



## November 2019 Bulletin

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### Atlantic Gold: In the Community

Atlantic Gold is a proud supporter of community activities and groups. Below are some of the important events we've recently partnered with to support.

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**Atlantic Gold Supports  
Local Hospital**

Community



Health care is an important issue for all Nova Scotians, including Atlantic Gold employees. Recently, the Musquodoboit Valley Health Foundation announced that they would be fundraising for the purchase of a mobile ultrasound unit to better serve patients in and around Middle Musquodoboit.

The Musquodoboit Valley Memorial Hospital had the use of a mobile ultrasound last summer on loan. This saved many patients from travelling to Halifax for tests – they also believe the speed of having timely results may have saved local lives. With that, Musquodoboit Valley Health Foundation President, Tom Parker, set out to fundraise for Diana Graham, Director of Health Services at the Musquodoboit Valley Memorial Hospital, and her staff for the purchase and full-time use of a mobile ultrasound machine.

At a presentation in July, Jennifer Adshade (Environmental Analyst with Atlantic Gold) presented Tom and Diana with a cheque for \$5,000 to help the Musquodoboit community obtain this important health equipment. Additional sizable donations from government levels and donations from community members led to the hospital receiving their new ultrasound machine.

Congratulations all around!

**Atlantic Gold Green Team**

**Environment**



Sustainability and environmental responsibility are top-of-mind for all Atlantic Gold employees. When it comes to our operations and the communities where we operate, we don't just work here, we live here, too!

Recently, a group of dedicated Atlantic Gold employees formed the Atlantic Gold Green Team. The goal of the Green Team is, *"to ensure ongoing continuous improvement and limitation of environmental risk through the use of best practice, fresh ideas and technological advances that are identified and implemented."* In other words, this committee is finding ways for our environmentally responsible mine to be even more sustainable and green.

The Green Team will also be travelling to community events to support sustainability efforts. In August, the Atlantic Gold Green Team visited the 135<sup>th</sup> Halifax County Exhibition and assisted in keeping the grounds clean and reducing the impact of this important event on our environment.



# Atlantic Gold

## OUR CORPORATE VALUES

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**WE ACT WITH HONESTY AND INTEGRITY**

**WE TREAT PEOPLE WITH RESPECT**

**WE VALUE WORKING TOGETHER**

**WE DELIVER TO PROMISE**

**WE STRIVE TO DO BETTER**

On July 19, 2019, St Barbara Ltd, a mining company based in Melbourne, Australia, completed a transaction to purchase Atlantic Gold Corporation.

St Barbara Ltd, with the acquisition of the Atlantic Gold operation, brings a commitment to a set of values. We strive to live these values as we work in your communities. These values form the basis for the [Community Relations Policy](#).

“St Barbara has built a reputation of being a responsible operator of long-term mining operations and is committed to building and maintaining positive relationships with all stakeholders, including government, First Nations and local communities”, says Bob Vassie, Managing Director and CEO of St Barbara Ltd.

# Interested in joining the Sherbrooke or FMS CLC?

*Join the  
conversation*

**COMMUNITY LIAISON COMMITTEES (CLC)  
PROVIDE AN IMPORTANT CONNECTION  
BETWEEN ATLANTIC GOLD AND THE  
COMMUNITY. CLC'S:**

- PROVIDE FEEDBACK ON ISSUES TO ATLANTIC GOLD
- HELP US UNDERSTAND COMMUNITY ISSUES AND CONCERNS
- ACT AS A CONDUIT BETWEEN THE COMMUNITY AND ATLANTIC GOLD

*If interested contact:*

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Mine sites are complicated and contain many different elements. The elements of a mine are often referred to as “mine infrastructure”. In this article, the different elements of a mine site are explained to help those around our mine sites understand more about what may be installed. Each individual mine site will be different from the others. To learn more about each mine project, please visit our [website](#).

### **What might be included when we are talking about Mine Infrastructure?**

Mine sites will include some or all the following pieces of infrastructure.

- *Ore extraction (surface mine);*
- *Mine site haul roads (access road, ore and mine rock haulage, site roads);*
- *Materials storage (waste rock, till/overburden, low grade ore);*
- *Ore processing (crusher, processing facilities and laboratory);*
- *Site facilities (mine buildings, fuel storage, power distribution, water distribution);*
- *Tailings management facility and effluent treatment plant;*
- *Environmental infrastructure (water management);*
- *Surface and groundwater monitoring stations; and*
- *Community development.*

Infrastructure at site can be either permanent or temporary. Temporary infrastructure will be removed when the mine closes. Permanent infrastructure will remain in place after closure.

