Appendix O.2

KPMG MRC Economic Impact Assessment – February 2020
Completed for the Updated 2021 Beaver Dam Mine EIS

KPMG

ATLANTIC MINING

Economic Impact Assessment of the Moose River Consolidated Project

Final Report

February 2021

kpmg.ca

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DISCLAIMER

This Report has been prepared by KPMG LLP ("KPMG") for Atlantic Mining NS Inc. (AMNS) a wholly owned subsidiary of St. Barbara Ltc. ("Client") pursuant to the terms of our engagement agreement with Client dated January 17, 2019 (the "Engagement Agreement"). KPMG neither warrants nor represents that the information contained in this Report is accurate, complete, sufficient or appropriate for use by any person or entity other than Client or for any purpose other than set out in the Engagement Agreement. This Report may not be relied upon by any person or entity other than Client, and KPMG hereby expressly disclaims any and all responsibility or liability to any person or entity other than Client in connection with their use of this Report.

EXECUTIVE SUMMARY

Atlantic Mining NS Inc. (AMNS) a wholly owned subsidiary of St. Barbara Ltd. has retained the services of KPMG to evaluate the economic benefits stemming from its Moose River Consolidated (MRC) Project in Nova Scotia and, more precisely, from its exploration, construction and operation activities. The Project consists in four open pit gold mines. The Touquoy gold mine was commissioned and reached commercial operation in 2018 and is expected to be in operation for 5 years. The 3 other mine sites, Beaver Dam, Fifteen Mile Stream and Cochrane Hill, are still in early stages and awaiting environmental approvals from the federal and provincial governments.

The estimate made as of March 13, 2019 indicated the presence of 22.99 million tonnes of proven reserves and 26.55 million tonnes of probable reserves for a total of 51.95 million tonnes of ore at 1.12 g / t gold equivalent[1]. Overall, Atlantic Mining hopes to recovers the equivalent of 1,41,590 ounces of gold over the life of the project[2].

To complete the Moose River Consolidated Project, Atlantic Mining intends to spend $2,136 million over the life of the project. Exploration expenditures were engaged during the 2012-2020 period and represent $77.2 million (or 4% of total spent); construction and operation spending are expected to reach $534.3M (25% of total spent) and $1,524.6M (71% of total spent) over the life of the Project. Construction spending has already been engaged for the Touquoy mine ($186.3M). The data used for this report comes from the most recent NI 43-101 Technical Report (March 2019) and information provided by Atlantic Mining[3].

KPMG calculated the direct and indirect economic impacts of exploration, construction and operating activities using the Statistics Canada Input-Output (I-O) model. This model is the benchmark model for analyzing economic benefits in the Canadian economy. The table below summarizes the economic impact on Nova Scotia stemming from construction and operating spending of Atlantic Mining for the Moose River Consolidated Project.

Due to the scale of total expenditures associated with the Project, the economic spinoffs from the proposed mining facilities would be significant. Table 1 presents estimates of the impacts on value added and employment over the entire Project period for each of the phases analyzed. Over the life of the Project, the additional added value generated in the economy - or contribution to Nova Scotia's GDP - would reach more than $1.0 billion. The expenses associated with this Project would also create or sustain jobs (direct and indirect) corresponding to an equivalent of 11,409 person-years within the province over the entire life of the project. At the time of writing this report, the schedule for the development of the Project was not yet known.

Table 1 - Impact on Value Added and Employment for Nova Scotia Stemming from Overall Expenses Related to the Moose River Project (Over the life of the project, M$ and in person-years)

NOVA SCOTIA	VALUE ADDED (IN $M)	JOBS (IN PERSON-YEARS)
Exploration	49.9	397
Construction	375.5	2,803
Operation (over LOM)	640.2	8,209
TOTAL	**1,067.4**	**11,409**

Note: Due to rounding, the sum of items may not add up to the total.
Source: Statistics Canada, Atlantic Mining, KPMG analysis

[1] Including rehandle of stockpiles

[2] NI 43-101 Technical Report

[3] It should also be noted that capital expenditures for Touquoy were based on the actual amount spent by Atlantic Mining on the construction of the mine.

The development and operation of the Moose River Consolidated Project would also generate significant government revenues in terms of taxes on workers' income, mining royalties, taxes on production and products, property taxes and the various permits and licenses required for mining activities. Total tax revenue for the municipal, provincial and federal governments would reach close to $320M. Nova Scotia government tax revenues would reach $153.0M of which nearly a quarter would be paid in the form of royalties ($26.5M over the duration of the project). In addition, the project expenditures would generate tax revenues of $132.4M for the federal government. These represent conservative estimates as, for example, corporate income taxes paid by suppliers cannot be estimated.

Table 2 - Municipal, Provincial and Federal Direct and Indirect Tax Revenues Stemming from Overall Expenses Related to the Moose River Project (Over the life of the project, M$)

	MUNICIPAL	PROVINCIAL	FEDERAL
Municipal Revenues (in $M)	**32.8**	**153.0**	**132.4**
Exploration[1]	0.1	17.1	7.0
Construction	10.4	20.9	32.2
Operation (LOM)	22.3	115.0	93.2

Note: Due to rounding, the sum of items may not add up to the total.
1 It should be noted that these are gross fiscal benefits, i.e. the analysis does not consider any future tax credit that the Atlantic Mining could potentially claim with regards to exploration spending.
Source: Statistics Canada, Atlantic Mining, KPMG analysis

The report also documents the impacts on Canada as a whole.

