HPQ Silicon Inc.

(Formerly HPQ Silicon Resources Inc.)

Consolidated Financial Statements
As at December 31, 2023 and 2022

(in Canadian dollars)

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INDEPENDENT AUDITOR'S REPORT

To the Shareholders of HPQ Silicon Inc.

Opinion

We have audited the consolidated financial statements of HPQ Silicon Inc. (the "Entity"), which comprise:

- the consolidated statements of financial position as at December 31, 2023 and December 31, 2022
- the consolidated statements of loss and other comprehensive loss for the years then ended
- the consolidated statements of changes in equity for the years then ended
- the consolidated statements of cash flows for the years then ended
- and notes to the consolidated financial statements, including a summary of material accounting policies

(Hereinafter referred to as the "financial statements").

In our opinion, the accompanying financial statements present fairly, in all material respects, the consolidated financial position of the Entity as at December 31, 2023 and December 31, 2022, and its consolidated financial performance and its consolidated cash flows for the years then ended in accordance with IFRS Accounting Standards.

Basis for Opinion

We conducted our audit in accordance with Canadian generally accepted auditing standards. Our responsibilities under those standards are further described in the **"*Auditor's Responsibilities for the Audit of the Financial Statements*"** section of our auditor's report.

We are independent of the Entity in accordance with the ethical requirements that are relevant to our audit of the financial statements in Canada and we have fulfilled our other ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Material Uncertainty Related to Going Concern

We draw attention to Note 2 in the financial statements, which indicates that the Entity has not yet generated income, has operated at a loss and has negative cash flows from operations. Furthermore, the entity's current liabilities exceed the total of its current assets. Accordingly, the Entity depends on its ability to raise financing in order to discharge its commitments and liabilities in the normal course of operations.

As stated in Note 2 in the financial statements, these events or conditions, along with other matters as set forth in Note 2 in the financial statements, indicate that a material uncertainty exists that may cast significant doubt on the Entity's ability to continue as a going concern.

Our opinion is not modified in respect of this matter.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the financial statements for the year ended December 31, 2023. These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

In addition to the matter described in the **"*Material Uncertainty related to Going Concern*"** section of the auditor’s report, we have determined the matter described below to be the key audit matter to be communicated in our auditor’s report.

Evaluation of indicators of impairment for property and equipment and intellectual properties

Description of the matter

We draw attention to Notes 4.8, 4.9, 4.10, 5.2, 10, and 11 of the financial statements. During the fiscal year, the Company recorded a write-off and an impairment of certain intellectual properties in the statement of net loss. The entity conducts an assessment of facts and circumstances from internal and external sources demonstrating the existence of potential impairment indicators. Significant judgments are required in the assessment of impairment indicators.

Why the matter is a key audit matter

We have determined that the evaluation of indicators of impairment of property and equipment (P&E) and intellectual properties (IP) constitutes a key audit matter. P&E and IP are significant relative to the financial statements. Significant auditor judgments are required to assess the results of our audit procedures and the entity's evaluation in determining the existence of impairment indicators.

How the matter was addressed in the audit

The following procedures are the principal procedures we implemented to address this key audit matter:

We evaluated the entity's analysis of external impairment indicators by:

- Comparing the qualitative information included in the analysis to external market data and industry data.

- Inspecting publicly available information regarding fluctuations in market prices of silicon metal.
- Comparing the entity's market capitalization to the carrying amount of its net assets.

We evaluated the entity's analysis of internal impairment indicators by:

- Obtaining an understanding of the technical feasibility related to the equipment by obtaining a report prepared by the entity detailing the progress and inspecting internal documentation.
- Discussing the report prepared by the entity with engineers and project managers and evaluating the existence of technological setbacks that are indicators of impairment.
- Discussing the resources available to continue the technological development of P&E and IP.

Other Information

Management is responsible for the other information. Other information comprises the information included in Management's Discussion and Analysis filed with the relevant Canadian Securities Commissions.

Our opinion on the financial statements does not cover the other information and we do not and will not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information identified above and, in doing so, consider whether the other information is materially inconsistent with the financial statements, or our knowledge obtained in the audit and remain alert for indications that the other information appears to be materially misstated.

We obtained the information included in Management's Discussion and Analysis filed with the relevant Canadian Securities Commissions as at the date of this auditor's report. If, based on the work we have performed on this other information, we conclude that there is a material misstatement of this other information, we are required to report that fact in the auditor's report.

We have nothing to report in this regard.

Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with IFRS Accounting Standards, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Entity's ability to continue as a going concern, disclosing as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Entity or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Entity's financial reporting process.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian generally accepted auditing standards will always detect a material misstatement when it exists.

Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

As part of an audit in accordance with Canadian generally accepted auditing standards, we exercise professional judgment and maintain professional skepticism throughout the audit.

We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion.

  The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Entity's internal control.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Entity's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Entity to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

- Communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

- Provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the group Entity to express an opinion on the financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.
- Determine, from the matters communicated with those charged with governance, those matters that were of most significance in the audit of the financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor’s report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our auditor’s report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The engagement partner on the audit resulting in this auditor’s report is Tracy Chehab.

KPMG LLP*

Montréal, Canada

April 29, 2024

*CPA auditor, public accountancy permit No. A126055

HPQ Silicon Inc. (Formerly HPQ Silicon Resources Inc.)
Consolidated Statements of Financial Position
As at December 31, 2023 and 2022
(in Canadian dollars)

	Notes	2023	2022
		$	$
ASSETS			
Current			
Cash		597,404	1,143,902
Marketable securities	6	676,493	710,403
Goods and services tax receivable		66,545	1,047,106
Investment tax credits receivable	21	692,508	207,101
Installments to a subcontractor	7	-	890,000
Deposit on contract with a subcontractor	10	-	1,286,000
Prepaid expenses and other		192,999	267,281
		2,225,949	5,551,793
Non-current			
Property and equipment	10	1,932,920	3,839,058
Intangible assets	11	4,559,836	11,866,770
Royalties' receivable	8	174,886	146,273
Right-of-use assets		18,715	28,331
Investment accounted for using the equity method	12	147,210	180,014
		6,833,567	16,060,446
Total assets		9,059,516	21,612,239
LIABILITIES			
Current			
Payable to a subcontractor and other trade payables	13	4,586,145	3,969,320
Due to directors	14	100,000	100,000
Royalties payable to a subcontractor	11	667,418	354,578
Current portion of lease liabilities		12,019	11,371
Income tax payable		28,193	-
		5,393,775	4,435,269
Non-current			
Due to directors, officers and a company owned by a director, without interest (effective rate of 3.1% in 2022)	14	920,291	827,052
Lease liabilities		6,857	16,997
Royalties payable to a subcontractor	11	904,411	1,814,251
		1,831,559	2,658,300
Total liabilities		7,225,334	7,093,569
EQUITY			
Share capital	15	56,835,710	54,865,457
Contributed surplus		2,931,580	3,782,159
Accumulated other comprehensive income		5,140	16,991
Deficit		(58,517,741)	(44,270,333)
Equity attributable to owners		1,254,689	14,394,274
Non-controlling interests	23	579,493	124,396
Total equity		1,834,182	14,518,670
Total liabilities and equity		9,059,516	21,612,239

The accompanying notes are an integral part of the consolidated financial statements.
These consolidated financial statements were approved and authorized for issue by the Board of Directors on April 29, 2024.

ON BEHALF OF THE BOARD

(s) Patrick Levasseur Director
(s) Bernard J. Tourillon Director

HPQ Silicon Inc. (Formerly HPQ Silicon Resources Inc.)
Consolidated Statements of Net Loss
As at December 31, 2023 and 2022
(in Canadian dollars)

	Notes	2023	2022
		$	$
Expenses			
Salaries and employee benefits expense	16.1	1,929,707	755,976
Other operating expenses	18	1,329,878	1,072,661
Research and development costs [1]		2,997,706	2,406,957
Amortization of intangible assets	11	685,724	611,023
Amortization of property and equipment	10	1,915,234	1,568,157
Write-off of property and equipment	10	-	574,909
Write-off of intangible assets	11	2,951,879	-
Impairment of intangible assets	11	3,888,227	1,321,272
Recovery of exploration and evaluation assets	9	-	(91,494)
Operating loss		15,698,355	8,219,461
Other income (expenses)			
Finance (loss) income	19	(847,737)	(396,941)
Finance costs	19	(409,738)	(344,351)
Share of loss from equity-accounted investment		(32,615)	(35,282)
Adjustment of ownership in equity-accounted investment		(189)	9,060
Loss on modification of royalties receivable		-	(97,160)
Gain on cancellation of royalties to a subcontractor	11	972,498	-
		(317,781)	(864,674)
Loss before income tax		(16,061,136)	(9,084,135)
Income taxes	21	28,193	-
Net loss		(16,044,329)	(9,084,135)
Net loss attributable to:			
Owners of the Company		(16,487,089)	(9,207,434)
Non-controlling interests	23	442,760	123,299
		(16,044,329)	(9,084,135)
Loss per share attributable to owners			
Basic and diluted loss per share	20	(0.04)	(0.03)

[1] Including share-based payments of $77,050 in 2023 and of $77,349 in 2022.

The accompanying notes are an integral part of the consolidated financial statements.

HPQ Silicon Inc. (Formerly HPQ Silicon Resources Inc.)
Consolidated Statements of Comprehensive Loss
As at December 31, 2023 and 2022
(in Canadian dollars)

	Notes	2023	2022
		$	$
Net loss		(16,044,329)	(9,084,135)
Other comprehensive income item that will subsequently be reclassified to net earnings:			
Exchange difference resulting from the conversion of a foreign subsidiary		486	16,991
Comprehensive loss		(16,043,843)	(9,067,144)
Comprehensive loss attributable to:			
Owners of the Company		(16,486,603)	(9,190,443)
Non-controlling interests	23	442,760	123,299
		(16,043,843)	(9,067,144)

The accompanying notes are an integral part of the consolidated financial statements.

