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VOLUME 1 - PROJECT DESCRIPTION

Whale Tail Pit Project
Meadowbank Division

REPORT

Report Number: 1541520

AGNICO EAGLE

Golder Associates

EXECUTIVE SUMMARY

Agnico Eagle Mines Limited – Meadowbank Division (Agnico Eagle) is proposing to develop Whale Tail Pit (Project), a satellite deposit located on the Amaruq Exploration property. Agnico Eagle is proposing to continue mine operations and milling at the Meadowbank Mine and gain approval to extend Meadowbank Mine to include development of resources from Whale Tail Pit. Concurrent with the reconsideration of the Project Certificate by the NIRB, Agnico Eagle is seeking an amendment to the Meadowbank Mine Type A Water Licence (No. 2AM-MEA1525) to include mining of Whale Tail Pit and the construction and operations of associated infrastructure from the Nunavut Water Board (NWB).

The Amaruq property is a 408 square kilometre (km^2) site located on Inuit Owned Land approximately 150 kilometres (km) north of the hamlet of Baker Lake and approximately 50 km northwest of Meadowbank Mine in the Kivalliq Region of Nunavut. The deposit will be mined as an open pit (i.e., Whale Tail Pit), and ore will be hauled by truck to the approved infrastructure at Meadowbank Mine for milling.

The Project facilities will consist of a personnel camp (i.e., Main Camp), power plant, heli-pad, maintenance shop, tank farm, a waste rock storage facility (WRSF), an ore stockpiling facility, an attenuation pond, a water and sewage collection and treatment system, haul roads, access roads, water management infrastructure (e.g., collection ponds, channels, dikes, dams, and culverts), and the Whale Tail Pit. As a result of development, Agnico Eagle is also proposing to expand the width of the existing exploration access road to a haul road to accommodate increased traffic rates and haul trucks. No new infrastructure is required at the existing Meadowbank Mine to support the development of the Project.

An initial amount of approximately 8.3 million tonnes (Mt) of ore will be mined from one open pit (i.e., Whale Tail Pit) and processed over a three to four year mine life. Ore from Whale Tail Pit will be segregated by grade then crushed on-site after which it will be transported to Meadowbank Mine for milling. The mill rate will be approximately 9,000 to 12,000 tonnes per day.

Agnico Eagle proposes to process the Whale Tail ore and dispose of the tailings slurry at the existing Meadowbank Mine tailing storage facility (TSF), which is authorized under the current Project Certificate and Type A Water Licence. The mine operation will generate approximately 8.3 Mt of tailings, 46.7 Mt of mine waste rock, and 5.8 Mt of overburden soil, with very limited organic material. Tailings produced from processing of Whale Tail ore will be accommodated within the existing footprint of the TSF. More specifically, tailings will be stored within the current footprint of the south cell TSF and by building an internal structure in the north cell TSF. Neither the footprint of the facility nor the chemical nature of the tailings and process water are expected to significantly change from current operations. Whale Tail tailings will require the same long-term environmental control mechanisms as are currently approved for Meadowbank.

Approximately 2.5 Mt of waste rock will be used for construction activities such as roads, pads, and water management facilities (i.e., dike, berm, rip rap, etc.). The remaining waste rock and overburden material will be hauled to the Whale Tail WRSF, which is located northwest of the Whale Tail Pit. A second, temporary overburden storage pad for staging purposes is located west of the Whale Tail Lake. Waste rock and overburden will be co-disposed together in one of the two piles constituting the storage facility.

The Project will be supported using the existing transportation requirements, relying on marine transportation for most supplies, aircraft for supplies and transportation of employees, and the gold dore produced at the Meadowbank Mill. The Meadowbank All Weather Access Road (AWAR) will continue to provide supplies

transported from the existing Baker Lake marshalling facilities to the Meadowbank Mine. The current operational components include marshalling facilities in Baker Lake and the 110 km AWAR between Baker Lake and Meadowbank Mine. Agnico Eagle is proposing to upgrade the previously permitted Amaruq exploration access road to a haul road to support the development of Whale Tail Pit and to enable hauling needed between the Whale Tail Pit and the Meadowbank Mill. No changes are proposed for the Meadowbank AWAR to Baker Lake.

Construction of the Whale Tail Pit site will begin as soon as approval and permits are received (anticipated for early 2018) and ultimately have full production in 2019. The operational phase will span three to four years, from Year 1 (2019) to Year 4 (2022). Mining activities are currently expected to end in Year 3 (2021) and ore processing is expected to end during Year 4 (2022). Closure will occur from Year 4 (2022) to Year 11 (2029) after the completion of mining and will include removal of the non-essential site infrastructure and flooding of the mined-out open pit, as well as reestablishment of the natural Whale Tail Lake water level. By extending the life of mine at Meadowbank, Agnico Eagle will progressively close portions of Meadowbank Mine while operating.

The main objectives pertaining to water management are to limit and/or stop the flow of surface water runoff in the pit and to limit the impact on the local environment. In developing the water management plan, the following principles were followed:

- keep the different water types separated as much as possible;
- control and minimize contact water through diversion and containment;
- minimize fresh water consumption by recycling and reusing the contact and process water wherever feasible; and
- meet discharge criteria before any site contact water is released to the downstream environment.

Water management infrastructure includes contact water collection ponds, freshwater collection ponds, diversion channels, retention dikes, dams, culverts, water treatment plant for effluent, potable water treatment plant, sewage treatment plant, and a discharge diffuser. All contact water on-site will be directed to an attenuation pond. Contact water will be treated and then released to Mammoth Lake through a discharge diffuser.

To allow the mining of the Whale Tail Pit, Whale Tail Lake will be partly dewatered once the Whale Tail Dike is constructed. Following the completion of mining, the open pit will be filled with natural runoff and water pumped from Whale Tail Lake (South Basin) into Whale Tail Pit. The north and south basins of Whale Tail Lake are expected to reach the same elevation within eight years (2029). The Whale Tail Dike and the Mammoth Dike will be breached when the water quality monitoring results meet discharge criteria as per NWB Type A Licence conditions to allow water to return to the natural flow patterns downstream.

The Project was designed to minimize the areas of surface disturbance, stabilize disturbed land surfaces against erosion, and return the land to a post-mining land use to re-establish traditional pursuits and wildlife habitat. This will mainly be achieved by rapidly dewatering during the open water season, mining the pit as efficiently as possible, and then refilling as early as possible during closure. Post-closure environmental monitoring will continue until it has been verified that reclamation has successfully met closure and reclamation objectives.

Baseline programs have been completed for the Project and have included data collection for the physical environment (e.g., terrain and soils, permafrost, geochemistry, noise, and surface water quantity and quality), biological environment (e.g., vegetation, terrestrial wildlife and birds, and fish and other aquatic organisms), and

the cultural environment (e.g., IQ, archaeology, and socio-economics) in support of the environmental assessment and Type A Water Licence Amendment Application. Agnico Eagle has completed an environmental assessment to identify and assess potential environmental and social effects resulting from the Project. It is anticipated that the Final Environmental Impact Statement (FEIS) Amendment and Type A Water Licence Amendment will be submitted to the NWB and NIRB in June 2016, at the time of the NPC conformity determination decision. The results of the environmental assessment found that with mitigation, the Whale tail Pit, Whale Tail haul road, and the extension of the Meadowbank Mine, will not cause long-term significant negative effects as a result of proposed construction, operations, and closure.

Agnico Eagle has developed monitoring and management programs required to mitigate, monitor, and report on its environmental performance against the regulatory requirements contained within its Meadowbank operating authorizations, permits, licenses, and leases consistent with the legal requirements of applicable Acts and Regulations in Nunavut. Existing Meadowbank Mine management and monitoring plans have been updated or addendums have been added to reflect the Project and will be submitted as part of the FEIS and Water Licence Amendments in June 2016. The performance of the management plans will be monitored periodically and the results communicated. Independent subject matter experts or consultants may be engaged to review performance where necessary. The accuracy of the environmental impact predictions and the effectiveness of the mitigation measures will be verified through monitoring and annual reporting. If unusual or unforeseen adverse environmental impacts are noticed, corrective action will be put in place. Through the adaptive management process, the existing mitigation measures will be adjusted or new mitigation measures implemented if necessary. External reporting will be completed, as required.

A key goal of Agnico Eagle's public consultation and engagement program has been to ensure the Company obtains a "social licence to operate", by securing the support of a majority of residents from potentially impacted local communities. Since operations of Meadowbank Mine began, Agnico Eagle has continued public consultation by annually meeting with the community and local stakeholders within the Kivalliq Region, regulatory agencies and local employees routinely which has allowed a better general understanding of the rights, interests, values, aspirations, and concerns of the potentially affected stakeholders, with particular reference to the local community of interest, Baker Lake. Through this continued consultation Agnico Eagle has developed an operational culture that recognizes and respects these relevant interests in the planning and executing processes. Agnico Eagle has consulted with local stakeholders and regulators regarding the current Amaruq exploration activities and the proposed Whale Tail Pit, as an extension to the Meadowbank Mine.

Consultation and regulatory engagement discussions were also considered as part of the alternatives assessment. The alternatives that shaped the overall Project includes the Project Go/No-Go decision, deposit, mining method, and production rate, processed ore containment and tailing storage, overburden and waste rock disposal, water management, transportation access and quarry development, and infrastructure support.

Agnico Eagle is a senior mining company with a proven reputation for sustainability and economic success in Nunavut. Its' success is based on grass roots exploration and recognizing the potential in the areas it explores. Agnico Eagle is committed to creating value for their shareholders by operating in a safe, socially, and environmentally responsible manner while contributing to the prosperity of their employees, their families, and the communities in which they operate. These commitments based on Agnico Eagle's Sustainable Development Policy, are published in the Annual Sustainable Development Report, and are reported annually to the Kivalliq Inuit Association, NWB, and NIRB.