It should be noted that this report does not explore dynamic economic impacts on the Nova Scotia economy, such as:

– Additional investments in Nova Scotia resulting from the increased activity stimulated by the project;

– Reinforcement of Nova Scotia's mining sector;

– Spillover effects resulting from the expertise of professional firms and contractors from other provinces;

– Improvement of living conditions in certain communities as salaries in the mining sector are significantly higher than regional average;

– Reduction of worker migration to other provinces.

Some of these benefits are explored in a separate report which documents the local economic benefits of the Cochrane Hill Mining project specifically.

1. INTRODUCTION

1.1 Mandate overview

Atlantic Mining has retained the services of KPMG to evaluate the economic benefits stemming from the development of the Moose River Consolidated Project which comprises Touquoy, Beaver Dam, Cochrane Hill and Fifteen Mile Stream gold deposits. While Touquoy Mine has been in operations since 2019, the other three sites are still at preliminary stages.

In 2015, KPMG performed an economic impact assessment of three of the four mining projects - at the time, the Fifteen Mile Stream Project was still too preliminary and was not included in the scope of the study. KPMG relied on the financial information included in the Preliminary Economic Assessment ("PEA") carried out by Moose Mountain technical services (published in 2014).

Two scenarios were then analyzed:

– Base case – assumed initial production from the fully-permitted Touquoy project and the Beaver Dam project, for total life of mine production ("LOM") of 702,000 ounces of gold at an average grade of 1.55 g/t;

– Base plus Cochrane case – included the addition of gravity and float concentrate production from the Company's Cochrane Hill mine, for a total LOM production of 1,129,000 ounces of gold at an average grade of 1.62 g/t.

KPMG calculated the economic impacts of these two scenarios which corresponded to investments of $162M and $284M respectively, while annual operating cost amounted to $50.3 and $86.0M. Table 4 present the main results of this study.

Table 3 - Reminder of the economic impact (direct and indirect) on Canada and Nova Scotia – 2015 KPMG study – Base Case (2014, in M$ and person-year equivalent)

	CANADA		NOVA SCOTIA	
	Construction (Cumulative - 2 years)	**Operation (Per year)**	**Construction (Cumulative - 2 years)**	**Operation (Per year)**
Value-added *(in millions of $)*	93.0	26.5	69.3	19.7
Jobs created *(in person-year equivalent)*	1,005	278	781	228
Government revenues *(in millions of $)*	5.5 *(federal only)*	8.1 *(federal only)*	4.1 *(provincial only)*	10.2 *(provincial only)*

Source: Economic Impact Assessment of Atlantic's Moose River Consolidated Gold Projects in Nova Scotia, KPMG 2015

Table 4 - Reminder of the economic impact (direct and indirect) on Canada and Nova Scotia – 2015 KPMG study – Base plus Cochrane Hill case (2014, in M$ and person-year equivalent)

	CANADA		NOVA SCOTIA	
	Construction (Cumulative - 2 years)	**Operation (Per year)**	**Construction (Cumulative - 2 years)**	**Operation (Per year)**
Value-added *(in millions of $)*	162.3	43.6	120.1	31.5
Jobs created *(in person-year equivalent)*	1,749	455	1,352	367
Government revenues *(in millions of $)*	9.7 *(federal only)*	13.1 *(federal only)*	7.1 *(provincial only)*	17.0 *(provincial only)*

Source: Economic Impact Assessment of Atlantic's Moose River Consolidated Gold Projects in Nova Scotia, KPMG 2015

This is an update of the work undertaken in 2015. It relies on current financial and production data from the Touquoy Mine since construction work has been completed and site operation has started. The reader should note that CAPEX real spent for Touquoy was higher than what was considered in the 2015 KPMG study. As such, economic impact of the mine has been greater than initially expected. For the other 3 mining projects, the evaluation was carried out based on the most updated information available as of January 2020. For operation expenditure, the information primarily came from Atlantic Mining and the technical report carried out by Ausenco and published in March 2019[4]. Additional data and information were provided by Atlantic Mining where more detail was required for the purposes of the analysis.

1.1.1 Objective

This report aims to consolidate the results presented in four standalone KPMG reports (one for each mining project) and completed during the years 2019 and 2020. It provides the reader with a portrait of the overall economic contribution of investment and operation spending related to the development of the Moose River Consolidated Project. The economic impact is based on the total capital expenditures (CAPEX) and operational expenditures (OPEX) over the life of mine (LOM). In addition, this report presents the economic impact of Atlantic Mining's exploration activities in the province of Nova Scotia between 2012 and 2020; these were not covered in the standalone reports. The economic impacts are measured in terms of:

– jobs directly sustained by Atlantic Mining in Nova Scotia and Canada;
– jobs indirectly sustained in Nova Scotia and Canada by all Atlantic Mining's expenditures;
– value added or wealth created in Nova Scotia and Canada (from capital and operation expenditures);
– taxes paid directly or indirectly (property taxes, income taxes, corporate taxes, taxes on products and royalties), at the municipal, provincial and federal levels.

1.2 Methodological Framework

1.2.1 Static Economic Impacts

This study presents the static economic impacts, which are the multiplying effects of the initial spending that Atlantic Mining plans to spend on the project in Nova Scotia. In short, these impacts measure the cascading effects that are produced by an injection of cash in a given territory. The more integrated the economy, or the more initial spending engages sectors of activity already in the region, the greater the economic benefits.

