum was signed with Apollon Solar in the development of its project to produce porous silicon wafers that can be used in solid Li-ion batteries. On December 30, 2020, an addendum was signed with Apollon Solar in the development of its project to produce porous silicon wafers that can be used in solid Li-ion batteries. Under this amendment, the Company undertakes to pay fees of € 120,000 over a period of 6 months from January 2021.

Subsequent to period ended, 500,000 warrants were issued for a total amount of \$ 305,000.

## **SUMMARY OF ACCOUNTING POLICIES**

---

The preparation of annual financial statements under IFRS requires that management use its judgment, makes assumptions and estimates and use hypotheses that influence the application of accounting methods, as well as having an effect on the book value of assets, liabilities, revenues and expenses. Final results could differ from these estimates.

The estimates and hypotheses are regularly reviewed. Any revision of accounting estimates are indicated during the period when the estimates are revised as well as any future periods affected by said revisions.

## **SUMMARY OF ACCOUNTING POLICIES (continued)**

---

Information on the hypotheses and estimate uncertainties that present an important risk of creating a significant adjustment during the course of the next financial period are as follows:

- Recoverability of Exploration and Evaluation Assets;
- Internally generated intangible assets;
- Evaluation of Income Tax Credits receivable on resources exploration and Mining Right Credits;
- Evaluation of the convertible debenture and derivative financial liability;
- Present value of royalties payable.

Management believes that the majority of the changes will be adopted in the Corporation's accounting methods during the first period starting after the effective date of each new change. The information on the new standards and interpretations as well as the new amendments, which are susceptible to be pertinent to the Corporation consolidated financial statements are supplied below.

## **FUTURE ACCOUNTING POLICIES**

---

At the date of these consolidated financial statements, certain new standards, amendments and interpretations to existing standards have been published but are not yet effective and have not been adopted early by the Company.

Management anticipates that all of the relevant pronouncements will be adopted in the Company's accounting policies for the first period beginning after the effective date of the pronouncement. Certain new standards and interpretations have been issued but are not expected to have a material impact on the Company's consolidated financial statements.

## **INFORMATION COMMUNICATION CONTROLS AND PROCEDURES**

---

As the Corporation is an emerging issuer, management does not need to attest to the establishment and maintenance of Information Communication Controls and Procedures and internal controls relating to financial information as defined under Regulation 52-109.

The Signing Officers of the Issuer are responsible to ensure that there are processes in place allowing them to gather sufficient information for the statements made in the Certificates.

## **FINANCIAL INSTRUMENTS**

---

Financial Assets used by the Corporation consist of: cash, royalties' receivable and the deposit on contract are part of the loans and receivables category.

The financial liabilities of the Corporation include supplier and creditor payables (excluding salaries and personnel related expenses), the amounts Due to Directors, the amounts Due to Directors, Officers and to a corporation held by a Director (excluding salaries and Personnel expenses) royalties payable, the interest payable on the convertible debenture, the convertible debenture and its derivative financial liability.

## **FINANCIAL INSTRUMENTS (continued)**

---

The fair value of royalties' receivable; of due to Directors, Officers and corporations, controlled by a Director or Officer; of the convertible debenture and derivative financial liabilities, of the Royalties payable, are estimated using an analysis of the discounted cash flows using an interest rate for similar instruments. The fair value of royalties' payable approximates the carrying amount at the end of the year, while the fair value of the due to directors, officers and a corporation held by a director is \$ 1,030,275 and the convertible debenture is \$ 1,306,436 (excluding derivative financial liabilities).

The fair value of the marketable securities of a quoted company was estimated based on the market price at the balance sheet date. Marketable securities of a quoted company measured at fair value in the consolidated statements of cash flows as at March 31, 2021.

As at March 31, 2021, the corporation cash was held in Canadian funds in an interest-bearing account at Bank of Montreal.

## **INFORMATION ON SHARE CAPITAL**

---

- **Information on financings**

On March 31, 2021, the Corporation had 273,769,559 shares issued and outstanding (273,769,559 on December 31, 2020), 14,267 shares to be issued (Nil on December 31, 2020), 55,691,012 warrants (62,656,012 as at December 31, 2020) and 5,850,000 Options (8,600,000 as of December 31, 2020). The number of shares on a diluted basis is 345,039,838.

- **Information on outstanding shares**

As at May 26, 2021, the Corporation had 283,484,559 shares issued and outstanding, 14,267 shares to be issued, 55 691 012 warrants and 5,850,000 options. The number of fully diluted shares is 345,039,838. The Corporation's share capital consists of an unlimited number of common shares with No Par Value.