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ᐊᒃᓗᓄᑦ ᐃᒍ ᐅᓴᖃᖅᓂᐊᖅᑐᓕᕆᔨᓄᑦ - ᐊᐅᖅᑎᓇᖅᑐᒥᑦ (ᐊᒃᓗᓄᑦᓄᑦ) ᑐᓴᕋᐅᓴᐅᒪᔪᑦ ᐱᓕᕆᐊᓂᖅᓯᒪᔪᖅ Whale Tail ᐃᓕᓴᒃᑐᖅᓯᒪᔪᖅ (ᐱᓕᕆᐊᖅ), ᐃᓕᓴᕐᓴᐅᔪᖅ ᐱᑕᓕᐅᔪᖅ ᐃᓂᐅᔪᐃᓐᓴᖅ ᐊᒪᓂᖅ ᖃᓄᖅᓴᐃᓂᓯᒪᔪᑦ ᐱᓕᕆᐊᓂᖅᓯᒪᔪᑦ ᐊᐅᖅᑎᓇᖅᑐᒥᑦ ᐊᒪᓕᓗ ᓇᓗᓕᕆᐅᓂᓯᒪᔪᑦ ᑐᓴᕋᐅᓴᖃᖅᑐᒥᑦ ᐅᐃᒍᕆᐊᖃᓕᒫᑐᑦ ᐊᐅᖅᑎᓇᖅᑐᒥᑦ ᐅᓴᖅᓂᐊᖅᓯᒪᔪᖅ ᐃᓕᓴᕐᑎᓪᓗᒍ ᐱᓕᕆᐊᖅᓯᒪᔪᖅ Whale Tail ᐃᓕᓴᑐᖅᓯᒪᔪᖅ. ᐃᓕᓴᕐᓴᐅᓕᕆᔨᖅ ᐃᓯᒪᓂᖅᓯᐅᑎᑕᖅᑲᓂᓯᓂᔪᑦ ᐱᓕᕆᐊᖅᓯᒪᔪᑦ ᓇᓗᓇᐃᔪᒃᑯᓂ NIRB-ᔨᓂᓕ, ᐊᒃᓗᓄᔨᓂ ᖃᓄᖅᑐᑦ ᐊᐳᖅᑎᐊᖅᓯᒪᔪᑦ ᐊᐅᖅᑎᓇᖅᑐᒥᑦ Type A ᐃᒪᖏᑦ ᓕᐃᓴᓯᒥᑦ (ᓇᓴᐅᑎ 2AM-MEA1525) ᐃᓕᐅᑎᓪᓗᒥᑦ ᐅᓴᖅᓂᐊᖅᓯᒪᔪᖅ Whale Tail ᐃᓕᓴᑐᖅᓯᒪᔪᖏᑦ ᐊᒪᓕᓗ ᓴᓇᐅᐅᓂᖅᓴᓂᓕ ᐊᐅᓪᓚᖅᑐᓂᖅᓴᓂᓕᓪᓕ ᐊᑐᖅᑕᐅᓂᐊᖅᑐᓂᓕ ᐱᖏᓪᓗᒍᓂᓕ ᓄᓇᕗᒻᒥ ᐃᓕᓴᕐᑎᓪᓗᒍᓂ (NWB).

ᐊᒪᑕᖅ ᐱᑎᐅᔪᖅ 408 ᑭᐸᓛᖅᑐᑦ ᑭᓯᒥᑕᐅᔪᑦ (km^2) ᐃᓂᐅᔪᒥᑦ ᐃᓄᐃᑦ ᓇᖏᒥᓂᕆᔨᖅᓂᓂᓂ 150 ᑭᓯᒥᑕᓪᓗᐊᑦ ᐅᐊᖏᓇᖅᓂᓂ ᖁᒪᓂᑐᐊᕆᒥᑦ ᐅᖏᓪᓗᑎᒥᔪᖅ ᐊᒪᓕᓗ 50 ᑭᓯᒥᑕ ᐅᐊᖏᓇᖅᐸᓯᖅᓂᓂ ᐱᖏᖏᓇᖅᐸᓯᖅᓂᓂ ᐊᐅᖅᑎᓇᖅᑐᒥᑦ ᑭᓇᓪᓕᕆᒥᑦ ᐅᖏᓪᓗᑎᒥᔪᖅ. ᐅᓴᖅᓂᐊᖅᑕᐅᓂᐊᖅᑐᑦ ᐅᑯᐊᖏᓪᓗᓯᓪᓂᐊᖅᑐᑦ (ᓄᓇᓗ Whale Tail ᐃᓕᓴᑐᖅᓯᒪᔪᖅ), ᐊᒪᓕᓗ ᐅᓴᖅᖁᐃᓕ ᐊᒃᓴᖅᑕᐅᓗᑎᑐᒃ ᓄᓇᑯᐊᑎᓂᓯ ᓇᒪᓐᖏᓕᕆᔨᓄᑦ ᐃᒃᓗᕐᓴᐅᔨᓕᑦ ᐊᐅᖅᑎᓇᖅᑐᒥᑦ ᓄᓇᖅᑐᖅᑕᐅᓂᐊᖅᑐᑦ ᐃᓕᓴᕐᑎᓪᓗᒍᓂᓕ ᐊᑐᖅᑕᐅᓂᐊᖅᑐᑦ ᓄᓇᖅᑐᖅᑕᐅᓂᐊᖅᑐᑦ (ᓄᓇᓗ, ᓄᓇᕗᐊᓂᕆᔨᐅᓂᐊᖅᑐᑦ), ᐅᓪᓚᖅᑯᓂ, ᖃᓄᕗᒍᓄᓪᓚᖅᑐᑦ ᒥᑦᑕᖃᖅ, ᓄᖃᒥᑦᑐᖅᓯᒪᔪᖅ ᑕᓪᓕᐊᓂᖅᑐᑦ ᐅᖃᖅᑎᑦᓯᒪᔪᖅ, ᐅᖃᖅᑎᑦᓯᒪᔪᖅ, ᐅᓴᖅᓂᐊᖅᑐᑦ (WRSF), ᐅᓴᖅᑕᖅᑕᐅᔪᑦ ᑲᑎᖅᓯᐅᓂᐊᕐᓗᖅ, ᓴᖅᑭᑐᓗᐋᓄᖅᓴᓂᑎᑦᖃᖅ ᑕᓯᖃᖅ, ᐃᓕᒥᑦ ᐊᒪᓕᓗ ᖃᓄᖅᓴᐃᖅᖃᖅ ᐊᒪᓕᓗ ᐱᓕᕆᐊᖃᓂᖅᓴᓂᓕ ᐊᒋᖅᐅᓕᔨᓂ, ᐅᓴᐳᑕᖅᓂᓯᓂᓕ ᐊᐸᖏᓂᓂ, ᐊᐸᖏᓂᓂ, ᐃᓕᓴᕐᓂᕐᓇᓂ (ᓄᓇᓗ, ᑲᑎᖅᓴᐃᓯᓂᓕ ᑕᓯᖃᖅ, ᓄᐸᓗᐃᓂ, ᐃᓗᓕᑕᐅᓗᓂᐃᓗ), ᐊᒪᓕᓗ Whale Tail ᐃᓗᓕᑐᖅᓯᒪᔪᖅ. ᐱᔨᔪᑎᑦᓯᓗᒍ ᐱᓕᕆᐊᓯᖅ, ᐊᒃᓗᓄᔨᓂ ᑐᓴᕋᐅᓴᐅᒋᐊᔪᑦ ᐊᖏᑫᓕᑕᐅᑎᓪᓯᖅᓂ ᓄᓕᓯᖅᓂ ᐃᒪᓕᒃᑯᓂᓕ ᐅᑎᓪᓗᒥ ᐅᑭᐅᖅ ᐱᓕᕆᐊᖅᑐᒥᑦ ᐊᐅᖅᑎᓇᖅᑐᒥᑦ ᐅᐸᑐᓕᕆᔨᖅ ᐅᓴᐳᑕᑕᓯᓂᓕᓪᓕ ᐊᐅᖅᑎᓇᖅᑐᒥᑦ ᐃᓄᐃᑦ ᐱᓕᕆᐊᖅᑐᒥᑦ ᐊᐅᖅᑎᓇᖅᑐᒥᑦ ᐃᓕᓴᕐᑎᓪᓗᒍᓂᓕ ᐊᒪᓕᓗ

ᐱᓕᕆᐊᖅ ᐊᑐᖅᓂᐊᖅᑐᖅ ᑕᐃᒪᐅᔨᒥᐅ ᐃᖏᕐᕋᖏᓂᖅᓯᒪᑦ ᐱᓴᕆᐊᖅᖢᖅᑐᓂᐅ, ᐊᑐᖅᓯᑎᐅ ᐃᒪᐅᓂᐊᖅ ᐊᖏᖅᑐᐃᓐᓇᖅᑐᐅ ᐱᖅᔪᑎᓯᓂᖅᑐᑦ ᐱᖅᔪᑎᓯᓂᖅᑐᑦ ᐱᓕᕆᐊᓂᐅ, ᐅᑎᖅᑎᑦᓴᖅᑐᑦ ᐱᓕᕆᐊᓂᐅ ᐱᓕᕆᐊᓂᐅ ᐊᑐᖅᑎᓴᖅᑐᑦ

ᐊᓂᑎᒥᐅ ᖃᐅᔨᒋᐊᖅᑕᑦᓯᓂᖅ ᑲᔪᓯᓂᐊᖅᑐᖅ ᑭᓯᐊᓂ ᓇᓗᓇᐃᖅᐸᑕ ᐅᑎᖅᑎᑎᓇᓂᖅ ᑎᑭᐅᑎᑦᑎᐊᖅᒪᑦ ᐅᑲᓄᐊᖅᐸᓪᓕᐊᓂᖓᑦ ᐊᒻᒪᓗ ᐅᑎᖅᑎᑎᓇᓂᖓᑦ ᐱᓕᕆᔨᓄᑦ.