HPQ Silicon Inc. (Formerly HPQ Silicon Resources Inc.)
Consolidated Statements of Changes in Equity
As at December 31, 2023 and 2022
(in Canadian dollars)

	Notes	Equity attributable to owners					Non-controlling interests	Total shareholders' equity
		Share capital	Contributed surplus	Deficit	Accumulated Other comprehensive	Total		
		$	$	$	$	$	$	$
Balance at January 1 st 2022		49,858,704	3,516,870	(35,043,329)	-	18,332,245	-	18,332,245
Private placement unit issuance	15.1	3,264,000	340,000	-	-	3,604,000	-	3,604,000
Investments from non-controlling interests	23	-	-	-	-	-	1,097	1,097
Exercise of warrants	15.2	1,184,716	(106,744)	-	-	1,077,972	-	1,077,972
Exercise of options	16.2	558,037	(210,037)	-	-	348,000	-	348,000
Share-based payments	16.2	-	242,070	-	-	242,070	-	242,070
Unit issuance cost		-	-	(19,570)	-	(19,570)	-	(19,570)
		5,006,753	265,289	(19,570)	-	5,252,472	1,097	5,253,569
Net income for the period		-	-	(9,207,434)	-	(9,207,434)	123,299	(9,084,135)
Total comprehensive for the period		-	-	-	16,991	-	-	16,991
Balance at December 31, 2022		54,865,457	3,782,159	(44,270,333)	16,991	14,394,274	124,396	14,518,670
Private placement unit issuance	15.1	607,013	-	-	-	607,013	-	607,013
Exercice of warrants	15.2	1,269,460	-	-	-	1,269,460	-	1,269,460
Common share issuance for the settlement of accounts payable	15.1	93,780	30,316	-	-	124,096	-	124,096
Share-based payments	16.2	-	1,380,036	-	-	1,380,036	-	1,380,036
Expiration of warrants	15.2	-	(480,000)	480,000	-	-	-	-
Expiration of options	16.2	-	(1,784,419)	1,784,419	-	-	-	-
Issuance cost		-	3,488	(24,738)	-	(21,250)	-	(21,250)
		1,970,253	(850,579)	2,239,681	-	3,359,355	-	3,359,355
Net income for the period		-	-	(16,487,089)	-	(16,487,089)	442,760	(16,044,329)
Total comprehensive for the period		-	-	-	(11,851)	(11,851)	12,337	486
Balance at December 31, 2023		56,835,710	2,931,580	(58,517,741)	5,140	1,254,689	579,493	1,834,182

The accompanying notes are integral part of the consolidated financial statements.

HPQ Silicon Inc. (Formerly HPQ Silicon Resources Inc.)
Consolidated Statements of Cash Flows
As at December 31, 2023 and 2022
(in Canadian dollars)

	Notes	2023	2022
		$	$
OPERATING ACTIVITIES			
Net loss		(16,044,329)	(9,084,135)
Non-cash items			
Share-based payments		1,380,036	242,070
Amortization of intangible assets		685,724	611,023
Amortization of property and equipment		1,915,234	1,568,157
Depreciation of right-of-use assets		10,400	2,576
Net change in fair value of marketable securities		933,910	508,053
Write-off of intangible assets		2,951,879	-
Gain on cancellation of royalties payable to a subcontractor		(972,498)	-
Share of loss from equity-accounted investment		32,615	35,282
Adjustment of ownership in equity-accounted investment		189	(9,060)
Accretion revenues – royalties receivable		(28,613)	(6,111)
Change in fair value of royalties receivable		-	(25,458)
Accretion expenses – due to directors, officers and a company owned by a director		34,240	33,195
Accretion expenses – royalties payable		375,498	411,156
Salaries and employee benefits expense		84,000	25,000
Interest income on royalties receivable		(25,000)	(25,000)
Impairment (recovery) of exploration and evaluation assets		-	(91,494)
Impairment of intangible assets		3,888,227	1,321,272
Write-off of property and equipment		-	574,909
Adjustement of royalties receivable		-	(100,000)
Loss on modification of royalties receivable		-	97,160
Changes in working capital items	22	3,514,282	(967,819)
Cash flows used for operating activities		(1,264,206)	(4,879,224)
INVESTING ACTIVITIES			
Additions to property and equipment		(7,614)	(920,000)
Additions to intangible assets		(262,732)	(318,119)
Purchase of investments in a subcontractor		(900,000)	(260,000)
Tax credits received		41,689	8,559
Acquisition of exploration and evaluation assets held for sale		-	(962)
Cash flows used for investing activities		(1,128,657)	(1,490,522)
FINANCING ACTIVITIES			
Proceeds from issue of units by private placements		607,013	3,604,000
Proceeds from exercise of warrants		1,269,460	1,077,972
Proceeds from exercise of options		-	348,000
Investments from non-controlling interests		-	1,097
Repayment of dues to directors		-	(184,999)
Repayment of lease liabilities		(10,276)	(2,539)
Issuance cost of units		(21,250)	(19,570)
Cash flows provided by financing activities		1,844,947	4,823,961
Net change in cash		(547,916)	(1,545,785)
Effect of exchange difference on cash		1,420	16,991
Cash, beginning of the year		1,143,902	2,672,696
Cash, end of the year		597,404	1,143,902

For additional cash flows information refer to Note 22.

Cash operations

Interests received from operating activities		32,560	54,543

The accompanying notes are an integral part of the consolidated financial statements.

1. NATURE OF OPERATIONS

HPQ Silicon Inc. ("HPQ" or the "Company") specializes in the development of technologies related to the transformation of quartz into silicon materials and its derivatives.

During the Annual General Meeting held on June 30, 2022, the shareholders approved the change of the name of the company from HPQ Silicon Resources Inc. to HPQ Silicon Inc. This change came to effect on July 4, 2022.

As a result of the pending change in activity, the Company will focus on the innovation of silicon solutions and related technology and will longer focus on the exploration and evaluation of quartz properties. As part of its exit strategy from mining activities, the Company has committed to a plan to sell certain mining rights and as a result has classified the related exploration and evaluation assets as held for sale and was concluded on August 30,2022. An impairment test was performed as at December 31, 2021 on the properties owned by the Company. Refer to Note 9.

2. GOING CONCERN AND STATEMENT OF COMPLIANCE WITH IFRS

The consolidated financial statements have been prepared in compliance with IFRS Accounting Standards (IFRS) for accounting and the basis of the going concern assumption, meaning the Company will be able to realize its assets and discharge its liabilities in the normal course of operations.

The Company has not yet generated income or positive cash flows from its operations for the years ended December 31, 2023 and December 31, 2022. As at December 31, 2023, the Company has an accumulated deficit of $58,517,741 ($44,270,333 as at December 31, 2022). The company has negative working capital of $3,167,826 as of December 31, 2023. Management has determined that the Company has adequate resources to continue operations normally for at least the next 6 months from the date of the statement of financial position. As the Company is still in its development phase and will now focus on the innovation of silicon solutions and related technology, the Company will likely continue to operate at a loss until the technology can be commercialized, and the Company will require additional financing in order to fund future operations and expansion plans. The Company does not expect to generate revenue from product sales unless and until it successfully completes development of its silicon solutions, which may take a number of years and is subject to significant uncertainty. Until such time that it can generate significant revenue from product sales, if ever, the Company expects to finance its operations through a combination of public or private equity or debt financings or other sources. The Company currently has no committed sources of financing available. While the Company has been successful in securing financing in the past, raising additional funds is dependent on a number of factors outside the Company's control, and as such there is no assurance that it will be able to do so in the future. The ability of the Company to meet its commitments and discharge its liabilities as they become due and become profitable is dependent on the successful completion of the development of its technology and its commercial production, its ability to raise additional funding to finance these activities and the continued financial support of shareholders and lenders. The conditions mentioned above indicate the existence of a material uncertainty that may cast a significant doubt as to the Company's ability to continue as a going concern.

The carrying amounts of assets, liabilities, revenues and expenses presented in the consolidated financial statements and the classification used in the statement of financial position have not been adjusted as would be required if the going concern assumption was not appropriate. Those adjustments could be material.

2. GOING CONCERN AND STATEMENT OF COMPLIANCE WITH IFRS (continued)

There is a significant business relationship and economic dependence with the subcontractor, PyroGenesis Canada Inc. (PyroGenesis or subcontractor), which is a shareholder of HPQ. HPQ does business with PyroGenesis for its research and development activities involving the plasma-based process, the latter is a company that develops plasma reactors in a closed-loop furnace. Under agreements with the Company or its subsidiaries, PyroGenesis provides engineering services and assembles the equipment and the Company pays the costs upon presentation of invoices for the work performed. The QRR PUREVAP^{TM} equipment is located on the premises of PyroGenesis. As described in note 5.1, as of December 31, 2023, PyroGenesis has a right to convert the royalties into 50% of the shares of the subsidiary HPQ Polvere held by HPQ. The assets acquired with the subcontractor, PyroGenesis, as well as the related royalties payable are described in Note 10 and 11.The expenses recorded in 2023 relating to expenses generated with PyroGenesis are $1,763,600 in research and development costs ($1,184,000 in 2022).

3. GENERAL INFORMATION

HPQ is incorporated under the *Canada Business Corporations Act*. The address of the registered office and its principal place of business is 3000 Omer-Lavallée Street, office 306, Montreal, Quebec, Canada. HPQ shares are listed on the TSX Venture Exchange.

4. MATERIAL ACCOUNTING POLICIES

4.1 Overall considerations

The material accounting policies that have been applied in the preparation of these consolidated financial statements are summarized below.

4.2 Principle of consolidation

The Company's consolidated financial statements include the accounts of the parent company and the subsidiaries it controls. Control exists when an investor is exposed, or has rights, to variable returns from its involvement with an investee and has the ability to affect those returns through its power over the investee. Subsidiaries are included in the consolidated financial statements from the date control is obtained until the date control ceases. Where the Company's interest in a subsidiary is less than 100%, the Company recognizes non-controlling interests. All intercompany balances, transactions, income, expenses, profits, and losses, including unrealized gains and losses have been eliminated on consolidation. When the Company ceases to have control; any retained interest in the entity is re-measured to its fair value at the date when control is lost, with the change in carrying amount recognized in profit or loss. The fair value is the initial carrying amount for the purposes of subsequently accounting for the retained interest as an associate, joint venture, or financial asset.

4. MATERIAL ACCOUNTING POLICIES (continued)

4.2 Principle of consolidation (continued)

The following table presents detailed information on the subsidiaries and affiliated companies held by the Company at the end of the financial reporting period.

Name	Principal activities	Country of incorporation	Percentages held by the Company
HPQ Nano Silicon Powders Inc. (HPQ Nano)	Manufacture of silicon nanoscale materials	Canada	100%
HPQ Silica Polvere Inc. (HPQ Polvere)	Manufacture of Fumed Silica	Canada	100%
NOVACIUM S.A.S. (Novacium)	Research and development of products made of silicon and its derivatives	France	20%

With regard to Novacium, since June 7, 2022, the Company exercises control through the holding of a preferred share granting it a right of veto over decisions that have a significant impact on the relevant activities of this affiliated company.

4.3 Investment in associate

The associate is an entity over which the Company is able to exert significant influence, but which is not a subsidiary. Investments in the associate are initially recognized at cost and subsequently accounted for using the equity method.

4.4 Functional and presentation currency

The Company and its subsidiaries each determine their functional currency based on the currency of the primary economic environment in which they operate. Transactions denominated in a currency other than the functional currency of the entity are translated at the exchange rate in effect on the transaction date. Related exchange differences are included in each entity's net income for the period in which they arise.

