



## **MANAGEMENT'S DISCUSSION & ANALYSIS**

**Three-month and nine-month periods ended September 30, 2020**

## MANAGEMENT'S DISCUSSION AND ANALYSIS FOR THE THREE-MONTH AND NINE-MONTH PERIODS ENDED SEPTEMBER 30, 2020

The following management discussion and analysis (the "MD&A") of the operations and financial position of Niobay Metals Inc. ("NioBay" or the "Company") for the three-month and nine-month periods ended September 30, 2020, should be read in conjunction with NioBay's audited consolidated financial statements as at and for the year ended December 31, 2019 (the "Annual Financial Statements"). The MD&A is intended to supplement and complement the Company's unaudited condensed interim consolidated financial statements and related notes as of September 30, 2020, and for the three-month and nine-month periods ended September 30, 2020 and 2019 (the "Financial Statements").

The Financial Statements have been prepared in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board ("IASB"). Consequently, all comparative financial information presented in the MD&A reflects the consistent application of IFRS.

NioBay's management ("Management") is responsible for the preparation of the financial statements and other financial information relating to the Company included in this MD&A. The Board of Directors (the "Board") is responsible for ensuring that Management fulfills its responsibilities for financial reporting. In furtherance of the foregoing, the Board has appointed an Audit Committee composed entirely of independent directors. The Audit Committee meets with Management in order to discuss results of operations and the financial condition of the Company prior to making recommendations and submitting the financial statements to the Board for its consideration and approval for issuance to shareholders. The information included in the MD&A is as of November 25, 2020, the date when the Board approved the Financial Statements, following the recommendation of the Audit Committee. All monetary amounts included in this report are expressed in Canadian dollars ("C\$"), the Company's reporting and functional currency, unless otherwise noted.

### DESCRIPTION OF BUSINESS

NioBay is a mineral resource company. The business of the Company consists of acquiring, exploring, evaluating and developing mining properties. NioBay has not yet determined whether its properties contain economically viable mineral deposits.

NioBay's assets are all located in Canada. Its principal asset is a 100% interest in the James Bay Niobium Project located 42 km south of Moosonee, in the James Bay Lowlands in Ontario (the "James Bay Project" or the "Project"). NioBay also holds: i) through its 72.5%-owned subsidiary Crevier Minerals Inc ("CMI"), the Crevier niobium and tantalum project (the "Crevier Project") located in Quebec and ii) a 47% participation in certain mineral titles located in the Chibougamau region, Quebec, under a joint venture agreement (the "Joint Venture") with SOQUEM Inc. ("SOQUEM"). The Company's common shares are listed on the TSX Venture Exchange under the symbol "NBY".

### JAMES BAY NIOBIUM PROJECT

In June 2016, the Company acquired the James Bay Project from Barrick Gold Inc., James Bay Columbian Ltd. and Goldcorp Inc. This property is located in the district of Cochrane, in the James Bay Lowlands in northeastern Ontario, and covers an area of 8,833 hectares. The property rights are held through a Crown mining lease recorded in the name of the Company. The mining lease was renewed for a term of ten (10) years as of March 1, 2018.

The James Bay Project was discovered in 1966 by Consolidated Morrison Explorations Limited. At that time, exploratory and detailed drilling totaled over 14,000 meters, outlining the deposit to a maximum depth of 275 meters. The deposit was drilled along a strike of 730 meters. An exploration shaft was sunk to investigate soil conditions and to provide a 225 ton bulk sample. Subsequent pilot plant operations demonstrated an excellent quality pyrochlore concentrate with low impurities, with a high recovery rate of 78%.

Following the acquisition of the James Bay Project, the Company gathered and compiled all of the historical data. A team of geologists cleaned and re-logged the historical drill core and over 600 samples from twelve (12) representative historical drill holes were re-assayed. In May 2017, the Company reported the results of preliminary metallurgical testing conducted by SGS Lakefield ("SGS") in Ontario using core from the historical drilling program. In November 2017, the Company announced an initial Mineral Resource Estimate ("MRE") which estimate was updated in November 2018 (the "2018 MRE") and in July 2020 (the "2020 MRE") as described below under the "Mineral Resource Estimate" heading. In October 2020, the Company announced the results of an independent Preliminary Economic Assessment (the "PEA") as described below under the "Preliminary Economic Assessment" heading.

### The Protection Agreement

As part of the process to obtain the exploration permit for its drilling program on the James Bay Project (the "Drilling Program"), the Company and the Ontario Ministry of Energy, Northern Development and Mines (the "MENDM") reached out to all impacted stakeholders in the area of the James Bay Project, including the Moose Cree First Nation ("MCFN"). On January 29, 2019, the MENDM issued the exploration permit to the Company.

The Company did not intend to start the Drilling Program without the support of the MCFN. As such, the Company undertook the negotiation of a protection agreement (the "Protection Agreement") with the MCFN which was concluded on December 24, 2019. The Protection Agreement provides a framework for the building of a mutually cooperative, respectful, and beneficial relationship between the Company and the MCFN (collectively, the "Parties"), including a mechanism for effective communication, information exchange, and meaningful discussion respecting the Drilling Program. The Protection Agreement also outlines how the Parties will collaborate to ensure the Drilling Program is executed with high environmental and safety standards while respecting MCFN aboriginal and treaty rights.