ᐱᓕᓇᐊᖓᑦ ᑭᒡᓕᓕᐅᓇᓂᖓᑦ ᑐᑭᖏᓚᔪᑦ ᐱᐊᓂᑕᐅᓕᐅᖅᑐᑦ ᐊᒻᒪᓗ ᐃᓕᐅᓕᐅᖅᑐᑦ ᓴᓴᐅᑎᓂᒃ/ᑎᑎᖅᑲᓂᒃ ᑲᑎᖅᑲᐊᓂᖅ ᐊᖏᖅᑎᑦ (ᓄᓇᓗ ᓄᓇ ᐊᒻᒪᓗ ᐃᓱᐊᐃᑦ, ᖃᓄᐊᖓᐃᓇᐅᔪᖅᑐᖅ, ᓄᐃᓇᓚᓂᖅ, ᓂᐱᖏᖅᓂᖅ, ᐊᒻᒪᓗ ᐃᒪᐅᓱ ᖁᓕᖏ ᖃᓄᑎᒋᐅᓂᖓᓚᓄᑦ ᐊᒻᒪᓗ ᖃᓄᐃᓂᓕᕆᖓᓄᑦ), ᐅᒪᓂᖃᖅᓂᖓᒃ ᐊᒻᒪᑎᐅᓱ (ᓄᓇᓗ ᐱᐅᖅᑐᐃᑦ, ᓂᓪᔨᑎᑦ ᐊᒻᒪᓗ ᑎᑎᖅᑲᑦ, ᐊᒻᒪᓗ ᐃᖃᓗᐃᑦ ᐊᓂᖏᓪᓗ ᐃᒪᒋᐅᑕᐃᑦ), ᐊᒻᒪᓗ ᐱᖅᓂᓂᔨᓂ (ᓄᓇᓗ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔭᑐᖃᓕᓂᑦ, ᐃᑕᑦᓂᓕᑕᓚᓂᑦ, ᐊᒻᒪᓗ ᐃᓄᐃᑦ-ᐱᐅᖅᑕᓪᓕᐊᔪᑦ) ᐃᑲᔪᐃᓂᒧᑦ ᐊᒻᒪᑎᓚᓚᓂᒧᑦ ᖃᐅᔨᓴᐃᓂᒧᑦ ᐊᒻᒪᓗ Type A ᐃᒪᒋᑦ ᓪᐃᓴᓂᒥᑦ ᐊᖏᖅᑐᐅᓂᒧᑦ ᑕᐅᔨᓂᒥᑦ ᐊᒻᒪᑎᓚᓚᓂᒧᑦ ᖃᐅᔨᓴᐃᓂᒧᑦ ᐃᓕᑕᖅᓂᒧᑦ ᐊᒻᒪᓗ ᐃᓄᖅᑎᑎᑦᓴᓂᐅᔪᓂᖓᓄᑦ ᖃᓄᐃᓚᓕᖅᑎᑕᑎᓂᓂᓂᓄᑦ ᐱᓕᓚᐊᒥᑦ ᐱᔪᓄᑦ. ᓂᐱᖅᓄᑦᓯᐊᓂᖓᓄᑦ ᑭᓯᐊᓂᖓᓄᑦ ᐊᖏᖅᑐᐅᓂᒧᑦ ᐊᒻᒪᓗ Type A ᐃᒪᒋᑦ ᓪᐃᓴᓂᒥᑦ NWB-ᓄᓪᓗᑦ ᐊᒻᒪᓗ NIRB-ᓄᓪᓗᑦ ᓱᓂ 2016-ᒥᑦ, NPC-ᓄᑦ ᒪᓕᖅᓚᓕᒪᑕ ᖃᐅᔨᓴᐃᓂᒧᑦ ᐃᓱᒪᓕᐅᖅᑕᓪᓕᐊᓂᒧᑦ. ᖃᐅᐃᖅᓚᓂᐅᔪᑦ ᐊᖏᖅᑐᓚᓂᒧᑦ ᖃᐅᔨᓴᐃᓂᒧᑦ ᓇᓂᔪᑦ ᐊᖅᑭᓗᖅᑭᑎᓂᑎᓂᒧᑦ, Whale Tail ᐃᓗᑦᑐᖅᓱᒪᔪᖅ, Whale Tail ᐅᔨᖏᑕᖅᓂᒧᑦ ᐊᑦᔪᐊᑎ, ᐊᒻᒪᓗ ᐅᐃᒍᒋᐊᖅᓱᓂᖅ ᐊᐅᖅᑎᓂᓇᖅᑐᑕᒥᑦ ᐅᓴᕋᓂᐊᓂᓂᖅ, ᐊᐅᓂᐅᔪᑦ ᑕᑭᑎᒋᓂᖓᓄᑦ ᐊᖅᑭᔪᒥᒃ ᐱᐅᖅᑎᑐᑎᒃ ᖃᐅᔨᓴᐃᓂᖅᑐᓂᖓᖁᓪᓕᖅᑎᓂᖓᓄᑦ ᓴᓇᓴᐅᓂᖓᓄᑦ, ᐊᐅᓪᓚᕆᓂᖓᓄᑦ, ᐊᒻᒪᓗ ᐅᐅᓂᖃᖅᓂᒧᑦ.

ᐊᒻᓂᓂᔪᓂ ᐱᓕᓇᐊᖏᓚᐅᖅᑐᑦ ᖃᐅᔨᒋᐊᖏᑕᑦᓯᓂᒧᑦ ᐊᒻᒪᓗ ᐊᐅᓚᑦᑎᓂᓂᒧᑦ ᑐᑭᖏᓚᔪᓂᑦ ᐱᓴᓇᐊᖏᖅᑐᑦ ᐊᖅᑭᔪᒥᒃᑐᑦᑎᓂᓂᒧᑦ, ᐊᒻᒪᓗ ᐅᓂᐸᑉᑎᓂᓂᒧᑦ ᐊᖏᖅᑐᐅᓂᒧᑦ ᖃᐅᔨᓴᐃᓂᖅᑐᖅ ᓴᓇᔨᓕᓕᐅᑎᓂᖓᓄᑦ ᐱᓕᕆᔨᒃᑯᑦᓯᓂᖓᓄᑦ ᐃᓕᓴᐅᔪᓂᖓᓄᑦ ᐱᓕᕆᔨᒃᑯᑦᓯᓂᖓᓄᑦ ᐊᒻᒪᓗ ᐃᓕᓴᐅᔪᓂᖓᓄᑦ ᐊᐅᓚᑦᑎᓂᓂᒧ

ᐅᓴᕐᓂᐊᖏᑕᐅᔪᓇᓕ ᑐᖏᑦᑕᐅᓯᒪᓂᖅᓯᑦ ᐊᒻᒪᓗ ᖃᒪᑲᑎᑦᑐᓇᓕ ᑐᖏᑦᓯᓯᒪᕐᕕᐃᓕ, ᐅᖅᓱᑕᐅᑦᑎᔪᑦ ᐊᒻᒪᓗ ᐊᑲᑯᖏᑕᐅᔪᑦ ᐅᓴᖏᑲᐃᑦ ᐃᓕᑕᐅᔪᑦ, ᐃᒪᖅᔫᑦ ᐊᐅᓪᓚᑎᓂᖏ, ᐃᖅᑦᕋᕆᖅᓂᕐᔫᑦ ᐱᔪᖅᓇᖅᓂᖏ ᐊᒻᒪᓗ ᐃᓗᑦᑐᖏᑦ ᐱᔪᓯᓚᐅᕐᓂᖏ, ᐊᒻᒪᓗ ᐱᕐᔪᐊᑎᓴᐅᔪᓇᓕ ᐃᑲᔪᖏᑕᐅᓂᖏ.

ᐊᑭᓕᔪᔪᑦ ᐊᖓᔪᒃᓴᖅᓯᖓᔪᑦ ᐅᓴᕐᓂᐊᖏᑐᓚᓂᕐᒧᑦ ᑲᒡᓯᓂᐅᑎᓂᖏᖅᑐᑦ ᐱᐅᓂᔪᓇᑦᑐᓂᓗ ᐱᓕᕆᔨᑦᑎᓂᓗ ᐊᓐᓇᓂᔪᖓᓂᓂᓗ ᑲᑎᒪᓗ ᐃᓕᑕᖏᓐᓂᒃᑯᓂᓗ ᐊᐅᓚᑦᑎᓂᓗ ᐊᐅᓚᑦᑎᓂᓗ ᐃᓕᑕᖏᓐᓂᒃᑯ

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Appendix 1-E
Multiple Account Analysis

MEADOWBANK MINE – WHALE TAIL PIT FACT SHEET

Location

- Meadowbank Mine site located in the Kivalliq Region of Nunavut at approximately 70 km north of the community of Baker Lake.
- Amaruq property is located approximately 50 km northwest of the Meadowbank Mine site.

Life of Mine

- Meadowbank Mine began construction in 2008 and has been in commercial operation since 2009.
- Whale Tail Pit is a satellite deposit located on the Amaruq property to be mined over a three to four year period. It will take 2 years to construct the facilities necessary to support mining and once mining has concluded, Agnico Eagle proposes to actively reclaim the facilities over a 3 year period. Post-closure monitoring is planned until 2038.

Production

- Open pit mining will occur in only one pit, Whale Tail Pit.
- 8,279,144 Mt of ore will be mined.
- The total gold resource for the Whale Tail Pit will extend the Life of Mine of Meadowbank.

Processing

- Ore processing, handling, treatment, and disposal will continue at the Meadowbank Mill.
- Tailings will be stored in the existing approved tailings storage facility at Meadowbank Mine.

Transport

- Transportation to site (marine barging, airstrip, and transportation along the All Weather Access Road), housing, and handling will remain the same as authorized under the current Project Certificate for Meadowbank Mine.

Roads

- The Project is designed to operate as a satellite of the main Meadowbank facilities, and will be accessed by the existing 72 km exploration access road, which will be upgraded to accommodate haul trucks and increased traffic.
- Meadowbank All Weather Access Road will continue to be used.

Re- Supply

- Marine supply via open water seasonal shipping to Baker Lake and transported via Meadowbank All Weather Access Road and haul road to site.

Environment

- Baseline studies completed including terrestrial, atmospheric, freshwater, and cultural environments.

Socio-Economics

- Construction employment up to 500 person per year, during dewatering. Agnico Eagle capital investment estimated at approximately 233 M dollars.
- Operational employment on average up to 931 persons per year over three to four year period (rotational work basis with approximately 50% on site at any given point in time).

Traditional Use

- Inuit Qaujimajatuqangit information collected through series of workshops conducted in 2005, 2014, and 2016.
- Inuit Qaujimajatuqangit integrated into the environmental impact statement and provided input on development of mitigation and monitoring plans.

Closure and Reclamation

- Objective of closure is a physically and chemically stable project footprint for the long-term protection of the environment and people of Nunavut.
- Most closure activities will occur over a 3 year period with passive closure to be maintained until all water management infrastructure is breached/removed after which a period of post-closure will be observed to confirm physical and chemical stability.