4.5 Financial Instruments

Recognition and derecognition

Financial assets and financial liabilities are recognized when the Company becomes a party to the contractual provisions of the financial instrument.

Financial assets and liabilities are initially measured at fair value adjusted for transaction costs, if applicable.

Financial assets are derecognized when the contractual rights to cash flows from a financial asset expire, or when a financial asset and substantially all risks and rewards are transferred. A financial liability is derecognized in the event of termination, extinction, cancellation or expiration.

The classification of financial instruments under IFRS 9 is based on the entity's business model and the characteristics of the contractual cash flows of the financial asset or liability.

4. MATERIAL ACCOUNTING POLICIES (continued)

4.5 Financial instruments (continued)

Classification and initial valuation of financial assets

Financial assets are classified into one of the following categories:

- Amortized cost;
- Fair value through profit or loss ("FVTPL");

All income and expenses relating to financial assets recognized in profit or loss are presented in finance costs or financial income.

Subsequent measurement of financial assets

Financial assets

Financial assets are measured at amortized cost if they meet the following conditions:

- They are held according to an economic model whose objective is to hold financial assets in order to collect the contractual cash flows;
- The contractual terms of the financial assets give rise to cash flows that correspond solely to repayments of principal and interest payments on the principal outstanding.

After initial recognition, they are measured at amortized cost using the effective interest rate method. Royalties receivables are included in this category of financial instruments.

Financial assets that are held in a different economic model other than "holding for the purpose of collection" or "holding for the purpose of collection and sale" are classified in the FVTPL category.

Financial assets at fair value through profit or loss ("FVTPL")

The class includes the marketable securities of a quoted company as an equity investment.

Assets in this category are measured at fair value and gains or losses are recognized in net income. The fair value of financial assets in this category is determined based on transactions in an active market or by applying a valuation technique when there is no active market.

Impairment of financial assets

The impairment provisions in IFRS 9 use more forward-looking information, the expected credit loss model, which replaces the IAS 39 loss model.

The recognition of credit losses is no longer dependent on the identification of a credit loss event by the Company. Rather, it must take into account an expanded range of information for assessing credit risk and assessing expected credit losses, including past events, current circumstances, and reasonable and justifiable forecasts that affect expected recoverability of future cash flows of the financial instrument.

The estimate of expected credit losses is determined at each reporting date to reflect changes in credit risk since the initial recognition of the related financial asset.

Classification and measurement of financial liabilities

The Company's financial liabilities include trade payables and other payables (excluding salaries and personnel expenses), royalties payable, due to directors and officers (current and non-current liabilities), and to a corporation owned by a director (excluding salaries and personnel expenses).

4. MATERIAL ACCOUNTING POLICIES (continued)

4.6 Basic and diluted loss per share

Basic loss per share is calculated by dividing the loss attributable to common equity holders of the Company by the weighted average number of common shares outstanding during the period. Diluted earnings per share is calculated by adjusting loss attributable to common equity holders of the Company, and the weighted average number of common shares outstanding, for the effects of all dilutive potential common shares which include share options, brokers' warrants, brokers' units and warrants. Dilutive potential common shares shall be deemed to have been converted into common shares at the average market price at the beginning of the period or, if later, at the date of issue of the potential common shares.

4.7 Investment tax credits receivable

Tax credits are recognized as a reduction of the cost of assets acquired and on estimates made by management. The Company records these tax credits when there is reasonable assurance with regards to collections and assessments and that the Company will comply with the conditions associated to them. Adjustments required, if any, are reflected in the year when such assessments are received.

4.8 Property and equipment

Property and equipment are held at cost less accumulated amortization and accumulated impairment losses. Cost includes all costs incurred initially to acquire or construct an item of property and equipment. Amortization is recognized on a straight-line basis to reduce the cost to its estimated residual value, with a constant charge over the useful life of the asset.

Equipment and leasehold improvements are amortized on a straight-line basis over a period of 3 to 10 years and equipment under construction will be amortized on a straight-line basis over a period of 3 to 10 years when they are ready for use.

4.9 Intangible assets

Patents and intellectual property are intangible assets measured at historical cost less accumulated amortization and accumulated impairment losses, if any. The cost of patents consists of the cost of patent applications. The cost of intellectual property is initially comprised of the acquisition cost. Amortization is calculated on a straight-line basis over the estimated useful life of the patent and intellectual property, which is valued at 17 and 21 years, respectively. The amortization period and amortization method are reviewed annually and adjusted prospectively as required.

4.10 Impairment of assets

For the purposes of assessing impairment, assets are grouped at the lowest levels for which there are largely independent cash inflows (cash-generating units). As a result, some assets are tested individually for impairment and some are tested at a cash-generating unit level.

Whenever events or changes in circumstances indicate that the carrying amount may not be recoverable, an asset or cash-generating unit is reviewed for impairment, with the exception the equipment under construction and intangible assets that are not yet ready for use.

Intangible assets that are not yet ready for use must be tested for impairment annually.

4. MATERIAL ACCOUNTING POLICIES (continued)

4.10 Impairment of assets (continued)

An impairment loss is recognized for the amount by which the asset's (or cash-generating unit's) carrying amount exceeds its recoverable amount, which is the higher of fair value less costs of disposal and value-in-use. To determine the value-in-use, management estimates expected futures cash flows from each cash-generating unit and determines a suitable discount rate in order to calculate the present value of those cash flows. Discount factors are determined individually for each cash-generating unit and reflect current market assessments of the time value of money and asset-specific risk factors.

An impairment loss is recognized in profit or loss for the amount by which the assets or cash-generating unit's carrying amount exceeds its recoverable amount. The recoverable amount of an asset or a cash-generating unit is the higher of its fair value less cost to sell and its value in use.

An impairment charge is reversed if the assets or cash-generating unit's recoverable amount exceeds it carrying amount.

4.11 Provisions and contingent liabilities

All provisions are reviewed at each reporting date and adjusted to reflect the current best estimate. No provision was recognized in the consolidated statements of financial position at December 31, 2023 and December 31, 2022.

4.12 Income taxes

Tax expenses recognized in profit or loss comprises the sum of deferred tax and current tax not recognized directly in equity.

Calculation of current tax is based on tax rates and tax laws that have been enacted or substantively enacted by the end of the reporting period. Deferred income taxes are calculated using the liability method.

Deferred tax assets are recognized to the extent that it is probable that the underlying tax loss or deductible temporary difference will be utilized against future taxable income. This is assessed based on the Company's forecast of future operating results, adjusted for significant non-taxable income and expenses and specific limits on the use of any unused tax loss or credit.

Deferred tax liabilities are generally recognized in full, although IAS 12 "Income Taxes" specifies limited exemptions. As a result of these exemptions, the Company does not recognize deferred tax on temporary differences relating to goodwill, or to its investments in subsidiaries.

4.13 Equity

Share capital represents the amount received on the issue of shares. If shares are issued when share options, brokers' warrants, brokers' units or warrants are exercised, the share capital account also comprises the compensation costs or the value of the stock options, warrants or brokers' warrants previously recorded as contributed surplus.

Unit placements

Proceeds from unit placements are allocated between shares and warrants issued using the residual method. Proceeds are first allocated to the shares according to the quoted price of existing shares at the time of issuance and any residual in the proceeds is allocated to warrants.

4. MATERIAL ACCOUNTING POLICIES (continued)

4.14 Equity-settled share-based payments

The Company operates an equity-settled share-based payment plan for its eligible directors, officers, employees and consultants. The Company's plan does not feature any option for a cash settlement.

All goods and services received in exchange for the grant of any share-based payments are measured at their fair values, unless that fair value cannot be estimated reliably. If the Company cannot estimate reliably the fair value of the goods or services received, the Company shall measure their value indirectly by reference to the fair value of the equity instruments granted. For the transactions with employees and others providing similar services, the Company measured the fair value of the services rendered by reference to the fair value of the equity instruments granted.

All equity-settled share-based payments (except brokers' warrants, brokers' units and brokers' options) are ultimately recognized as an expense in profit or loss, depending on the nature of the payment with a corresponding credit to Contributed surplus, in equity. Equity-settled share-based payments to brokers, in respect of an equity financing are recognized as issuance costs of the equity instruments with a corresponding credit to contributed surplus, in equity.

4.15 Segmental reporting

The Company presents and discloses segmental information based on information that is regularly reviewed by the chief operating decision maker, i.e. the Chairman and the Board of Directors. The Company has determined that there was only one operating segment, being the sector of the transformation of quartz into silicon materials and derivative products.

4.16 New accounting standards adopted

IAS 1, Disclosure of Accounting Policies

In February 2021, the IASB issued amendments to IAS 1 to require entities to disclose its material accounting policies instead of its significant accounting policies.

This amendment is applicable to the Company beginning January 1, 2023. The adoption of this amendment did not have a significant impact on the Company's financial statements.

IAS 8, Definition of Accounting Estimates

In February 2021, the IASB issued amendments to IAS 8 to replace the definition of a change in accounting estimate. Under the new definition, accounting estimates are "monetary amounts in financial statements that are subject to measurement uncertainty".

This amendment is applicable to the Company beginning January 1, 2023. The adoption of this amendment did not have a significant impact on the Company's financial statements.

IAS 12, Deferred Tax Related to Assets and Liabilities Arising From a Single Transaction

In May 2021, the IASB issued amendments to IAS 12 to require entities to recognize deferred tax on transactions that, on initial recognition, give rise to equal amounts of taxable and deductible temporary differences.

This amendment is applicable to the Company beginning January 1, 2023. The adoption of this amendment did not have a significant impact on the Company's financial statements.

4. MATERIAL ACCOUNTING POLICIES (continued)

4.17 New accounting standards not yet adopted

At the date of authorization 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. Information on new standards, amendments and interpretations that are expected to be relevant to the Company's consolidated financial statements is provided below. Certain other new standards and interpretations have been issued but are not expected to have a material impact on the Company's consolidated financial statements.

IAS 1 Presentation of financial statements

Amendments to the classification of liabilities as current or non-current: includes classification of liabilities as current or non-current.

IFRS 16 Leases – lease liability in case of sale and leaseback

The amendments introduce a new accounting model that affects how a seller-turned-tenant accounts for variable lease payments resulting from a lease-back transaction.

IAS 7 Statement of cash flows & IFRS 7 Financial instruments: Disclosure – Supplier finance arrangements

The amendments introduce new communication objectives for a company to provide information on its supplier financing agreements that would enable investors to assess the impact of these agreements on liabilities, cash flows and exposure to the company's liquidity risk. The new disclosure should also include the type and effect of non-cash changes in the book value of financial liabilities that are part of a funding agreement with a supplier.

5. JUDGMENTS, ESTIMATES AND ASSUMPTIONS

When preparing the consolidated financial statements, management undertakes a number of judgments, estimates and assumptions about recognition and measurement of assets, liabilities, income and expenses.

