

August 18, 2021

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Environment and Climate Change Canada

**RE: Touquoy Mine (Registry No. 82837) Request for Designation Under the *Impact Assessment Act* – Response to Request for Information**

## 1. Introduction

On July 29, 2021, Atlantic Mining NS Inc. (AMNS) received notification from the Impact Assessment Agency of Canada (IAAC) describing the receipt of a request to designate the proposed Touquoy Mine Expansion Project (the Project) under subsection 9(1) of the *Impact Assessment Act* (IAA). The notification from IAAC includes a request for additional information.

The Project is required to allow full recovery of the resources of the mine as delineated through the mine's ongoing operation. The resources of the mine are greater than was initially anticipated and the recovery of this ore involves the handling of greater amounts of waste rock and tailings. The proposed creation of an in-pit tailings disposal facility from the excavated open pit will enable the existing operations to continue as a provincially regulated facility. Designation of the Project under subsection 9(1) of the IAA is anticipated to result in a significant delay to the approvals process which would be disruptive to the Touquoy Project as it will require the suspension of mine operations, laying off employees, and the suspension of the economic benefits of the mine.

The Project is required and justified by the Touquoy Mine on its own. The capacity of the open pit tailings facility which is determined by the size of the excavation is sufficient to accommodate tailings from other mine projects for which AMNS has applied for approval and which are subject to assessment under the IAA. The Touquoy Project will proceed independently of whether these other projects are approved.

This letter describes why AMNS does not believe that the Project should be designated under the IAA including the following reasons:

- The Project is not designated under the *Physical Activities Regulation* of the IAA
- The Project will continue to be operated in accordance with the requirements of the *Fisheries Act*, the *Migratory Birds Convention Act*, *Species at Risk Act* *Metal and Diamond Mining Effluent Regulations*, *Explosives Act* and *Transportation of Dangerous Goods Act*
- To the extent that we are aware, there is no decision, exercise of a power or the performance of a duty or function by a federal authority that permits the carrying out of the Project which would result in potential adverse effects within federal jurisdiction that would not be appropriately managed by existing federal legislative mechanisms, the provincial environmental assessment process, and regulatory processes

- Even if there were the potential for a federal authority's performance of a duty or function, or provision of financial assistance that would enable the carrying out of the Project, in whole or in part, potential adverse environmental effects and related concerns will be appropriately managed by existing and effective legislative mechanisms such as review under the *Fisheries Act*, the *Migratory Birds Convention Act* and the provincial environmental assessment and regulatory processes.
- The Project is subject to review under the Nova Scotia *Environmental Assessment Regulations* which involves several provincial and federal government departments, Mi'kmaq communities and organizations, and a public comment period

Detailed responses to the request for additional information from IAAC are presented in Table 2.

## 2. Background

The Touquoy Gold Project is an open pit gold mine, currently operating under Industrial Approval (IA) # 2012-084244-08, issued under Division V of the *Activities Designation Regulations* of the *Environment Act*.

In December 2020, AMNS submitted an application to Nova Scotia Minister of Environment and Climate Change (NSECC) for an amendment to the existing IA (#2012-084244-08), to accommodate proposed modifications to the Approved Project. Upon review of these proposed modifications, the determined that a Class I EA under the *Environment Act* and *Environmental Assessment Regulations* would be required before the existing IA could be amended. The Class 1 Environmental Assessment Registration Document (EARD) was officially registered on July 18, 2021.

In addition to the Touquoy Gold Mine, AMNS is advancing three other gold development projects in Nova Scotia which are at various stages of planning and regulatory review. These are the Beaver Dam Mine project (Impact Assessment Registry 80111) and Fifteen Mile Stream Gold project (Impact Assessment Registry 80152), both of which are currently undergoing federal and provincial environmental assessment review, and the Cochrane Hill Gold project (Impact Assessment Registry 80159 - assessment and permitting to be undertaken in the future). The potential cumulative environmental effects of these projects are considered in their respective environmental assessment reports.

## 3. Project Benefits

The Touquoy Gold Mine has provided benefits at the federal, provincial and local levels as summarized in Table 1 (KPMG 2020, Attachment 1):

- \$186.2 million capital investment at Touquoy between 2015-2020
- Annual operating investment of \$52.7 million.
- Between 2015 and 2020, 400 direct and indirect jobs (FTEs) were created by Touquoy Operations – 302 in direct employment and 98 indirect
- AMNS tax contribution calculations include both direct and indirect payment and include payroll taxes, property taxes, corporate taxes, royalties and other taxes.



**Table 1 Summary of the Economic Impact (direct and indirect) on Canada and Nova Scotia from Construction and Operation Activities for the Touquoy Gold Mine (2015-2020) (KPMG 2020)**

In Millions of Dollars	Canada		Nova Scotia	
	Construction (Between 2015-2020)	Operation (Per Year)	Construction (Between 2015-2020)	Operation (Per Year)
Value Added (e.g., salaries, wages)	\$149.20 M	\$38.1 M	\$131.5 M	\$29.8 M
Government Revenues	\$11.4 M	\$4.5 M	\$7.4 M (Provincial) \$3.7 M (Municipal)	\$7.4 M (Provincial) \$3.7 M (Municipal)
<b>In Person-Year (FTE Equivalent)</b>				
Jobs Created	1,108	455	983	400

AMNS contributes to local community initiatives and projects through its Community Investment Policy, such as: - Camp Kidston; Braeside Seniors Home; Musquodoboit Food Bank; and the Musquodoboit Family Resource Centre.

## 4. Scope of the Project and Assessment

### 4.1. Scope of the Project

The scope of the Project under review is limited to modifications at the Touquoy Site as described in the EARD (Section 1.2; 1.4; 2.2), for the sole purpose of supporting ongoing, approved mining activities at that site. Since commencement of operation, the delineation and understanding of the ore body has improved, and enhancements have been made to the mine plan in an iterative fashion that supports efficient production. For example:

- Minerals have been more widely spread across the strata than original modelling indicated, which has increased the amount of waste rock produced.
- Materials originally classified as waste rock are now being considered as potential medium grade ore that will be processed for mineral extraction.
- The storage capacity of the WRSA was reduced due to the requirement for environmental controls, and the identification of a wetland area which has been avoided.

An early shutdown of operations at the Touquoy Mine before all reasonably available ore is extracted would represent an inefficient use of the extracted resource, and would result in a premature loss of project benefits for the Company, direct and indirect employment, and the Federal and Province governments in reduced revenues.

The Scope of the Project to be assessed is defined as specific modifications that are being proposed at the Mine Site for the Touquoy Gold Project. These modifications are:

- in-pit disposal of tailings from the Touquoy Mine
- expansion of the WRSA
- expansion of the Clay Borrow Area
- relocation of the Plant Access Road



The Scope of the Project also includes ancillary components associated with these modifications including improvements to water management infrastructure (e.g., ditching, drainage), relocation of a groundwater monitoring well (WRW-1A/B), and modifications to signage, gates, security shack and the Plant Site parking lot.

The scope of the Project to be assessed does not include current operation and infrastructure of the Approved Project, nor does it include the use of the Touquoy Mine Site for AMNS satellite mining operations. Use of the Touquoy Mine Site infrastructure for processing ore from Beaver Dam, Fifteen Mile Stream, and Cochrane Hill Gold Projects and disposal of associated tailings is assessed in the environmental assessment documents for those projects (Respective Impact Assessment Registries: 80111; 80152; 80159).

## 4.2. Scope of the Assessment

NSECC classified the undertaking as a Class I Project as defined in Schedule A of the *Environmental Assessment Regulations*. As a Class I Project, the EARD must conform with the requirements presented under Section 9(1A) of the *Environmental Assessment Regulations*. A concordance to these requirements is presented in Section 1.5.3 (Table 1.3) of the EARD. Under Section 12 of the *Environmental Assessment Regulations*, the Minister must consider the following information when making a decision:

- the location of the proposed undertaking and the nature and sensitivity of the surrounding area
- the size, scope and complexity of the proposed undertaking
- concerns expressed by the public and aboriginal people about the adverse effects or the environmental effects of the proposed undertaking
- steps taken by the proponent to address environmental concerns expressed by the public and aboriginal people
- whether environmental baseline information submitted under subclause 9(1A)(b)(x) for the undertaking is sufficient for predicting adverse effects or environmental effects related to the undertaking
- potential and known adverse effects or environmental effects of the proposed undertaking, including identifying any effects on species at risk, species of conservation concern and their habitats
- project schedules where applicable
- planned or existing land use in the area of the undertaking
- other undertakings in the area
- whether compliance with licenses, certificates, permits, approvals or other documents of authorization required by law will mitigate the environmental effects
- such other information as the Minister may require.

As a mining development, the assessment also conformed with the requirements for assessment described in the Guide to Preparing an EA Registration Document for Mining Developments in Nova Scotia (NSECC 2009).

<https://novascotia.ca/nse/ea/docs/EA.Guide-Proponents.pdf>

<https://novascotia.ca/nse/ea/docs/EA.Guide-RegistrationDocumentation-MiningDevelopments.pdf>

## 4.3. Review of the Environmental Assessment Registration Document

As confirmed with NSECC, the following provincial and federal departments will be given an opportunity to review the EARD; this review process is currently active:

### Provincial Reviewers

- Department of Environment and Climate Change
- Department of Lands and Forestry
- Department of Fisheries and Aquaculture
- Department of Agriculture



- Department of Energy and Mines
- Service Nova Scotia and Municipal Relations
- Office of L'nu Affairs

#### Federal Reviewers

- Department of Fisheries and Oceans
- Impact Assessment Agency of Canada
- Environment and Climate Change Canada
- Health Canada

The province is undertaking Indigenous consultation. A letter was sent to the 13 Mi'kmaq communities in Nova Scotia, inviting comments on the EARD. The EARD document is available for public review online, at two public viewing locations, as well as at the local offices of NSECC.

#### **4.4. Proponent Engagement and Indigenous Consultation**

The *Environmental Assessment Regulations* make specific reference to proponent engagement with the Mi'kmaq of Nova Scotia: 9(1A)(xiii to xv) "As part of an undertaking, proponent must identify: All steps taken to identify, list and address concerns of the public and aboriginal people about the adverse effects or the environmental effects of the proposed undertaking." These requirements are detailed in the document, "Proponent's Guide: The Role of Proponents in Crown Consultation with the Mi'kmaq of Nova Scotia" (NSECC 2012). Further to these requirements, AMNS met with the Nova Scotia Office of L'nu Affairs (NSOLA) and NSECC on April 7, 2021 as part of regulatory engagement for the EARD. Following that meeting, NSOLA provided direction to AMNS via letter (May 14, 2021, Attachment 2) outlining, "...the expectations that the Province has of Atlantic Gold (AMNS) regarding engagement with the Mi'kmaq." This letter describes the provincial Crown's duty to consult, expectations for the engagement phase (before formal Crown consultation is initiated) and describes the roles and responsibilities of the proponent during the Crown consultation phase.