### Drilling Program Highlights

On March 7, 2020, the Company completed the Drilling Program. A total of seven holes for a total of 3,090 metres were drilled to test the extension of a high-grade zone at depth at section 200N, 400N and 600N, respectively. All seven holes intersected visually mineralised carbonatite over down hole lengths varying from 108 metres to 243 metres and pyrochlore was the main niobium mineral identified. The mineralised carbonatite zone remains open at depth on all the three sections drilled. The vertical depth of the deepest carbonatite intersection was 330 metres from surface. Results on the drill holes were disclosed by the Company on a press release dated April 8, 2020 entitled "NioBay intersects 1.02% Nb<sub>2</sub>O<sub>5</sub> over 62 metres at James Bay Niobium" and a press release dated May 21, 2020 entitled "NioBay extends high-grade mineralization at James Bay Niobium".

### Mineral Resource Estimate

In November 2017, the Company had reported an initial MRE for its James Bay Project prepared in accordance with Canadian National Instrument 43-101 Standards of Disclosure for Mineral Projects ("NI 43-101") following the re-logging and re-sampling program of representative historical drill holes. In November 2018, the Company reported an increase to the initial MRE due to a revised tonnage factor. The initial, 2018 and 2020 MREs were prepared by Roscoe Postle Associates Inc. ("RPA"). The effective date of the 2020 MRE is July 9, 2020 and the supporting NI 43-101 technical report is filed on SEDAR.

Highlights of the 2020 MRE:

Category	Tonnes (Mt)	Grade (%Nb <sub>2</sub> O <sub>5</sub> )	Contained Nb <sub>2</sub> O <sub>5</sub> (Mkg)
Indicated	29.7	0.53	158
Inferred	33.8	0.52	177

Notes:

1. CIM (2014) Definitions Standards were followed for Mineral Resources.
2. Mineral Resources are reported at a cut-off grade of 0.3% Nb<sub>2</sub>O<sub>5</sub> based on an underground mining operating cost of C\$70/tonne and a metallurgical recovery of 70%.
3. Mineral Resources are estimated using a long-term niobium price of US\$40/kg and a US\$/C\$ exchange rate of 1:1.2.
4. Bulk density of 2.93 g/cm<sup>3</sup> was used.
5. A minimum mining width of approximately 7.5 m was used to build the resource wireframes.
6. Resources situated in a 46 m thick crown pillar have been excluded.
7. The RPA Qualified Persons for the estimate are Dorota El Rassi, P.Eng. and Paul Chamois, P.Geo.

The 2020 MRE is supported by the results from the Drilling Program and the data used to estimate the Mineral Resource includes 86 diamond drill holes totaling 16,320 metres located within the resource model area. The data includes 3,449 assays, of which 64 have a value of zero for Nb<sub>2</sub>O<sub>5</sub>. The estimate was prepared using a block model constrained with 3-D wireframes of the mineralized zone. The niobium oxide grades were interpolated using ordinary kriging, dynamic anisotropy and two passes. The Drill Program was successful in confirming the extension to the North and at depth of the high-grade zone at the heart of the deposit.

The 2020 MRE incorporates the drilling results noted above, under the "Drill Program Highlights" heading, and demonstrates an increase in contained metal of 13.7% for the Indicated Resources and 37.2% for the Inferred Resources as compared to the 2018 MRE.

Comparison between the 2020 MRE and 2018 MRE:

	Category	Tonnage (Mt)	Grade (% Nb <sub>2</sub> O <sub>5</sub> )	Contained Metal (000 t Nb <sub>2</sub> O <sub>5</sub> )
2018	Indicated	26.1	0.53	139
	Inferred	25.3	0.51	129
2020	Indicated	29.7	0.53	158
	Inferred	33.8	0.52	177
Differences	Indicated	+ 13.8%	0.0%	+ 13.7%
	Inferred	+ 33.6%	2.0%	+ 37.2%

Notes:

1. CIM (2014) Definitions Standards were followed for Mineral Resources.
2. Mineral Resources are reported at a cut-off grade of 0.3% Nb<sub>2</sub>O<sub>5</sub> based on an underground mining operating cost of C\$70/tonne and a metallurgical recovery of 70%.
3. Mineral Resources are estimated using a long-term niobium price of US\$40 per kg and a US\$/C\$ exchange rate of 1:1.2.
4. Bulk density of 2.93 g/cm<sup>3</sup> was used.
5. A minimum mining width of approximately 7.5 m was used to build the resource wireframes.
6. Resources situated in a 46 m thick crown pillar have been excluded.
7. The RPA Qualified Persons for the estimate are Dorota El Rassi, P.Eng. and Paul Chamois, P.Geo.

RPA has recommended a second phase of drilling, including 9,000 metres that would focus on upgrading portions of the Inferred Resources to Indicated Resources and extending the Mineral Resources laterally as well as environmental, engineering and metallurgical studies required to support a future feasibility study.

*Preliminary Economic Assessment*

On October 13, 2020, NioBay announced the results of the PEA for the James Bay Project which was prepared with independent engineering firm G Mining Services Inc. ("G Mining"). Because of the geometry and location of the deposit, three mining scenarios were evaluated: open pit (scenario #1), underground (scenario #3) and a hybrid of both mining methods (scenario #2). Details of the financial and technical highlights of all three scenarios are available on the Company's website.