5.1 Significant management judgments

The following are significant management judgments in applying the accounting policies of the Company that have the most significant effect on the consolidated financial statements.

Determination of control, joint control or significant influence over a business

The Company must make judgments when assessing the level of control and influence it exercises over its holdings, considering in particular the way in which decisions concerning the relevant activities of the holding company are taken, the protective nature or substantial rights held by other holders and the Company's ability to influence the returns of the investee. The Company must also make judgments in identifying related parties.

Going concern

The assessment of the Company's ability to continue as a going concern and to raise sufficient funds to pay for its ongoing operating expenditures, meets its liabilities for the ensuing year, and to fund planned and contractual scientific research and experimental development, involves significant judgment based on historical experience and other factors including expectation of future events that are believed to be reasonable under the circumstances. See Note 2 for more information.

5. JUDGMENTS, ESTIMATES AND ASSUMPTIONS (continued)

5.1 Significant management judgments (continued)

Impairment indicators

The Company performs an evaluation of facts and circumstances from internal and external sources demonstrating the existence of potential indicators of impairment. Significant judgments are required in evaluating impairment indicators.

Conversion of royalties payable

As described in note 2, there is a significant business relationship and economic dependence with the subcontractor, PyroGenesis Canada Inc. (PyroGenesis or subcontractor), who is also a shareholder of HPQ. PyroGenesis owns less than 10 % of the shares of the Company including the dilutive effect of exercising warrants. In addition, certain subsidiaries of the Company have the obligation to pay perpetual royalties of 10 % of future sales related to intellectual properties purchased from PyroGenesis. At December 31, 2023, PyroGenesis has a right to convert the royalties from HPQ Polvere and HPQ Nano into 50% of the shares held by HPQ in its subsidiaries. The conversion right in the HPQ Nano subsidiary ceased on March 24, 2024, upon handover of the underlying NRSi intellectual property to PyroGenesis. The Company has assessed that PyroGenesis has neither de-facto control over the Company, given the fact that it does not have the ability to direct the relevant activities of the Company unilaterally, nor does it exercise significant influence over the Company. The Company considered the substance of the arrangement and agreements with PyroGenesis, the latter's percentage shareholding of the Company, combined with the Company's s obligation to pay royalties on future sales, the timing of such sales and the probability of conversion of such royalties into 50 % of the shares held by HPQ in certain subsidiaries of the Company.

5.2 Assumptions and estimation uncertainty

Information about estimates and assumptions that have the most significant effect on the recognition and measurement of assets, liabilities, income and expenses are discussed below. Actual results may be substantially different.

Investment tax credits receivable

The calculation of the Company's refundable tax credit of scientific research and experimental development tax credits involves a degree of estimation and judgment with respect to certain items whose tax treatment cannot be finally determined until a notice of assessment has been issued by the relevant taxation authority and payment has been received. Differences arising between the actual results following final resolution of some of these items and the assumptions made could necessitate adjustments to the refundable tax credit, refundable tax credit for scientific research and experimental development, property and equipment and income tax expense in future periods. See Note 4.7 for more information.

Impairment of assets

When an indication of an impairment loss or a reversal of an impairment loss exists, the recoverable amount of the individual asset or the cash-generating units must be estimated.

In assessing impairment, the Company must make some estimates and assumptions regarding future circumstances. Estimates and assumptions may change if new information becomes available. If, information becomes available suggesting that the recovery of expenditure is unlikely, the amount capitalized is written off in profit or loss in the period when the new information becomes available.

(in Canadian dollars)

5. JUDGMENTS, ESTIMATES AND ASSUMPTIONS (continued)

5.2 Assumptions and estimation uncertainty (continued)

Impairment of property and equipment and intangible assets

In assessing impairment, management estimates the recoverable amount of each cash-generating asset or unit based on future cash flows and uses an interest rate to discount them. The uncertainty in the estimates is related to assumptions about future operating results and the determination of an appropriate discount rate.

During the year ended December 31, 2023, the Company recorded a write-off of $2,951,879 on intangible assets and an impairment of $3,888,227 on intangible assets in profit or loss (as at December 31, 2022, the Company recorded a write-off of $574,909 of property and equipment and an impairment of $1,321,272 on intangible assets.

6. MARKETABLE SECURITIES

The Company holds shares and warrants in various public companies. During the period ended December 31, 2023, these shares and warrants were valued at fair market value, resulting in a loss of $933,910 (loss of $508,053 as at December 31, 2022).

Shares of various public companies are classified as FVTPL and are recorded at fair value using quoted market prices as at December 31, 2023 and are therefore classified as Level 1 within the fair value hierarchy.

The warrants in various public companies are classified as FVTPL and are recorded at fair value using a Black-Scholes pricing model with observable inputs and are therefore classified as Level 2 within the fair value hierarchy.

The following table summarizes the information on marketable securities for the periods presented:

	December 31, 2023	December 31, 2022
	$	$
Balance at January 1st	710,403	666,000
Acquisition of securities through disposition of assets held for sale (a)	-	292,456
Acquisition (b)	900,000	260,000
Change in fair market value	(933,910)	(508,053)
	676,493	710,403

(a) During the month of August 2022, the Company received 3,000,000 units consisting of one common share and one-half of one warrant from Québec Innovatrice Materials Corp. (QIMC) (formerly Québec Silica Resources Inc.), a public company, in exchange for the sale of 27 claims from the Ronceveaux property and 36 claims from the Martinville property. The shares were issued at $0.07 per share and each full warrant is exercisable at $0.15 for a period of 3 years expiring on August 31, 2025. The fair value of one-half of one warrant was estimated using the Black-Scholes model as follows: share price $0.07, risk-free interest rate – 1.65%, expected life of warrants – 3 years, volatility rate – 417% and dividend rate – 0%.

6. MARKETABLE SECURITIES (continued)

The Company held 3,000,000 common shares as at December 31, 2023 (2022- 3,000,000) and the quoted price of QIMC shares was $0.025 as at December 31, 2023 ($0.045 as at December 31, 2022).

For the variation of warrants, the Company held 1,500,000 warrants that are exercisable at a price of $0.15 per share (2022 – 1,500,000). The fair value of warrants was valued at $12,136 as at December 31, 2023 (2022 – $63,395) and was estimated using the Black-Scholes model with the following assumptions: share price of $0.025, risk-free interest rate of 3.91%, expected life of warrants of 1.67 years, volatility rate of 144% and a dividend rate of 0%. (As at December 31, 2022 - share price of $0.045, risk-free interest rate of 4.03%, expected life of warrants of 2.67 years, volatility rate of 406% and a dividend rate of 0%).

(b) During the month of March 2023, the Company acquired 900,000 units consisting of one common share and one warrant of PyroGenesis Canada Inc. for a total value of $900,000. Each warrant is exercisable at a price of $1.25 over a period of 2 years expiring on March 7, 2025. During the month of October 2022, the Company acquired 200,000 units consisting of one common share and one warrant of PyroGenesis Canada Inc. for a total value of $260,000. Each warrant is exercisable at a price of $1.75 over a period of 2 years expiring on October 19, 2024. The Company held 1,300,000 common shares as at December 31, 2023 (2022 - 400,000) and the quoted price of PyroGenesis shares was $0.43 as at December 31, 2023 ($1.03 as at December 31, 2022).

For the variation of warrants, the Company held 1,100,000 warrants (2022 – 200,000) that are exercisable at an average price of $1.34 per share (2022 - $1.75). The fair value of the warrants was valued at $30,357 as at December 31, 2023 (2022 – $96,008) and was estimated using the Black-Scholes model with the following assumptions: share price of $0.43, risk-free interest rate of 3.91%, expected life of warrants of 1.11 years, volatility rate of 78% and dividend rate of 0% (2022 - share price of $1.03, risk-free interest rate of 4.03%, expected life of warrants of 1.8 years, volatility rate of 117% and dividend rate of 0%).

7. INSTALLMENTS TO A SUBCONTRACTOR

This amount represents the balance of the installment made by the Company, on September 28, 2022, to a subcontractor in the amount of $2,650,000 to be used for acquisition and works anticipated in the near future. This amount is conditional and had to be returned to the Company in the event the planned work and transaction were not agreed upon by the parties before December 31, 2022. The balance of this deposit was $890,000 as of December 31, 2022. This amount was refunded by the subcontractor during the first quarter of 2023.

8. ROYALTIES RECEIVABLE

During 2021, the Company received 166,667 shares of the capital stock of GBF as a settlement of a royalty receivable from GBF of $50,000. As a result of the exchange, the Company recognized an increase of $9,770 in its investment of BGF and a loss of $40,230.

(in Canadian dollars)

8. ROYALTIES RECEIVABLE (continued)

On June 23, 2022, an addendum was signed to modify initial terms of the agreement. The NSR payments for each subsequent year have been replaced with 10% annual interest, the $250,000 royalty is non-transferable and the due date is December 31, 2025 including unpaid interest. As at December 31, 2023, the balance of interest receivable is $50,000 ($25,000 as at December 31, 2022).

	December 31, 2023	December 31, 2022
	$	$
Balance, beginning	146,273	211,864
Change in fair value	-	19,068
	146,273	230,932
Derecognition of royalties	-	(230,932)
Addition of a royalty receivable	-	133,772
Accretion charge	28,613	12,501
Balance, end	174,886	146,273

The fair value of the royalties' receivable was estimated using a present value technique, immediately prior to the modification date. The revalued fair value of $230,932 was estimated based on the probability of cash outflows over a four-year period at 18%, which is the interest rate for similar financial instruments. Undiscounted cash inflows are $250,000 and reflect management's estimate of the timing of royalty repayment.

During fiscal 2022, the Company derecognized the royalty receivable of $230,932 and with the new agreement revalued the royalty in the amount of $133,772, calculated based on estimated cash flows under the addendum over a period of 3.5 years discounted at a rate of 18%. Undiscounted cash inflows are $250,000 and reflect management's estimate of the timing of royalty payment. The change in royalty resulted in a loss of $97,160 which was recorded in net income during fiscal 2022.

9. ASSETS HELD FOR SALE

In December 2021, following its decision to cease its mineral exploration activities, the Company made a commitment to sell its Ronceveaux and Martinville properties. As at December 31, 2021, the Properties of Ronceveaux and Martinville were presented in the statement of financial position at the lower of fair value less costs to sell and their carrying amount.

On August 30, 2022, the Company completed the sale of its quartz properties to Québec Silica Resources Inc ("QTZ"), now known as QIMC, in consideration of 3,000,000 units composed of one common share and one-half of one warrant issued by QTZ. Each full warrant entitles the holder to subscribe for one common share at a price of $0.15 per share for 36 months following closing of the transaction. The value of the transaction is $292,456 which was recorded as an investment. A recovery of exploration and evaluation assets of $91,494 has been recorded in net loss during fiscal 2022.