LIST OF ACRONYMS AND UNITS OF MEASURE

Acronym	Definition
Agnico Eagle	Agnico Eagle Mines Limited – Meadowbank Division
ARD	Acid Rock Deposition
AWAR	All Weather Access Road
DFO	Fisheries and Oceans Canada
FEIS	Final Environmental Impact Statement
IIBA	Inuit Impact and Benefit Agreement
INAC	Indigenous and Northern Affairs Canada
IOL	Inuit Owned Land
KIA	Kivalliq Inuit Association
LOM	Life of Mine
MAA	Multiple Accounts Analysis
NIRB	Nunavut Impact Review Board
NLCA	Nunavut Land Claims Agreement
NPC	Nunavut Planning Commission
NTI	Nunavut Tunngavik Incorporated
NWB	Nunavut Water Board
NWNSRTA	*Nunavut Waters and Nunavut Surface Rights Tribunal Act*
Project	Whale Tail Pit and haul road
RMMS	Responsible Mining Management System
TSF	Tailings Storage Facility
TSM	Towards Sustainable Mining
VC	Valued Component
WRSF	Waste Rock Storage Facility

Unit of Measure	Definition
km	Kilometre
km^2	square kilometre
m	Metre
m^2	square metre
m^3/s	cubic metre per second
m^3	cubic metre
m^3/day	cubic metre per day
m^3/year	cubic metre per year
Mt	million tonne
t/day	tonne per day
V	Volt

1.0 REGULATORY REGIME AND PROJECT DESCRIPTION

1.1 Introduction

Agnico Eagle Mines Limited – Meadowbank Division (Agnico Eagle) is proposing to develop Whale Tail Pit, a satellite deposit located on the Amaruq property, to continue mine operations and milling at Meadowbank Mine. The Amaruq property is a 408 square kilometre (km^2) site located on Inuit Owned Land (IOL) approximately 150 kilometres (km) north of the hamlet of Baker Lake and approximately 50 km northwest of Meadowbank Mine in the Kivalliq Region of Nunavut (Figure 1.1-1). The right to explore and extract minerals from the property was acquired by Agnico Eagle in April 2013 subject to a mineral exploration agreement with Nunavut Tunngavik Incorporated (NTI).

Meadowbank Mine is an approved mining operation and Agnico Eagle is looking to extend the life of the mine by constructing and operating Whale Tail Pit and haul road (referred to in this document as the Project). As an amendment to the existing operations at Meadowbank Mine, it is subject to an environmental review established by Article 12, Part 5 of the *Nunavut Land Claims Agreement* (NLCA). Baseline data have been collected in support of the Environmental Review to document existing conditions and to provide the foundation for a qualitative and quantitative assessment of project operations and the extension of the mine development, to be evaluated in the Final Environmental Impact Statement (FEIS) for the Project.

Agnico Eagle is seeking approval to extend Meadowbank Mine to include development of resources from Whale Tail Pit and requests the Nunavut Impact Review Board (NIRB) reconsider Agnico Eagle deems this submission as an amendment to the activities previously assessed and approved by NIRB.

Concurrent with the reconsideration of the Project Certificate by the NIRB, Agnico Eagle is seeking an amendment to the Meadowbank Mine Type A Water Licence (No. 2AM-MEA1525) to include mining of Whale Tail Pit and construction and operation of associated infrastructure from the Nunavut Water Board (NWB) (refer to Volume 2).

In support of the Project Certificate reconsideration and Type A Water Licence Amendment, Agnico Eagle has provided this stand-alone FEIS Amendment document to guide the review process, and reintroduce NIRB to the FEIS (Cumberland in 2005). The June 2016 submission includes a main volume, the project description, impact assessment, monitoring and mitigation plans, and Type A Water Licence Amendment package related to proposed Project development. Existing Meadowbank Mine management and monitoring plans have been updated or addendums have been added to reflect the Project and will be submitted as part of the FEIS and Water Licence Amendments in June 2016. The Project Description will not change for the June 2016 FEIS Amendment submission.

As the economics of the Meadowbank Mine have improved, Agnico Eagle's Meadowbank Mine Division's priority in recent years has been to optimize mine operations, specifically engineers have been considering the feasibility of expanding operations to extend the life of mine (LOM) at Meadowbank. Extending the life of a mine through development of additional ore deposits is a continuous process. Consistent with the Project Certificate Item 29, Agnico Eagle is herein "reporting to NIRB if and when [Agnico Eagle] develops plans for an expansion of the Meadowbank Gold Mine." Exploration is on-going with the objective of identifying additional deposits or ore bodies feasible for development, such as Whale Tail.

Y:\burnaby\CAD-GIS\Client\Agnico_Eagle_Mines_Ltd\Whale_Tail\99_PROJECTS\1541520_FEIS\02_PRODUCTION\FEIS\MXD\1300_Documentation\1340_Project_Description\Report\1541520_FIG_1.1-1_PROJECT_LOCATION.mxd

560000 580000 600000 620000 640000 660000 680000 700000 720000

7260000 7240000 7220000 7200000 7180000 7160000 7140000

N

Whale Tail Pit

Meadowbank Mine to Whale Tail (71.5 km)

Vault Pit

Baker Lake to Meadowbank Mine (107.5 km)

Baker Lake

Pipedream Lake

Tehek Lake

Schultz Lake

Baker Lake

7012 7014 7001 7009 7013 7016 7912

LEGEND

- COMMUNITY
- PROPOSED HAUL ROAD
- ALL WEATHER ROAD
- WHALE TAIL PIT
- MEADOWBANK OPERATION AND INFRASTRUCTURE
- CLAIM BOUNDARY
- WATERCOURSE
- WATERBODY

REFERENCE

1. HAUL ROAD OBTAINED FROM AGNICO EAGLE MINES LIMITED. 2015-10-14 FROM 6103-117-230-200_R0.dwg
2. CLAIM BOUNDARIES OBTAINED FROM AGNICO EAGLE MINES LIMITED.
3. WATERCOURSE AND WATERBODY DATA OBTAINED FROM CANVEC © DEPARTMENT OF NATURAL RESOURCES CANADA. ALL RIGHTS RESERVED.
4. INSET MAP DATA OBTAINED FROM ESRI.

DATUM: NAD 83 CSRS PROJECTION: UTM ZONE 14

12 0 12
KILOMETRES

PROJECT
AGNICO EAGLE

AGNICO EAGLE MINES LIMITED:
MEADOWBANK DIVISION
WHALE TAIL PIT PROJECT

TITLE

PROJECT LOCATION AND CLAIM BOUNDARIES

Golder Associates

PROJECT		1541520	FILE No.	
DESIGN	JR	24 Mar. 2016	SCALE AS SHOWN	REV. 0
GIS	CDB	24 Mar. 2016		
CHECK	JR	09 May 2016		
REVIEW	LY	09 May 2016		

FIGURE 1.1-1

1.1.1 Project Definition

The Meadowbank Mine represents construction, operations, maintenance, reclamation, closure, and monitoring of an open pit gold mine in the Kivalliq Region of Nunavut. Agnico Eagle constructed and has operated the Meadowbank Mine since 2009.

Table 1.1-1 summarizes the Project scoped defined in the FEIS (Cumberland 2005) comparative to revised scope associated with the development of the proposed Project.

Agnico Eagle understands that in accordance with Section 13.5.5. of the NLCA or Section 39(2) of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (NWNSRTA) the NWB is not precluded from issuing interim, short-term approvals for water uses related to [ ] developmental work for a proposal under development impact review.

One of Agnico Eagle goals is to keep Meadowbank staff employed without a stoppage pending approval and development of Whale Tail and or other Agnico Eagle projects under development in the Kivalliq Region.

Agnico Eagle has conducted environmental baseline studies in the Project area, the results of which have been integrated into the current Project design. As part of the original environmental review process, valued components (VCs) for Meadowbank Mine were identified in consultation with regulatory authorities and members of the local community.

The FEIS Amendment is consistent with the FEIS (Cumberland 2005), and Agnico Eagle has applied the same VC's to the current Project. They include air quality, noise, permafrost, vegetation, wildlife, birds and bird habitat, surface water quality, surface water quantity, fish and fish habitat, archaeology, traditional land use, and socio-economic VCs including employment, training, business opportunities, community wellness, infrastructure, and social services (refer to Volume 3, Section 3.2).

Agnico Eagle will continue to implement a project environmental management system consistent with operations at Meadowbank Mine. The system consists of four key elements: an integrated environmental management plan, a formal environmental awareness program, reporting and transparency with regulatory agencies and the Kivalliq Inuit Association (KIA), and an on-going environmental monitoring program. Refer to Volume 8 for detailed information on Agnico Eagle's mitigation and monitoring plans.

Agnico Eagle believes the scope of the Project defined in the FEIS (Cumberland 2005) has not changed significantly with the development of the Project.

Table 1.1-1: Definition of Scope

	FEIS (Cumberland 2005) (consistent with Section 2.0 of the NIRB Guidelines 2004)	Revised Scope – FEIS Amendment
Location/Land Tenure	[Meadowbank Mine] is located on Inuit Owned Land approximately 70 km north of Hamlet of Baker Lake.	The Amaruq property located approximately 150 km north of the Hamlet of Baker Lake and approximately 50 km northwest of the Meadowbank Mine. Project Development Area boundaries expanded.
Resource	The total gold resource at Meadowbank Mine was estimated to be 3.08 million ounces.	The total gold resource for the Whale Tail Pit will extend the LOM of Meadowbank for three to four years.
Life of Mine	This resource will be extracted during the roughly 9 to 10 year operational lifespan of the mine. Mine construction and pre-stripping is scheduled to begin in March 2005 and mine/processing in December 2006. Production will be split between open pit mining (87%) and underground mining (13%).	This resource will be extracted over approximately three to four year period. Construction and pre-stripping is scheduled to begin in 2018 and mining in October 2018 with mill feed expected to begin in third quarter of 2019. Dewatering is currently scheduled to occur between the first and third quarters of 2019. Infrastructure/activities at Meadowbank Mine that support the Project will be extended for another three years and will remain the same as authorized under the current Project Certificate.
Site Access	The [Meadowbank Mine] is designed as a “fly in/fly out” operation with an airstrip providing year round access to the site. A 92 km long winter haulage route from Baker Lake to the Project will provide seasonal access and re-supply, while permanent, on-site mine access roads will connect the open pit areas to site infrastructure. 110 km All Weather Access road from Baker Lake to Meadowbank for shipment of supplies; amended in 2009 to include access for ATVs and hunters. The site is not publically accessible beyond km 85.	Existing airstrip used during exploration phase will be reclaimed. The Project is designed to operate as a satellite of the main Meadowbank facilities, and will be accessed by the existing exploration access road, which will upgraded to accommodate haul trucks and increased traffic. Transportation to site (marine barging, airstrip, and transportation along the all-weather access road), housing and handling will remain the same as authorized under the current Project Certificate.
Laydown Facilities and Baker Lake Marshalling Area	All construction and operating supplies for the [Meadowbank Mine] will be transported on ocean freight systems to facilities constructed at the Hamlet of Baker Lake, which will include barge unloading facilities, laydown area, and tank area.	Existing Meadowbank facilities will be used. A small laydown area will be constructed on the Whale Tail Pit site.