The cascading economic benefits are divided into two main groups – the direct and indirect effects of intended spending:

– The **direct effects** are the revenues directly attributable to the spending involved in the project. These revenues are generated by the principals authorizing the expansion project (meaning Atlantic Mining and its general contractors). These are the salaries paid to Atlantic Mining's or prime contractors' staff and other revenues generated (profits, amortization);
– The **indirect effects** are the income effects stemming from a demand for goods and services generated by the project activities in other industrial sectors. We are referring here to the impacts on the suppliers selling their goods and services to the principals investing in the project. For example, these include professional and engineering services, specialized technical services (surveying, drilling, etc.), mechanical, energy, machinery and equipment services and the like. Indirect impacts therefore also include salaries paid to employees of the various suppliers as well as other revenues generated by these suppliers.

The direct and indirect economic impacts were calculated using Statistics Canada Input-Output (I-O) model. This model is designed to simulate the activity of a project, a company or an industry (based on the number of jobs, production values, expenditures or sales) and measure its direct and indirect effects on the national and provincial economies.

[4] Moose River Consolidated Project, Nova Scotia, Canada, NI 43-101 Technical Report on Moose River Consolidated (Report Effective Date: March, 2019)

This study does not include an assessment of the dynamic impacts related to investment Atlantic Mining would make in the province. Dynamic economic impacts occur when a project contributes, in addition to its effect of spending on the territory's economy, to increase the overall economic performance of firms, a region or an industrial sector. This improvement in performance can take various forms, such as improving worker productivity, developing new skills, reducing production costs or increasing exports. The scope of these impacts is generally much broader than the project under study, and the benefits generated can be felt in many companies, including customers and suppliers.

1.3 Basic Assumptions Underlying This Evaluation

The evaluation of the economic benefits stemming from the Moose River Consolidated Project is based on numerous assumptions, the most important ones being as follows:

- **For the Touquoy deposit**, the analysis is based on Capex figures from actual amount spent by Atlantic Mining, between 2015 and 2020. These figures were provided by Atlantic Mining to KPMG. Expenses were then converted to 2019 dollars by using a construction price index published by Statistics Canada. For the operating phase, the analysis is based on the information published in the most recent NI 43-101 Technical Report (March 2019) and on operating spending costs provided to KPMG by Atlantic Mining;
- **For the three other deposits,** the analysis is based on the information published in the most recent NI 43-101 Technical Report (March 2019) and information provided by Atlantic Mining when additional detail was required by KPMG.
- The analysis of the impacts of Atlantic Mining's operating expenses on the economy are presented based on an average yearly-spent during the LOM; impacts could vary from year to year depending on the actual level of spending in a given year;
- The analysis is based on project cost distribution provided by Atlantic Mining. The benefits could vary if the distribution among the cost components were to change;
- The analysis is based on 2016 Input-Output (I-O) model from Statistics Canada, which was, at the time of writing the reports, the most recent model available and representative structure of the Nova Scotia and Canadian economies. All results are denominated in 2019 Canadian dollars. Where possible, adjustments were performed to update certain parameters of the model[5]. The benefits could vary if the average structure of the Canadian economy changed. Furthermore, the input-output model is based on the assumption of fixed technological coefficients. It does not take into account economies of scale, constraint capacities, technological change, externalities, or price changes. This makes impact analysis less accurate for long-term and large impacts as firms adjust their production technology and the IO technological coefficients become outdated. Assuming that firms adjust their production technology over time to become more efficient implies that the impact of a change in final demand will tend to be overestimated;
- KPMG preferred to be careful about any additional assumptions that could be made such that the results remain conservative.

1.4 Document Structure

Following this introduction, this report is divided into four main sections:

- Section 2 provides an outline of the **project's scope**;
- Section 3 summarizes the economic impacts related to the **exploration** activities
- Section 4 displays the economic benefits stemming from the **construction** activities;
- Section 5 assesses the economic benefits stemming from **operations**.

[5] In particular, employment numbers were adjusted to take into account wage increases over the 2016-2019 period. When possible, fiscal data was also updated to take into account changes in fiscal policy. While the analysis is based on the 2016 tax structure for taxes on products and production (tax rate, available credit, contribution rate, etc.), 2017 personal effective income tax rates were used to estimate both direct and indirect personal revenue income taxes generated. The 2018 corporate tax rates and royalty regime were used to assess the direct fiscal contribution of Atlantic Mining. These latter figures were provided by Atlantic Mining.

2. PROJECT SCOPE

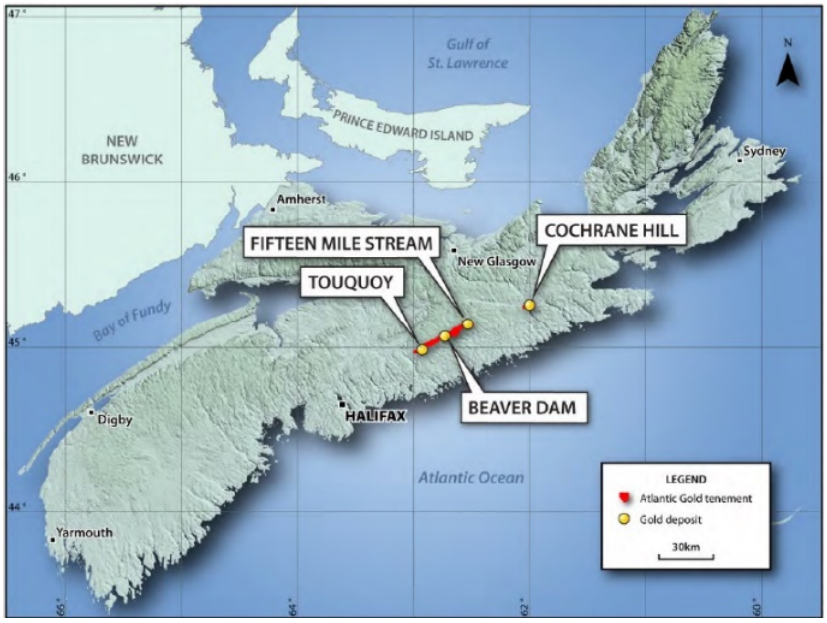
This second section presents the main characteristics of the Moose River Consolidated Project, including an overview of the mine's production schedule and the overall spending throughout the life of the mine (LOM).