(in Canadian dollars)

10. PROPERTY AND EQUIPMENT

Property and equipment of the Company are composed of leashold improvements, equipment and equipment under construction. The $5,090,000 equipment and rental improvements pertain to the QRR PUREVAP™ process pilot plant located at the subcontractor's facilities.

As of December 31, 2022, the Company was committed to paying an amount of $1,286,000 for tests on the QRR Purevap ™ which were carried out during fiscal 2023.

The carrying amount is set out as follows:

	Leasehold improvements	Equipment	Total
	$	$	$
Gross carrying amount			
Balance at January 1, 2023	344,000	5,063,215	5,407,215
Acquisition	-	7,614	7,614
Effect of foreign exchange	-	1,758	1,758
Balance at December 31, 2023	344,000	5,072,587	5,416,587
Accumulated depreciation			
Balance at January 1, 2023	114,667	1,453,490	1,568,157
Depreciation	114,666	1,800,568	1,915,234
Effect of foreign exchange	-	276	276
Balance at December 31, 2023	229,333	3,254,334	3,483,667
Carrying amount at December 31, 2023	114,667	1,818,253	1,932,920

	Leasehold improvements	Equipment	Equipment under construction	Total
	$	$	$	$
Gross carrying amount				
Balance at January 1, 2022	344,000	4,240,000	503,335	5,087,335
Acquisition from subcontractor	-	890,715	79,285	970,000
Investment tax credits	-	(67,500)	(7,711)	(75,211)
Write-off	-	-	(574,909)	(574,909)
Balance at December 31, 2022	344,000	5,063,215	-	5,407,215
Accumulated depreciation				
Balance at January 1, 2022	-	-	-	-
Depreciation	114,667	1,453,490	-	1,568,157
Balance at December 31, 2022	114,667	1,453,490	-	1,568,157
Carrying amount at December 31, 2022	229,333	3,609,725	-	3,839,058

(in Canadian dollars)

10. PROPERTY AND EQUIPMENT (continued)

In fiscal 2022, management wrote off the equipment under construction held by its subsidiary, HPQ Nano Powders of Silicon Inc., *PUREVAP™* NSiR Gen1.5, due to the fact that the equipment design did not meet its intended purpose. *PUREVAP™* NSiR Gen1.5 aimed to transform high-purity silicon into spherical nano silicon wires and powders. Even after final adjustments, the problem of oxygen contamination of the final material remained and the technical feasibility of the project was no more. The total carrying amount of the equipment under construction was therefore written off, i.e. $574,909.

11. INTANGIBLE ASSETS

Fumed Silica

On June 30, 2021, the Company acquired intellectual property for the production of fumed silica materials. Pursuant to the purchase agreement, the Company is committed to pay to the seller an annual royalty equal to 10% of net revenues, excluding the samples and testing products (as defined in the agreement) generated from the exploitation of the acquired technology or the minimum amounts per the agreement not exceeding total sales. 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 Polvere. An amount of $3,300,000 paid in cash was recorded as the cost of intellectual property. No royalties to be paid are recorded for this process as of December 31, 2023 and 2022.

Under this agreement, the minimum annual royalty amounts not exceeding total sales owed when there is income are as follows:

	$
2024	100,000
2025	150,000
2026 and after	200,000

PUREVAP™ NSiR

On August 18, 2020, the Company acquired from 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.

The intellectual property, was recognized upon acquisition for a total amount of $2,400,000, paid in cash. The related liability, royalties payable, of $864,013 calculated based on estimated cash flows under the agreement over a period of 25 years at a discounted rate of 18%, was also recorded to intellectual property.

After a careful review of the Nano Silicon material market environment, the technology advancement and associated future development costs needed to get the PUREVAPTM Nano Silicon Reactor (NSiR) to a potential commercial stage, HPQ has advised its technology provider that it no longer intends to pursue the development of this technology. The Company wrote off the total book value of intellectual property of $3,264,013 net of amortization of $466,287 and the book value of related patents of $170,758 net of amortization of $16,605 during the third quarter of 2023, for a total expense of $2,951,879. The intellectual property was officially transferred to PyroGenesis on March 24, 2024. The royalties payable to PyroGenesis relating to this technology were derecognized as of December 31, 2023 and a gain on the cancellation of the royalties payable of 972,498 $ was recognized in the statement of profit or loss.

(in Canadian dollars)

11. INTANGIBLE ASSETS (continued)

PUREVAP™ QRR

On July 29, 2016, the Company acquired PUREVAP™ QRR technology from PyroGenesis for the transformation of quartz into silicon metal of high purity. 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 annual amounts per the agreement are as follows:

	$
2024 and after	250,000

The intellectual property and its related liability, royalties payable, were recognized upon acquisition for a total amount of $815,427 and were calculated based on estimated cash flows under the agreement over a period of 20 years at a rate of 22%. The amount of $50,000 recorded as a deposit in 2015 was reversed at the cost of the intellectual property. In 2016, an amount of $1,000,000 paid in cash was recorded at the cost of the intellectual property.

Management uses its judgment to estimate the amount of royalties payable under the QRR PUREVAP™ and NSiR PUREVAP™ technology acquisition agreement. Estimation uncertainty is related to net revenue assumptions and the determination of a suitable discount rate.

11. INTANGIBLE ASSETS (continued)

PUREVAP™ QRR

The following table shows the distribution of royalty payments to be paid according to PUREVAP™ technology as at December 31, 2023:

	QRR	NSiR	Total
	$	$	$
Balance at January 1, 2023	1,124,778	1,044,051	2,168,829
Accretion expenses	234,551	141,397	375,948
Derecognition of NSiR	-	(972,948)	(972,948)
Balance at December 31, 2023	1,359,329	212,500	1,571,829
Current	454,918	212,500	667,418
Non-current	904,411	-	904,411
	1,359,329	212,500	1,571,829

(in Canadian dollars)

11. INTANGIBLE ASSETS (continued)

The following table shows the distribution of royalty payments to be paid according to PUREVAP™ technology as at December 31, 2022:

	QRR	NSiR	Total
	$	$	$
Balance at January 1, 2022	1,138,138	869,535	2,007,673
Accretion expenses	236,640	174,516	411,156
Payment of the QRR	(250,000)	-	(250,000)
Balance at December 31, 2022	1,124,778	1,044,051	2,168,829
Current	227,459	127,119	354,578
Non-current	897,319	916,932	1,814,251
	1,124,778	1,044,051	2,168,829

CARBON EMISSION REDUCTION PROCESS:

On November 10, 2022, the company acquired from PyroGenesis, in consideration of $3,600,000, the technology relating to carbon emission reduction for the production of Silicon. n accordance with the purchase agreement, the Company has agreed to make the payment of the remaining balance of $3,430,000 no later than June 30, 2024.

The Company relies on government programs for the development of this technology. The activities of one of the main funders for this type of project, Sustainable Development Technology Canada (SDTC), are frozen until further notice due to internal governance issues at SDTC. Management recorded an impairment of $3,599,999 of the book value with a corresponding depreciation of $264,706 and the book value of the related patents of $644,721 with a corresponding depreciation of $91,787 for a net charge of $3,888,227 in the last quarter of 2023 and continues to retain its rights in the related intellectual property.

(in Canadian dollars)

11. INTANGIBLE ASSETS (continued)

The Company's intangible assets include patents and intellectual property. The carrying amount is as follows:

	Patents	Intellectual property	Total
	$	$	$
Gross carrying amount			
Balance at January 1, 2023	890,618	12,029,440	12,920,058
Acquisitions	216,481	-	216,481
Write-off	(170,758)	(3,264,013)	(3,434,771)
Impairment	(644,721)	(3,599,999)	(4,244,720)
Effect of foreign exchange	2,710	-	2,710
Balance as at December 31, 2023	294,330	5,165,428	5,459,758
Accumulated depreciation			
Balance at January 1, 2023	85,724	967,564	1,053,288
Depreciation	90,514	595,210	685,724
Write-off	(16,605)	(466,287)	(482,892)
Impairment	(91,787)	(264,706	(356,493)
Effect of foreign exchange	295	-	295
Balance as at December 31, 2023	68,141	831,781	899,922
Carrying amount at December 31, 2023	226,189	4,333,647	4,559,836

	Patents	Intellectual property	Total
Gross carrying amount	$	$	$
Balance at January 1, 2022	547,991	10,005,249	10,553,240
Acquisitions	342,627	3,600,000	3,942,627
Impairment	-	(1,575,809)	(1,575,809)
Balance as at December 31, 2022	890,618	12,029,440	12,920,658
Accumulated depreciation			
Balance at January 1, 2022	42,619	654,183	696,802
Depreciation	43,105	567,918	611,023
Impairment	-	(254,537)	(254,537)
Balance as at December 31, 2022	85,724	967,564	1,053,288
Carrying amount at December 31, 2022	804,894	11,061,876	11,866,770

(in Canadian dollars)

11. INTANGIBLE ASSETS (continued)

In the last quarter of fiscal 2022, management recorded an impairment for the full carrying amount of $1,321,272, on the process acquired from Apollon Solar SAS due to the fact that HPQ could not demonstrate the economic value of this specific application used to produce porous silicon in the short term. As the end of 2022, HPQ made the strategic decision to focus on the production of silicon in micro-powder, rather than porous silicon. .

An amount of $685,724 ($611,023 as at December 31, 2022) is presented in Amortization of intangible assets.

12. INVESTMENT ACCOUNTED FOR USING THE EQUITY METHOD

On December 31, 2023, the Company holds the 4.07% (4.73% as at December 31, 2022) voting and equity interest in BGF. The investment is accounted for using the equity method since December 2018. Although the Company holds less than 20% of the voting rights, it has concluded that it exercises significant influence over it, in particular because of the representation it has on the Board of Directors. As at December 31, 2023, the fair value of the investment amounts to $106,288 ($167,024 as at December 31, 2022).

The aggregate amount of the associate can be summarized as follows:

	October 31, 2023	October 31, 2022
	$	$
Current assets	195,758	746,971
Non-current assets	4,302,372	3,731,141
Current liabilities	356,507	179,946
Non-current liabilities	169,849	142,133
Net and total loss of comprehensive income	741,380	600,222

A reconciliation of the summarized financial information with the carrying value of the investment is as follows:

	October 31, 2023	October 31, 2022
	$	$
Total net assets	3,951,774	4,156,033
Contributed surplus not attached to ordinary shareholders	(351,571)	(351,571)
	3,600,203	3,804,462
Portion of the interest held by the Company	4.07%	4.73%
	147,210	180,014

(in Canadian dollars)

12. INVESTMENT ACCOUNTED FOR USING THE EQUITY METHOD (continued)

The Company has not incurred any contingent liabilities or other commitments relating to its investment in this associate.