Table 1.1-1: Definition of Scope (continued)

	FEIS (Cumberland 2005) (consistent with Section 2.0 of the NIRB Guidelines 2004)	Revised Scope – FEIS Amendment
On-site Facilities	On-site facilities will include a mill, power plant, maintenance facilities, tank farm, fuel storage, water treatment plant, sewage treatment plant, airstrip, and accommodation for 250 people.	Construction of on-site facilities on the Whale Tail Pit site: power plant, maintenance facilities, tank farm, water treatment plant, water management infrastructure, sewage treatment plant, heli-pad, and accommodation for 210 people at the main camp. Continued use of the existing Amaruq exploration camp on the property exploration activity. All milling will be done at Meadowbank Mine at a mill rate consistent or lower than the current mill rate (9,000 to 12,000 tonnes per day). Power generation for the Mill and camp at Meadowbank will remain the same as authorized under the current Project Certificate.
Mine Infrastructure	Open pit mining will occur in three separate areas and water retention dykes will be constructed from mined rock at two of these pits to allow for the mining of ore beneath shallow lakes. A low permeability vertical slurry wall will be constructed in the centre of the dykes to minimize seepage from surrounding lakes into the work area. Construction of the dykes will use floating silt curtains to minimize the release of suspended solids into surrounding lake waters.	Open pit mining for the Project is planned to occur in one area, Whale Tail Pit. Flow of surface water into the pit will be limited through construction of two dikes. Whale Tail Dike will be constructed to divide the pit area from the southern portion of Whale Tail Lake, and Mammoth Dike is required for dewatering the pit area and to limit the water flow from Mammoth Lake into the pit during important flood events. To limit the impact of dike construction, turbidity barriers will be installed. Only non-potentially acid generating (NPAG) material will be used for the construction of infrastructure. Water tight rockfill dikes with a geomembrane will be constructed. As needed, sodium bentonite will be mixed in place with aggregate or in a slurry to reduce the permeability of the product.

Table 1.1-1: Definition of Scope (continued)

	FEIS (Cumberland 2005) (consistent with Section 2.0 of the NIRB Guidelines 2004)	Revised Scope – FEIS Amendment
Ore Processing	Ore will be processed according to one of two options involving cyanide leaching, cyanide destruction, and refining dore bars. Details will be provided on the destruction of cyanide to rationalize the chosen option. The combined leach residue slurry will be treated with an air/SO_2 process to detoxify the free cyanide in the tailings stream.	Ore processing, handling, treatment, and disposal will continue at the Meadowbank Mill and tailings will be stored in the footprint of the existing approved tailings storage facility consistent with the current Project Certificate.
Waste Rock	Waste rock will be placed in tailings impoundments and waste rock storage piles. A classification system will be used to identify both PAG and metal leaching rock, and PAG mine rock will be stored in designated storage areas designed for long-term stability. Acidic run-off will be appropriately handled.	Waste rock and overburden generated at Whale Tail will be placed in the Whale Tail Waste Rock Storage Facility. Consistent with Meadowbank a classification system will be used to identify and safely store NPAG and PAG (metal leaching rock). PAG mine rock will be stored in the designated storage areas designed for long-term stability. Run-off will be appropriately handled.
Tailings	The treated tailings will either be disposed under a minimum cover in the Second Portage Lake impoundment area.	No tailings to be treated or disposed of on the Whale Tail Pit site. The existing tailings facility at Meadowbank Mine will continue to be used for tailings disposal. All tailings treatment and disposal will remain consistent with the current Project Certificate.
Freshwater	The freshwater supply for the mine and camp will be pumped from the Third Portage Lake.	The freshwater and potable water supply for the Whale Tail Camp will be pumped from Nemo Lake during most of construction and all of operations and treated at the on-site water treatment plant. Freshwater and potable water will be required from Whale Tail Lake, for construction and closure. Water supply for milling will continue to be sourced in the reclaim pond located near the Meadowbank Mill and freshwater will continue to be taken from Third Portage Lake as approved by the Nunavut Water Board.
Process Water	Mine process water will be primarily reclaimed from the tailings pond; treated sewage will be discharged to the tailings pond.	Mine process water reclamation will remain the same as authorized under the current Project Certificate.
Water Management	Site contact water will be collected in the Tailings Storage Facilities North Cell, the Vault Attenuation Pond or the Stormwater Management Pond. Non-contact water will be diverted from the site through a mix of	Water management infrastructure at Meadowbank Mine tailings facility will remain the same as authorized under the current Project Certificate. Construction of the Whale Tail Pit Attenuation Pond and related infrastructure.

Table 1.1-1: Definition of Scope (continued)

	FEIS (Cumberland 2005) (consistent with Section 2.0 of the NIRB Guidelines 2004)	Revised Scope – FEIS Amendment
	berms and ditches. Dewatered flows from Second Portage Lake will be pumped to Third Portage Lake to create Second Portage Pit while water from Vault Lake will be pumped to Wally Lake to create Vault Pit. Once the pits are operational, dewatering flow will be pumped to attenuation ponds.	Construction of a series of dewatering and diversion dikes for water management of Whale Tail Pit. At the Whale Tail Pit property, contact water will be directed to the Whale Tail Attenuation Pond. Site contact water will be discharged to the Whale Tail Attenuation Pond. Sewage at Whale Tail Pit will be treated using a treatment system similar to the system used at Meadowbank Mine. Treated sewage effluent will be discharged to the Whale Tail Attenuation Pond and discharged with other site contact water. Effluent from the Whale Tail Attenuation Pond will be treated and discharged to Mammoth Lake. Non-contact water will be diverted from site through channels and dikes. Dewatered flows from Whale Tail Lake (North Basin) will either be pumped to Whale Tail Lake (South Basin) or discharged to Mammoth Lake through a diffuser. Any water requiring treatment will be pumped to the water treatment plant prior to discharge through the diffuser in Mammoth Lake. Raising of the water level of Whale Tail Lake (South Basin) to discharge into Mammoth Lake through a southwest diversion channel. Refilling of Whale Tail Lake (North Basin).
Fuel and Hazardous Wastes	[no mention in the FEIS[a]]	A Bulk Fuel Storage Facility will be constructed on the Whale Tail Pit site. All hazardous waste will be hauled to Meadowbank and disposal will remain the same as authorized under the current Project Certificate. Use, transportation, handling and storage of fuel, hazardous materials, concrete, and aggregates will remain the same as authorized under the current Project Certificate.

Table 1.1-1: Definition of Scope (continued)

	FEIS (Cumberland 2005) (consistent with Section 2.0 of the NIRB Guidelines 2004)	Revised Scope – FEIS Amendment
Closure	Upon conclusion of activities, [Agnico Eagle] plans to fully decommission the mine by sealing the underground mine facilities, removing the mill and ancillary buildings, recontouring disturbed areas and reclaiming the vegetation.	Closure and reclamation activities at Meadowbank Mine will remain the same as authorized under the current Project Certificate. However, closure of the Meadowbank Mill, maintenance shop, powerhouse, and camp will be delayed by three years. The Whale Tail site will be closed and reclaimed in a manner consistent with the FEIS[a] and as recommended under the current Project Certificate. Water management at closure for Whale Tail Lake will require flooding of Whale Tail Pit, refilling of Whale Tail Lake (North Basin), breaching of Northeast, Mammoth, and Whale Tail dikes, and decommissioning of North, East, and South Whale Tail diversion channels. The open pit will be filled with natural runoff and water pumped from Whale Tail Lake (South Basin). Post-closure the Whale Tail Waste Rock Storage Facility dike will be breached.
Employment	Meadowbank's operational phase workforce requirement is approximately 370 at the Meadowbank Mine site itself.	The total work force employed by Agnico Eagle will increase during construction and operations of the Project. The current workforce located at Meadowbank Mine for the operational phase will remain similar for the Whale Tail Pit development and with employees stationed at Meadowbank camp for milling and at Whale Tail Pit for mining of the satellite pit.

[a] Cumberland (2005).

[ ] = used to denote when information is changed from the Cumberland 2005 FEIS; PAG = potentially acid generating.

1.1.2 The Proponent

The Amaruq property is owned and managed by Agnico Eagle Mines Limited (NYSE:AEM, TSX:AEM), a Canadian publicly traded mining company listed on the Toronto and New York Stock Exchange, trading symbol AEM, with head offices in Toronto, Ontario.

Agnico Eagle is a senior Canadian gold mining company that has produced precious metals since 1957. Its nine mines are located in Canada, Finland, and Mexico, with exploration and development activities in each of these regions, as well as in the United States. Agnico Eagle has been exploring for minerals in Canada since 1953 and has been active in the Kivalliq Region since 1990. Agnico Eagle owns and operates Meadowbank Mine, which is located 70 km directly north of Baker Lake and approximately 50 km southeast of the Amaruq property. In addition, Agnico Eagle owns mineral exploration and production rights to the Meliadine Gold Project, which is located approximately 25 km north of Rankin Inlet, and 80 km southwest of Chesterfield Inlet.

