

Cochrane Hill
Gold Mine NOPE
Campaign –
NO OPEN PIT
EXCAVATION



Opening Remarks



- ▶ Representing the St. Mary's River Association, formed in 1979 as a conservation organization
- ▶ Our vision is the “Health for the River, the Atlantic Salmon and our community”
- ▶ Our NOPE campaign is an education campaign – where we talk about our point of view with our fellow community members

History of Cochrane Hill Mining

- ▶ Located between Sherbrooke and Melrose on Highway 7
- ▶ The site has a history of underground mining for gold that happened between 1868 and 1929. They retrieved 1350 ounces of gold during this time frame
- ▶ Further mining and exploration in 1970s and 1980s
- ▶ Currently is now an active mine site one of three satellite operations. The main site in Moose River known as Touquoy. Atlantic Gold is hoping to expand operations to 15 Mile Stream, Beaver Dam and Cochrane Hill

Who is Atlantic Gold?

- ▶ Australian junior mining company with Canadian Headquarters in BC- no vested interest in NS or Canada
- ▶ Cochrane Hill Gold Mine would start in 2021 and operate it for a minimum of 6 years
- ▶ At this point Atlantic Gold have conducted sampling and engaged stakeholders (council, local communities, First Nations, etc.)
- ▶ Completed a “Project Description”
- ▶ As of Nov 23rd, a federal environmental assessment is required - available for public comment until Dec 24th



Amherst

Spring Hill

New Glasgow

Stellarton

Truro

Antigonish

Port Hawkesbury

FIFTEEN MILE STREAM

BEAVER DAM

TOUQUOY

COCHRANE HILL

MAP 3

MAP 4

MAP 5

MAP 6

MAP 7

MAP 9

MAP 10

HALIFAX

How the CH Mine Will Work

- ▶ At Cochrane Hill they will mine ore, crush it, process it down to a concentrate
 - ▶ Blasting will occur 2 – 3 times a week to get ore
 - ▶ A three step process to Crush the ore
 - ▶ The finely crushed ore will run through a *Process* using chemicals & a lot of water to produce a gold concentrate (Chemicals used will be Potassium Amyl Xanthate (PAX), Methyl Isobutyl Carbinol (Frother), W34 (Frother), Flocculant.)
- ▶ The gold concentrate is then transported to the Touquoy mine by way of Highway 7 through Sherbrooke to Sheet Harbour. All trucked by c-train configuration 8 axle trucks (58,500 kg or 128,700 pounds)
- ▶ Mine tailings (by product) will be deposited on site at Cochrane Hill to a Tailings Management Facility

Fire Departments

- ▶ Specialized training and equipment may be necessary
- ▶ Need to understand the characteristics of explosives and chemicals used in the mining process (Chemicals used will be Potassium Amyl Xanthate (PAX), Methyl Isobutyl Carbinol (Frother), W34 (Frother), Flocculant.)
- ▶ Hazards such as a forest fire in the area OR a fire at the site
- ▶ Collapse or failure of a structure at the site
- ▶ the emergency response effort and coordination required of local fire departments, first responders and mutual aid partners will be significant