The EARD (Section 4.1) provides a record of AMNS' pre-Consultation engagement including a record of communications and meetings and presents a summary of questions, issues, and comments received and how these have been addressed. An example of the letter sent out by AMNS to all 13 Mi'kmaq communities is attached (Attachment 3).

Given the industrial nature of the site, current mining operations and site access restrictions, it is unlikely that Mi'kmaq use of the Mine Site has changed since the MEKS was conducted in 2005. Similarly, changes to health or socioeconomic conditions are not anticipated as adverse changes to the environment are consistent with those originally assessed, and the mine life remains as originally considered. An issue related to Cultural and Heritage Resources (i.e., physical and cultural heritage and structures, sites or things of historical, archaeological, paleontological or architectural significance) was raised during the engagement process. Additional investigations and assessment in 2021, which included engagement with Kwilmu'kw Maw-klusuaqn Negotiation Office Archaeology Research Division (KMKNO-ARD) did not identify Cultural and Heritage Resources in the development area.

### **5. Federal Authority Performance of a Duty or Function, or Provision of Financial Assistance**

The Project will be 100% privately funded; there is no federal financial assistance. As provided for in more detail in the section below (Section 6, Table 2), the following potential federal involvement applies to the Project:

- No Authorization requirements have been identified under the Fisheries Act to date. A Request for Review was submitted to DFO on August 11, 2021 to determine if an Authorization under the Fisheries Act will apply to the Project.
- The project will not interfere with navigable waterways under the Canadian Navigable Waters Act.



- Operations will continue to be conducted in accordance with the requirements of the Fisheries Act, Migratory Birds Convention Act, Metal and Diamond Mining Effluent Regulations, Explosives Act and Transportation of Dangerous Goods Act.

The Project will not directly or indirectly impact Federal lands (refer to Section 6, Table 2 below and Attachment 4). Transboundary effects have not been identified.

The potential adverse effects within federal jurisdiction will be appropriately managed by existing legislative mechanisms and the provincial environmental assessment and regulatory processes, which provide adequate opportunity for federal involvement and oversight. These processes also provide mechanisms for consultation with Indigenous peoples, including addressing potential adverse effects and concerns raised by Indigenous peoples and members of the public.

Therefore, to the extent that we are aware, there is no decision, exercise of a power or the performance of a duty or function by a federal authority that permits the carrying out of the Project which would result in potential adverse effects within federal jurisdiction that would not be appropriately managed by existing federal legislative mechanisms, the provincial environmental assessment process, and regulatory processes

The decision of the Minister in the consideration of the Goldboro Gold Mine Project is instructive. (*Reference Number: 80340*):

Anaconda Mining Inc. proposed the construction, operation, decommissioning, and abandonment of a gold mine located in Goldboro, Nova Scotia, approximately 175 kilometres northeast of Halifax. The project would entail both open pit and underground mining phases and an onsite milling facility. Tailings would be stored in an onsite engineered tailing storage facility. The anticipated mine life was approximately nine years.

On December 12, 2019, the Minister determined that the Goldboro Gold Mine Project did not warrant designation under the Act. The Minister reached the decision for the following reasons:

- The comprehensive environmental assessment and regulatory review processes that currently apply to the project and related consultations with Indigenous Peoples provide a robust framework to address the potential adverse aforementioned effects and concerns raised by Indigenous Peoples and members of the public.
- The project must comply with relevant provisions of federal legislation, including the Metal and Diamond Mining Effluent Regulations, *Fisheries Act*, the *Canadian Environmental Protection Act, 1999*, the *Species at Risk Act* and the *Migratory Birds Convention Act, 1994*.

In its analysis report, the IAA noted that for potential adverse direct or incidental effects, Fisheries and Oceans Canada may issue an authorization under the *Fisheries Act* for impacts to fish and fish habitat.

The agency also expressed the view that potential impacts to the Aboriginal or Treaty rights of the Nova Scotia Mi'kmaq can be addressed through the *Fisheries Act* authorization process (if required) and the provincial environmental assessment (Nova Scotia).

## 6. Information Request Response

Table 2 provides responses to the specific information requests included in the July 29, 2021 letter from IAA.



**Table 2 Disposition of Information Requests from the Impact Assessment Agency**

Information Request	Response	EARD Reference
<p>In accordance with subsection 9(3) of IAA, and to inform its advice to the Minister, the Agency is requesting that you provide any available information that is in addition to your provincial environmental assessment registration document, regarding potential adverse effects to:</p>	<p>Where available information has been included in the provincial EARD document, Section and Appendix / Attachment References are provided. All Section and other references to the EARD are made in addition to the general Chapters 1-5, which all include information relevant to the assessment of the valued components referenced in the information request. The full registration including EARD, appendices, and supporting documents can be accessed via FTP:</p> <p><b>Login Information</b>  <b>Browser link:</b> <a href="https://projsftp.stantec.com">https://projsftp.stantec.com</a>  <b>FTP Client Hostname:</b> projsftp.stantec.com Port: 22 (can be used within an FTP client to view and transfer files and folder; e.g., FileZilla)  <b>Login name:</b> ATLNGOLD1349  <b>Password:</b> 7415967  <b>Expiry Date:</b> 7/5/2022  <b>Owner:</b> <a href="mailto:SARA.WALLACE@STANTEC.COM">SARA.WALLACE@STANTEC.COM</a></p>	
<p>Fish and fish habitat, migratory birds and species at risk</p>	<p>Fish and Fish Habitat: Available information is provided in the EARD and supporting documentation. In addition, AMNS submitted a Request for Review to Fisheries and Oceans Canada on August 11, 2021. The Request for Review is based on the information presented in the EARD.</p> <p>Migratory Birds: Available information is provided in the EARD and supporting documentation.</p> <p>Species at Risk: Available information is provided in the EARD and supporting documentation in each relevant valued component assessment.</p>	<p>8.0 Fish and Fish Habitat Appendix D</p> <p>9.0 Terrestrial Environment (including vegetation, wetlands, wildlife, avifauna)</p> <p>Appendix E</p>
<p>Adverse changes to the environment that would occur on federal lands and lands outside Nova Scotia or Canada</p>	<p>No transboundary environmental effects have been identified. No environmental effects from the Project are expected to cause changes on lands outside of Nova Scotia or Canada.</p> <p>Assessment boundaries have been established for each valued component. The Project Development Area as defined considers direct physical disturbance associated with construction, operation and decommissioning of the Project. The Local Assessment Area as defined considers the area within which Project-related environmental effects can be predicted or measured for assessment. Regional Assessment Areas are defined for purposes of context in significance determinations. None of these areas extends beyond regional watershed boundaries.</p> <p>No adverse environmental effects are anticipated to federal lands as a result of the Project. The attached Figure 1 (Attachment 4) provides information about land ownership associated with the development areas of the modifications. The nearest federal crown land is located 17.5 km northwest of the Touquoy Mine (Upper Musquodoboit Post Office).</p>	<p>2.1 Project Location and Site Layout</p> <p>5.2.3 Spatial and Temporal Boundaries</p> <p>6.2.2; 7.2.2; 8.2.2; 9.2.2; 10.2.2 Spatial Boundaries (defined for each valued component)</p>





**Table 2 Disposition of Information Requests from the Impact Assessment Agency**

Information Request	Response	EARD Reference
<p>Adverse impacts, resulting from any change to the environment, on Indigenous peoples (e.g., changes to the environment impacting physical and cultural heritage, current use of lands and resources for traditional purposes, and structures, sites or things of historical, archaeological, paleontological or architectural significance) or changes to their health, social or economic conditions.</p>	<p>AMNS engaged representatives of the Nova Scotia office of L'nu Affairs (NSOLA) and NSECC to present plans for Indigenous engagement on the proposed modifications and receive feedback on the requirements for assessment (refer to Section 4.4 above and Attachment 2). The EARD (Section 4.1) provides a record of AMNS' pre-Consultation engagement including a record of communications and meetings and presents a summary of questions, issues, and comments received and how these have been addressed. An example of the letter sent out by AMNS to all 13 Mi'kmaq communities is attached (Attachment 3). As part of the provincial review of the EARD, all 13 Mi'kmaq were sent a letter by NSECC, inviting comments on the EARD.</p> <p>The Project is located within the boundaries of the previously assessed Touquoy Mine Site, with the exception of the Clay Borrow Area which is on directly adjacent lands. The Mi'kmaq Knowledge Study (MEKS) carried out for the approved project included, "...the Musquodoboit Valley and Shubenacadie region, located in the Mi'kmaq district of Sipekne'katik." Given the industrial nature of the site, current mining operations and site access restrictions, it is unlikely that Mi'kmaq use of the Mine Site has changed since the MEKS was conducted in 2005. Similarly, changes to health or socioeconomic conditions are not anticipated as adverse changes to the environment are consistent with those originally assessed, and the mine life remains as originally considered.</p> <p>A potential interaction between the Project and Indigenous peoples was identified regarding Cultural and Heritage Resources (i.e., physical and cultural heritage and structures, sites or things of historical, archaeological, paleontological or architectural significance) – specifically with the potential for archaeological resources within the development area for the WRSA and the Clay Borrow Area. On 23 April 2021, Cultural Resource Management Group Ltd. (CRM Group) contacted KMKNO-ARD requesting information regarding traditional or historic Mi'kmaq use of the study area. On 30 April 2021, KMKNO-ARD provided information that was taken into consideration when preparing the archaeological assessment. Field investigations were undertaken in 2021 and did not identify archaeological resources in these areas.</p> <p>Given the conclusions of previous Archaeological Resource Impact Assessment at the Touquoy Mine Site which determined that the site has low archaeological potential, combined with the results of 2021 field testing, and the application of contingency measures in case of a chance find, the residual effects of the Project on cultural and heritage resources is predicted to be not significant</p>	<p>Section 4.1 Indigenous Engagement</p> <p>Section 5.2 Scope of the Assessment</p> <p>Section 10 Cultural and Heritage Resources</p> <p>Appendix B Engagement</p> <p>Appendix C Technical Reports - Socioeconomic</p>