Agnico Eagle is a senior mining company with a proven reputation for sustainability and economic success in Nunavut. Its' success is based on grass roots exploration and recognizing the potential in the areas it explores like the North. Key contacts within Agnico Eagle for the Project are provided in Table 1.1-2. A summary of Agnico Eagle past performance is provided in Appendix 1-A and is available on-line at: 2014 Audited Financial Statements.

Table 1.1-2: Agnico Eagle Key Contacts

Agnico Eagle – Meadowbank Division:	Agnico Eagles Mines Limited CP 87, 765 Chemin de la mine Goldex Val-d'Or (Qc) J9P 4N9 Ph. 819 -874-5980
General Manager:	Bertin Paradis, General Manager – Meadowbank Division Agnico Eagle Mines Limited 93, Arseneault, Suite 202 Val d'Or, QC, Canada, J9P 0E9 T: 819-759-3555 Ext. 6725 M: 819.355.9348 bertin.paradis@agnicoeagle.com
Manager of Regulatory Affairs:	Stephane Robert Baker Lake, Nunavut, Canada, X0C 0A0 Ph : 819-759-3555 (ext.5188) M : 819-763-0229 Email : stephane.robert@agnicoeagle.com
Environmental Manager:	Ryan Vanengen, Environment Superintendent – Permitting and Regulatory Affairs Baker Lake, Nunavut, Canada, X0C 0A0 M: 819-651-2974 Email: ryan.vanengen@agnicoeagle.com
Environmental Superintendent	Jamie Quesnel, Environment Superintendent – Nunavut Operations Baker Lake, Nunavut, Canada, X0C 0A0 Ph : 819-759-3555 (ext.6838) Email: Jamie.quesnel@agnicoeagle.com

Agnico Eagle has maintained strong relationships with the NIRB, NWB, and regulators on their projects, most notably with the recent approval by NIRB for the Vault expansion (Phaser Pit and BB Phaser Pit), Amaruq

exploration access road, the renewal of the Meadowbank Type A water license, and on the issuance of the Type A Water Licence for the Meliadine Gold Mine by the NWB (NWB 2016). Agnico Eagle's relationships are built on thorough monitoring, reporting, and presentation of information to the regulators and stakeholders, and are backed by successful and accomplished operations.

A list of consultants and contractors who provided assistance and support in preparation of the amendment Applications is provided in Table 1.1-3.

Table 1.1-3: List of Consultants and Contractors who Provided Assistance and Support in Preparation of the Amendment Applications

Consultant / Contractor
Golder Associates Ltd.
C. Portt and Associates
Azimuth Consulting Group
Dougan & Associates - Ecological Consulting & Design
Gebauer & Associates Ltd.
Knights Piésold Ltd.
Nunami-Stantec Limited
Nanuk Enterprises and Outcrop
SNC Lavalin Inc.

1.1.3 Sustainable Development and the Precautionary Principle

Agnico Eagle is committed to creating value for their shareholders by operating in a safe, socially, and environmentally responsible manner while contributing to the prosperity of their employees, their families, and the communities in which they operate. This is imbedded into the four fundamental values that make up the keystones of Agnico Eagle's Sustainable Development Policy: Operate Safely, Protect the Environment, and treat Employees and Communities with Respect. This commitment is reflected in Agnico Eagle's published Sustainable Development Policy (English, French, and Inuktitut), which includes environment and health and safety. In addition, Agnico Eagle monitors accountability to sustainable development by completing an Annual Sustainable Development Report, which is also available on the website (Agnico Eagle 2015).

The commitments made in this Sustainable Development Policy are extended to all of Agnico Eagle operations world-wide, and apply to the Meadowbank Mine and the Project. This policy states Agnico Eagle's commitment to protect the environment, public health and safety, and natural resources by conducting operations in an environmentally sound manner, while pursuing continuous improvement to environmental performance. Agnico Eagle subscribes to the principle of sustainable development in mining. Agnico Eagle makes it a key responsibility to limit negative environmental and social impacts, and to enhance positive impacts. The environmental policy of the company, as well as the health and safety policy, apply to all businesses for which Agnico Eagle has an operating responsibility (i.e., employees, contractors, subcontractors, and suppliers where possible).

Section 4.2 of the FEIS (Cumberland 2005) states:

> Achieving sustainable development requires continued and full consideration of the economic, environmental, and social impacts on the sustainability of both the project and the Baker Lake community. To promote the goal of sustainable development, support is needed for the local people to pursue sustainable livelihoods both in the traditional and wage economy.

To achieve sustainable development, Agnico Eagle's policies are guided by the *precautionary principle*. The company's compliance record and proven ability to quickly respond to on-site concerns demonstrates that environmental measures at Meadowbank Mine anticipate, prevent, and mitigate the causes of environmental degradation.

At Meadowbank Mine, one measure of commitment and actions towards sustainable development is assessed through Agnico Eagle's participation with other interested parties in a collaborative socio-economic committee (SEMC) that focuses on issues related to individual and community wellness. The Kivalliq SEMC Annual Reports are available from the NIRB website (NIRB 2010) and are considered in the socio-economic section of this FEIS Amendment (Volume 7, Section 7.4) and the Socio Economic Management Plan (Volume 8, Appendix 8-E.6).

As part of Agnico Eagle's overall commitment to continuous improvement, the company has steadily increased its presence on national, international, and industry-specific boards and organizations. These organizations help Agnico Eagle improve and measure performance by providing research and guidance on the latest industry standards and global best practices. For example, as a member of the Mining Association of Canada, Agnico Eagle fully endorses its Towards Sustainable Mining (TSM) Initiative. Towards Sustainable Mining provides a framework for companies to evaluate their management systems under six performance indicators: crisis management, energy/greenhouse gas emissions, tailings management, biodiversity conservation management, health and safety, aboriginal relations, and community outreach. Agnico Eagle underwent an external verification of its performance in meeting the MAC TSM criteria in 2015 and these external audits are to be repeated every three years in accordance with the TSM criteria. In between these external audits Agnico Eagle conducts annual self-assessment of its performance under TSM. The results of these self-assessments and external audits are reported publically on the MAC website. Agnico Eagle aims to achieve a Level A rating at all of its mines. Additional initiatives include: Carbon Disclosure Project, the Global Reporting Initiative and International Cyanide Management Code. For more information refer to Agnico Eagle's website at Sustainability Standards.

Agnico Eagle is determined to make a significant and positive difference in the communities where we operate and in the lives of our employees. This commitment is founded on Agnico Eagle's core values – to operate safely, protect the environment, and treat our employees and communities with respect (Agnico Eagle 2015a).

In all parts of the business, Agnico Eagle limits their environmental impact by using natural resources efficiently, by limiting pollution, and by reducing waste. Accountability for protecting the environment extends to every employee and contractor who works for Agnico Eagle. Everyone is expected to understand and act in accordance with the Environmental Policy, with various regulatory compliance requirements, and to report unacceptable practices to management, while they are at our sites.

In line with the Environmental Policy, Agnico Eagle's operations are required to meet and, where practical, exceed relevant laws, regulations, and standards. Agnico Eagle believes in using industry best practices to minimize their impact on the environment to the greatest practical extent possible. As part of Agnico Eagle's internal Environmental Management System (Responsible Mining Management System; RMMS), each operation is required to identify, analyze, and manage the environmental risks specific to its activities and to work in a

transparent manner with involved local stakeholders. Agnico Eagle has the resources (both human and economic) available to fully meet regulatory requirements at all of its mining operations. Agnico Eagle aims to minimize effects of their operations on the environment and maintain its viability and diversity.

PROTECT THE ENVIRONMENT

Agnico Eagle aims to minimize the effects of our operations on the environment and maintain its viability and its diversity. To achieve this we:

- *Minimize the generation of waste and ensure its proper disposal;*
- *Manage tailings, waste rock and overburden to ensure environmental protection;*
- *Implement measures to conserve natural resources such as energy and water;*
- *Implement measures to reduce emissions to air, water and land, and to minimize our footprint;*
- *Implement measures to reduce our greenhouse gas emissions and address climate change;*
- *Integrate biodiversity conservation and land use planning considerations through all stages of business and production activities;*
- *Rehabilitate sites to ensure physical and chemical stability and in consultation with the communities in a timely manner.*

Creating and maintaining a safe workplace is a shared responsibility of the company and each employee. Agnico Eagle's overriding goal is zero harm to all workers. Agnico Eagle endeavors towards this through a combination of safety standards, safe work practices and procedures, incident reporting and tracking, knowledge sharing across operations, and safety audits.

Each of Agnico Eagle's mine sites has an emergency response team – staffed with employees who volunteer for the assignment. Each employee receives extensive training and all the proper equipment they need to respond in an emergency situation.

1.1.4 Regional Context

The Project falls within the boundaries of the Keewatin Regional Land Use Plan (Nunavut Planning Commission; NPC 2000) administered by the NPC. The issues considered in the FEIS (Cumberland 2005) within a regional context remain unchanged as a result of the proposed Project. The regional physical, biological, and socio-economic environments of the central Kivalliq Region are summarized in Volume 2. Baseline reports are appended to the appropriate FEIS Amendment Volumes.

1.1.5 Regulatory Regime

FEIS

The Meadowbank Mine is subject to the environmental review and related licensing and permitting processes established by Part 5 of the NLCA.

All current, applicable, and active permits are the sole ownership and responsibility of Agnico Eagle - Meadowbank Division. A list of Permits and Authorizations can be found in Appendix 1-B. A record of compliance to the Project Certification is provided in Volume 2, Appendix 2-A. All of the permits were approved based on the FEIS environmental management plans and subsequent revisions (required by the NWB).

The regulatory organizations have not changed since the FEIS (Cumberland 2005). However, the administration and regulatory requirements (i.e., management, administration, or processes) of several regulatory authorities have been further defined or amended through legislation or regulations as outlined in subsection below.

For compliance and regulatory history related to the Type A Water Licence see Volume 2, Appendix 2-I.

Moving forward, Agnico Eagle will continue to work efficiently and cooperatively with the NIRB and all regulators to ensure the regulatory process proceeds as expeditiously as possible.

Water Licence

The proposed Whale Tail Pit, satellite deposit of the Meadowbank Mine, requires a Type A Water Licence amendment from the NWB. Agnico Eagle must also comply with requirements of additional authorities for land use planning, environmental assessment, Inuit water rights, and any other Federal, Territorial act, regulation or guideline applicable to the Project.