PEA Highlights

	Open Pit	Open Pit + UG	Underground
Pre-Tax Internal Rate of Return (IRR)	33.6%	33.4%	26.0%
Pre-Tax Net Present Value (NPV) 8%	\$1,475 M	\$1,268 M	\$1,104 M
Pre-Tax Payback (years)	2.6 years	2.5 years	3.8 years
After-Tax IRR	27.5%	27.0%	21.6%
After-Tax NPV 8%	\$1,008 M	\$856 M	\$733 M
After-Tax Payback (years)	3.2 years	3.1 years	4.3 years
Pre-Production CAPEX (incl. 25% Contingency)	\$510.5 M	\$482.0 M	\$579 M
Average Annual LOM Niobium Production	5,470 t Nb	6,213 t Nb	6,283 t Nb
Life of Mine ("LOM")	30 years	23 years	23 years
Total Mineral Resources Mined	70.8 Mt	53.7 Mt	53.6 Mt
Average Grade Mined	0.44 % Nb <sub>2</sub> O <sub>5</sub>	0.51 % Nb <sub>2</sub> O <sub>5</sub>	0.51 % Nb <sub>2</sub> O <sub>5</sub>
Gross Revenue After Royalties (LOM)	\$9,264 M	\$8,360	\$8,454
After-tax Operating Cash Flow (LOM)	\$3,581 M	\$2,696 M	\$2,536 M
C1 Costs over LOM*	US\$16.10/kg Nb	US\$18.45/kg Nb	US\$19.11/kg Nb
	\$48.48/t	\$63.85/t	\$66.94
All-in Costs (sustaining CAPEX + Closure + OPEX)	US\$17.58/kg Nb	US\$20.52/kg Nb	US\$21.43/kg Nb
	\$52.93/t	\$70.98/t	\$75.08/t
LOM Niobium Price	US\$45/kg Nb	US\$45/kg Nb	US\$45/kg Nb
Exchange Rate (C\$/US\$)	1.30	1.30	1.30

\*C1 Cost is mine site, transport, marketing and royalty

### Capital Costs

Capital Costs by Area (in C\$M)	Open Pit	OP + UG	Underground
Infrastructure	133,575	133,575	112,615
Power & Electrical	31,485	31,485	31,485
Water & Tailings	31,413	13,575	20,482
Mining U/G	-	-	117,729
Mining Pre-production	31,312	31,338	-
Mining Equipment OP	29,405	29,405	-
Process Plant	69,985	69,985	99,985
Other Equipment	5,613	5,614	5,612
<b>Total Direct</b>	<b>332,788</b>	<b>314,977</b>	<b>387,908</b>
Construction Indirect	35,018	32,699	34,772
General Services	40,406	37,730	40,122
Pre-Prod, Startup, Commission	150	150	150
Contingency	102,090	96,389	115,738
<b>Total Indirect</b>	<b>177,664</b>	<b>166,968</b>	<b>190,782</b>
<b>Total CAPEX</b>	<b>510,452</b>	<b>481,945</b>	<b>578,691</b>
Sustaining Costs	283,163	359,123	416,080
Closure Costs	32,418	23,992	20,692

### Operating Costs

Operating Costs by Area (C\$/t)	Open Pit	OP + UG	Underground
Mining Costs*	12.13	26.42	29.44
Processing Costs	14.60	14.62	14.62
Converter Costs	11.48	12.76	12.89
G&A	10.00	10.00	10.00
<b>Total</b>	<b>48.48</b>	<b>63.85</b>	<b>66.94</b>
<b>US\$/kg Nb</b>	<b>16.10</b>	<b>18.45</b>	<b>19.11</b>

\*Unit mining cost of \$4.43/t based on 1.8 strip ratio and including stockpile rehandle.

The PEA is preliminary in nature, includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the PEA will be realized. Mineral resources that are not mineral reserves do not have demonstrated economic viability.

### Opportunities to Enhance Value

Trade-off studies will be performed to determine the most suitable mining scenario among the three contemplated. Below are examples of items and programs to enhance the Project's value to be included in an eventual feasibility study:

- Initial metallurgical results indicate that there is a likelihood to improve the overall recovery rate above 80%.
- The Federal & Provincial governments announced a billion-dollar program to support infrastructure development in northern Ontario. The Company believes that capital costs associated with the road access and power line may qualify for these programs.
- Future drilling programs will test the high-grade zone raking north as described below, under "Exploration Potential" heading.
- Geotechnical studies and drilling will be required to establish design criteria for open pit slopes which could potentially steepen angles and reduce the strip ratio (scenarios #1 and #2). Similarly, for the underground, the crown pillar thickness will be evaluated, and could potential be reduced and increase ore recovery (scenario #3).
- Incorporation of automation to reduce personnel requirements (scenarios #2 and #3).
- Mine production is expected to be set at a maximum of 5% of the ferro-niobium world market share. However, the deposit is suitable to provide additional material to market to maintain market share in a growing market.

### Exploration Potential

The Drilling Program clearly demonstrated a large high-grade zone raking 20 to 30 degrees to the north in the center of the deposit. The results of these seven (7) drill-holes produced an increase of 14% of the Indicated Resources and a 37% in the Inferred category. Management believes that this high-grade zone could continue to extend at depth under a series of shallow historical drill holes to the north and this sector will be a high priority target for the next drilling campaign. If this geological hypothesis is confirmed, such a high-grade zone could be beneficial to the underground scenario and will be fully evaluated.