### **Ore extraction**

Atlantic Gold extracts gold using an “open pit” to access gold-bearing ore. In general, the open pit is designed to maximize ore extraction and minimize waste removal. Pit wall slopes (the walls of the open pit) are designed for safety and stability. Access to active mine areas is via a ramp system. Within the active mining area, rock is drilled and blasted on 5m to 10m bench heights. Ore and waste are loaded and transported out of the pit using specialized mining equipment (typically excavators, loaders, haul trucks).

The pit is part of the permanent infrastructure that will remain in place after completion of

mining operations. Upon closure the pit will be allowed to fill in with water, creating a lake. The pit edges will be re-sloped and re-vegetated, where possible, to improve safety and reduce erosion.

### **Mine site haul roads**

There are 3 types of roads commonly located at site:

- *Access road;*
- *Mine haul roads; and*
- *Light vehicle access.*

The **access road**, as it states, provides access for all personnel and materials entering and leaving the site. This road is generally unrestricted to traffic but at some point will terminate at a security check point.

The largest roads on site are the **mine haul roads** and provide transportation links from the “open pit” to the various material stockpiles and the processing plant. These roads are designed for larger mining equipment. Light vehicle access (cars and trucks) are not permitted on mine haul roads except to authorized vehicles for safety reasons.

Various minor roads will be located around the site to provide **light vehicle access** to site facilities and environmental monitoring locations. Unless required, all roads are considered temporary infrastructure and will be reclaimed upon closure. This will consist of excavating and grading road surfaces, spreading of topsoil, and re-vegetation.

### **Materials storage**

Ore extraction at Atlantic Gold’s operations involves the removal of both ore and waste from an open pit. Waste rock materials are hauled and stored in stockpiles based on material types. Common stockpiles include topsoil, over burden and waste rock. The waste rock stockpile (WRSF) is generally one of the larger infrastructure items and are designed with specialized engineering input to ensure stability and safety during operation and closure.

Given the size of the waste rock stockpile, it may be visible from the surrounding environment. It’s size also means that it will remain after a mine closes. For that reason, these large structures are designed, sloped, and revegetated to blend in to the surrounding topography once a mine ceases operation. Special attention is paid to reduce the visual impact and ensure long term stability. In addition, where possible, stockpiles are progressively reclaimed. Progressive reclamation means that while the mine is still in operation, areas and infrastructure that can be reclaimed will be, instead of waiting until the mine closes to begin reclamation. These progressively reclaimed areas of the mine also provide a preview to regulators, community, and First Nations of what the mine will look like after closure and reclamation.

Ore material extracted from the open pit is generally hauled to the processing plant for processing. However, in order to improve the grade processed, lower grade material is routinely stockpiled for later processing in the mine’s life. These temporary stockpiles are generally located close to the processing plant and will be reclaimed and processed throughout operation.

### **Ore processing area**

The largest buildings on site are associated with ore processing and the various stages that are involved, including:

- *Crushing and grinding;*
- *Gold recovery; and*
- *Cyanide destruction and tailings disposal.*

The first stage of the ore processing consists of crushing. Ore is crushed and reduced in size through a three-stage process with each stage progressively reducing the particle size. The crushing circuit consists of a primary crusher, secondary crusher and tertiary crusher connected via a series of conveyor belts and screen decks to ensure correct material sizing at each stage. The final product is transferred via conveyor to a fine ore stockpile where it is stored prior to grinding.

After crushing and grinding, the gold ore enters the gold recovery circuit which includes gravity concentration and leaching. Gravity concentration devices create movement between the gold and host rock particles to allow the separation of the heavier gold particles from the lighter waste material.

Finer gold particles which are not recovered through gravity proceed through the plant and into the leach circuit. The method used at the Touquoy mine is the Carbon-In-Leach (CIL) process. In this process, the finely ground ore is leached using cyanide in a series of agitated tanks. For the Beaver Dam, Fifteen Mile Stream and Cochrane Hill mines, no cyanide will be used.

In the case of Fifteen Mile Stream and Cochrane Hill operations, leaching will be replaced by a flotation process to produce a gold concentrate that will be transported to the Touquoy mine site for leaching and final processing.

The design and installation of the processing facility requires many thousands of hours of detailed engineering and test work to complete. All infrastructure associated with ore processing will be removed from site at closure and the remaining disturbed areas reclaimed.