SMRA Reasons for NO MINE



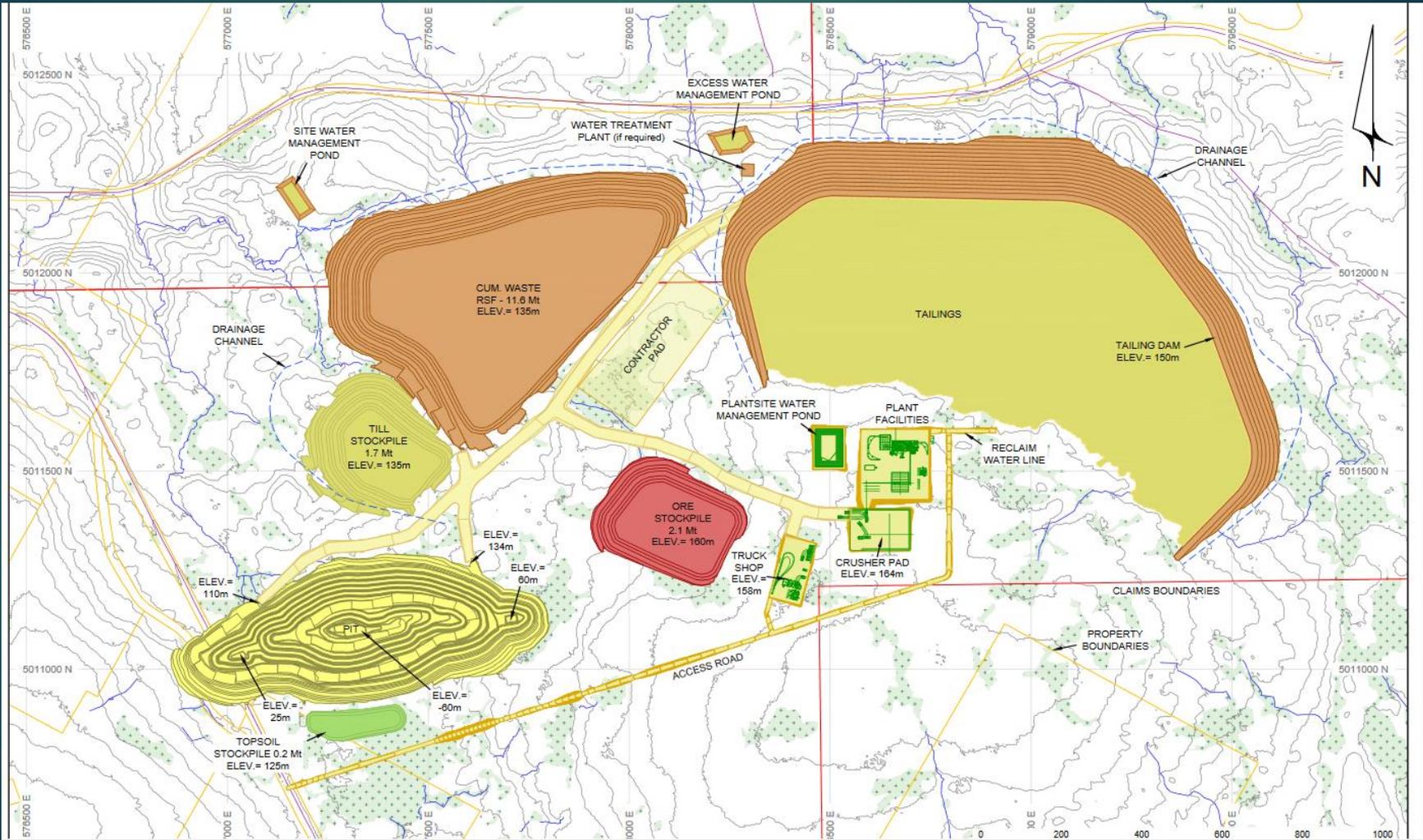
- The efforts and investments of decades should not be risked for a foreign owned company wanting to make a quick profit
- It does not make sense to allow an Industry so large, intrusive and risky into our community for such a short term gain (6 years of operation)
- We as a community have to much to loose

SMRA Reasons for NO MINE

▶ Land

- ▶ Total mine footprint is 600 acres
- ▶ Estimated size of the Open Pit will be 70 acres - that is 950 metres long, 450 metres wide with a maximum depth of 170 metres
- ▶ Depth is 60 metres below sea level
- ▶ Size of the Tailings Pond will be 260 acres
- ▶ Size of the waste rock, low grade ore, overburden pile will be 173 acres. 5% of ore is shipped after processing and 95% stays on site
- ▶ Clear cutting is a known issue. The loss of more trees and ground cover will create additional problems with water leaving the area more quickly after a rainfall.
- ▶ The resulting runoff puts silt into the river, erodes river banks killing invertebrates and fish eggs.