2.1 Project Overview

Atlantic Mining is proposing the construction, operation, decommissioning and reclamation of The Moose River Consolidated Project which consists of four open pit mines. The Touquoy property is located 60 km northeast of the Provincial capital, Halifax, in Halifax county, and is centred on the former mining village of Moose River Gold Mines. The gold mine was commissioned and reached commercial operation in 2018 and is expected to be in operation for 5 years. The 3 other mine sites are awaiting environmental approvals from the federal government:

– The Beaver Dam property is also located in Halifax County, approximately 85 km northeast of Halifax and would be in operation for a period of 5 years;
– The Fifteen Mile Stream property is situated 100 km northeast of Halifax in Halifax County and would be in operation for 7 years;
– The Cochrane Hill property is located 13 km north of Sherbrooke in Guysborough County and would be in operation for 8 years.

Figure 1 - Project Location Plan



Source: Technical Report 2019

Part of the ore transformation will be done on each site, but final transformation will be performed at Touquoy. More precisely, ore mined at Beaver Dam would be crushed and then hauled to the process plant at Touquoy. Fifteen Mile Stream and Cochrane Hill are planned as independent standalone mine operations and concentrate from these operations would be hauled to Touquoy plant for final processing.

The estimate made as of March 13, 2019 indicated the presence of 22.99 million tonnes of proven reserves and 26.55 million tonnes of probable reserves for a total of 51.95 million tonnes of ore at 1.12 g / t gold equivalent[6]. Overall, Atlantic Mining plans to recovers the equivalent of 1,41,590 ounces of gold over the life of the project.

2.2 Spending and Investment Needs throughout LOM

To complete the Moose River Consolidated Project, Atlantic Mining intends to invest 2,136 million $ over the life of the project. The following table details each of the three main project phases in terms of expenditure.

Table 5 - Distribution of Spending: Moose River Consolidated Project (Over the LOM, in (2019) M$)

SPENDING CATEGORY	IN M$	AS A % OF THE TOTAL
1. Exploration	77	4%
2. Construction	534	25%
3. Operation[7]	1,525	71%
Total	**2,136**	**100%**

Source: Atlantic Mining, 2018. KPMG analysis

[6] Including rehandle of stockpiles
[7] Including sustaining capital expenditure

3. ECONOMIC BENEFITS STEMMING FROM EXPLORATION ACTIVITIES

This third section presents the direct and indirect economic benefits stemming from exploration expenditures of Atlantic Mining in Nova Scotia. The nature and scope of these expenditures are first analyzed, then the resulting economic benefits for the province of Nova Scotia and for Canada are presented.

3.1 Exploration Expenditures

Mining exploration refers to the search for minerals that appear in high enough concentration and amounts to be extracted and processed for profit. This phase includes activities such as prospecting, mapping, digging and production of geophysical surveys, but also the acquisition of permits, leases and licenses that are required. Even though they represent a small share of overall project spending, these generate preliminary steps to mining support well-paid jobs and play a key role in ensuring the long-term viability of the province's mining industry.

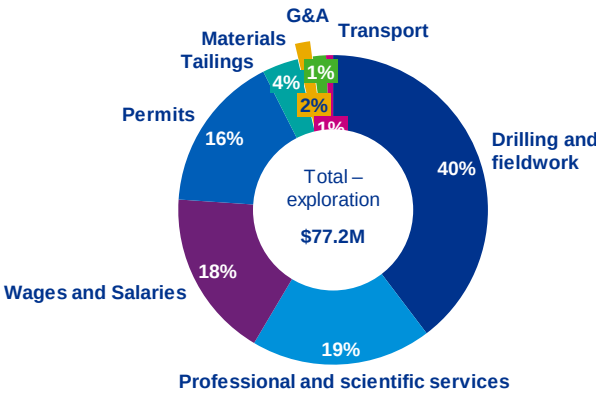
Broad Spending Components

Atlantic Mining has conducted exploration activities in Nova Scotia between 2014 and 2020 for a total spending of $77.2M. Exploration costs can be divided into eight (8) broad components:

- Drilling and fieldwork (40% of total spending);
- Professional and scientific services including engineering, assay analysis, legal fees, etc. (19% of total spending);
- Wages and salaries (18% of total spending);
- Permits including environmental permits (16% of total spending);
- Tailings (4% of total spending);
- Material, General and Administration, Permits and Transport (4% of total spending).

Figure 2 - Breakdown of Exploration Expenditures by Broad Component

In millions and %



Note: Figures have been rounded and may not sum.
Source : Atlantic Mining, KPMG analysis.

3.2 Economic Impacts of Exploration Activities

The economic spinoffs of overall exploration spending by Atlantic Mining in Nova Scotia between 2012 and 2020 are estimated at $49.9M. This total corresponds to the value added of exploration expenditures in Nova Scotia, or, in other words, the true wealth creation effect on Nova Scotia's economy. Pre-tax wages represent 86% of this added value, or $42.8M. These activities supported 397 jobs (in person-year) over the 8-year exploration period (or 50 jobs on average per year).