In the fourth quarter of 2020, the Company completed a detailed high resolution aero-magnetic survey of the entire property including the mining license and the 306 surrounding new claims. This survey will help better understand the attitude of the different lithologies of the area and could reveal other exploration targets, knowing that carbonatites in the world have a strong tendency to be found in clusters.

### Mining

The PEA considers open pit mining under scenario #1 using an owner operated fleet. Open pit mining is possible given that the orebody sub-crops in the basement formation overlain by sediments and overburden ranging from 10 to 20m in thickness. A stream flows over the deposit which will require relocation to the north outside of the mining footprint by the third year of operation.

The open pit will be mined for 24 years during which time low grade material will be stockpiled and processed at the end of the mine life. A cut-off grade of 0.12% Nb<sub>2</sub>O<sub>5</sub> was applied for the open pit resulting in 70.8Mt of mill feed. A total of 198Mt of material will be mined for an average LOM strip ratio of 1.8.

During pre-production a total of 5Mt is mined to supply construction materials for the tailings storage facility and to strip overburden. The initial mining rate is then established at 7Mt/year for the first 4 years and increases to a peak of 10Mt/year by the 8th year of operation. The mining fleet will consist of 64t rigid trucks matched with hydraulic excavators with 7m<sup>3</sup> buckets supported by front-end loaders.

### Metallurgy and Processing

The selected process has been developed using available technology and retaining some aspects of past work done. The process flowsheet and design criteria are based on the interpretation of preliminary metallurgical test work results and industry practice. The process scenario description is for a nominal throughput of 2.4 Mt/yr and a process plant availability of 93%. The scenario retained includes an intermediary gravity circuit removing close to 42 % of the mass with limited niobium losses. This particularity of the process minimizes energy requirements and considerably reduces the volume of pulp thereby lowering reagent costs. The reagents consumption has been estimated on the preliminary metallurgical results.

The low grinding index of the ore and coarse grind required for good liberation of the niobium mineral minimizes the power requirement for grinding. A total of 1900 kw has been estimated for the entire grinding stage to prepare the ore for processing. The process will have two stages of grinding with the gravity interstage followed by pulp desliming, magnetic separation, three steps of specific minerals removal prior to the niobium flotation. The niobium concentrate will be leached, filtered and a gravity separation will be done to generate two different concentrate grades. The final concentrates will be dried and bagged to respond to the feed of a converter process.

A series of metallurgical tests were performed at SGS during the year with results confirming a recovery rate of 78% and high niobium grade in the concentrate and low impurities, item as the pilot plant results performed in the 1960's.

### Proposed Infrastructure

Access to the mine site will be via a 38km all season road from Moose River East bank south of Moosonee. A 4.0km one lane tunnel is planned to cross Moose River and a final 2.6km road segment will connect to the existing road to Moosonee near the Hydro One Renison substation. From Moosonee, the Ontario Northland Railway connects to Cochrane and from there onto the Ontario Highway 11.

Power will be provided from the Hydro One grid with a connection from the Renison substation. This substation provided power onto the Five Nations Energy Inc. transmission line servicing the now closed DeBeers Victor Diamond Mine.

The mining activities and processing facility will be supported by ancillaries located at site including a maintenance shop, warehouse, mine dry, explosives storage, fuel storage, administration building, and an operations camp. Other infrastructure is planned to be in Moosonee such as a material transit terminal, laboratory, and administrative building for support functions such as accounting, human resources and other.

### Environment and Closure Plan

It is anticipated that the Project will require a review under the Federal Impact Assessment Act coordinated along with provincial Class Environmental Assessment. The Company would be proposing the active participation of identified impacted First Nation communities in the design, baseline data collection and follow up environmental monitoring. Only under Scenario #1 is there anticipated to be a federal Department of Fisheries and Oceans permit for a creek re-alignment. Examples of other provincial permits that will be required would include: Permit(s) to Take Water; Lands and Rivers Improvement Act; and Environmental Compliance Approval(s)(air and water).

In Ontario, a mine must file a closure plan prior to commencing construction. It is anticipated that with the active participation of identified impacted First Nation communities, the closure plan will be integrated into the mine design and initial environmental approvals. The closure plan must also include financial assurance that the operation will be closed out and remediated.

### Stakeholder Engagement

Stakeholder engagement will include individuals and communities interested in or impacted by the potential development. However, there will be a distinct negotiated engagement plan with potentially impacted First Nation communities. This is in recognition of their established Treaty and Aboriginal Rights. NioBay will collaborate with the First Nation community to design a plan of engagement to ensure that the environmental approvals are fully aligned with their values. As future exploration and/or baseline environmental work proceeds, the MCFN may want another longer-term agreement that speaks to both their environmental and business involvement with the Project.

NioBay continues to communicate with MCFN in relation to drilling and other potential activities at site despite COVID-19, as discussed below under the “*Coronavirus (COVID-19)*” heading. NioBay was hosted by MCFN to provide a community update on March 5, 2020 to discuss the Drilling Program and presented opportunities for future collaborations. NioBay also presented the results of the Project's PEA on October 15, 2020.