Cochrane Hill Mine Site Map



SMRA Reasons for NO MINE

- ▶ Gold mining is ranked in the top 5 of the worlds worst and largest pollutants. This is for two reasons one is the final processing which involves arsenic and two Acid Mine Drainage
- ▶ Acid rock drainage: Occurs when sulphite minerals (e.g. pyrite) are brought to the surface, and interact with water and oxygen. This reaction leads to sulfuric acid and metal oxides, which can then decrease pH (= more acidic) and release heavy metals (e.g. arsenic) in water bodies that receive runoff
- ▶ Acid Mine Drainage (AMD) is currently the main pollutant of surface water in the mid-Atlantic region.. AMD comes mainly from abandoned mines and currently active mining. AMD degrades more than 4500 stream miles in the mid-Atlantic region with the loss of aquatic life, and restricts stream use for recreation, public drinking water and industrial water supplies.
- ▶ A region impacted by acid mine drainage often has a decline in valued recreational fish species such as salmon and trout as well as a general decline in outdoor recreation and tourism along with contamination of groundwater drinking supplies

SMRA Reasons for NO MINE

▶ Water

- ▶ Start up requirements will be 500,000 cubic meters of water to be taken Archibald Lake or the St Mary's River
- ▶ From the Project Description AG estimates 50,000 litres or more a day required for on going operations (any more than 23,000 liters/day requires a water withdrawal permit)
- ▶ In low water conditions, the St. Mary's River cannot support additional withdrawal - high temperatures and lack of water depth do not provide adequate conditions for fish (salmon and trout) and their eggs to survive
- ▶ As the pit gets deeper the underground water table is altered and can completely disappear
- ▶ Four species in the watershed have been added to the SARA in one status or another: salmon, wood turtle, snapping turtle and fresh water mussel known as the Brook Floater
- ▶ River is also the home of the Gaspereau and American Eel – both fished commercially

SMRA Reasons for NO MINE

▶ Tailings Pond Impact

- ▶ Tailings are the by-product of mining. They are the ore waste of mines, and are typically a mud-like material. Worldwide, the storage and handling of tailings is a major environmental issue. Many tailings are toxic and must be kept perpetually isolated from the environment.
- ▶ The TMF (tailings management facility) at Cochrane Hill is designed to permanently store tailings.
- ▶ Treated discharge (known as effluent) from Tailings Management Facility will go to Archibald Lake or McKeen Brook system & into the river
- ▶ leaching from the tailings pond will end up in the surface water and in the river. Water or waste water will end up in the St. Mary's no matter what direction it leaves Cochrane Hill. It all slopes back to the river!
- ▶ A breach of the tailings pond over time or during an extreme weather event like hurricane Florance can lead to structural failure which will unleash a torrent of toxic material into the environment
- ▶ Companies seldom held accountable for the failure



The results of a tailing pond breach at Imperial Metals Corp's gold and copper mine in Mount Polley BC in 2014, which released 24 million cubic meters of water and waste into the near by lakes and rivers which ultimately end up in the Fraser River. Photograph: Reuters





LA PLATA COUNTY SHERIFF'S OFFICE

742 Turner Drive Durango, CO 81301 375-243-1111 375-243-1122

RIVER
CLOSED

By Order of the La Plata
County Sheriff, pursuant
to C.R.S. 33-13-111 &
112

Due to Gold King Mine Spill, the
Animas River is closed to
recreational use until further notice.

EFFECTIVE THURSDAY, AUGUST 6, 2013 at 10PM



SMRA Reasons for NO MINE

- ▶ On August 5, 2015, the EPA on-site staff and contractors breached a dam blocking the toxic waste water from the Gold King Mine. The resulting release of three million gallons of toxic wastewater flowed into the Animas and San Juan Rivers and into the Navajo reservation. The contamination threat and water shutoffs in the wake of the spill devastated the tribe's agricultural center. According to testimony by Doug Holtz-Eakin, president of the American Action Forum, before the Senate Committee on Indian Affairs, the total economic impact of the spill could total \$335 million.
- ▶ Atlantic Golds bond held with provincial government is not big enough to cover the cost of recovery should an event ever happen on the St. Mary's. Bond is currently set at \$10 million; clean up of other sites has amounted to much more



**Colorado Anamitis River 1 milion
gallons of waste water heavy metals
released from tailings pond breach**

SMRA Reasons for NO MINE

▶ Air Quality

- ▶ Dust and dirt from blasting 2 – 3 times a week will become airborne
- ▶ Operation of trucks and heavy machinery will produce air pollution 24 hours a day
- ▶ Heavy metals are frequently released into the air during blasting (arsenic, mercury) posing a health hazard to anyone exposed

▶ Road Infrastructure

- ▶ Damage to our roads as a result of heavy trucks, heavy loads and additional traffic will ultimately end up as repair costs charged to the NS taxpayer not Atlantic Gold
- ▶ Our vehicles will be subject to debris resulting in paint chips or windshield damage, hitting potholes causing damage to tires and rims.