The following table shows the distribution of direct and indirect effects on value added and employment over the exploration period.

Table 6 - Economic Impact on Nova Scotia Stemming from the Exploration Activities (2012-2020, in millions of dollars and in person-years)

NOVA SCOTIA	DIRECT EFFECTS	INDIRECT EFFECTS	TOTAL
IN MILLIONS OF DOLLARS			
Total value added, of which	14.6	35.3	49.9
Salaries and wages before income taxes	13.6	29.3	42.8
Other gross income before taxes	1.0	6.0	7.0
IN PERSON-YEAR (FTE EQUIVALENT)			
Jobs in person-years	117	280	397

Note: Due to rounding, the sum of items may not add up to the total.
Source: Simulations of Statistics Canada based on data from Atlantic Mining, KPMG analysis

For Canada as a whole, the impact arising from exploration activities in terms of wealth creation is estimated at $57.7M. Furthermore, 446 jobs would be sustained over the 8-year period (in person-years), which corresponds to 56 jobs in full-time equivalent on average per year.

Table 7 - Economic Impact on Canada Stemming from the Exploration Activities (2012-2020, in millions of dollars and in person-years)

CANADA	DIRECT EFFECTS	INDIRECT EFFECTS	TOTAL
IN MILLIONS OF DOLLARS			
Total value added, of which	14.6	43.1	57.7
Salaries and wages before income taxes	13.6	34.3	47.8
Other gross income before taxes	1.0	8.8	9.8
IN PERSON-YEAR (FTE EQUIVALENT)			
Jobs in person-years	117	329	446

Note: Due to rounding, the sum of items may not add up to the total.
Source: Simulations of Statistics Canada based on data from Atlantic Mining, KPMG analysis

Exploration activities also impact government revenues, whether through taxes on personal incomes, taxes on products and taxes on production. In addition, these activities require various permits and licenses which are added to the revenue of the provincial government. Overall, Atlantic Mining's exploration activities have increased the revenues of the various levels of government by $24.1M. It should be noted that these are gross fiscal benefits, i.e. the analysis does not consider any future tax credit that the Atlantic Mining could potentially claim with regards to exploration spending.

Table 8 - Direct and Indirect Municipal, Provincial (Nova Scotia) and Federal Government Revenues Stemming from the Exploration Activities (2015-2020, in millions of dollars)

DETAIL TAX REVENUES	PERSONAL INCOME TAX[1]	TAXES ON PRODUCTS[2]	TAXES ON PRODUCTION[2]	PERMIT AND LICENCE	TOTAL
Municipal	--	--	0.1	--	0.1
Nova Scotia (Provincial)	4.6	0.6	0.2	11.7	17.1
Canada (Federal)	6.7	0.2	0.1	--	7.0

Note: Due to rounding, the sum of items may not add up to the total.
1.Personal income taxes have been estimates based on 2017 effective tax rate in Nova Scotia and Canada (from Statistics Canada).
2.Direct and indirect taxes, based on Statistics Canada Input-Output model.
Source: Statistics Canada, Atlantic Mining, KPMG analysis

4. ECONOMIC BENEFITS STEMMING FROM CONSTRUCTION ACTIVITIES

Construction activities involve preparing the mine sites, setting up infrastructures and facilities and buying mining and processing equipment enabling the Moose River Consolidated Project to reach its full projected production capacities. This section presents the economic benefits stemming from the construction activities and spending related to the Project.

4.1 Construction Activities

According to the data provided by Atlantic Mining as well as those presented in the Technical Report dated March 2019, Moose River Consolidated Project require investments totaling $534M (this figure includes CAPEX already incurred at Touquoy Mine). These costs include various spending components. The two most important spending components are the construction of the processing facilities, including the acquisition of the processing equipment, and the construction of site infrastructures. Table 9 summarizes capital costs by area of spending for each of the four sites.

Table 9 - Capital Cost Summary by Deposit and Total for Moose River Consolidated Project (In millions of $)

AREA	TOUQUOY	BEAVER DAM	FIFTEEN MILE STREAM	COCHRANE HILL	MOOSE RIVER CONSOLIDATED
Mine development	23.8	1.3	34.1	29.8	89.0
Process plant	71.1	4.9	72.5	55.5	204.0
On-site infrastructure	84.0	5.3	19.6	13.6	122.5
Off-site infrastructure	-	10.7	7.4	6.6	24.7
Indirect cost (including EPCM, field indirect, freight, vendor, first fill and spare parts) and owner's costs	7.3	3.7	35.0	25.3	71.3
Contingency	-	1.8	16.5	13.8	32.1
Total Capital Costs	**186.2**	**27.7**	**185.2**	**144.3**	**534.3**

Note: Figures have been rounded and may not sum.
Source: Data from Atlantic Mining, KPMG analysis.

4.2 Economic Impacts of Construction Activities

The overall economic spinoffs of the investments stemming from the construction of the Moose River Consolidated Project are estimated at $375.5 million in Nova Scotia. Investment activities would support 2,200 jobs (in person-years) over the entire duration of the work. These consist of 2,219 direct jobs and 584 indirect jobs among Nova Scotia suppliers (in person-years). The following table shows the distribution of direct and indirect effects on value added and employment. It is important to emphasize that those benefits are not recurring yearly and reflect the impact of one-off expenditures during the construction works. Moreover, the impacts linked to the activities of the subcontractors were considered part of the direct impacts of the construction activities.