### Independent Qualified Persons

The PEA was prepared for NioBay by G Mining, and other industry consultants, all Qualified Persons (“QP”) under NI 43-101. The PEA was coordinated by the Company's CEO Claude Dufresne P.Eng. The Company and independent QPs include:

- G Mining: Louis-Pierre Gignac P. Eng, M.Sc.A, CFA, Antoine Champagne P. Eng, Paul Murphy, P. Eng., Carl Michaud P. Eng.
- NioBay: Jacques Gauthier, P. Geo, Pierre Pelletier P. Eng (Consultant Metallurgy)

### **SOQUEM JOINT VENTURE**

In January 2008, the Company had entered into the Joint Venture with SOQUEM, for certain mineral titles located in Québec, including the Clairy, Des Meloïzes, Lac Shortt and L'Espérance properties. The Clairy property is located 120 km north from the Chibougamau mining camp and 40 km south of the former Troilus mine. This property includes 56 mining claims covering a surface area of 2,818 hectares. The minerals of interest are copper and zinc. The Des Meloïzes property (the “DM Property”) is located 7 km east of Amex Exploration's Perron gold property. The Lake Shortt and L'Espérance properties are located about 135 km south-west from the Chibougamau mining camp and 15 km north-east from the Bachelor Lake concentrator. The Lac Shortt property includes 97 mining claims covering a surface area of 4,798 hectares. The L'Espérance property holds 36 mining claims covering a surface area of 1,978 hectares. The mineral of interest is gold.

On November 25, 2020, the Company completed a sales agreement (the “Transaction”) for its interest in the DM Property, owned by the Joint Venture to Generic Gold Corp. (“Generic Gold”). In exchange of its 47% ownership of the DM Property, the Company received: (i) cash in the amount of \$25,000; and (ii) an aggregate of 1,750,000 common shares (the “Consideration Shares”) in the capital of Generic Gold. In exchange for its 53% ownership in the DM Property, SOQUEM received: (i) cash in the amount of \$175,000; and (ii) an aggregate of 750,000 Consideration Shares. In addition, SOQUEM received a 3% net smelter returns royalty (the “NSR”) in respect of the DM Property, subject to the right and option of Generic Gold to purchase 1% of the NSR for a price equal to \$1,000,000.

## CREVIER PROJECT

The Crevier Project is held through CMI, a private company 72.5% owned by the Company and 27.5% owned by Niobec Inc., a wholly-owned subsidiary of Magris Resources Inc. and is located north of Lake St-Jean in the Roberval County, Quebec. The Crevier deposit was discovered in 1975 by SOQUEM. In 2010, a preliminary economic assessment of the development of the niobium-tantalum resource was prepared by Met-Chem Canada Inc. after which several feasibility-stage studies were conducted including a pilot plant process.

The Company has a non-expiring right to acquire an additional interest of 15% in CMI by paying in cash or in shares, at the option of the Company, \$750,000 to the non-controlling shareholder, following which the Company may be required by the non-controlling shareholder (at any time during the following 18 months) to purchase its remaining interest of 12.5% in CMI by paying an amount estimated at \$2,250,000.

In January 2019, the Company initiated desktop evaluation work on the Crevier Project. Following this work, the Company initiated a series of metallurgical tests. From the fifteen-tonne bulk sample extracted from the deposit in early June 2019, a portion was shipped to the COREM research and development center in Quebec City. Metallurgical tests were initiated to test innovative technologies with a focus on pre-concentration technologies and new reagents developed over the last few years. The additional metallurgical testing to be performed use new and innovative techniques and equipment, with a view of increasing niobium and tantalum grades in concentrates and overall recovery. Results were originally expected late in the third quarter of 2020, however COREM had temporarily shut down its operations due to COVID-19, as discussed below under the "Coronavirus (COVID-19)" heading. The Company has yet to resume the test work.

In relation to this work, the Company received a grant of an amount up to \$144,800 from The Quebec Minister of Energy and Natural Resources, as well as a second grant from the Quebec Minister of the Economy and Innovation of an amount up to \$108,600.

Depending on the tests results, the Company may evaluate various options to further develop the Crevier Project.

## QUALIFIED PERSON

Mr. Claude Dufresne, P. Eng, acted as the qualified person as defined in NI 43-101. He reviewed and approved the technical and scientific content of this MD&A. Mr. Dufresne is the President and CEO of the Company.

## DESCRIPTION OF FINANCING TRANSACTIONS

### *Private Placement subsequent to September 30, 2020*

On November 17, 2020, the Company announced that it has entered into an agreement with Canaccord Genuity Corp. on behalf of a syndicate of agents that includes Sprott Capital Partners LP, in connection with a "best efforts" private placement for aggregate gross proceeds of up to \$12,000,000.

### *Financing transactions completed during the nine-months ended September 30, 2020*

On January 22, 2020, the Company closed of a non-brokered private placement pursuant to which the Company issued 328,571 units at a price of \$0.35 per unit for proceeds of \$115,000. Each unit is comprised of one common share and one-half of a warrant and each full warrant entitles its holder to subscribe for one common share at a price of \$0.45 per common share during a 24-month period.

## GRANT OF STOCK OPTIONS

On January 20, 2020, the Company granted 100,000 stock options to an officer and key consultant. One third of the stock options granted vested at the grant date and the remaining stock options granted are subject to a two-year vesting period. All grants have a five-year term at an exercise price of \$0.40.

On June 4, 2020, the Company granted 905,000 stock options to directors, officers, employees and consultants of the Company. One third of the stock options granted vested at the grant date and the remaining stock options granted are subject to a two year vesting period. All grants have a five-year term at an exercise price of \$0.28.