**Table 2 Disposition of Information Requests from the Impact Assessment Agency**

Information Request	Response	EARD Reference
<p>Please also include any additional information available regarding adverse effects (changes to the environment or to health, social or economic conditions) that are directly linked or necessarily incidental to a federal authority's exercise of a power, performance of a duty or function, or provision of financial assistance, that would enable the carrying out of the Project, in whole or in part.</p>	<p>The Project will be 100% privately funded; there is no federal financial assistance.</p> <p>No Authorization requirements have been identified under the <i>Fisheries Act</i> to date. A Request for Review was submitted to DFO on August 11, 2021 regarding potential projects effects related to Watercourse #4. If it is determined that a harmful alteration, destruction or disruption of fish habitat would occur, and Authorization under Section 34.4(2) or 35(2) of the Fisheries Act would be required. In this case, if after avoidance and mitigation has been considered, it is predicted there will be adverse effects to fish habitat, there would be a requirement to offset them.</p> <p>Potential adverse effects related to fish and fish habitat are assessed in the EARD, including consideration of federal regulations.</p> <p>The Project will have to comply with <i>Metal and Diamond Mining Effluent Regulations</i> but there are no permits or approvals required under these regulations.</p> <p>The Project will continue to comply with the prohibitions and requirements of the Fisheries Act, the <i>Metal and Diamond Mining Effluent Regulations</i>, the <i>Migratory Birds Convention Act</i> and the <i>Species at Risk Act</i>. AMNS operations will continue to be conducted in accordance with the requirements of the <i>Explosives Act</i> and <i>Transportation of Dangerous Goods Act</i>. The project is not anticipated to result in effect or interfere with navigable waterways under the <i>Canadian Navigable Waters Act</i>.</p> <p>No other effects directly linked or necessarily incidental to a federal authority's exercise of a power, performance of a duty or function, or provision of financial assistance, have been identified related to the Project.</p>	<p>Section 1.6 Funding</p> <p>Section 1.5.1 Legislative Framework</p> <p>Section 8 Fish and Fish Habitat Appendix D</p> <p>Section 9 Terrestrial Environment Appendix E</p>



## 7. Conclusion

This letter provides the rationale for AMNS' position that the Project does not warrant designation under the IAA including adherence to federal Acts and Regulations that apply to Project, and appropriate management of potential environmental effects. The Nova Scotia Environmental Assessment Act, its requirements and review process, and the procedures laid out by the Office of L'nu Affairs provide a comprehensive framework to address potential effects.

AMNS is committed to the regulatory review process and is prepared to work with NSECC and other reviewers, including involved federal departments, throughout the review period. AMNS is also committed to fulfilling the requirements as set out by the Office of L'nu Affaires during the consultation period.

We welcome the opportunity to provide additional information and are available at any time to discuss the information provided herein.

Sincerely,

<Original signed by>

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Atlantic Mining NS Inc  
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- Att: Attachment 1 Economic Impact Assessment  
Attachment 2 Office of L'nu Affairs Letter to AMNS  
Attachment 3 Example Letter Sent to Communities  
Attachment 4 Land Ownership Figure
- c.c. Bridget Tutty (NSECC; Environmental Assessment Officer)  
Laird Brownlie (AMNS; Head of External Affairs and Business Continuity)  
Meryl Jones (St Barbara President Americas)  
Kathryn MacCarthy (Impact Assessment Agency of Canada)



**ATTACHMENT 1**  
**Economic Impact Assessment**





**ATLANTIC GOLD CORPORATION**

# Economic Impact Assessment of the Touquoy Gold Mine

Final Report

June 2020

[kpmg.ca](http://kpmg.ca)





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# Disclaimer

This Report has been prepared by KPMG LLP (“KPMG”) for Atlantic Gold Corporation (“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 Gold Corporation has retained the services of KPMG to evaluate the economic benefits stemming from its Touquoy Mine in Nova Scotia and, more precisely, from its construction and operation activities. The Touquoy Mine is a gold mine with a projected production over the life of mine (LOM) of 261,912<sup>1</sup> ounces. The construction of the mine started in 2015 and continued until 2020. Mine operations started in 2019 and the mine is expected to stay in operation for five (5) years.

Atlantic Gold spent \$186.3M in capital investment (CAPEX) over the 2015-2020 period and estimates its average annual operating costs (OPEX) at \$52.7M. The data used for this report comes from the most recent NI 43-101 Technical Report (March 2019) and information provided by Atlantic Gold. It should also be noted that capital expenditures were based on the actual amount spent by Atlantic Gold on the construction of the mine.

KPMG calculated the direct and indirect economic impacts of 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 Canada and Nova Scotia stemming from construction and forecasted operating spending of Atlantic Gold for the Touquoy Mine.

The construction phase generated \$131.6M in value added for Nova Scotia economy, supported 983 jobs and generated \$7.4M and \$3.7M in provincial and municipal government revenues, respectively over the 5 year-period (2015-2020). Operating activities are expected to generate \$29.8M in value added annually, support 400 jobs in the province and provide \$XXM and \$1.3M in provincial and municipal government revenues.

Impacts on the Canadian economy as a whole are expected to be higher as some of the subcontractors working on site as well as some suppliers, would come from other Canadian provinces. For construction and operation activities, the impacts on the Canadian economy would be 13% and 28%, respectively, higher than provincial impacts (based on value added).

**Table 1: Summary of the Economic Impact (direct and indirect) on Canada and Nova Scotia Stemming from Construction and Operation Activities for the Touquoy Gold Mine**  
2015-2026, in millions of dollars

In millions of dollars	Canada		Nova Scotia	
	Construction (between 2015-2020)	Operation (Per year)	Construction (between 2015-2020)	Operation (Per year)
Value added	149.2	38.1	131.6	29.8
Government revenues	11.4 <i>(federal only)</i>	4.5 <i>(federal only)</i>	7.4	4.9
			3.7 <i>(municipal only)</i>	1.3 <i>(municipal only)</i>
<b>In person-year (FTE equivalent)</b>				
Jobs created	1,108	455	983	400

<sup>1</sup> Refers to the recovered quantity considering an ore grade ranging from 1.11 to 1.51 g/t Au and an average recovery rate of 90% (based on information provided by Atlantic Gold to KPMG).

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.

# 1. Introduction

## 1.1 Mandate overview

Atlantic Gold has retained the services of KPMG to evaluate the economic benefits stemming from the development of the **Touquoy Mine** and, more precisely, from construction and operating activities related to the project.

Atlantic Gold is currently focused on the development of its portfolio of advanced gold development properties located in Nova Scotia. Atlantic Gold currently holds four gold development projects in the province (Touquoy, Beaver Dam, Cochrane Hill and Fifteen Mile Stream). This report focuses on the Touquoy project only.

This evaluation was carried out based on the information available as of January 2020. For operation expenditure, the information primarily came from Atlantic Gold and the technical report carried out by Ausenco and published in March 2019<sup>2</sup>. Additional data and information, including construction expenditure, were provided by Atlantic Gold where more detail was required for the purposes of the analysis.

In 2014, KPMG evaluated the economic benefits stemming from Atlantic Gold's three mining projects (Touquoy, Beaver Dam and Cochrane Hill) in Nova Scotia and more precisely from all construction and operating activities. This evaluation was carried out with the information available as of November 2014. The financial data and the other information relating to the projects were in preliminary stages when the analysis was undertaken. The information primarily came from the Preliminary Economic Assessment ("PEA") carried-out by Moose Mountain technical services and published in October 2014.

### 1.1.1 Objective

The objective of the mandate is to evaluate the economic contribution of the investments and overall activities related to the Touquoy Mine. The economic impact is based on the total capital expenditures (CAPEX) and the operational expenditures (OPEX) over the life of mine (LOM). The economic impacts are measured in terms of:

- jobs directly sustained by Atlantic Gold in Nova Scotia and Canada;
- jobs indirectly sustained in Nova Scotia and Canada by all of Atlantic Gold'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 Gold 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:

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<sup>2</sup> Moose River Consolidated Project, Nova Scotia, Canada, NI 43-101 Technical Report on Moose River Consolidated (Report Effective Date: March, 2019)

- 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 Gold and its general contractors). These are the salaries paid to Atlantic Gold'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 (profits, amortization).

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.

This study does not include an assessment of the dynamic impacts of Touquoy Mine or its investments. 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.

This report does not include the benefits stemming from exploration activities. Spending and economic impacts related to exploration activities are covered in the full report that presents Atlantic Gold's overall activities and economic impacts in Nova Scotia.

### 1.3 Basic Assumptions Underlying This Evaluation

The evaluation of the economic benefits stemming from the Touquoy Mine is based on numerous assumptions, the most important ones being as follows:

- For the construction phase, the analysis is based on actual amount spent by Atlantic Gold, between 2015 and 2020. Expenses were converted to 2019 dollars by using a construction price index published by Statistics Canada. These figure were provided by Atlantic Gold to KPMG;
- 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 Gold. The impacts of Atlantic Gold's operating expense 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;
- Overall, the analysis is based on the project cost distribution provided by Atlantic Gold. 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 is, as of January 2020, 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<sup>3</sup>. 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,

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<sup>3</sup> 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 Gold. These latter figures were provided by Atlantic Gold.

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 the introduction, this document is divided into three main sections:

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

## 2. Project Scope

This second section presents the main characteristics of the Touquoy Gold Mine, including an overview of the mine’s production schedule and the overall spending throughout the life of the mine (LOM).

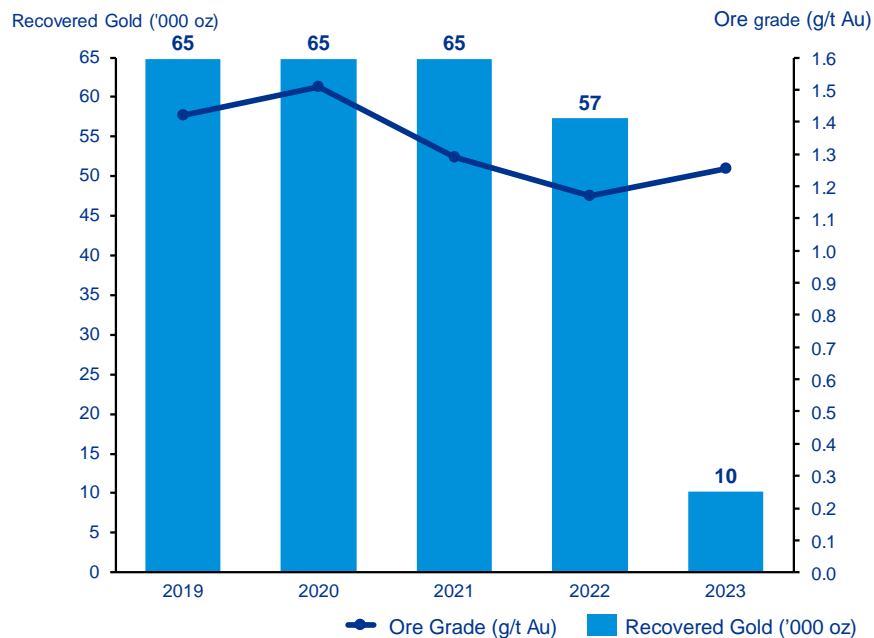
### 2.1 Project Overview

The Touquoy property is located 60 km northeast of the Provincial capital, Halifax, in Halifax county. The gold mine was commissioned and reached commercial operation in 2019. The mine area includes the open pit area, the mill site, the waste rock storage and the tailing management facilities.