The Whale Tail Pit site is located on IOL. The lead authorizing agencies for the Project are the NIRB, NWB, KIA, and Indigenous and Northern Affairs Canada (INAC). The Project will require the authorization and consent for the development, construction, operations, and closure of the Whale Tail deposit and its related facilities. These approvals will be in the form of amended land use leases, production lease, and Inuit Impact and Benefit Agreement (IIBA), water compensation agreements, and other forms or approvals and authorizations. A full list of applicable acts, regulations, and guidelines that govern the Project are provided in Appendix 1-B.

1.1.5.1 Nunavut Planning Commission

All project proposals in the Keewatin Planning Region that require amendment to a licence or authorization from a land use authorizing agency must be re-assessed by the NPC for conformity with the Keewatin Regional Land Use Plan (NPC 2000). The Project is entirely within the Kivalliq (Keewatin) Region of Nunavut and therefore is subject to confirmation of conformity determination to the Keewatin Regional Land Use Plan. The authority of the NPC is provided under Article 11 of the NLCA and more recently clarified by the *Nunavut Planning and Project Assessment Act*.

Project related positive conformity determination include:

- winter road determination (NIRB 11 EN010) on March 9, 2011;
- exploration camp and associated activities (i.e., drilling) renewal on multiple permits on October 21, 2015; and
- exploration access road for multiple permits on July 17, 2015.

The Meadowbank Gold Mine Project was originally assessed by the NIRB from 2003 to 2006. The original application was screened by the NIRB in accordance with Article 12, Part 4 of the NLCA. On September 23, 2003 the NIRB recommended to the then-Minister of Indian Affairs and Northern Development that the project should be the subject of a review pursuant to s. 12.4.4(b). On December 3, 2003 the Minister referred the project to the NIRB for review pursuant to Article 12, Part 5 of the NLCA.

1.1.5.2 Nunavut Impact Review Board

The Meadowbank Mine was subject to the environmental review established by Article 12, Part 5 of the NLCA. In November 2006 the Minister of Indian and Northern Affairs Canada (now Indigenous and Northern Affairs Canada) approved the NIRB decision that the project proceed subject to terms and conditions. On 30 December 2006 the NIRB issued a Project Certificate for the development of Meadowbank Mine. The Project Certificate was issued to Meadowbank Mining Corporation (a wholly owned subsidiary of Cumberland Resources Ltd.). Agnico Eagle has maintained sole responsibility for the construction, operations (including dewatering and mining), on-going inspection, and maintenance of all of the components of the Meadowbank Mine and has been successfully operating in Nunavut since 2007. A summary of major procedural steps taken by the Agnico Eagle (its predecessor) and the NIRB are shown in Volume 2, Appendix 2-C.

Consistent with the 2015 amendment filed for the Vault Pit expansion (Phaser Pit and BB Phaser Pit), Agnico Eagle has provided the necessary information for environmental review as a stand-alone document capable of supporting the public review, comment, and assessment process.

Agnico Eagle is seeking approval to extend the Meadowbank Mine to include development of resources from Whale Tail Pit and requests the NIRB reconsider the terms and conditions set out in Project Certificate (No. 004) issued for the Meadowbank Mine. Notwithstanding NIRBs authority, or at the request of any other interested party a request for reconsideration of the terms and conditions contained in the NIRB Project Certificate, Agnico Eagle has highlighted the specific terms and conditions for reconsideration. Refer to the NIRB Record of Compliance Volume 2, Appendix 2-A.

1.1.5.3 Nunavut Water Board

Any project using water or depositing of waste is required to obtain approval from the NWB. Agnico Eagle currently holds a Type A Water Licence for the Meadowbank Mine (2AM-MEA1525) and two Type B water licenses (i.e., exploration 2BE-MEA1318 and the exploration access road 8BC-AEA1525).

For additional details on the Type A Water Licence Amendment Application, project definition, the NWB regulatory regime and requirements, or any other matters which fall under the mandate of the NWB under Article 13 of the NLCA or in accordance with the NWNSRTA including a list of current water licenses and compliance related to the Project refer to Volume 2.

1.1.5.4 Fisheries Act Authorizations

The *Fisheries Act* requires that projects avoid causing serious harm to fish unless authorized by the Minister of Fisheries and Oceans Canada (DFO). This applies to work being conducted in or near waterbodies that support fish that are part of or that support a commercial, recreational, or Aboriginal fishery. To protect fish and fish habitat, efforts should be made to avoid, mitigate, and/or offset harm.

Agnico Eagle holds two existing DFO Authorizations under Sections 32 and 35 of the *Fisheries Act* for the Meadowbank Mine. The existing Authorizations are for Second and Third Portage Lakes (NU-03-0191.3) and Vault Lake (NU-03-0191.4). For the Amaruq exploration access road, Agnico Eagle submitted a proponent self-assessment and request for review to DFO. Fisheries and Oceans Canada approved construction of the road as designed, without the need for issuing an Authorization under the *Fisheries Act*. Authorization for the Vault expansion (Phaser Pit and BB Phase Pit) is currently pending.

Environment Canada administers the Metal Mining Effluent Regulations and Schedule II listing of Second Portage Lake Northwest Arm for Meadowbank Mine. No further Schedule II listing is required for Whale Tail.

Fisheries protection and pollution prevention measures for the Project are subject to the requirements of the *Fisheries Act* s.35, which states that no person shall carry on any work, undertaking, or activity that results in serious harm to fish that are part of a commercial, recreational, or Aboriginal fishery, or to fish species that support such a fishery.

Agnico Eagle has conducted two years' of aquatic baseline studies for the Project, and will work together with DFO to seek a *Fisheries Act* Authorization during the review/regulatory phase of this Project.

1.1.6 Land Tenure

Agnico Eagle's land tenure is on a mix of IOL administered by the KIA, Crown Land administered by INAC, and Commissioner Land administered by the Government of Nunavut. Agnico Eagle's land tenure is summarized in Table 1.1-4 and shown in Figure 1.1-1.

Table 1.1-4: Land Tenure Summary

Property	Land[a]			Total (km^2)
	IOL (km^2)	Crown (km^2)	Commissioner (km^2)	
Meadowbank	231.26	73.95	-	305.21
Amaruq property	408	-	-	408
Baker Lake marshalling area	-	-	5.79	
Haul road (between Meadowbank and Whale Tail site)	0.13	0.28	-	0.41
All Weather Access Road (Baker Lake to Meadowbank)	1.40	1.98	0.21	3.59

[a] Numbers have been rounded to two decimal places.
km^2 = square kilometres.

Agnico Eagle has sole responsibility for the construction and on-going inspection and maintenance of all of the components of the current Project.

1.1.6.1 Nature of Interest in the Land

Under the NLCA enacted in 1993, the mineral rights for about 2% of the territory have been transferred from Canada to the Inuit. The Designated Inuit Organization under the NLCA is NTI; it negotiates terms and conditions for those blocks that are not under federal jurisdiction. The Whale Tail deposit is located on IOL with the surface rights managed by the KIA and the sub-surface mineral rights managed by NTI. Surface rights for IOL are vested in the KIA, which administers the access and management of the lands for the benefit of the Inuit of the region. Access to and use of surface lands requires an Inuit Land Use permit, licence, or commercial lease issued by the KIA.

The exploration and mineral development rights for the Amaruq property are 100% owned by Agnico Eagle under an agreement from NTI, and are currently in good standing.

Crown Land

Nunavut mining and exploration activities are regulated by INAC. This federal department ensures compliance with the Canada Mining Regulations across the territory. There are three main types of mineral interests under the Canada Mining Regulations: a mineral claim, a prospecting permit, and a mineral lease (also referred to as mining lease). Surface rights on Crown Land are vested in the federal government and administered/managed by INAC. Access to and use of these surface lands requires a land use permit, licence, or commercial lease issued by the INAC. A summary of land tenure is provided in Table 1.1-4.

Inuit Owned Lands

As stated previously, the 408 km^2 Amaruq property is located on IOL, and the rights to explore and develop mineral resources were acquired by Agnico Eagle in 2013 subject to a mineral exploration agreement with NTI. The surface ownership of the land is held by the KIA. Land and environmental management in this area are generally governed by the provisions of the NLCA.

The proposed Whale Tail Pit and associated infrastructure is to be constructed on IOL leased by Agnico Eagle from the KIA. In addition, quarry permits will be sought from the KIA as needed. A list of current quarry permits held by Agnico Eagle are provided in Appendix 1-B.

Because it lies on IOL, the Project can only proceed with the full consent of the Inuit as provided by the KIA.

1.1.7 Land Use Planning

All project proposals in the Keewatin Planning Region that require a licence or authorization from a land use authorizing agency must be assessed by the NPC for conformity with the Keewatin Regional Land Use Plan (NPC 2000). The proposed Whale Tail Pit is entirely within the Kivalliq (Keewatin) Region of Nunavut and therefore is subject to confirmation of conformity determination under the Keewatin Regional Land Use Plan. Agnico Eagle is requesting that NPC undertake a conformity determination on the proposed Project. Agnico Eagle anticipates the amendment of the Type A application to the NWB, and screening request to the NIRB will trigger NPC conformity determination requirements.

1.1.8 Inuit Impact Benefit Agreement and Inuit Water Rights

Inuit Owned Land is administered by the KIA. Inuit Beneficiaries in the Kivalliq Region are represented by the KIA. Agnico Eagle currently has in place an IIBA with the KIA for Meadowbank Mine.

Agnico Eagle has entered into negotiations with the KIA for the provision of benefits to Inuit through an IIBA. Under the NLCA Section 12.5.2 f, Agnico Eagle is required to detail the steps it proposes to take to compensate interests adversely affected by the Project.

Agnico Eagle and the KIA initiated in early 2016 re-negotiation of the Meadowbank IIBA to include the Project, and continue to advance discussions in accordance with the requirements set out in Article 26 of the NLCA. Both parties are working towards finalizing the IIBA, which could occur later in 2016.

For the purposes of the Project IIBA, the KIA and Agnico Eagle have agreed that the most affected communities are Baker Lake and Chesterfield Inlet, but the IIBA will cover all seven Kivalliq Communities. Once agreement in principle has been achieved on the IIBA, both KIA and Agnico Eagle will take the proposed IIBA to their respective Boards of Directors for approval. As negotiations are still underway, Agnico Eagle is not in a position to publically disclose any of the details of this IIBA.