On June 8, 2020, NioBay announced an investor relations services agreement with Relations Publiques Paradox Inc. and the granting of 400,000 stock options. One third of the stock options granted vested at the grant date and the remaining stock options granted are subject to a two year vesting period. All grants have a five-year term at an exercise price of \$0.40.

## **FINANCIAL CONDITION**

As at September 30, 2020, the Company had a working capital of \$823,629, which includes cash and cash equivalents of \$1,065,673.

The Company estimates that the working capital available at September 30, 2020 will not be sufficient to cover its general administrative expenses and its planned exploration and evaluation budget for the next twelve months. Since the Company does not generate cash flows, it will need to raise additional funds in the future through the issuance of equity, strategic partnerships or joint venture arrangements to meet its planned exploration and evaluation work programs. While Management has been successful in securing financing in the past, there can be no assurance it will be able to do so in the future or that these sources of funding or initiatives will be available to the Company or that they will be available on terms which are acceptable to the Company. If the Company is not successful in raising additional funds, it may be required to reduce the scope of, or eliminate its planned exploration and evaluation activities.

## **CORONAVIRUS (COVID 19)**

NioBay faces risks related to health epidemics and other outbreaks of communicable diseases, which could significantly disrupt, directly or indirectly, its operations and may materially and adversely affect its business and financial conditions.

NioBay's business could be adversely impacted by the effects of the coronavirus or other epidemics. In December 2019, a novel strain of the coronavirus emerged in China and the virus has now spread to several other countries, including Canada and the U.S., and infections have been reported globally. The extent to which the coronavirus impacts NioBay's business, including its operations and the market for its securities, will depend on future developments, which are highly uncertain and cannot be predicted at this time, and include the duration, severity and scope of the outbreak and the actions taken to contain or treat the coronavirus outbreak. There can be no assurance that NioBay's personnel will not be impacted by these pandemic diseases and ultimately see its workforce productivity reduced or incur increased medical costs / insurance premiums as a result of these health risks.

In addition, a significant outbreak of coronavirus could result in a widespread global health crisis that could adversely affect global economies and financial markets resulting in an economic downturn that could have an adverse effect on the demand for specialty metals and NioBay's future prospects.

## **OUTLOOK**

The Company's development strategy is focused on the development of economic mineral deposits, where the benefits of mining or selling the deposits, will ensure the Company's sustainability. Management, while implementing its development strategy, will take into account the context of global market conditions and the stock market.

As previously discussed in this MD&A, the Company completed its analysis of the drill results from the Drilling Program in May 2020, announced the results of the 2020 MRE on the James Bay Project in July 2020 and announced the results of its PEA on the James Bay Project in October 2020. Based on the results of the PEA, the Company is planning the next steps in the development of the James Bay Project which may include a drilling campaign in 2021, on-going metallurgical testing, and the implementation of certain environmental and cultural baseline studies to be included in an eventual pre-feasibility study.

Further, the Company continues to engage with the local first nation MCFN. During the year, the Company has presented an overview of the James Bay Project, the results of the Drilling Program and the results of the PEA. MCFN leadership invited the Company to host an information session on March 5, 2020, and a second information session will be hosted as soon as the MCFN's travel restrictions are lifted. The Company maintains constant communication with MCFN.

Finally, the Crevier Project's metallurgical testing at COREM were suspended due to COVID-19. The Company is currently reviewing the plan for the timing of resuming the testing. The results of the studies being conducted at COREM, as described above, could have a significant impact on the development of the Crevier Project.

## EXPLORATION AND EVALUATION EXPENSES

The Company incurred the following exploration and evaluation expenses by project:

Nine-month period ended September 30, 2020	James Bay	Crevier	Others	Total
	\$	\$	\$	\$
Wages and fees	362,453	9,900	-	372,353
Drilling	512,735	-	-	512,735
Studies	428,420	75,271	-	503,691
Mineral claims	26,030	3,695	7,900	37,625
Transportation	354,301	-	-	354,301
Others	25,937	1,050	-	26,987
<b>Total</b>	<b>1,709,876</b>	<b>89,916</b>	<b>7,900</b>	<b>1,807,692</b>

Nine-month period ended September 30, 2019	James Bay	Crevier	Others	Total
	\$	\$	\$	\$
Wages and fees	222,632	10,500	4,500	240,632
Studies	7,574	43,366	-	50,940
Mineral claims	8,292	18,020	4,780	31,092
Others	26,375	564	-	26,939
<b>Total</b>	<b>267,873</b>	<b>72,450</b>	<b>9,280</b>	<b>349,603</b>

## FINANCIAL REVIEW

The Company is in the exploration and evaluation phase and does not yet have revenue-generating activities. Accordingly, the Company's financial performance is largely a function of the level of exploration and evaluation activities undertaken on its projects and the management and administrative expenses required to operate and carry out its activities.

*Results for the 3<sup>rd</sup> quarter ended September 30, 2020 ("Q3-2020") compared to the 3<sup>rd</sup> quarter ended September 30, 2019 ("Q3-2019")*

The Company incurred a net loss of \$589,746 during Q3-2020 (\$0.01 per share) compared to a net loss of \$313,389 in Q3-2019 (\$0.01 per share). The net loss attributable to shareholders of the Company totaled \$588,189 in Q3-2020 compared to \$309,210 in Q3-2019.