During 2021, the Company received 166,667 shares of the capital stock of GBF as a settlement of a royalty receivable from GBF of $50,000. As a result of the exchange, the Company recognized an increase of $9,770 in its investment of BGF and a loss of $40,230.

During the period ended December 31, 2023, BGF issued shares for the closing of a private placement and exercise of warrants. Those issuances decreased the Company's ownership from 4.73% to 4.07%.

13. TRADE AND OTHER PAYABLES

	December 31, 2023	December 31, 2022
	$	$
Trade accounts	326,466	168,426
Payable to a subcontractor	3,982,922	3,699,434
Salaries payable	25,000	60,294
Other	251,757	41,166
	4,586,145	3,969,320

14. DUE TO DIRECTORS, OFFICERS AND A COMPANY OWNED BY A DIRECTOR

The Company owes to directors, officers and a company owned by a director some salaries and remuneration for a nominal value of $1,020,291 (2022: $935,391). The Company has obtained confirmation for said nominal value of $920,291 in debts (2021: $835,391, effective rate of 3.1%), that they will not request payment thereof prior to 12 months plus one day following December 31, 2023. These amounts are classified as non-current liabilities. The remaining amount of $100,000 (2022: $100,000) has been classified as current liabilities and presented as due to the directors.

15.1 Share capital

The authorized share capital of the Corporation consists of an unlimited number of common shares without par value. They are voting, participating and eligible to receive the dividends.

	December 31, 2023	December 31, 2022
	Number of shares	Number of shares
Shares issued at the beginning	351,998,770	334,792,358
Private placements (a) (d) (e)	2,207,318	6,800,000
Issuance for the payment of accounts payable (b) (c)	396,000	-
Exercise of warrants	12,694,600	7,506,412
Exercise of options	-	2,900,000
Total shares issued and fully paid at the end	365,296,688	351,998,770

15.1 Share capital (continued)

(a) On May 2, 2022, the Company completed a private financing for an amount of $3,604,000. The Company issued 6,800,000 units to PyroGenesis consisting of one common share and one warrant. Each full warrant entitles the holder thereof to subscribe an equivalent number of common shares of the Company at a price of $0.60 per share, during a period of 24 months following the closing of the financing. An amount of $340,000 was attributable to the warrants.

(b) On February 21, 2023, the Company settled a trade account payable of $44,100 by the issuance of 180,000 units. Each unit consists of one common share and one warrant. Each warrant entitles the holder thereof to acquire one common share of the Company at a price of $0.32 per share for 24 months following the closing date of the transaction. An amount of $13,566 was attributable to the warrants and no gain or loss was recorded on this transaction.

(c) On June 07, 2023, the Company settled a trade account payable of $49,680 by the issuance of 216,000 units. Each unit consists of one common share and one warrant. Each warrant entitles the holder thereof to acquire one common share of the Company at a price of $0.27 per share for 24 months following the closing date of the transaction. An amount of $16,750 was attributable to the warrants and no gain or loss was recorded on this transaction.

(d) On November 17,2023, the Company completed a private financing for an amount of $337,013. The Company issued 1,225,500 units consisting of one common share and one warrant. Each warrant entitles the holder thereof to subscribe to one common share of the Company at a price of $0.30 per share during a period of 24 months following the closing of the financing. In addition, the Company paid an amount of $3,300 in commission fees and issued 12,000 warrants to an agent (for a value of $1,076). Each warrant entitles the holder to subscribe to one common share of the Company at a price of $0.30 per share for a period of 24 months from the date of closing of the financing. No amount related to warrants was recorded.

(e) On November 24,2023, the Company completed a private financing for an amount of $270,000. The Company issued 981,818 units consisting of one common share and one warrant. Each warrant entitles the holder thereof to subscribe to one common share of the Company at a price of $0.30 per share during a period of 24 months following the closing of the financing. In addition, the Company paid an amount of $10,575 in commission fees and issued 38,454 warrants to agents (for a value of $2,412). Each warrant entitles the holder to subscribe to one common share of the Company at a price of $0.30 per share for a period of 24 months from the date of closing of the financing.

During the year ended December 31, 2023, 12,694,600 common shares were issued following the exercise of warrants. The weighted average share price at the date of exercise was $0.10 per share.

During the year ended December 31, 2022, 7,506,412 common shares were issued following the exercise of warrants. The weighted average share price at the date of exercise was $0.14 per share.

During the year ended December 31, 2022, 2,900,000 common shares were issued following the exercise of options. The weighted average share price at the date of exercise was $0.12 per share.

(in Canadian dollars)

15.2 Warrants

Outstanding warrants entitle their holders to subscribe an equivalent number of common shares, as follows:

	December 31, 2023		December 31, 2022	
	Number of warrants	Weighted average exercise price	Number of warrants	Weighted average exercise price
		$		$
Balance, beginning of reporting year	23,494,600	0.33	24,201,012	0.20
Granted	2,603,318	0.30	6,800,000	0.60
Exercised	(12,694,600)	0.10	(7,506,412)	0.14
Expired	(4,000,000)	0.61	-	-
Balance, end of reporting period	9,403,318	0.52	23,494,600	0.33

The weighted average fair value of $0.077 of the warrants granted for the settlement of account payable was determined using the Black-Scholes model based on the following weighted average assumptions:

	2023
Average share price at date of grant	$0.24
Expected dividend yield	0%
Expected weighted volatility	66.5%
Average risk-free interest rate	4.39%
Expected average life	2.0 years
Average exercise price at date of grant	$0.29

(in Canadian dollars)

15.2 Warrants (continued)

Outlined below are the outstanding warrants which could be exercised for an equivalent number of common shares:

	December 31, 2023		December 31, 2022	
Expiration date	Number	Exercise price	Number	Exercise price
		$		$
April 2023	-	-	8,300,000	0.10
May 2023	-	-	4,394,600	0.10
September 2023	-	-	4,000,000	0.61
May 2024	6,800,000	0.60	6,800,000	0.60
February 2025	180,000	0.32	-	-
June 2025	216,000	0.27	-	-
Novembre 2025	2,207,318	0.30	-	-
	9,403,318	0.52	23,494,600	0.33

15.3 Brokers' warrants

Outstanding brokers' warrants entitle their holders to subscribe to an equivalent number of common shares as follows:

	December 31, 2023	
	Number of broker's warrants	Weighted average exercise price
		$
Balance, beginning	-	-
Granted	50,454	0.30
Balance, end	50,454	0.30

The Company recorded an amount of $3,488 in issuance costs when the brokers' warrants were issued and was recorded as an increase to contributed surplus and a decrease to retained deficit.

(in Canadian dollars)

15.3 Brokers' warrants (continued)

The weighted average fair value $0.069 of the brokers' warrants granted was estimated on the grant date using the Black-Scholes option pricing model, based on the following weighted average assumptions:

	December 31, 2023
Share price at date of grant	$0.22
Expected dividend yield	0%
Expected volatility	70%
Risk-free interest rate	4,46%
Expected life	2.0 years
Exercise price at date of grant	$0.30

The underlying expected volatility was determined in relation to the historical data of the Company's shares over the expected life of the brokers' warrants.

Outlined below are the outstanding brokers' warrants which can be exercised for an equivalent number of common shares:

	December 31, 2023	
Expiration date	Number	Weighted average exercise price
		$
November 2026	50,454	0.30
	50,454	0.30

16. EMPLOYEE REMUNERATION

16.1 Salaries and employee benefits expense

Salaries and employee benefits expense are analyzed below:

	As at December 31,	
	2023	2022
	$	$
Salaries and benefits	277,616	341,180
Management fees	375,000	324,125
Share-based payments	1,155,634	-
Remuneration of directors	159,000	123,000
Salaries and benefits recovered	(37,543)	(32,329)
	1,929,707	755,976

16.2 Share-based payments

Under this option plan, the Directors may grant options to its Directors, Employees and Consultants or of those of its subsidiaries. The maximum number of shares to be granted under the Plan is 22,000,000 (19,100,000 as at December 31, 2022). As at December 31, 2023, 17,735,000 options remained exercisable (16,485,000 options as at December 31, 2022).

The Directors fix the exercise price of an option granted under the plan which cannot be lesser than the last closing price of the Corporation's shares as quoted by the TSX Venture Exchange at the end of the day preceding the one on which an option is granted, less the applicable discount as defined by the TSX Venture Exchange. The options can be exercisable for a maximum of ten years. Options are non-assignable and non-transferable except by will or the laws of succession. Upon the death of an option holder, the option may be exercised by the legal heirs or personal representatives of the option holder for a period not exceeding one year from the option holder's death provided that nothing in the foregoing shall have the effect of extending the Term of an option beyond its original expiry date. Options granted to an option holder who is a Director, Employee, Consultant or Management Company Employee shall expire at no later than a period of 12 months after the option holder ceases to be part of at least one of those categories, by reason other than the option holder's death.

No more than 5% of the shares issued by the Company may be granted to any individual in any 12-month period (unless the Company has obtained disinterested shareholder approval). No more than 2% of the shares issued by the Company may be granted to any one Consultant, in any 12-month period. No more than an aggregate of 2% of the shares issued by the Company may be granted to Persons providing Investor Relations Activities, during a 12-month period, calculated at the date the option was granted. Options granted to Consultants providing Investor Relations activities must vest gradually over 12 months with no more that ¼ of the options vesting in any three-month period. No accelerated acquisition of such options granted to those consultants shall be permitted if not approved by the Exchange. Options granted to an option holder who is providing Investor Relations activities shall terminate on expiry of a period not in excess of 30 days following the date that the option holder ceases to be provide such services. The number of Options granted to insiders, within a 12-month period may not exceed 10% of the issued Shares of the resulting issuer. The number of shares reserved for issuance under the Plan granted to insiders may not exceed 10% of the issued shares of the Company.