## **RELATED PARTY TRANSACTIONS**

---

For the period ending on March 31, 2021, the sum of \$37,500 (\$150,000 on December 31, 2019) was accounted for as management fees under a contract between the Corporation and a corporation controlled by the Chairman of the Board as part of a consulting agreement with the Corporation.

These activities are part of the normal course of business for the Corporation and are established based on their exchange value as agreed to by the parties.

Accounts payable and other payables include \$ 72,854 due to officers and a corporation held by a director (\$ 106,972 as at December 31, 2020).

## **RELATED PARTY TRANSACTIONS (continued)**

---

The Corporation owes to Directors and Officers salaries and remuneration with a nominal value of \$1,204,891. The Corporation has obtained confirmation that payment of an amount of \$1,088,141, under certain conditions, will not be demanded for a minimum of 12 months and one day after March 31, 2021.

## **MANAGEMENT'S REPORT ON CONTROLS AND PROCEDURES ON INFORMATION TO BE SUPPLIED**

---

Under the dispensations granted in November 2007 by each of the Securities Commissions of Canada, the CEO and the CFO must produce a « Certificate of Filings-Emerging Issuer » relating to financial information presented in the annual and interim filings, including Management Discussion and Analysis.

When compared with the « Schedule 52-109A2-Certificate of Annual and Interim documents », the « Basic Certificate relating to an Emerging Issuer » includes a "Notice to reader" which declares that the CEO and CFO make no declaration regarding the establishment and maintenance of Controls and Procedures on the Communication of Information (CPCI) and the Internal Controls of the Financial Information (ICFI), as outlined in Regulation 52-109.

## **RISK FACTORS**

---

- **Inherent risks in mineral exploration and evaluation**

The Corporation's activities consist in the acquisition and exploration of mining properties with the hope of discovering mining sites with economic potential. The Corporation's properties are currently at the exploration stage and do not hold any known commercial deposit. It is very unlikely that the Corporation will realize any short or mid-term benefits from these properties. Any future profitability of the Corporation's operations is conditional on the discovery of an economic ore body. In addition, if such a case would arise, nothing guarantees that such an ore body could be put into profitable commercial production.

- **Environmental regulations and commitments**

The Corporation's activities require that it obtains permits from various governmental authorities and are regulated by laws and regulations on the exploration, development, extraction, production, exports, income tax, labor regulations and workplace safety as well as environmental issues and other topics.

Additional costs and delays could be caused by the need to comply with laws and regulations. If the Corporation cannot obtain or renew its permits or approvals, it could be forced to reduce or cease its Exploration Evaluation and Development activities.

## **RISK FACTORS (continued)**

---

- **First Nations relations**

The Corporation regularly initiates exploration work in areas where First Nations could make claims. These claims could slow down the work to do or could increase its costs. The effect of these factors cannot be precisely determined.

- **Financing needs**

The exploration, evaluation, development, extraction and production from the Corporation's properties will necessitate very substantial additional financial resources. The only sources of funds available are through the issuance of share capital and borrowing. There is no assurance that such financings will be available, neither would they be available at favorable conditions or will respond sufficiently to the project's needs. This could have a negative effect on the Corporation's business and financial situation. The impossibility of obtaining a sufficient financing could delay or postpone indefinitely exploration evaluation or production activities on one or all the Corporation's properties, and even see the Corporation lose its participation in some or all of its properties.

- **Metal prices**

The Corporation's share price, its financial results as well as its exploration and evaluation, production and development activities have been affected in the past and could very well be very negatively affected in the future by a fall in the price of precious and base metals.

- **Non insured risks**

The Corporation's activities are subject to certain risks and dangers, including difficult environmental conditions, industrial accidents, labor conflicts, unusual or unexpected geological conditions, landslides, rock falls and other natural phenomenon such as unfavorable meteorological conditions, floods and earthquakes. Such events could result in bodily injuries or death, environmental damages or other damages to the properties or the production facilities or to the properties of other corporations, delays in mining production, monetary losses, and possibly legal liabilities.

- **Corporate permanence**

The Corporation's future depends on its ability to finance its activities and to develop its assets. The failure to obtain sufficient financing could create a situation where it could not continue its activities, realize its assets and settle its liabilities in the normal course of business within a foreseeable future.

(s) Bernard J Tourillon, President and Chief Executive Officer

(s) François Rivard, Chief Financial Officer

Montreal, May 26, 2021.