The operating loss for Q3-2020 was \$615,964 and increased by \$295,883 as compared to Q3-2019. This increase from Q3-2019 is mostly due to the exploration and evaluation expenses incurred related to the 2020 MRE and the execution of the PEA at the James Bay Project. Exploration and evaluation expenditures totaled \$301,725 in Q3-2020 (\$88,238 in Q3-2019), the details of which can be seen in the tables above.

Management and administration expenses totaled \$238,719 in Q3-2020 (\$196,155 in Q3-2019). The increase between periods is due primarily to the elevated investor relations activities undertaken during Q3-2020. The other costs are consistent between periods. Share-based compensation totaled \$71,964 during Q3-2020 (\$32,157 in Q3-2019). The increase in share-based compensation between periods is due to the increase in stock options granted in the current period.

The Company realized \$2,117 as finance income in Q3-2020 (\$7,634 in Q3-2019). The decrease in finance income results from reduced liquidities held in Q3-2020. Income related to the recognition of the deferred premium on flow-through shares in Q3-2020 amounted to \$24,112 (\$ nil in Q3-2019).

*Results for the nine-month period ended September 30, 2020 ("YTD-2020") compared to the nine-month period ended September 30, 2019 ("YTD-2019")*

The Company incurred a net loss of \$2,468,180 during YTD-2020 (\$0.05 per share) compared to a net loss of \$1,038,157 in YTD-2019 (\$0.02 per share). The net loss attributable to shareholders of the Company totaled \$2,450,859 in YTD-2020 compared to \$1,004,181 in YTD-2019.

The operating loss for YTD-2020 was \$2,672,243 and increased by \$1,606,844 as compared to YTD-2019. This increase from YTD-2019 is mostly due to the exploration and evaluation expenses incurred related to the Drilling Program, the 2020 MRE and execution of the PEA at the James Bay Project. Exploration and evaluation expenditures totaled \$1,807,692 in YTD-2020 (\$349,603 in YTD-2019), the details of which can be seen in the tables above.

Management and administration expenses totaled \$644,799 in YTD-2020 (\$555,683 in YTD-2019). The increase between periods is due primarily to the elevated investor relations activities undertaken during YTD-2020, offset slightly by a reduction in professional fees incurred in YTD-2020. The other costs are consistent between periods. Share-based compensation totaled \$208,532 during YTD-2020 (\$149,618 in YTD-2019). The increase in share-based compensation between periods is due to the increase in stock options granted in the current period.

The Company realized \$19,007 as finance income in YTD-2020 (\$28,566 in YTD-2019). The decrease in finance income results from reduced liquidities held in YTD-2020. Other income related to the recognition of the deferred government grants in YTD-2020 amounted to \$53,425 (\$ nil in YTD-2019). Income related to the recognition of the deferred premium on flow-through shares in YTD-2020 amounted to \$131,609 (\$ nil in YTD-2019).

*Selected Quarterly Financial Information*

The following is a summary of the Company's financial results for the past eight quarters:

<b>Period ended</b>	<b>Finance income</b>	<b>Net loss</b>	<b>Net loss attributable to to shareholders of the Company</b>	<b>Basic and diluted loss per share</b>
	\$	\$	\$	\$
September 30, 2020	2,117	(589,746)	(588,189)	(0.01)
June 30, 2020	5,140	(557,503)	(551,618)	(0.01)
March 31, 2020	11,750	(1,320,931)	(1,311,052)	(0.03)
December 31, 2019	5,877	(507,322)	(498,548)	(0.01)
September 30, 2019	7,634	(313,389)	(309,210)	(0.01)
June 30, 2019	9,326	(350,633)	(331,088)	(0.01)
March 31, 2019	11,606	(374,135)	(363,883)	(0.01)
December 31, 2018	12,183	(373,820)	(359,395)	(0.02)

From September 30, 2018 to December 31, 2019, the Company's quarterly net loss was consistent between periods. The increase in net loss during the nine-month period ended September 30, 2020 coincide with the Drilling Program, the 2020 MRE and the execution of the PEA at the James Bay Project.

### *Liquidity and Capital Resources*

The Company's working capital at September 30, 2020 totaled \$823,629 compared to a working capital of \$2,890,010 at December 31, 2019.

The Company estimates that the working capital available at September 30, 2020 will not be sufficient to cover its general administrative expenses and its planned exploration and evaluation budget for the next twelve months. The Company's properties are in the exploration and evaluation stage and, as a result, the Company currently has no source of operating cash flow. The potential sources of future funds presently available to the Company are through equity financing, joint venture or other arrangements. The ability of the Company to arrange future financings will depend in part upon global economic and capital market conditions, the potential of its projects as well as the business performance of the Company. There can be no assurance that the Company will be successful in its efforts to arrange additional financing on terms satisfactory to the Company. If the Company is not successful in raising additional funds, it may be required to reduce the scope of, or eliminate its planned exploration and evaluation activities.

### *Capital Management*

In managing its capital, the objective of the Company is to preserve its ability to continue its mining exploration while maintaining the current exploration programs and evaluation of mining assets, to provide sufficient working capital to meet its current commitments and to pursue potential investments. At September 30, 2020, the capital of the Company consists of equity attributable to shareholders of the Company of \$1,303,994 (\$3,352,794 at December 31, 2019). The Company manages its capital structure and makes adjustments in accordance with the aforementioned objectives, as well as in light of changes in economic conditions and the risk characteristics of the underlying assets.