Construction work started in 2015 and operating activities began in 2019. It is expected that the mine will be in operation for five (5) years (from 2019 to 2023) and will produce a total of 261,912 ounces of gold over the LOM at grade ranging from 1.11 to 1.51 grams per tonne and an average recovery grade of 90%.

A total of 10,500 kilo tonne (kt) of ore will be mined during the life of mine at Touquoy. Operations at the site will include mining, crushing, concentration and operation of a waste rock storage facility, low grade ore stockpiles and tailings management facility.

**Figure 1: Touquoy LOM Production Schedule**  
2019-2023, gold produced in '000 ounces and ore grade (g/t Au)



Source: Atlantic Gold, 2019. KPMG analysis



## 2.2 Spending and Investment Needs throughout LOM

The construction and commissioning of a mine such as Touquoy is subject to important investments and spending. **Atlantic Gold plans to spend \$449.6 million in Nova Scotia over the 2015 to 2023 period.**

**Table 2: Distribution of Spending: Touquoy Gold Mine**  
*2015-2023, over the LOM, in (2019)M\$*

Spending category	In M\$	As a % of the total
1. Construction (2015-2020)	186.3	41.4%
2. Operation (2019-2023)	246.0	54.7%
3. Sustaining capital (2019-2023)	17.3	3.8%
<b>Total (2015-2023)</b>	<b>449.6</b>	<b>100.0%</b>

Source: Atlantic Gold, 2018. KPMG analysis

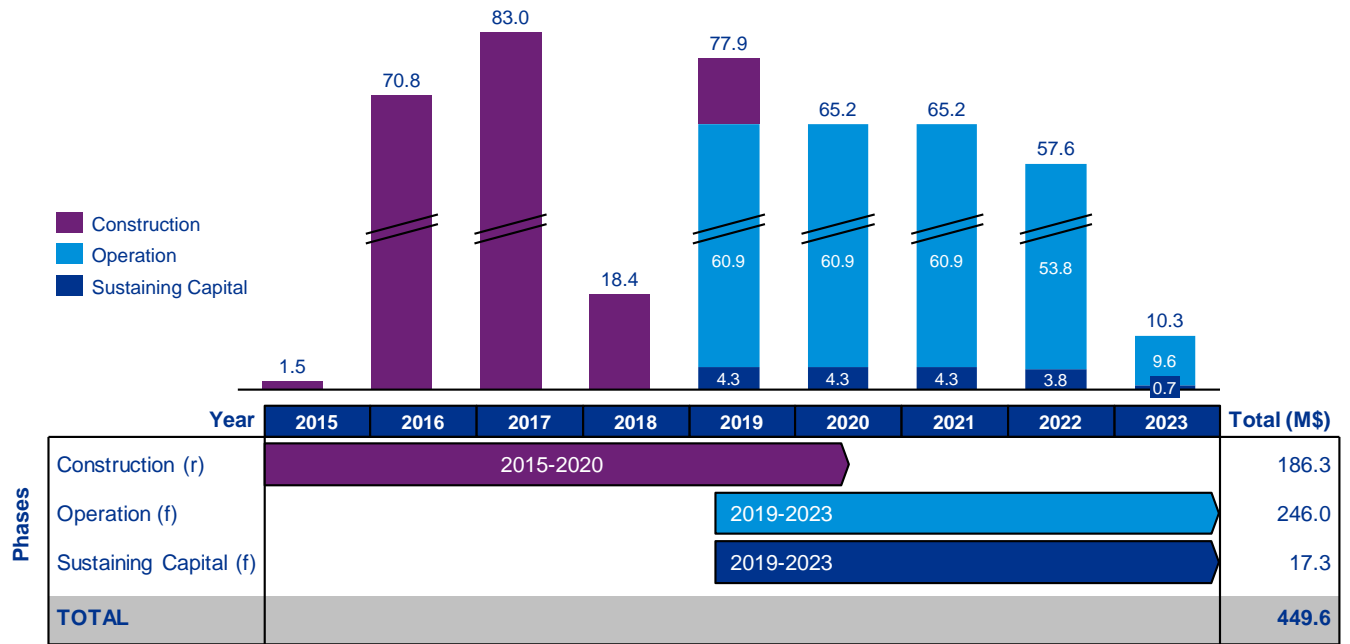
The **construction phase** (2015-2020) includes the expenditure required to start up a business to a standard where it is ready for initial production. This phase started with mine site development activities including forest clearing, soil preparation and road constructions. Following this step, Atlantic Gold built site's infrastructure such as of the electrical infrastructure, water and sewage treatment plants. Investments at this stage also include permanent equipment, materials and labour associated with the physical construction of the process facility, infrastructure, utilities, buildings, etc. Contractor's costs are also considered.

The **operation phase** (2019-2023) of the mine began in 2019 and will extend for five (5) years, according to documents provided by Atlantic Gold to KPMG. Life of mine operation costs were estimated at \$21.95/t milled for Touquoy<sup>4</sup>. They include material costs and payroll for all mine activities, including, for example, drilling, extraction, conveying and transportation of ore. The operating phase also involves the costs of the ore processing plant (e.g. chemicals, electricity, consumables, fuel), tailings management and water management (e.g. environmental services, waste management residues) and the general administration of operations (e.g. management of site administration, human resources, technical services, electronic equipment, office supplies). In addition, all capital investments required to maintain infrastructure or spending related to the preservation of the environment (i.e. wetland restoration) occurring during the operation phase will be considered as operation costs.

Figure 2 illustrates the schedule of the spending throughout the LOM.

<sup>4</sup> Average annual cost include stockpile rehandle and processing.

**Figure 2: Total Spending by Atlantic Gold on the Touquoy Mining Project during LOM**  
2015-2023, in \$M



Source: Atlantic Gold, 2019. KPMG analysis

Note: The distribution of annual operation and sustaining capital expenditures were estimated by weighting the total cost of operation over the LOM by the quantity of ore mined annually.

r = real values

f= forecasted values

# 3. Economic Benefits Stemming from Construction Activities

This third section presents the direct and indirect economic benefits of the investment expenditures of the Touquoy Project. The nature and scope of the expenditures are first analyzed, then the resulting economic benefits for the province of Nova Scotia and for Canada are presented.

## 3.1 Construction Activities

### 3.1.1 Broad Spending Components

According to the data provided by Atlantic Gold, total costs for the construction of the Touquoy mine are estimated at \$186.3M. Infrastructure on site includes crushing facilities, fine ore stockpile and reclaim, concentrator facilities, maintenance facilities, fuel storage, office infrastructure and site haul roads.

Overall, these costs consist of four (4) broad components:

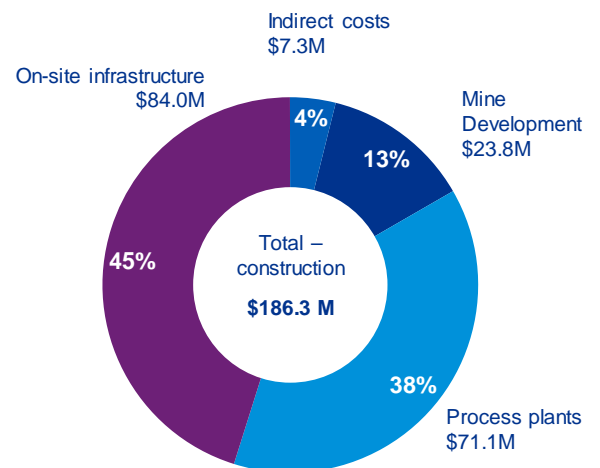
- On-site infrastructure such as laboratory and sewage treatment plant (45% of the total spending);
- Construction and commissioning of the processing plant (38% of the total spending);
- Construction of the mine including site preparation and pit water (13% of total spending);

Are also included:

- Indirect costs which include all costs associated with implementation of the plant and incurred by the owner, engineer or consultants in the design, procurement, construction, and commissioning of the project (4% of the total spending);

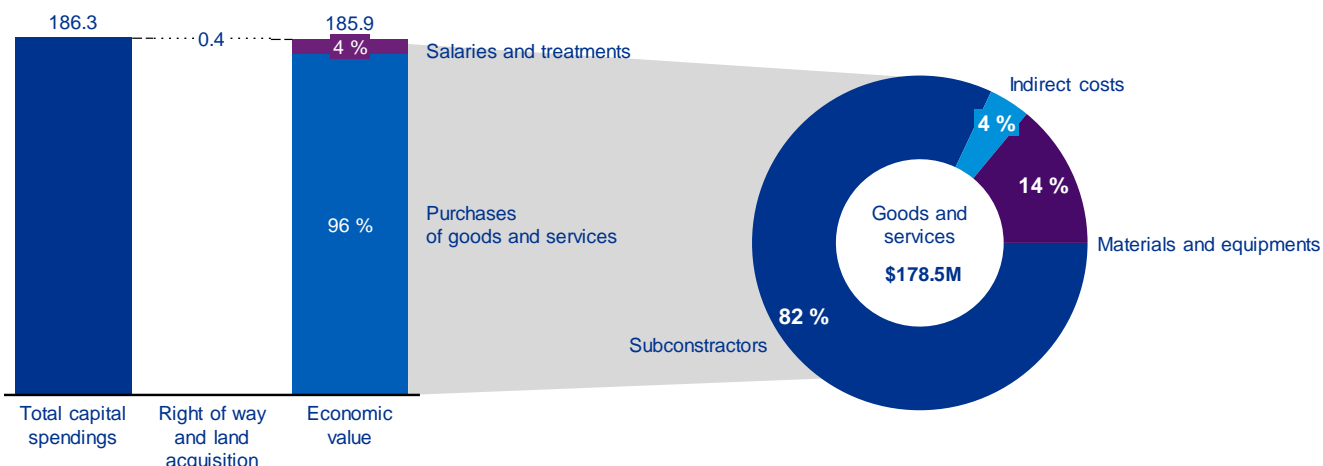
The construction phase is characterized by a large volume of purchases of goods and services, notably to subcontractors (82%) as well as materials and specialized equipment (14%). The following figure shows the breakdown by type of expenditure.

**Figure 3: Breakdown of Touquoy Gold Mine Construction Spending by Broad Component 2015-2020, construction phase**



Note : Due to rounding, the sum of items may not add up to the total .  
Source :Data from Atlantic Gold, KPMG analysis.

**Figure 4: Distribution of Touquoy Gold Mine Construction Expenses by Category of Goods and Services**  
2015-2020, in millions of dollars and breakdown in %



Source: Data from Atlantic Gold, KPMG analysis.  
Note: For the purposes of this economic impact analysis, all cost related to fees and permits has been removed from the input's simulation as they are considered to generate no economic value.