Table 10 - Impacts on Value Added in Nova Scotia Stemming from Construction - Moose River Consolidated Project (In millions of dollars)

	TOUQUOY	BEAVER DAM	FIFTEEN MILE STREAM	COCHRANE HILL	MOOSE RIVER CONSOLIDATED
GDP IMPACT					
Direct	104.1	15.1	106.9	82.8	308.9
Indirect	27.5	3.2	20.5	15.4	66.6
Total	**131.6**	**18.3**	**127.4**	**98.2**	**375.5**

Note: Due to rounding, the sum of items may not add up to the total.
1. The direct economic impacts from subcontractor activity were considered part of the direct impacts of construction (this is consistent with best practice).
Source: Simulations of Statistics Canada based on data from Atlantic Mining, KPMG analysis

Table 11 - Impacts on Employment in Nova Scotia Stemming from Construction - Moose River Consolidated Project (In person-years)

	TOUQUOY	BEAVER DAM	FIFTEEN MILE STREAM	COCHRANE HILL	MOOSE RIVER CONSOLIDATED
EMPLOYMENT IMPACT					
Direct	744	108	771	596	2,219
Indirect	239	29	181	135	584
Total	**983**	**137**	**952**	**731**	**2,803**

Note: Due to rounding, the sum of items may not add up to the total.
1. The direct economic impacts from subcontractor activity were considered part of the direct impacts of construction (this is consistent with best practice).
Source: Simulations of Statistics Canada based on data from Atlantic Mining, KPMG analysis

Table 12 - Impacts on Value Added in Canada Stemming from Construction - Moose River Consolidated Project (In millions of dollars)

	TOUQUOY	BEAVER DAM	FIFTEEN MILE STREAM	COCHRANE HILL	MOOSE RIVER CONSOLIDATED
GDP IMPACT					
Direct	104.1	15.1	109.	85.8	314.0
Indirect	45.1	6.0	36.6	27.5	115.2
Total	**149.2**	**21.1**	**146.4**	**113.3**	**430.0**

Note: Due to rounding, the sum of items may not add up to the total.
1. The direct economic impacts from subcontractor activity were considered part of the direct impacts of construction (this is consistent with best practice).
Source: Simulations of Statistics Canada based on data from Atlantic Mining, KPMG analysis

For Canada as a whole, the impact arising from construction activities of the Moose River Consolidated Project in terms of wealth creation is estimated at $430M; the Project would support 3,211 jobs (in person-years) throughout the construction period of the 4 mines.

Table 13 - Impacts on Employment in Canada Stemming from Construction - Moose River Consolidated Project (In person-years)

	TOUQUOY	BEAVER DAM	FIFTEEN MILE STREAM	COCHRANE HILL	MOOSE RIVER CONSOLIDATED
EMPLOYMENT IMPACT					
Direct	744	108	771	641	2,264
Indirect	363	49	298	236	946
Total	**1,108**	**157**	**1,069**	**877**	**3,211**

Note: Due to rounding, the sum of items may not add up to the total.
1. The direct economic impacts from subcontractor activity were considered part of the direct impacts of construction (this is consistent with best practice).
Source: Simulations of Statistics Canada based on data from Atlantic Mining, KPMG analysis

The development of the Moose River Consolidated Project would also impact government revenues, through taxes on personal incomes, taxes on products and taxes on production. Total expected tax revenues stemming from the construction phase amount to $20.9M for the Nova Scotia Government, $32.2M for the Federal Government and $10.4M for municipal governments.

Table 14 - Direct and Indirect Municipal, Provincial (Nova Scotia) and Federal Government Revenues Stemming from Construction - Moose River Consolidated Project (In Millions of dollars)

TYPES	TOUQUOY	BEAVER DAM	FIFTEEN MILE STREAM	COCHRANE HILL	MOOSE RIVER CONSOLIDATED
MUNICIPAL					
Taxes on Production[2]	3.7	0.5	3.3	2.9	**10.4**
NOVA SCOTIA (PROVINCIAL)					
Personal Income Tax[1]	6.1	0.8	6.1	3.8	**16.8**
Taxes on Products[2]	0.7	0.4	0.7	0.6	**2.4**
Taxes on Production[2]	0.6	0.1	0.4	0.6	**1.7**
Total	**7.4**	**1.3**	**7.2**	**5.0**	**20.9**
CANADA (FEDERAL)					
Personal Income Tax[1]	10.8	1.2	10.8	7.5	**30.3**
Taxes on Products[2]	0.6	0.2	0.6	0.5	**1.9**
Total	**11.4**	**1.4**	**11.4**	**8.0**	**32.2**

Note: Due to rounding, the sum of items may not add up to the total.
1.Personal income taxes have been estimates based on 2017 effective tax rate in Nova Scotia and Canada (from Statistics Canada).
2.Direct and indirect taxes, based on Statistics Canada Input-Output model.
Source: Statistics Canada, Atlantic Mining, KPMG analysis

5. ECONOMIC BENEFITS STEMMING FROM OPERATIONS

The mining and processing activities of the Moose River Consolidated Projects in Nova Scotia would involve the deployment and operation of new mining production capacity. This section presents the economic benefits linked to this spending, both for Nova Scotia and for Canada.

5.1 Operating Expenditures

Operating expenditures represent an important part of the Moose River Consolidated Project's contribution to the economy. Over the LOM, OPEX are estimated at $1,523.6M.

The breakdown of operating costs is presented for each of the sites as well as a total for the entire Moose River Consolidated Project in Table 15. Operating expenditures fall into 5 broad components:

– Mining costs including labor, materials, specialized equipment, etc. (41% of total spending);

– Processing costs such as labour, chemicals, electricity, fuel, etc. (34% of total spending);

– General and administration including electronic equipment, office supplies, etc. (13% of total spending);

– Transport (7% of total spending);

– Sustaining Capex including materials and spare parts, owner costs and environmental services (5% of total spending).