### *Transactions with Related Parties*

The remuneration awarded to directors and to key management personnel, including the President and CEO and the CFO, is as follows:

	<b>Three months ended</b>		<b>Nine months ended</b>	
	<b>September 30,</b>		<b>September 30,</b>	
	<b>2020</b>	<b>2019</b>	<b>2020</b>	<b>2019</b>
			<b>\$</b>	<b>\$</b>
Salaries, professional fees and other short-term benefits	<b>65,000</b>	72,251	<b>229,000</b>	216,751
Share-based compensation	<b>23,000</b>	19,144	<b>110,000</b>	92,664
	<b>88,000</b>	91,395	<b>329,000</b>	309,415

### *Off-Balance Sheet Arrangements*

As at September 30, 2020, the Company has no off-balance sheet arrangements.

### *Outstanding Share Data*

As at November 25, 2020, the Company has 52,832,580 common shares, 3,553,085 share purchase warrants and 4,075,800 stock options outstanding.

## **OTHER RISKS AND UNCERTAINTIES**

The Company is subject to a number of significant risks and uncertainties which include but are not limited to the nature of its business and the present stage of exploration, evaluation and development of its mineral projects and the requirement for additional funds to pursue its planned exploration, evaluation and development activities on its project. Failure to successfully address such risks and uncertainties could have a significant negative impact on the Company's overall operations and financial condition and could materially affect the value of the Company's assets and future operating results. Therefore, an investment in the securities of the Company involves significant risks and should be considered speculative. The risks and uncertainties described herein are not necessarily the only ones that the Company could be facing. The Company cannot give assurance that it will successfully address these risks or other unknown risks that may affect its business. Readers should carefully consider the risks and uncertainties described below.

### *Company Specific Risks*

- The Company may be unable to obtain all necessary permits as well as environmental and social acceptability for the development of the James Bay Project by affected stakeholders, including Moose Cree First Nation.
- The Company may be unable to continue funding the exploration, evaluation and development of its projects and achieve its objectives and milestones.
- The Company's plans and objectives as well as its ability to raise funds may be affected by low metal prices.
- In Ontario, mineral rights are property rights that can be sold, transferred or leased. The Company is taking steps to verify title with respect to its most material mineral properties. Although the Company believes that title to its mineral properties are in good standing there is no guarantee that title to such properties will not be challenged or impugned.
- The Company's mineral resources estimates are not mineral reserves. There is no assurance that minerals will be discovered in sufficient quantities to justify commercial operations and that the Company will be able to demonstrate the economic viability of its projects.
- Future issuance of common shares into the public market may result in dilution to the existing shareholders.
- The Company faces substantial competition within the mining industry from other mineral companies with much greater financial and technical resources.
- The Company does not expect to receive revenues from operations in the foreseeable future.
- Certain directors and senior officers of the Company also serve as officers and/or directors of other mineral resource companies, which may give rise to conflicts.

### *Industry Risks*

- Mineral exploration, evaluation and development is a high risk, speculative business. Few properties that are explored are ultimately developed into producing mines.
- Mineral exploration is subject to geological uncertainties and interpretation.
- Mineral exploration is subject to numerous industry operating and environmental hazards and risks, many of which are beyond the Company's control.
- Substantial expenditures are required to explore mineral projects, define mineral resources, and complete all metallurgical, engineering, environmental, financial and other studies required to complete a feasibility study.
- Necessary permits to operate may not be granted or may be granted later than anticipated.
- Social and environmental groups may be opposed to the development of mining projects.
- Commodity prices including the price of niobium have fluctuated in the past and may continue to do so in the future.
- Current economic uncertainties globally have created market volatility and risk aversion among investors, limiting capital raising options.
- Changes in mining and environmental laws are beyond the Company's control.
- Mining operations including exploration, evaluation and development activities are subject to numerous laws and regulations.
- Title to mineral rights and surface rights may be disputed.

## **CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS**

This MD&A contains certain forward-looking statements as defined in applicable Canadian securities laws (referred to herein as "forward-looking statements"). Specifically, this MD&A includes forward-looking statements regarding the Company's strategic plans and objectives; the timing, completion and results of planned exploration and drilling programs, resource estimate, preliminary economic assessment and planned feasibility study; future financial results and future financings. Forward-looking statements involve a number of risks and uncertainties, and there can be no assurance that such statements will prove to be accurate. Therefore, actual results and future events could differ materially from those anticipated in such statements.

Risks and uncertainties that could cause results or future events to differ materially from current expectations expressed or implied by the forward-looking statements include, but are not limited to, the timing and results of consultations with the aboriginal groups, changes and volatility of metal prices and equity markets, the uncertainties involved in interpreting geological data and estimating mineral resources, changes or delays in exploration plans, the results of exploration programs, risks related to the receipt of regulatory and governmental permits and approvals, increases in costs, changes in environmental legislation and regulation, general economic conditions and mining industry risks, as well as other risk factors discussed in this MD&A. All forward-looking statements in this MD&A are qualified by this cautionary statement. Accordingly, readers should not place undue reliance on forward-looking statements. The Company undertakes no obligation to update publicly or otherwise revise any forward-looking statements whether as a result of new information or future events or otherwise, except as may be required by law.

#### **Additional Information and Continuous Disclosure**

This MD&A has been prepared as at November 25, 2020. Additional information on the Company is available through regular filings of press releases, financial statements and MD&A on SEDAR ([www.sedar.com](http://www.sedar.com)) and on the Company's website ([www.niobaymetals.com](http://www.niobaymetals.com)).