### 3.2 Economic Impacts of Construction Activities

The economic spinoffs of the investments stemming from the construction of the Touquoy mine are estimated at \$131.6 million in Nova Scotia. This total corresponds to the value added of the project in Nova Scotia, or, in other words, the true wealth creation effect on the Nova Scotia economy. Pre-tax wages represent 74% of this added value, or \$97.7M. The investment activities supported 983 jobs (in person-years) over the entire duration of the work. These consist of 744 direct jobs and 239 indirect jobs among Nova Scotia suppliers.

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 the investments that took place between 2015 and 2020.

The impacts linked to the activities of the subcontractors were considered to be part of the direct impacts of the construction activities.

**Table 3 : Economic Impact on Nova Scotia Stemming from the Construction – Touquoy Mine**  
2015-2020, in millions of dollars and in person-years

Nova Scotia	Direct Effects <sup>1</sup>	Indirect Effects	Total
<b>In millions of dollars</b>			
Total value added, of which	104.1	27.5	131.6
Salaries and wages before income taxes	79.0	18.6	97.7
Other gross income before taxes	25.1	8.9	33.9
<b>In person-year (FTE equivalent)</b>			
Jobs in person-years	744	239	983

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 to be part of the direct impacts of construction (this is consistent with best practice).  
Source: Simulations of Statistics Canada based on data from Atlantic Gold, KPMG analysis

For Canada as a whole, the impact arising from the construction activities of the Touquoy Mine is estimated at \$149.2M in value added and 1,108 jobs supported (including Atlantic Gold suppliers). These are full-time equivalent jobs over the duration of the construction phase (2015 to 2020).

**Table 4 : Economic Impact on Canada Stemming from the Construction – Touquoy Mine**  
2015-2020, in millions of dollars and in person-years

Canada	Direct Effects <sup>1</sup>	Indirect Effects	Total
<b>In millions of dollars</b>			
Total value added, of which	104.1	45.1	149.2
Salaries and wages before income taxes	79.0	29.8	108.8
Other gross income before taxes	25.1	15.3	40.4
<b>In person-year (FTE equivalent)</b>			
Jobs in person-years	744	363	1,108

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 to be part of the direct impacts of construction (this is consistent with best practice).  
Source: Simulations of Statistics Canada based on data from Atlantic Gold, KPMG analysis

The development of the mine also had a significant impact on government revenues, whether through taxes on personal incomes, taxes on products and taxes on production. Total expected tax revenues stemming from the construction phase amount to \$7.4M for the Nova Scotia Government, \$11.4M for the Federal Government and \$3.7M for municipal governments.

**Table 5: Direct and Indirect Municipal, Provincial (Nova Scotia) and Federal Government Revenues Stemming from the Construction – Touquoy Mine**  
2015-2020, in millions of dollars

Detail tax revenues	Personal income tax <sup>1</sup>	Taxes on products <sup>2</sup>	Taxes on production <sup>2</sup>	Total
Municipal	--	0.0	3.7	3.7
Nova Scotia (Provincial)	6.1	0.7	0.6	7.4
Canada (Federal)	10.8	0.6	0.0	11.4

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 Gold, KPMG analysis

# 4. Economic Benefits Stemming from Operations

Following an analysis of the nature and scope of operating expenditures, this last section presents the economic benefits stemming from mining and processing activities at Touquoy, for both Nova Scotia and Canada.

## 4.1 Touquoy Operating Expenditures

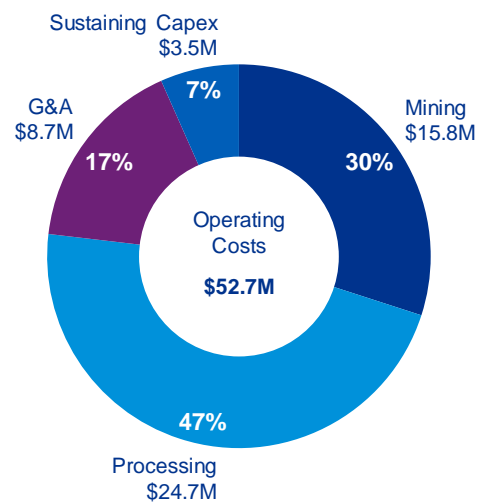
### 4.1.1 Broad Spending Components

Operating expenditures represent an important part of Touquoy’s contribution to the economy. Over its lifetime – which is assumed to be of five (5) years – OPEX are estimated at \$263.5M, which is equivalent to an average yearly spending of \$52.7M.

The breakdown of the yearly average operating costs for the Touquoy Gold Mine mine is illustrated in figure 5 and falls into four (4) broad components:

- Processing costs such as labour, chemicals, electricity, fuel, etc. (47% of total spending);
- Mining costs including labor, materials, specialized equipment, etc. (30% of total spending);
- General and administration (electronic equipment, office supplies, etc.) (17% of total spending).
- Sustaining Capex including materials and spare parts, owner costs and environmental services (7% of total spending).

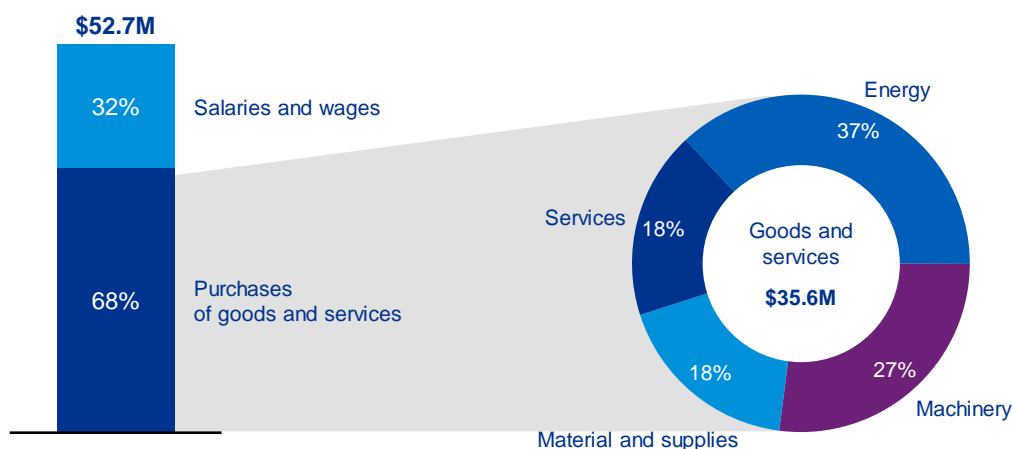
**Figure 5: Breakdown of Average Annual Mine Operating Expenditures by Broad Component**  
*In millions and %*



Source : Atlantic Gold, KPMG analysis.

As illustrated in Figure 5, for the purposes of the economic impact analysis, sustaining CAPEX has been included in operating expenditures in order to reflect their specific nature. Sustaining capital costs include the costs for raising the tailings dam (as required over the life of the mine), plant and infrastructure spending and reclamation costs.

**Table 6: Distribution of Mine Operating Expenses by Category of Goods and Services**



Source : Atlantic Gold, KPMG analysis.

## 4.2 Economic Benefits of Operations

Operating expenses would contribute to increase value added in Nova Scotia by \$29.8M per year on average, or \$149.0M over the entire operating phase (2019-2023). Pre-tax wages would represent 84% of this added value, or \$25.0M per year. The planned activities would support the equivalent of 400 full-time equivalent workers per year. These jobs would consist of 302 direct jobs, plus 98 indirect jobs with Atlantic Gold's leading suppliers. The following table shows the distribution of direct and indirect benefits to value added and employment.

**Table 7: Economic Impacts in Nova Scotia Stemming from Operations – Touquoy Mine**

*Typical year, in millions of dollars and in person-years*

Nova Scotia Province	Direct Effects	Indirect Effects	Total
<b>In millions of dollars</b>			
Total value added, of which	17.8	11.9	29.8
Salaries and wages before income taxes	17.1	7.8	25.0
Other gross income before taxes	0.7	4.1	4.8
<b>In person-year (FTE equivalent)</b>			
Jobs in person-years	302	98	400

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 Gold, KPMG analysis



The following table presents the economic benefits arising across Canada from the projected OPEX. Average yearly value added for Canada amounts to \$38.1M and operations would support 455 jobs across the country.

**Table 8: Economic Impacts on Canada Stemming from Operations – Touquoy Mine**

*Typical year, in millions of dollars and in person-years*

Canada	Direct Effects	Indirect Effects	Total
<b>In millions of dollars</b>			
Total value added, of which	17.8	20.3	38.1
Salaries and wages before income taxes	17.1	12.9	30.0
Other gross income before taxes	0.7	7.4	8.1
<b>In person-year (FTE equivalent)</b>			
Jobs in person-years	302	153	455

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 Gold, KPMG analysis

The operation of the mine 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<sup>5</sup> would reach nearly \$10.7M a year, including property taxes of \$289,504 per year. These represent conservative estimates as, for example, corporate income taxes paid by suppliers cannot be estimated.

**Table 9: Municipal, Provincial and Federal Direct and Indirect Tax Revenues Stemming from Operations – Touquoy Mine**

*Typical year, in millions of dollars*

Detail tax revenues	Royalties <sup>1</sup>	Personal income tax <sup>2</sup>	Taxes on products <sup>3</sup>	Taxes on production <sup>3</sup>	Total <sup>4</sup>
Municipal	--	--	0.0	1.3	1.3
Nova Scotia (provincial)	1.0	2.8	0.9	0.2	4.9
Canada (federal)	--	3.4	1.1	0.0	4.5

Note: Due to rounding, the sum of items may not add up to the total.

1. Direct income taxes and royalties are estimated by Atlantic Gold; figures exclude corporate income taxes paid by Atlantic Gold suppliers.

2. Personal income taxes have been estimates based on 2016 effective tax rate in Nova Scotia and Canada (from Statistics Canada).

3. Direct and indirect taxes, based on Statistics Canada Input-Output model. Property taxes paid by Atlantic Gold for FY 2018-2019 has been added.

4. These figures do not take into account corporate taxes that could be paid by Atlantic Gold.

Source: Statistics Canada, Atlantic Gold, KPMG analysis

<sup>5</sup> This figure includes property taxes paid to the municipality of Halifax of \$289,504.49 in 2018/2019.



## 5. Conclusion

The Touquoy Mine that Atlantic Gold is currently operating in Nova Scotia will benefit the province's economy throughout the life of the mine. The project under review represents more than \$449.6 million of spending over the 2015-2023 period, including \$186.3M in capital expenditures and \$263.3M in operating expenditures (\$52.7M in yearly OPEX).

As previously shown, the initial investment leading to the construction of the mine generated \$131.6M in value added in Nova Scotia, supported 983 full-time equivalent jobs and generated \$22.5M in revenues for the three levels of government, while the operating and recurrent spending would generate \$29.8M in value added annually, support 400 jobs and provide \$4.9M per year in government revenues.