(in Canadian dollars)

16.2 Share-based payments (continued)

The Company's share options are as follows for the reporting periods presented:

	December 31, 2023		December 31, 2022	
	Number	Weighted average exercise price	Number	Weighted average exercise price
		$		$
Outstanding, beginning of reporting year	16,485,000	0.67	17,885,000	0.61
Granted	10,900,000	0.22	1,500,000	0.31
Exercised	-	-	(2,900,000)	0.12
Expired	(9,650,000)	0.55	-	-
Outstanding and exercisable, end of reporting period	17,735,000	0.46	16,485,000	0.67

The table below summarizes the information related to outstanding share options as at December 31, 2023:

Outstanding options		
Number of options	Weighted average exercise price	Weighted average remaining contractual life
	$	(years)
9,800,000	0.215	4.99
200,000	0.23	1.52
800,000	0.28	0.76
900,000	0.28	177
700,000	0.35	3.37
5,335,000	1.00	2.97
17,735,000	0.46	3.93

The table below summarizes the information related to outstanding share options as at December 31, 2022:

Outstanding options		
Number of options	Weighted average exercise price	Weighted average remaining contractual life
	$	(years)
800,000	0.28	1.76
700,000	0.35	4.37
9,650,000	0.55	0.97
5,335,000	1.00	3.97
16,485,000	0.67	1.76

(in Canadian dollars)

16.2 Share-based payments (continued)

The weighted fair value of the granted options of $0.127 ($0.161 as at December 2022) was determined using the Black-Scholes option pricing model based on the following weighted average assumptions:

	2023	2022
Average share price at date of grant	$0.21	$0.31
Expected dividend yield	0%	0%
Expected weighted volatility	74.0%	72.0%
Average risk-free interest rate	4.26%	2.74%
Expected average life	4.7 years	3.4 years
Average exercise price at date of grant	$0.22	$0.31

The underlying expected volatility was determined by reference to historical data of the Company's shares over the expected average life of the options. No special features inherent to the options granted were incorporated into measurement of fair value.

In total, an amount of $1,380,036 ($242,070 as at December 31, 2022) of employee remuneration expense (all of which related to equity-settled share-based payment transactions) were included in profit or loss and credited to contributed surplus, therefore ($1,155,634 as salaries and employee benefit expenses, $147,352 as professional and consulting fees ($164,721 as of December 31, 2022)) and $77,050 in research and development expenses ($77,349 as of December 31, 2022)).

17. FAIR VALUE MEASUREMENT

17.1 Financial instruments measured at fair value

The hierarchy groups financial assets and liabilities into three levels based on the significance of inputs used in measuring the fair value of the financial assets and liabilities. The fair value hierarchy levels are as follows:

– Level 1: Quoted prices (unadjusted) in active markets for identical assets or liabilities at the reporting date;

– Level 2: Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly; and

– Level 3: Inputs for the assets or liabilities that are not based on observable market data.

The fair value of the marketable securities in a quoted company was estimated based on the market price at the closing date. Marketable securities in a quoted company measured at fair value in the consolidated statement of financial position as at December 31, 2023 and December 31, 2022 are classified as Level 1 and warrants are classified as Level 2.

(in Canadian dollars)

17. FAIR VALUE MEASUREMENT (continued)

17.2 Financial instruments measured at amortized cost for which a fair value is disclosed

The fair value of royalties receivable, due to directors, officers and a company owned by a director and royalties payable was estimated using an analysis of discounted cash flows with an interest rate for similar financial instruments.

The fair value royalties receivable in the current term as well as the royalties payable in the current term approximate the book value at the end of the period.

The fair value of royalties receivable in the non-current term, due to directors, officers and a company owned by a director and royalties payable in the non-current term is $174,886, $920,291 and $904,411 respectively ($146,273, $827,052 and $1,814,251 respectively as at December 31, 2022). See Notes 8, 14 and 11 for methods of assessing fair values.

Financial instruments are classified in Level 2 of the fair value hierarchy except for royalties' receivable and royalties' payable which are classified in Level 3 of the fair value hierarchy.

18. OTHER OPERATING EXPENSES

Other operating expenses are detailed as follows:

	December 31,	
	2023	2022
	$	$
Professional and consultation fees (1)	936,368	735,642
Travelling expenses	91,805	28,973
Office expenses	168,863	160,299
Information to shareholders and registration fees	131,061	172,166
Bank charges	7,142	6,382
Loss (gain) on exchange rate	1,900	(24,245)
Administrative expenses recovered	(7,261)	(6,556)
	1,329,878	1,072,661

(1) Including share-based payments of 147,352 ($164,721 in 2022).

19. FINANCE INCOME AND FINANCE COSTS

Finance income consists of the following for the reporting periods presented:

	December 31,	
	2023	2022
	$	$
Change in fair value of marketable securities in a quoted company	(933,910)	(508,053)
Accretion of royalties receivable	-	25,458
Amortization of discount rate on royalties receivable	28,613	6,111
Interest income	57,560	79,543
	(847,737)	(396,941)

(in Canadian dollars)

19. FINANCE INCOME AND FINANCE COSTS (continued)

Finance costs consists of the following for the reporting periods presented:

	December 31,	
	2023	2022
	$	$
Accretion expenses- royalties payable	(375,498)	(411,156)
Accretion expenses- due to directors, officers and companies owned by a director	(34,240)	(33,195)
Adjustment – royalties payable	-	100,000
	(409,738)	(344,351)

20. INCOME (LOSS) PER SHARE

The calculation of basic loss per share is based on the loss for the period divided by the weighted average number of outstanding shares during the period. In calculating the diluted loss per share, dilutive potential common shares such as warrants, brokers' warrants, brokers' units, share options and the convertible debenture have not been included as they would have the effect of decreasing the loss per share. Decreasing the loss per share would be antidilutive. Details of share options and warrants issued that could potentially dilute earnings per share in the future are given in Notes 15.2 , 16.2 and 28.

Both the basic and diluted loss per share have been calculated using the loss as the numerator, i.e. no adjustment to the loss was necessary in 2023 and 2022.

	December 31,	
	2023	2022
Net loss	$(16,044,329)	$(9,084,135)
Weighted average number of outstanding shares	360,978,177	345,005,110
Basic and diluted loss per share	$(0.04)	$(0.03)

21. INCOME TAXES

Major components of tax expense (income)

The major components of tax expense (income) are outlined below:

	2023	2022
	$	$
Origination and reversal of temporary differences	(3,727,069)	(2,391,620)
Change in foreign subsidiary rates	(13,619)	
Tax exemption on income from a foreign subsidiary	(156,459)	
Temporary differences not recorded	3,925,340	2,391,620
	28,193	-

(in Canadian dollars)

21. INCOME TAXES (continued)

Relationship between expected tax expense and accounting profit or loss

The relationship between the expected tax expense based on the combined federal and provincial income tax rate in Canada and the reported tax expense in the consolidated statement of comprehensive loss can be reconciled as follows:

	2023	2022
	$	$
Expected tax expense calculated using the combined federal and provincial income tax rate in Canada of 26.5% (26.5% in 2022)	(4,231,168)	(2,445,683)
Adjustments for the following items:		
Fiscal impact of temporary difference not recorded	3,925,340	2,391,617
Non-taxable portion of the variation of fair value	128,090	70,791
Share-based payments	365,710	64,149
Change in foreign subsidiary rates	(13,619)	-
Tax exemption on income from a foreign subsidiary	(156,459)	-
Non-deductible expenses and others	10,299	(80,874)
Deferred income tax income	28,193	-

Deferred tax assets and liabilities and variation of recognized amounts during the year

The following differences between the carrying amounts and tax bases from temporary differences, unused tax losses and unused tax credits give rise to the following recognized deferred income tax assets and liabilities, and the following unrecognized temporary differences, unused tax losses and unused tax credits:

	Balance, January 1, 2023	Recognized in profit or loss	Balance, December 31, 2023
	$	$	$
Recognized			
Marketable securities	(6,888)	123,744	116,856
Intangible assets	(412,296)	772,289	359,993
Investment tax credits receivable	(49,410)	(17,434)	(68,844)
Royalties receivable	(38,762)	(7,583)	(46,345)
Due to directors, officers and a company owned by a director	(9,073)	9,073	-
Royalties payable	204,591	(533,060)	(328,469)
Non-capital losses	311,838	(347,029)	(35,191)
Recognized deferred tax assets and liabilities	-	-	-

(in Canadian dollars)

21. INCOME TAXES (continued)

Deferred tax assets and liabilities and variation of recognized amounts during the year (continued)

	Balance, January 1, 2022	Recognized in profit or loss	Balance, December 31, 2022
	$	$	$
Recognized			
Marketable securities	(75,205)	68,317	(6,888)
Intangible assets	(601,509)	189,213	(412,296)
Investment tax credits receivable	66	(49,476)	(49,410)
Royalties receivable	(56,144)	17,382	(38,762)
Due to directors, officers and a company owned by a director	(17,870)	8,797	(9,073)
Royalties payable	256,927	(52,336)	204,591
Non-capital losses	493,735	(181,897)	311,838
Recognized deferred tax assets and liabilities	-	-	-

	December 31, 2023	
	Federal	Provincial
	$	$
Deductible temporary differences and tax losses not recognized		
Property and equipment	2,011,840	2,043,327
Intangible assets	428,842	423,058
Patent and other elements	5,882,719	5,431,811
R&D costs	3,796,395	3,796,395
Issuance costs of equity instruments	56,932	56,932
Exploration and evaluation assets	2,467,200	2,551,431
Provisions and reserves	4,692,202	2,126,989
Marketable securities	94,902	94,902
Unused loss carry-forwards	27,108,834	32,766,459
	46,539,866	49,291,304

(in Canadian dollars)

21. INCOME TAXES (continued)

Deferred tax assets and liabilities and variation of recognized amounts during the year (continued)

	December 31, 2022	
	Federal	Provincial
	$	$
Deductible temporary differences and tax losses not recognized		
Property and equipment	1,059,675	1,091,162
Intangible assets	271,699	265,915
Patent and other elements	1,175,679	724,771
R&D costs	2,510,395	2,510,395
Issuance costs of equity instruments	66,851	66,851
Exploration and evaluation assets	3,244,252	3,243,320
Provisions and reserves	2,313,993	1,833,438
Marketable securities	78,500	78,500
Unused loss carry-forwards	21,094,346	24,671,458
	31,815,390	34,485,810

The Company has non-capital losses which are available to reduce income taxes in future periods, for which no deferred tax asset has been recorded in the consolidated statement of financial position that can be carried over the following years:

	Federal	Provincial
	$	$
2026	218,404	218,151
2027	193,983	124,284
2028	870,544	772,933
2029	614,130	610,009
2030	627,620	624,214
2031	759,417	755,536
2032	649,448	647,675
2033	803,620	798,209
2034	723,985	720,353
2035	1,082,684	1,077,205
2036	1,766,123	1,756,689
2037	1,602,371	1,593,219
2038	1,527,744	1,514,884
2039	1,100,417	1,098,582
2040	1,472,599	3,872,552
2041	2,231,119	2,949,752
2042	6,315,218	9,023,214
2043	4,549,409	4,546,551
	27,108,834	32,766,459

(in Canadian dollars)

21. INCOME TAXES (continued)

The Company has tax credits for investments which are available to reduce income taxes in future periods, for which no deferred tax asset has been recorded. These tax credits can be carried over the following years:

	Federal	Provincial
	$	$
2027	3,363	-
2028	70,404	-
2029	8,810	-
2030	6,540	-
2031	310	-
2032	4,501	-
2033	1,200	-
2040	11,462	-
2041	56,397	-
2042	332,837	-
2043	167,694	-
	663,518	-

22. ADDITIONAL INFORMATION – CASH FLOWS

The changes in working capital items are detailed as follows:

	As at December 31,	
	2023	2022
	$	$
Goods and services tax receivable	980,561	(401,125)
Prepaid expenses and other	99,282	(66,052)
Deposit on contract	1,286,000	664,000
Installments to a subcontractor	890,000	(890,000)
Investment tax credits receivable	(527,096)	(140 449)
Trade and other payables	757,342	57,307
Due to directors	-	58,500
Royalties payable	-	(250,000)
Income tax payable	28,193	-
	3,514,282	(967,819)

(in Canadian dollars)

22. ADDITIONAL INFORMATION – CASH FLOWS (continued)

Non-cash balance sheet transactions are detailed as follows:

	As at December 31,	
	2023	2022
	$	$
Trade and other payables included in intangible assets	3,582,487	3,624,508
Issuance of shares for payment of accounts payables included in intangible assets	93,780	-
Issuance of equity instruments for payment of accounts payable	30,316	-
Issuance of equity instruments for unit issuance costs	3,488	-
Tax credits receivable included in property and equipment	-	75,211
Marketable securities received on sale of assets and devaluation held for sale	-	292,456

23. NON-WHOLLY-OWNED PARTNER COMPANY

	December 31, 2023	December 31, 2022
Proportion of ownership interests and voting rights held by non-controlling interests	80%	80%
Net earnings allocated to non-controlling interests for the year	442,760	123,299
Non-controlling interests	579,493	124,396

Summarized financial information of the subsidiary that has non-controlling interests is set out below. The summarized financial information below represents amounts before intragroup eliminations.