Table 15 - Operating Costs Summary – for each of the 4 mines and Moose River Consolidated (M$/Year and M$ over the LOM)

AREA	TOUQUOY	BEAVER DAM	FIFTEEN MILE STREAM	COCHRANE HILL	MOOSE RIVER CONSOLIDATED
Mining costs	15.8	35.9	19.1	23.7	N/A
Processing costs	24.7	24.9	14.1	16.5	N/A
G&A	8.7	8.7	6.0	6.0	N/A
Transport	--	12.1	1.2	1.8	N/A
Sustaining capex	3.5	1.4	4.0	3.2	N/A
Total per year (M$/Year)	**52.7**	**83.0**	**44.7**	**51.1**	**N/A**
Total over the LOM (M$)	**263.5**	**539.4**	**312.9**	**408.8**	**1,524.6**

Source: Technical Report 2019 and Atlantic Mining, KPMG analysis

5.2 Economic Benefits of Operations

Operating expenses would contribute to increase value added in Nova Scotia by $640.2M over the entire duration of operations. Table 16 presents the economic impact stemming from the operation expenditure for each site and overall for the Moose River Consolidated Project.

Table 16 - Impacts on Value Added in Nova Scotia Stemming from Operations (Typical year and over the LOM, in millions of dollars)

	TOUQUOY (5 YEARS)	BEAVER DAM (5 YEARS)	FIFTEEN MILE STREAM (7 YEARS)	COCHRANE HILL (8 YEARS)	MOOSE RIVER CONSOLIDATED
GDP IMPACT (YEARLY BASIS)					
Direct	17.8	8.8	13.0	16.4	N/A
Indirect	11.9	22.4	7.3	7.8	N/A
Total per year (M$/Year)	**29.8**	**31.2**	**20.3**	**24.2**	**N/A**
Total over the LOM (M$)	**148.5**	**156.0**	**142.1**	**193.6**	**640.2**

Note: Due to rounding, the sum of items may not add up to the total.
Source: Simulations of Statistics Canada based on data from Atlantic Mining, KPMG analysis

As presented in Table 17, over the entire duration of the operation of the project, Atlantic Mining would support the equivalent of 8,209 jobs on a person-year basis.

Table 17 - Impact on Employment in Nova Scotia Stemming from Operations (Typical year and over the LOM, in person-years)

	TOUQUOY (5 YEARS)	BEAVER DAM (5 YEARS)	FIFTEEN MILE STREAM (7 YEARS)	COCHRANE HILL (8 YEARS)	MOOSE RIVER CONSOLIDATED
TOTAL JOBS (YEARLY BASIS)					
Direct	302	150	235	255	N/A
Indirect	98	161	63	66	N/A
Total per year	**400**	**311**	**298**	**321**	**N/A**
Total over the LOM (in person-years)	**2,000**	**1,555**	**2,086**	**2,568**	**8,209**

Note: Due to rounding, the sum of items may not add up to the total.
Source: Simulations of Statistics Canada based on data from Atlantic Mining, KPMG analysis

For Canada as a whole, impact arising from operating activities of the Moose River Consolidated Project in terms of wealth creation is estimated at $889.4M over the duration of the Project (Table 18) ; 9,601 jobs (in person-years) would be supported by Atlantic Mining (Table 19).

Table 18 - Impacts on Value Added in Canada Stemming from Operations (Typical year and over the LOM, in millions of dollars)

	TOUQUOY (5 YEARS)	BEAVER DAM (5 YEARS)	FIFTEEN MILE STREAM (7 YEARS)	COCHRANE HILL (8 YEARS)	MOOSE RIVER CONSOLIDATED
GDP IMPACT (YEARLY BASIS)					
Direct	17.8	8.5	13.0	16.4	N/A
Indirect	20.3	42.2	14.4	15.3	N/A
Total per year (M$/Year)	**38.1**	**50.7**	**27.4**	**31.7**	**N/A**
Total over the LOM (M$)	**190.5**	**253.5**	**191.8**	**253.6**	**889.4**

Note: Due to rounding, the sum of items may not add up to the total.
Source: Simulations of Statistics Canada based on data from Atlantic Mining, KPMG analysis

Table 19 - Impacts on Employment in Canada Stemming from Operations (Typical year and over the LOM, in millions of dollars)

	TOUQUOY (5 YEARS)	BEAVER DAM (5 YEARS)	FIFTEEN MILE STREAM (7 YEARS)	COCHRANE HILL (8 YEARS)	MOOSE RIVER CONSOLIDATED
TOTAL JOBS (YEARLY BASIS)					
Direct	302	150	235	255	N/A
Indirect	153	271	80	122	N/A
Total per year	**455**	**421**	**315**	**377**	**N/A**
Total over the LOM (in person-years)	**2,275**	**2,105**	**2,205**	**3,016**	**9,601**

Note: Due to rounding, the sum of items may not add up to the total.
Source: Simulations of Statistics Canada based on data from Atlantic Mining, KPMG analysis

The operation of the four mines would generate additional government revenues in terms of labor income taxes, indirect taxes, corporate taxes and mining royalties. Total tax revenues for the Nova Scotia, Canadian and municipal governments would reach nearly $240M over the duration of the project. These represent conservative estimates as, for example, corporate income taxes paid by suppliers cannot be estimated.