Impacts on the Canadian economy as a whole would be higher as some of the subcontractors working on site would come from other Canadian provinces. For construction and operation activities, the impacts on the Canadian economy would be 13% and 28%, respectively, higher than provincial impacts (based on value added).

**Table 13: Summary of the Economic Impact (direct and indirect) on Canada and Nova Scotia Stemming from Construction and Operation Activities for the Touquoy Mine**  
2015-2026, in millions of dollars

	Canada		Nova Scotia	
In millions of dollars	Construction (between 2015-2020)	Operation (Per year)	Construction (between 2015-2020)	Operation (Per year)
Value added	149.2	38.1	131.6	29.8
Government revenues	11.4 <i>(federal only)</i>	4.5 <i>(federal only)</i>	7.4 <i>(provincial only)</i> 3.7 <i>(municipal only)</i>	4.9 <i>(provincial only)</i> 1.3 <i>(municipal only)</i>
<b>In person-year (FTE equivalent)</b>				
Jobs created	1,108	455	983	400

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.



[kpmg.ca](http://kpmg.ca)



This Report has been prepared by KPMG LLP ("KPMG") for Atlantic Gold Corporation ("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.

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# **ATTACHMENT 2**

**Office of L'nu Affairs Letter to AMNS**



May 14, 2021.

Mr. James Millard  
409 Billybell Way, Mooseland,  
Middle Musquodoboit, NS B0N 1X0

Via Email: [James.Millard@atlanticgold.ca](mailto:James.Millard@atlanticgold.ca)

Dear Mr. Millard,

**Re: Proponent Engagement and Aboriginal Consultation on the Touquoy Mine Project – EARD for Proposed Project Changes.**

I am writing on behalf of the Province of Nova Scotia (the Province) to provide information regarding engagement with the Mi'kmaq of Nova Scotia (the Mi'kmaq) on the proposed Touquoy Mine Project – EARD for Proposed Project Changes (the project).

This letter outlines the expectations that the Province has of Atlantic Gold (AMNS) regarding engagement with the Mi'kmaq. Proponent engagement can occur during any stage of the project and can be related to any aspect, authorization, or component of the project. This project is currently in the **engagement phase**, but formal Crown consultation will be triggered once the Environmental Assessment Registration Document (EARD) is registered with Nova Scotia Environment & Climate Change (ECC).

**Background**

The Crown has a duty to consult Aboriginal peoples in Canada when contemplating decisions that have the potential to adversely impact asserted Aboriginal and/or Treaty rights. While proponents and third parties do not have a legal duty to consult, proponents are encouraged to engage with the Mi'kmaq prior to the initiation of formal consultation, during formal consultation, and after the formal consultation process, throughout the life-cycle of the project. During the formal consultation process, the Province may delegate procedural aspects of the consultation to the proponent. Further information is also available in the *Proponents' Guide to Engaging the Mi'kmaq of Nova Scotia*, which can be found here: <http://www.gov.ns.ca/abor/docs/Proponants-Guide.pdf>

**Mi'kmaq Representatives**

In Nova Scotia, Section 35 rights-bearing groups are recognized as the 13 Mi'kmaq communities. Given the location and scope of this project, AMNS should engage with the following Mi'kmaq groups. Contact information for these groups is attached to this letter.

- Assembly of Nova Scotia Mi'kmaq Chiefs
- Millbrook First Nation
- Sipekne'katik First Nation.

**Proponent Engagement during Engagement Phase**

Meaningful and timely engagement with the Mi'kmaq is key to promoting collaboration and strong relationships. Proponent engagement can occur during any stage of the project and can be related to any aspect, authorization, or component of the project. The Province recommends that proponents engage with the Mi'kmaq in the early

stages of proposed projects. Early engagement can include activities such as sharing of information (project description, related reports/studies); participating in meetings (with Chiefs and Councils, with designated representatives, with community members); and gathering of Mi'kmaq views and Indigenous knowledge to identify, discuss, and document issues and concerns.

It is recommended that AMNS document and maintain an accurate record of all pre-Crown consultation engagement efforts and provides it to the Province when applying for authorizations related to the project. As well, where appropriate, the Province and the Mi'kmaq may review the pre-Crown consultation engagement activities to-date to better inform Crown consultation as outlined below.

Furthermore, pursuant to the *Environment Assessment Regulations*, as part of an Environmental Assessment (EA) Registration Document, the proponent is required to illustrate steps taken to identify the concerns of the Mi'kmaq of Nova Scotia about the adverse effects or the environmental effects of the proposed undertaking. The proponent must list all the concerns expressed by the Mi'kmaq of Nova Scotia and all steps taken or proposed to be taken by the proponent to address these concerns.

#### **Proponent Engagement during Formal Crown Consultation Phase**

Once formal Crown consultation is triggered, the Crown may delegate procedural aspects of the consultation to proponents throughout the process. Proponents have the in-depth technical knowledge regarding their project that makes them best suited to address questions and concerns identified by the Mi'kmaq of Nova Scotia during their project's development. During the EA approval process, the Province relies solely upon the process set out in the *Environment Act* and Regulations to fulfil the Crown's duty to consult the Mi'kmaq for this approval.

To assist the Province in fulfilling its duty to consult, outlined below are the activities that the Province intends to delegate to AMNS when formal consultation is initiated by the Crown. The Province may provide more details in writing on any delegated activities regarding formal Crown consultation.

#### Engagement and Relationship Building

Arrange meetings as needed with authorized Mi'kmaq representatives as indicated.

#### Information Sharing and Discussion

- Provide detailed project information to ensure that the Mi'kmaq are reasonably informed about the nature of the proposed activities, the potential environmental impacts, and the associated short and long-term mitigation plans.
- Share relevant completed reports, studies, or other documents related to the consultation with the Mi'kmaq as soon as they are available to be shared.
- Respond to questions or requests for additional information the Mi'kmaq may have regarding the proposed project.
- Provide project status updates to the Mi'kmaq on a regular basis via meeting, email, or letter. These updates should include information about project progress including regulatory status, project design changes, and project timelines.

Mr. James Millard  
Page 3  
May 14, 2021

Consultation Meetings

Participate in formal consultation meetings related to the project when invited by the Province and the Mi'kmaq.

Identification of Adverse Impacts to Aboriginal and Treaty Rights

Work with the Mi'kmaq to identify and document issues and concerns, including any potential adverse impacts to Aboriginal and Treaty Rights, such as hunting, fishing, gathering and ceremonial practices.

Discussion of Potential Accommodations

Work with the Mi'kmaq to identify accommodations that will minimize, mitigate, or avoid potential adverse impacts to Aboriginal and Treaty Rights.

AMNS is responsible to document all engagement and delegated consultation activities outlined above and prepare an Engagement Report to submit it to the Province. This report will clearly outline when and how the delegated activities were completed. The report should also outline any engagement activities conducted by AMNS before the formal consultation was initiated as well as during the Crown consultation process. Content from the report may be used to inform the Crown consultation process. For your reference, a sample table of contents is attached to guide the preparation of the Engagement Report.

AMNS is also responsible to keep an up-to-date summary of the status of all project-related reports, studies, and other documents that are planned, in progress, or completed including when and by what method these documents were shared with the Mi'kmaq.

Any Federal and Provincial consultation activities associated with the project will be coordinated under one consultation.

If you have any questions or require additional clarification, please do not hesitate to contact me.

Sincerely,

<Original signed by>

Beata Dera  
Director of Consultation

Encl: Mi'kmaq Contact Information  
Sample Engagement Report Table of Contents

Copied to: Twila Gaudet, Assembly of Nova Scotia Mi'kmaq Chiefs  
Beth Lewis, Consultation Advisor, Nova Scotia Office of L'nu Affairs  
Bridget Tutty, Nova Scotia Environment & Climate Change  
Jillian Bieser, Impact Assessment Agency of Canada



# **ATTACHMENT 3**

## **Example Letter Sent to Communities**





**Atlantic Mining NS Inc.**  
409 Billybell Way, Mooseland  
Middle Musquodoboit, Nova Scotia, Canada B0N 1X0  
Tel +902.384.2772 Fax +902.384.2259  
A wholly owned subsidiary of **St Barbara Limited**  
[www.stbarbara.com.au](http://www.stbarbara.com.au)

May 26, 2021

Chief Robert Gloade  
Millbrook First Nation  
P.O. Box 634  
Truro, Nova Scotia B2N 5E5

**Re: Proposed Project Changes to the Touquoy Mine Project**

Dear Chief Gloade,

I would like to take the opportunity to re-introduce myself. My name is Laird Brownlie and as of this May 2021, my role is Head of External Affairs for Atlantic Gold<sup>1</sup> (AG). We previously met several times in the past, mainly via video meetings. The most recent meeting occurred on March 16, 2021, where Jim Millard presented the proposed changes to the Touquoy Mine Project to Chief, Council, and Staff and we listened to various comments and concerns from Council and Staff.

The most important element of my role is to work with First Nation communities across Nova Scotia, including Millbrook First Nation and to continue to build a positive relationship based on honesty, integrity and mutual respect. Atlantic Gold (AG) respects the constitutionally-protected Aboriginal and Treaty rights of the Mi'kmaq of Nova Scotia and seeks opportunities to work together for mutual benefit. AG has committed to responding to the concerns and feedback received from Mi'kmaq communities where our Project activities may impact the ability to exercise constitutionally-protected Aboriginal and treaty rights, their way of life, their traditions, cultures and values.

Today, I am reaching out to share with you some updated information on the Touquoy Mine Environment Assessment (EA). As you are aware, the Touquoy Mine has been in operations since October 2017. At this time, we are proposing to undertake some changes to the Mine to better manage waste rock and tailings. A map showing the location of the Touquoy Mine Project is attached for your reference.

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<sup>1</sup> Atlantic Gold is also known as Atlantic Mining NS Inc. which is a fully owned subsidiary of St. Barbara Limited.

Atlantic Gold (AG) is completing a Provincial Class 1 Environmental Assessment (EA). This EA will be submitted in Summer 2021 to allow for the following proposed changes at the Touquoy Mine (see attached Site Layout Plan for reference):

- **To expand the Waste Rock Storage Area (WRSA).** By increasing the WRSA by 7.8 ha AG’s capacity to manage waste rock will increase.
- **To allow for in-pit tailings disposal.** This will allow the pit, after it is no longer being mined, to store tailings from the processing of the medium and low-grade ore from the Touquoy open pit that is currently stockpiled on site from the Touquoy Mine. Before the tailings are placed in the pit, groundwater, precipitation, and surface flow will be allowed to fill the pit and the tailings will be deposited below the water line.
- **To develop a 5.9-hectare clay borrow pit.** The clay is required for approved and proposed on-site needs, such as environmental mitigation, lining of ditches and ponds, run-off management and construction.
- **To move the existing Administration Road to another location on the site.** The road is being moved to allow for the expansion of the WRSA. This road relocation will reduce traffic on the public road (Mooseland Road) and increase the safety of staff and the public.