	December 31, 2023	December 31, 2022
	$	$
Summary Statements of Net Loss and Comprehensive Loss		
Income	1,571,326	660,885
Expenses	1,017,876	506,761
Comprehensive income	553,450	154,124
Comprehensive income attributable to:		
Owners of the Company	110,690	30,825
Non-controlling interests	442,760	123,299
	553,450	154,124

(in Canadian dollars)

23. NON-WHOLLY-OWNED PARTNER COMPANY (continued)

	December 31, 2023	December 31, 2022
	$	$
Summary Statements of Cash Flows		
Cash flows from operating activities	159,465	199,349
Cash flows used in investing activities	(7,614)	(65,610)
Cash flows from financing activities	-	1,372
Net change in cash and cash equivalents	151,851	135,111
Summary Statement of Financial Position		
Current assets	837,130	181,183
Non-current assets	47,764	60,390
	884,894	241,573
Current liabilities	162,406	78,438
Non-current liabilities	-	-
Net asset	722,488	163,135
Equity attribuable to owners	144,293	31,099
Non-controlling interests	577,168	124,396
Foreign currency translation adjustment	1,027	7,640
	884,894	241,573

(in Canadian dollars)

24. RELATED PARTY TRANSACTIONS

The Company's related parties include key management and companies held by a director or an officer, as described below.

Unless otherwise stated, none of the transactions incorporated special terms and conditions and no guarantees were given or received. Outstanding balances are usually settled in cash with the exception of patent acquisitions which were settled by the issuance of units during the first two quarters.

24.1 Transactions with key management personnel

Key management personnel of the Company are members of the Board of Directors and officers. Key management personnel remuneration and asset acquisitions are as follows:

	As at December 31,	
	2023	2022
	$	$
Salaries and employee benefits expense	149,092	226,022
Salaries and benefits for research and development [(1)]	493,650	197,363
Management fees [(2)]	375,000	324,125
Directors' remuneration	159,000	123,000
Share-based payments	1,232,684	77,349
Salaries and employee benefit expenses	2,409,426	947,859
Acquisition of patent [(1)]	322,682	-
Salaries and employee benefit expenses and acquisition of patent	2,732,108	947,859

(1) Paid to managers and shareholders of Novacium S.A.S. .

(2) Paid to a company owned by a director.

Trade and other payables include an amount of $186,452 due to a company owned by a director ($52,716 as at December 31, 2022) and $112,126 to the officers and shareholders of Novacium S.A.S. ($Nil as at December 31, 2022).

On December 31, 2023, due to directors, officers and a company owned by a director totalled $1,020,291 ($927,052 as at December 31, 2022).

25. CAPITAL MANAGEMENT POLICIES AND PROCEDURES

The Company's capital management objectives are to ensure the Company's ability to continue as a going concern, to increase the value of the assets of the business, and to provide an adequate return to owners of the Company.

These objectives will be achieved by technological development related to the transformation of quartz into silicon materials.

25. CAPITAL MANAGEMENT POLICIES AND PROCEDURES (continued)

The Company monitors capital on the basis of the carrying amount of equity.

The Company is not exposed to any externally imposed capital requirements

The Company finances its technology development activities related to the transformation of quartz into silicon materials primarily by seeking additional capital either through private placements or public placements. When funding conditions are not optimal, the Company can sign option agreements or other agreements to be able to continue its exploration and evaluation activities or can slow down its activities until funding conditions improve.

26. FINANCIAL INSTRUMENT RISKS

The Company is exposed to various risks in relation to financial instruments. The main types of risks are market risk, credit risk, interest rate risk, currency risk and liquidity risk.

The Company risk management is coordinated in close cooperation with the Board of Directors. The Company's risk management focuses on actively securing the Company's short-term to medium-term cash flows by minimizing the exposure to financial markets.

The Company does not actively engage in the trading of financial assets for speculative purposes.

26.1 Market risk

The most significant financial risks to which the Company is exposed are described below.

Equity price risk is defined as the potential adverse impact on the Company's results of operations and on the ability to obtain equity financing, or the ability of holders of convertible securities (options and warrants) to exercise their securities, which affects proceeds to the Company on such exercises, due to movements in individual equity prices or general movements in the level of the stock market. The Company closely monitors individual equity movements to determine the appropriate course of action to be taken by the Company.

Commodity price risk is defined as the potential adverse impact on the Company's future results in respect of the fluctuation in the price of raw materials. The Company is exposed to commodity price risk including exposure to the fluctuating market prices of quartz and graphite. The Company is exposed to other price risk.

Other price risk sensitivity.

The Company was exposed to fluctuations in the market prices of its marketable securities in a quoted company and derivative financial liability. The maximum risk to which the shares and derivative financial liability were exposed is equal to their fair value.

If the quoted share price for the shares had changed by ± 15% as at December 31, 2023 (± 15% as at December 31, 2022), the profit or loss and equity would have changed by $126,400 ($106,500 as at December 31, 2022).

26.2 Credit risk

Credit risk is the risk that another party to a financial instrument fails to meet its obligations and, therefore, leads the Company to incur a financial loss.

The Company's maximum exposure to credit risk is limited to the carrying value of cash and royalties' receivable for an amount of $772,290 as at December 31, 2023 ($1,290,175 as at December 31, 2022).

The credit risk for the deposit on contract and the royalties' receivable is considered limited. The Company continuously monitors default of counterparts. No impairment loss has been recognized in the periods presented.

(in Canadian dollars)

26. FINANCIAL INSTRUMENT RISKS (continued)

26.2 Credit risk (continued)

The credit risk for cash is considered negligible, since the counterpart is a reputable bank with high quality external credit ratings.

The royalties to be paid by the Company are due to a company towards which it is economically dependent. The company considers the term thereof at 12 years.

26.3 Interest rate risk

The Company is exposed to interest rate risk because of the fluctuation of interest rates. The Company's exposure to variable interest rates is limited to cash and cash equivalents.

26.4 Currency risk

Currency risk is the risk of fluctuation in gains or losses that arise from fluctuations in foreign exchange rates and the degree of volatility of those rates. The Company is exposed through its subsidiary Novacium to currency risk with regards to its transactions in euros.

Based on the value of net assets denominated in foreign currency as at December 31, 2023, a 10% fluctuation in foreign exchange rates relative to the Canadian dollar would impact the loss and comprehensive income for the period by approximately $7,400.

26.5 Liquidity risk

Liquidity risk is the risk that the Company will encounter difficulty in meeting obligations with financial liabilities that are settled by cash or another financial asset.

Liquidity risk management serves to maintain a sufficient amount of cash and to ensure that the Company has financing sources such as private and public investments for a sufficient amount.

Over the period, the Company has financed its working capital requirements and acquisitions of property and equipment and intangible assets through private placements.

The following table sets out the contractual maturities of the Company's financial liabilities:

	December 31, 2023	December 31, 2022
	$	$
Less than a year		
Trade payables and other accounts payable	578,223	269,886
Payable to a subcontractor	3,982,922	3,699,434
Lease liabilities	12,019	11,371
Royalties payable RRQ Purevap™	500,000	250,000
Royalties payable NRSi Purevap™	212,500	150,000
Total	5,285,664	4,380,691

(in Canadian dollars)

26.5 Liquidity risk (continued)

	December 31, 2023	December 31, 2022
	$	$
Between one and 5 years		
Lease liabilities	9,144	23,379
Royalties payable RRQ Purevap™	1,000,000	1,000,000
Royalties payable NRSi Purevap™	-	800,000
	1,009,144	1,800,000
More 5 years		
Royalties payable RRQ Purevap™	2,000,000	2 250,000
Royalties payable NRSi Purevap™	-	3,600,000
	2,000,000	5,850,000

The Company considers expected cash flows from financial assets in assessing and managing liquidity risk, in particular its cash.

27. CONTINGENCIES AND COMMITMENTS

The Company is partially financed through the issuance of flow-through shares and, and is engaged in realizing mining exploration work, under the terms of the tax rules regarding this type of financing.

These tax rules also set deadlines for carrying out the exploration work, which must be performed no later than the first of the following dates:

– Two years following the flow-through financings;

– One year after the Company has renounced the tax deductions relating to the exploration work.

However, there is no guarantee that the Company's exploration expenses will qualify as Canadian exploration expenses, even if the Company is committed to taking all the necessary measures in this regard.

As at December 31, 2023, in addition to the royalties' payable mentioned in Note 11, the Company was committed to pay an amount of $284,021 with the contractor PyroGenesis for the fumed silica project.

28. SUBSEQUENT EVENTS

On January 14, 2024, the Company settled a trade account payable of $49,680 by the issuance of 216,000 units. Each unit consists of one common share and one warrant. Each warrant entitles the holder thereof to acquire one common share of the Company at a price of $0.27 per share for 24 months following the closing date of the transaction.

On January 26, 2024, the Company settled a trade account payable of $44,100 by the issuance of 180,000 units. Each unit consists of one common share and one warrant. Each warrant entitles the holder thereof to acquire one common share of the Company at a price of $0.32 per share for 24 months following the closing date of the transaction.

On February 2, 2024, the Company reduced the exercise price for 6,800,000 warrants expiring on May 2, 2024, decreasing from $0.60 to $0.275.