Table 20 - Municipal, Provincial and Federal Direct and Indirect Tax Revenues Stemming from Operations (Typical year and Total over LOM, in millions of dollars)

TYPES	TOUQUOY (5 YEARS)	BEAVER DAM (5 YEARS)	FIFTEEN MILE STREAM (7 YEARS)	COCHRANE HILL (8 YEARS)	MOOSE RIVER CONSOLIDATED
MUNICIPAL					
Taxes on Production[2]	1.3	1.2	0.6	0.7	
NOVA SCOTIA (PROVINCIAL)					
Royalties	1.0	0.6	1.3	1.1	
Personal Income Tax[1]	2.8	1.4	1.3	2.3	
Taxes on Products[2]	0.9	2.7	1.2	1.4	
Taxes on Production[2]	0.2	0.1	0.1	0.1	
Total	**4.9**	**4.8**	**3.9**	**4.9**	
CANADA (FEDERAL)					
Personal Income Tax[1]	3.4	1.8	2.3	3.0	
Taxes on Products[2]	1.1	1.6	0.8	1.0	
Total	**4.5**	**3.4**	**3.1**	**4.0**	
Total per year (municipal, provincial, federal)	**10.7**	**9.4**	**7.6**	**9.6**	
Total over the LOM (M$)	**53.5**	**47.0**	**53.2**	**76.8**	**230.5**

Note: Due to rounding, the sum of items may not add up to the total.
1. Royalties are estimated by using a gold price of $ 1,859/oz and a royalty's rate of 1%.
2. Personal income taxes have been estimates based on 2017 effective tax rate in Nova Scotia and Canada (from Statistics Canada).
3. Direct and indirect taxes, based on Statistics Canada Input-Output model.
4. These figures do not take into account corporate taxes that could be paid by Atlantic Mining.
Source: Statistics Canada, Atlantic Mining, KPMG analysis

CONCLUSION

Due to the scale of total expenditures associated with the Project, the economic spinoffs from the proposed mining facilities would be significant. Over the life of the Project, the additional added value generated in the economy - or contribution to Nova Scotia's GDP - would reach more than $1.0 billion. At the time of writing this report, the schedule for the development of the Project was not yet known. Based the LOM of each mines, Table 21 presents estimates of the impacts on value added over the entire period for each of the phases analyzed.

Table 21 - Impact on Value Added for Nova Scotia Stemming from Overall Expenses Related to the Moose River Project (Over the life of the project, M$)

NOVA SCOTIA	DIRECT	INDIRECT	TOTAL
VALUE ADDED (IN $M)			
Exploration	14.6	35.3	49.9
Construction	308.9	66.6	375.5
Operation (over LOM)	355.2	285.0	640.2
Total	**678.7**	**386.9**	**1,067.4**

Note: Due to rounding, the sum of items may not add up to the total.
Source: Statistics Canada, Atlantic Mining, KPMG analysis

The expenses associated with this project would also create or sustain jobs (direct and indirect) corresponding to an equivalent of 11,409 person-years within the province over the entire life of the project. The jobs directly linked to the project throughout Nova Scotia would correspond to the equivalent of 8,281 person-years *i.e.* 117 during the exploration phase, 2,803 during the construction phase and 5,945 for the operation. Project-related expenses would also support jobs with Atlantic Mining's suppliers equivalent to 3,128 person-years.

Table 22 - Impact on Employment for Nova Scotia Stemming from Overall Expenses Related to the Moose River Project (Over the life of the project, person-years)

NOVA SCOTIA	DIRECT	INDIRECT	TOTAL
VALUE ADDED (IN $M)			
Exploration	117	280	397
Construction	2,219	585	2,803
Operation (over LOM)	5,945	2,264	8,209
Total	**8,281**	**3,128**	**11,409**

Note: Due to rounding, the sum of items may not add up to the total.
Source: Statistics Canada, Atlantic Mining, KPMG analysis

The development and operation of the Moose River Consolidated Project would also generate significant government revenues in terms of taxes on workers' income, mining royalties, taxes on production and products, property taxes and the various permits and licenses required for mining activities. Total tax revenue for the municipal, provincial and federal governments would reach close to $320M. Nova Scotia government tax revenues would reach $153.0M of which nearly a quarter would be paid in the form of royalties ($26.5M over the duration of the project). In addition, the project expenditures would generate tax revenues of $132.4M for the federal government. These represent conservative estimates as, for example, corporate income taxes paid by suppliers cannot be estimated.

Table 23 - Municipal, Provincial and Federal Direct and Indirect Tax Revenues Stemming from Overall Expenses Related to the Moose River Project (Over the life of the project, M$)

	MUNICIPAL	PROVINCIAL	FEDERAL
Municipal Revenues (in $M)	**32.8**	**153.0**	**132.4**
Exploration	0.1	17.1	7.0
Construction	10.4	20.9	32.2
Operation (LOM)	22.3	115.0	93.2

Note: Due to rounding, the sum of items may not add up to the total.
Source: Statistics Canada, Atlantic Mining, KPMG analysis

This report did not explore dynamic economic impacts on the Nova Scotia economy. Dynamic impacts could stem from:

– Additional investments in Nova Scotia resulting from the increased activity stimulated by the project;

– Reinforcement of Nova Scotia's mining sector;

– Spillover effects resulting from the expertise of professional firms and contractors from other provinces;

– Improvement of living conditions in certain communities as salaries in the mining sector are significantly higher than regional average;

– Reduction of worker migration to other provinces.

Some of these benefits are explored in a separate report which documents the local economic benefits of the Cochrane Hill Mining project specifically.

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