## Class 1 EA Process



These proposed changes (above bullet points) are mainly within the existing Project and study areas that were previously assessed as part of the 2006 Environmental Assessment (EA), however, there are new areas and processes that were not fully assessed previously. Since all of the changes were not included in the original EA for the site, the Province concluded that a Class 1 Environmental Assessment is required.

Biophysical surveys, focused on areas of proposed changes, were completed in 2020 and 2021 to verify and supplement previous assessment work that was completed as part of the original EA and monitoring programs required under EA Project Conditions. The proposed Project changes were designed to avoid, limit and to mitigate potential impacts to environmentally sensitive areas such as wetlands, watercourses, and rare vegetation. Archeological studies have also been completed to confirm that the proposed Project changes do not impact potential archaeological and cultural resources. With regard to traditional Mi’kmaq land and resource use in the expansion areas, it is noted that the overall proposed footprint of the expansion is minor (approximately 5% increase over the existing footprint) and that the proposed changes are unlikely to impact any traditional Mi’kmaq land and resource use in the area. All of the changes will occur within or directly adjacent to the existing mine boundaries.

Field work, analysis, and modelling have been undertaken in an effort to design the Project so as to reduce and mitigate the potential interactions of the proposed Project changes with environmental features. Preliminary summary results indicate the following:

- **Air and Noise:** Air quality, noise, and vibration are not expected to change substantially over the existing conditions at the mine site.
- **Land Use:** All of the changes will occur within or directly adjacent to the existing mine boundaries. No changes to existing land uses are anticipated.
- **Water:** The changes will affect how water is managed on site. Drainage and runoff from the areas impacted will be managed to meet or exceed appropriate water quality criteria and/or background conditions.
- **Fish and Fish Habitat:** Water quality and quantity will be maintained so that fish habitat is preserved and protected.
- **Vegetation:** The changes will create ground disturbance and the removal of vegetation where new infrastructure will be located. Plant species with conservation status will be protected.
- **Wildlife and Habitat:** The changes will alter approximately 0.7 hectares of wetland, this will require a wetland alteration permit. Changes to wetlands and other wildlife habitat will be reduced through project design and are not expected to be limiting to wildlife species.
- **Cultural and Heritage Resources:** A supplementary archaeological field survey was completed in 2021, including research, reconnaissance, and test-pitting in the areas not previously investigated. No cultural or heritage resources were identified.

We have been sharing information on the proposed changes to the Touquoy Mine Project during 2020 and 2021 by means of meetings with Mi'kmaq communities, the KMKNO and other First Nation groups. We held an information sharing session directly with Millbrook on March 16, 2021. During those meetings, we have listened to comments and have made the following commitments:

- Review the Project changes and Environmental Assessment with Millbrook First Nation and respond to questions and concerns as requested;
- Host a tour of the site to interested Council, Staff and community members (once covid and travel restrictions are lifted).
- Provide opportunities for Millbrook First Nation and organizations to participate in Environmental Effects Monitoring programs at the Touquoy site
- Extend an invitation to Millbrook First Nation to participate in the Touquoy Gold Mine Reclamation Working Group when it is established (2021); and
- Provide a Plain Language Summary (PLS) of the Project Environmental Assessment in both digital and printed formats to Millbrook First Nation at around the same time that the EA document is submitted.



I look forward to receiving any additional feedback you have on our proposed changes at the Touquoy Gold Mine. I sincerely thank you and your staff members for the positive and meaningful relationships that have been created with Atlantic Gold to this point. In conclusion, I encourage you to reach out to myself directly if you have questions or concerns regarding the proposed Touquoy Mine changes and environmental assessment. I can be reached at 902.391.0700 and at laird.brownlie@atlanticgold.ca.

Sincerely,

<Original signed by>

Laird Brownlie  
Head of External Affairs

Attach: Figure 1-1: Site Location Plan  
Drawing 2-1: Site Layout Showing Proposed Modifications

Cc: Gerald Gloade, Shelly Martin, Nigel Gloade (Millbrook First Nation)  
Jim Millard, Dustin O'Leary (AG)  
Beth Lewis, Beata Dera (NS Office of L'Nu Affairs)  
Bridget Tutty (NS Environment and Climate Change)



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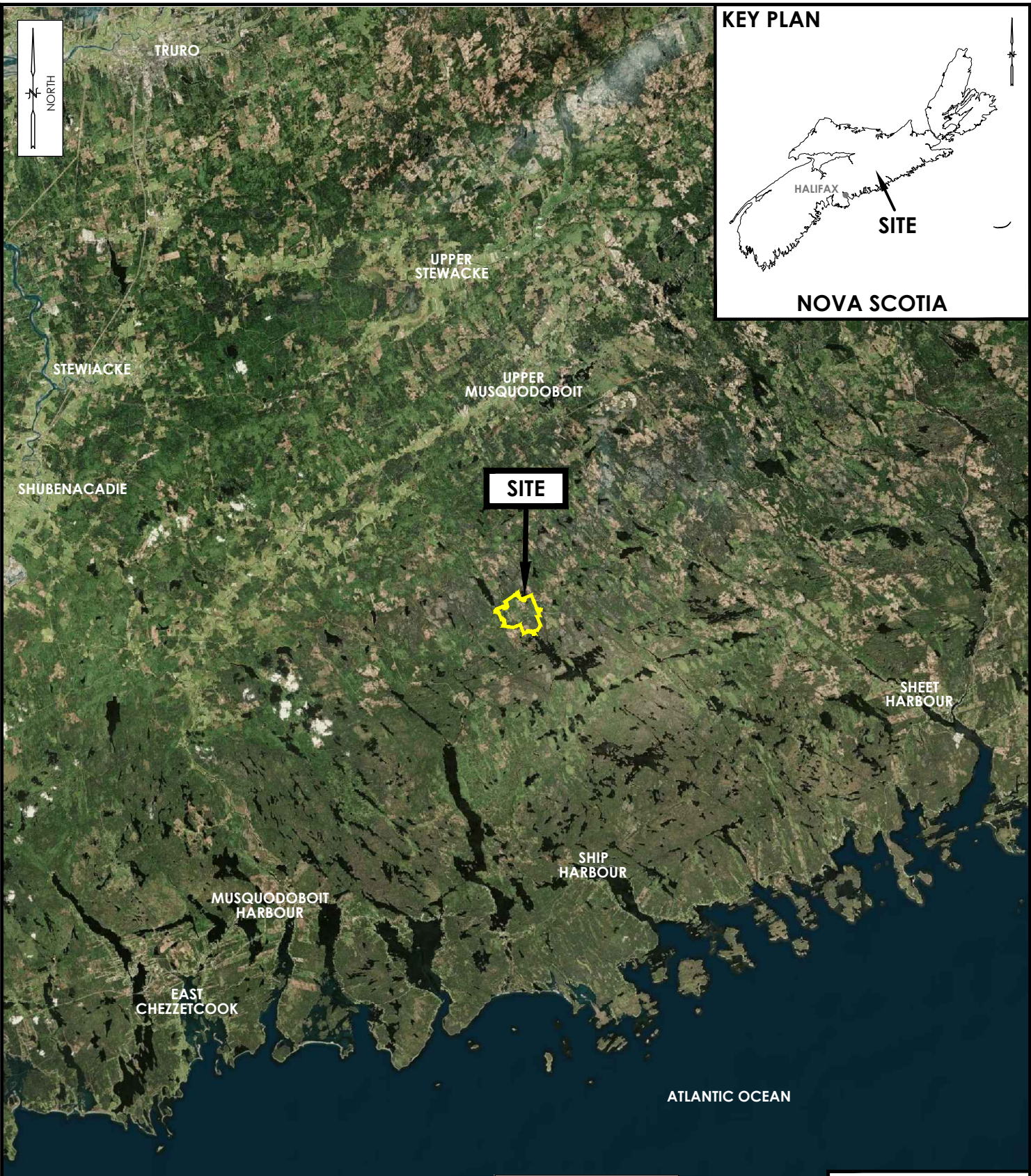