### **Site facilities**

In order to support a mine's operation, a number of smaller buildings are required. These may include some or all of the following:

- *Gatehouse* – a guardhouse at the site access road where security staff can control entry to the mine and process plant areas;
- *Administration office* – includes offices for mine staff, training rooms and IT infrastructure;
- *Mining office and change rooms* – accommodates the mining workforce and includes offices, lunchroom and wet and dry areas complete with wash facilities and personal storage;
- *Truck workshop, warehouse and wash facility* – generally one of the larger buildings on site, this facility is generally positioned adjacent to the mine office and is separated into two sections: one, the truck shop and the other, the warehouse. The truck shop for all maintenance and repairs on mobile mine equipment and often is subdivided into a number of maintenance bays. Other maintenance activities can be performed outside the building on a hardstand area.



- *Plant Workshop* - the Plant Maintenance building is generally located adjacent the process/concentrator building and will house maintenance personnel undertaking maintenance activities in support of ore processing;
- *Fuel storage*;
- *Power supply*;
- *Raw water supply*; and
- *Laboratory* - situated close to the plant and contains all necessary laboratory equipment for the site sample analyses, including mining, metallurgical and environmental requirements.

These site facilities are temporary and will be dismantled and removed from the site upon completion of mining activities. The areas where they were located will be reclaimed.

### **Tailings Management Facility**

Tailings are the by-products that remain following the extraction and recovery of gold through the milling/concentration process. Tailings generally consist of a mixture of finely ground rock particles, water, and processing reagents in low concentrations. The management of tailings is a key component in the design and operation of mining projects. The objective of tailings management is to confine the mine tailings for safe, long-term disposal.

Tailings are stored in engineered structures called tailings management facilities (TMF), which are created using dams, berms, and natural topographical features (valleys, depressions and hillsides) of the project area to aid with containment.

TMFs are permanent structures. Tailings management facilities are often a key element in the rigorous environmental assessment and regulatory processes that federal, provincial and territorial governments employ to ensure that the environmental effects of proposed mine projects are identified. Key requirements of most TMFs are a reclaim pump station that allows recycling of process water and an effluent treatment plant that treats surplus process water to strict environmental standards prior to discharge back to the natural environment.

*Mine site infrastructure varies from project to project. However, the above summary will assist those trying to understand what may be on any of the Atlantic Gold's mine sites.*

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## *Impact Assessment Agency of Canada*

replaces the Canadian Environment Assessment Agency

In August 2019, three new legislative Acts came into force at the federal level: the [Impact Assessment Act](#), the [Canadian Energy Regulator Act](#) and the [Canadian Navigable Water Act](#). The Impact Assessment Act repeals the Canadian Environment Assessment Act of 2012 and replaces it with the Impact Assessment Act. A new agency called the Impact Assessment Agency of Canada was created to administer the act.

Atlantic Gold's proposed projects will be evaluated under the Canadian Environmental Assessment Act of 2012. Because Atlantic Gold began under CEAA 2012, it will continue to adhere to the process under which it began.

The Canadian Environmental Assessment Agency (CEAA) website has been replaced with the [Impact Assessment Agency of Canada \(IAAC\)](#) site and includes a project [registry](#) that contains information related to all of Atlantic Gold project's Environmental Assessments.

Find out more about the impact assessment process under the new Impact Assessment Act by clicking [here](#). You can also learn about how members of [the public can participate](#) in the review process.

## INFORMATION ABOUT ATLANTIC GOLD'S MINING PROJECTS

IN EACH NEWSLETTER, WE PROVIDE UPDATES ON ATLANTIC GOLD'S ONGOING PROJECTS.

### Touquoy

Production at the Touquoy mine continues to be steady and on target with the estimated annual production of 95,000 to 105,000 ounces provided as guidance in summer 2019. The site has also hired a new General Manager, Laird Brownlie. Originally from Scotland, Laird has built a career in mining management that brings operations and staff to the next level of achievement and sustainability. He brings a variety of working experience and best practices from across Canada.

### Beaver Dam

The Environmental Impact Statement continues to be reviewed by the federal regulators. Atlantic Gold and it's consulting team are in the process of answering the second round of Information Requests. Once the federal and provincial regulators have no further questions, a final decision will be made on the project.

### Cochrane Hill

Atlantic Gold continues to study and refine it's plans for Cochrane Hill. Once all the studies are complete, the public will be invited to a public meeting to review results. The Sherbrooke Office is open two

### Fifteen Mile Stream

The Environmental Assessment for Fifteen Mile Stream was submitted in early October 2019. The Canadian Environmental Assessment Agency (CEAA) (now called the [Impact Assessment](#)

days per week for any questions or comments from the public. Please drop in and see us to discuss the project.

[Agency of Canada](#)) will post the EIS to its website and open a public consultation period where the public and First Nations can provide comments. Atlantic Gold will issue a special bulletin to announce the commencement of the public consultation period.



 [St Barbara Website](#)    [Email](#)

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