SMRA Reasons for NO MINE

▶ Tourism

- ▶ District of St Mary's Municipal Council (10 year Strategic Plan) and St Mary's River Association (Outdoor Recreation Development Plan for the St. Mary's Watershed) both have documented objectives for eco-tourism development.
- ▶ The paddling and canoeing work done with signage, maps and our annual paddling event should be just the beginning for SMRA and the District of St. Mary's.
- ▶ There are two significant, historical and natural river valleys in Nova Scotia: **The St. Mary's River Valley and the Margaree River Valley**. Together they are an enormous attraction .
- ▶ Our river valley is the centerpiece of the Marine Drive and has the potential to be one of Eastern Canada's most attractive tourist destinations. Our proximity to Halifax is a real plus!
- ▶ Anything that distracts from what nature has created will have a huge negative effect on the entire Eastern Shore!

SMRA Reasons for NO MINE

- SMRA is the only river in NS that has an Atlantic Salmon recovery strategy.
- To date we have spent over 1 million in habitat work
- We have applied for 1.5 million for a 3 year habitat and liming project on the West branch of the St. Mary's from the federal Coastal Restoration Fund
- We have active stock enhancement programs in partnership with DFO both for Salmon and Sea Trout
- The Margaree- The Margaree-Lake Ainslie River System is a designated Canadian Heritage River with protection afforded for both cultural and natural heritage values.
- Annual spending of \$2.9 million generates \$2.5 million in GDP, 70 full time equivalent jobs, and \$ 2.1 million worth of income.
- (3) Economic value of wild Atlantic salmon in Atlantic Canada: Creates 3,873 FTE (full time equivalent jobs) and \$128 million worth of income

Gardner Pinfold Report:

(1) Value of salmon (2010 stats) by province in 2010 (Millions)

	NB	NL	NS
Residents	28	19	3.3
Other Can	8.3	5.7	0.6
Visitors to Canada	7.6	2.4	0.4
	\$43.9	\$27.1	\$ 4.3

What the SMRA is doing

- ▶ Met with St. Mary's District council
 - ▶ Asked them to establish a by law to disallow any mining within 8 km of the St Mary's River
 - ▶ Pay for half of the cost for a specialist to analyze Atlantic Golds Environmental Impact Statement
- ▶ Hiring an expert to do an independent third party review of the EA
- ▶ Have representation on the Community Liaison Committee formed by Atlantic Gold
- ▶ Securing support and exchanging information with local like minded organizations such as NSNT, SuNNs, EAC, ASF, NSSA, CPAWS, ESFWA, Sherbrooke Village.
- ▶ Writing letters to our elected representatives
- ▶ Circulating a Petition for signature – sending it to our provincial government

SMRA Reasons for NO MINE

In Summary

Cons

- ▶ Only 6 years of production
- ▶ Huge Environmental Impact-Acid Mine Drainage
- ▶ Tailing Pond leaching or breach will lead to poisoning the river and potential loss or impact to other local jobs & industries
- ▶ Negative Impact to tourism & future dollars
- ▶ St Mary's River and salmon recovery program will suffer or cease to exist

Pros

- ▶ A few jobs, Atlantic Gold cannot or will not provide a number for 6 to 10 years
- ▶ Local Businesses will see an increase in activity
- ▶ Some organizations may receive funding for their programs.

What you can do

- ▶ Get involved!
- ▶ Contact your council member to share your concerns Bonding increased to 200million and share the cost of the 3rd party assesment!
- ▶ Contact your local MLA and / or MP
- ▶ Talk to your family, friends and neighbors
- ▶ Send an email or letter to CEAA during the public comment periods (open now until Dec 24th)
- ▶ Attend Atlantic Gold community meetings to educate yourself & express concerns
- ▶ Sign the on line petition – about 1000 people have so far (<https://www.change.org/p/nope-no-open-pit-excavation-in-st-mary-s>)
- ▶ Sign our community petition which will be presented to our Provincial Government in the Spring

St. Mary's River Silvers Pool





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NO OPEN PIT EXCAVATION