IMAGE SOURCE:  
 BING: EARTHSTAR GEOGRAPHICS © 2021 TOM TOM



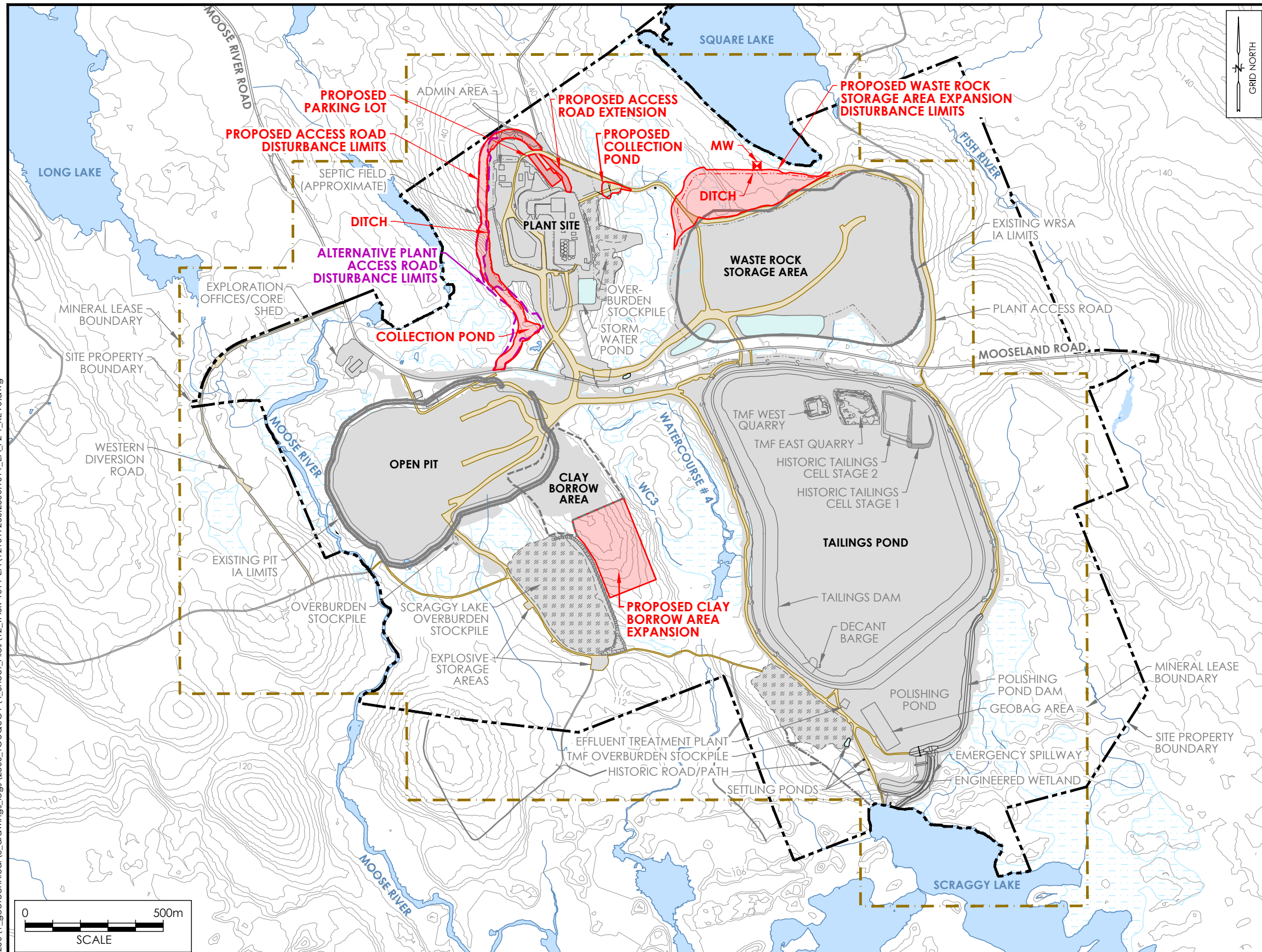
Client Logo  
 **Atlantic Gold**

THIS DRAWING ILLUSTRATES SUPPORTING INFORMATION SPECIFIC TO A STANTEC CONSULTING LTD. REPORT AND MUST NOT BE USED FOR OTHER PURPOSES.

<b>SITE LOCATION</b> TOUQUOY GOLD PROJECT HALIFAX COUNTY, NOVA SCOTIA	Job No.: 121619250	Fig. No.: <span style="font-size: 2em;">1-1</span>
	Scale: 1 : 400,000	
<b>Client:</b> ATLANTIC MINING NS INC.	Date: 2021 04 13	 <b>Stantec</b>
	Dwn. By: JL	
	App'd By: HG	



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**LEGEND**

- CONTOUR, 2m (LIDAR, 2010)
- SITE PROPERTY BOUNDARY
- MINERAL LEASE BOUNDARY
- EXISTING PIT IA LIMITS / WRSA IA LIMITS
- EXISTING ROAD
- HISTORIC ROAD/PATH
- PERIMETER/SITE DITCH
- SEEPAGE DITCH
- EXISTING WATERCOURSE
- WATERBODY
- COLLECTOR / SETTLING POND
- DISTURBED AREAS (2020)
- OVERBURDEN STOCKPILE
- HAUL/ACCESS ROAD
- WETLAND
- PROPOSED MODIFICATIONS DISTURBANCE LIMITS
- ALTERNATIVE MODIFICATIONS DISTURBANCE LIMITS
- PROPOSED DITCH
- UPDATED WRW-1A/B LOCATION

**NOTES:**

- ACCESS ROAD FINAL DESIGN WILL ENSURE THE INTEGRITY OF THE SEPTIC TANK AND FIELD.
- ACCESS ROAD EXTENSION AND PARKING LOT ARE APPROXIMATE PROPOSED LOCATIONS ONLY.



THIS DRAWING ILLUSTRATES SUPPORTING INFORMATION SPECIFIC TO A STANTEC CONSULTING LTD. REPORT AND MUST NOT BE USED FOR OTHER PURPOSES.

**Reference:**

- BACKGROUND TOPOGRAPHY SHOWN IS BASED ON LIDAR DATA PROVIDED BY CONESTOGA-ROVERS & ASSOCIATES (2010). ACTUAL FIELD CONDITIONS MAY VARY.
- SITE DATA PROVIDED BY ATLANTIC MINING NS INC.

**SITE LAYOUT SHOWING PROPOSED MODIFICATIONS**

TOUQUOY GOLD PROJECT  
HALIFAX COUNTY, NOVA SCOTIA

**Client:** ATLANTIC MINING NS INC.

<b>Job No.:</b>	121619250
<b>Scale:</b>	1 : 15 000
<b>Date:</b>	13-APR-2021
<b>Dwn. By:</b>	JL
<b>App'd By:</b>	HG

Client Logo

**Atlantic Gold**

Dwg. No.: **2-1**

**Stantec**

# **ATTACHMENT 4**

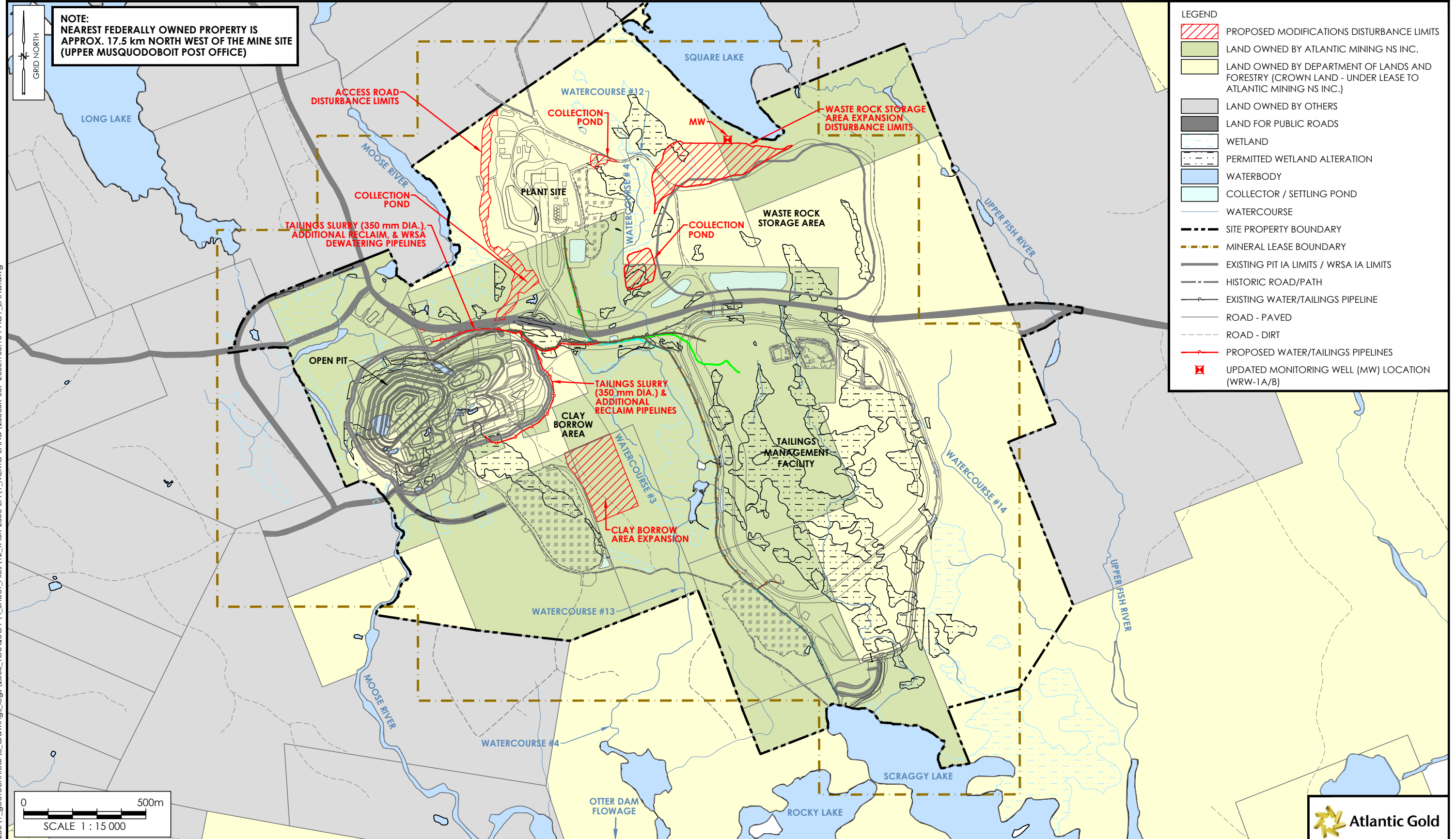
## **Land Ownership Figure**





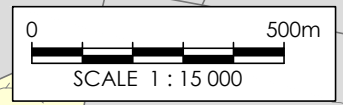
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**NOTE:**  
NEAREST FEDERALLY OWNED PROPERTY IS APPROX. 17.5 km NORTH WEST OF THE MINE SITE (UPPER MUSQUODOBOIT POST OFFICE)



**LEGEND**

- PROPOSED MODIFICATIONS DISTURBANCE LIMITS
- LAND OWNED BY ATLANTIC MINING NS INC.
- LAND OWNED BY DEPARTMENT OF LANDS AND FORESTRY (CROWN LAND - UNDER LEASE TO ATLANTIC MINING NS INC.)
- LAND OWNED BY OTHERS
- LAND FOR PUBLIC ROADS
- WETLAND
- PERMITTED WETLAND ALTERATION
- WATERBODY
- COLLECTOR / SETTLING POND
- WATERCOURSE
- SITE PROPERTY BOUNDARY
- MINERAL LEASE BOUNDARY
- EXISTING PIT IA LIMITS / WRSA IA LIMITS
- HISTORIC ROAD/PATH
- EXISTING WATER/TAILINGS PIPELINE
- ROAD - PAVED
- ROAD - DIRT
- PROPOSED WATER/TAILINGS PIPELINES
- UPDATED MONITORING WELL (MW) LOCATION (WRW-1A/B)



THIS DRAWING ILLUSTRATES SUPPORTING INFORMATION SPECIFIC TO A STANTEC CONSULTING LTD. REPORT AND MUST NOT BE USED FOR OTHER PURPOSES.

**Reference:**

1. PROVINCIAL BASE DATA REPRODUCED AND DISTRIBUTED WITH THE PERMISSION OF SERVICE NOVA SCOTIA & MUNICIPAL RELATIONS (SNSMR, 2006) AS PER THE TERMS OF USE OUTLINED IN THE UNRESTRICTED DATA USE LICENSE AGREEMENT FOR GEOGRAPHIC DATA.
2. SITE DATA PROVIDED BY ATLANTIC MINING NS INC. AND McCALLUM ENVIRONMENTAL.

**SITE LAYOUT SHOWING PROPOSED MODIFICATIONS / LAND OWNERSHIP**

TOUQUOY GOLD PROJECT  
HALIFAX COUNTY, NOVA SCOTIA

Client: ATLANTIC MINING NS INC.

Job No.:	121619250
Scale:	1 : 15 000
Date:	17-AUG-2021
Dwn. By:	JL
App'd By:	SW

**Atlantic Gold**

Fig. No.: **1**

**Stantec**