In addition to the IIBA, Agnico Eagle and the KIA have in place an agreement to provide benefits for impacts on wildlife and wildlife habitat. Agnico Eagle signed a Water Compensation Agreement for the Meadowbank Mine with the KIA in accordance with the requirements of Article 20 of the NLCA. It is expected that these agreements (i.e., wildlife agreement and water compensation agreement) will be revised during the regulatory process to cover the development of the proposed Project. Agnico Eagle is aware that the NWB is precluded from issuing a water licence for the Project if a water compensation agreement has not been reached with the KIA. Because it lies on IOL, the Project can only proceed with the full consent of the Inuit as provided by the KIA working with NTI.

1.1.9 Existing and Other User Water Rights

Presently, there are no properties adjacent to the proposed Mine that have any influence on the Project. No trap lines have been identified within or directly adjacent to the proposed Mine footprint. No third party or individuals have been identified, or have come forward as existing or other water users with rights that might be impacted by the Project. Agnico Eagle knows of no other water rights that must be secured for the Project.

1.1.10 Other Authorizations

1.1.10.1 Government of Nunavut

The current marshalling area in Baker Lake is sited on Commissioner's land, administered by the Department of Community and Government Services for the benefit of the Hamlet of Baker Lake. The extension of the Meadowbank Mine does not require additional permitting of this facility. A lease is in place for the marshalling facility. Agnico Eagle currently holds a Nunavut archaeological permit as well as wildlife research permit for works undertaken for the access road and ongoing exploration. The permits will be maintained in good standing as needed. Agnico Eagle is not intending to dispose of waste to municipal facilities or use municipal water in any significant amount.

1.1.10.2 Transport Canada

The Project may be subject to the *Navigation Protection Act*. Agnico Eagle met with Transport Canada to explore the implications of applying the *Navigation Protection Act* to the Project. The *Navigation Protection Act* which came into force on 1 April 2014, is the result of the 2012 amendments made to the *Navigable Waters Protection Act*.

Along the current alignment of the haul road, none of the water crossings are located on Transport Canada's schedule of navigable waters. Eleven watercourses are considered to be potential migration routes and/or potentially provide spawning or nursery habitat for large-bodied or small-bodied fish.

At this time, Agnico Eagle does not believe that the small lakes, ponds, and streams within the Project's footprint on the Whale Tail site are navigable waterbodies. Agnico Eagle will work with Transport Canada to confirm this to ensure compliance with the *Navigation Protection Act*.

1.1.11 Consultation

Public consultation and engagement is a legal requirement in Nunavut, an industry best practice, and an important corporate commitment. Effective public consultation and engagement helps ensure that community members are informed and knowledgeable about proposed projects, that community support for those projects is more readily obtained, and sustainable development goals are achieved. A key goal of Agnico Eagle's public

consultation and engagement program has been to ensure the Company obtains a “social licence to operate”, by securing the support of a majority of residents from potentially impacted local communities.

To obtain this goal, a number of process goals have been followed:

- identification and prioritization of communities and community stakeholder groups;
- developing an understanding of key community and stakeholder views regarding the Project;
- addressing community and stakeholder issues and expectations;
- identifying current and historical patterns of land- and resource-use;
- identifying VCs and VSECs;
- determining criteria for evaluating the significance of potential impacts;
- deciding upon mitigating measures;
- formulating compensation packages;
- identifying and implementing monitoring measures, including post-project audits; and
- continuous improvement.

Since operation of the Meadowbank Mine began, Agnico Eagle has continued public consultation by meeting with employees local employees that live throughout the Kivalliq, meeting in the community and local stakeholders, and regulatory agencies routinely which has allowed a better general understanding of the rights, interests, values, aspirations, and concerns of the potentially affected stakeholders, with particular reference to the local population. Through this continued consultation Agnico Eagle has developed an operational culture that recognizes and respects these relevant interests in the planning and executing processes. A record of consultation including government engagement is provided in Volume 2, Table 2-H. Agnico Eagle has and will continue to engage with the KIA and other stakeholders.

1.2 Project Description and Alternatives

1.2.1 Project Justification

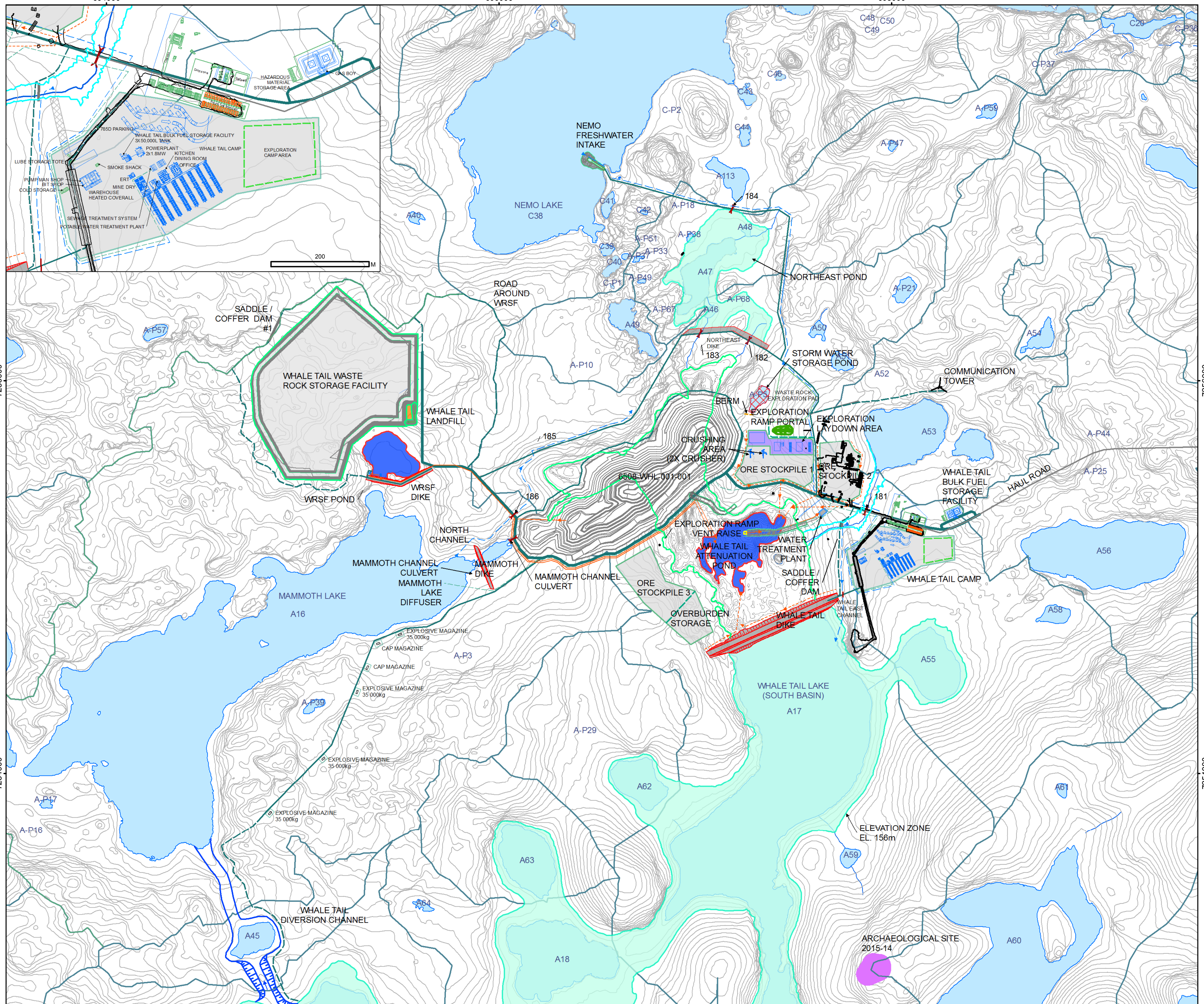
1.2.1.1 Project Purpose and Rationale

Since 2009, Agnico Eagle has operated the Meadowbank Mine. Components of the Meadowbank Mine include a marshalling facility in Baker Lake and the 110 km All Weather Access Road (AWAR) between Baker Lake and Meadowbank (Figure 1.1-1). The Meadowbank Mine consists of several gold-bearing deposits that will be mined until Q3 of 2018. Mining at Meadowbank is currently occurring in three open pits (Goose Pit, Portage Pit, and Vault Pit). Much of the pit development is located in close proximity to the mill, office, and lodging infrastructure, with the exception of the Vault Pit which is approximately 8 km northeast of the main mine site.

As the economics of the Meadowbank Mine have changed and details of the last few years of the Meadowbank Mine are optimized, mine engineers began considering the feasibility of expanding Meadowbank operations through development of Vault Pit expansion, Phaser Pit, and BB Phaser Pit, which was initiated in 2015.

The extension of the Meadowbank LOM is expected to help bridge the production gap between the end of production at Meadowbank and the start of the proposed Meliadine Mine with the proposed start of production of a satellite pit located on the Amaruq property called Whale Tail Pit. The company is actively exploring the Amaruq deposit, and expects to ultimately develop Whale Tail Pit, as a satellite operation to Meadowbank, with the potential to have full production in 2019. A major challenge is that the gold reserves at Meadowbank will be exhausted by the third quarter of 2018. Although Agnico Eagle is working closely with regulatory agencies, full authorizations, approvals, and permits required for Whale Tail Pit are not expected to be completed until early 2018 and not fully operational until the third quarter of 2019. Agnico Eagle is optimistic that permits will be received in a timely matter and are therefore planning on Whale Tail Pit construction and progressive closure at Meadowbank that will reduce a potential employment gap from one year to a shorter period of time.

The development of the Project, a satellite deposit, is part of an effort to extend the LOM at Meadowbank Mine while exploration activity continues. The deposit will be mined as an open pit (Whale Tail Pit; Figure 1.2-1), and ore will be hauled to the approved infrastructure at Meadowbank Mine for milling. As a result of development, Agnico Eagle is also proposing to expand the width of the exploration access road to a haul road to accommodate increased traffic rates and haul trucks.



604000
606000
608000
7256000
7254000
NEMO FRESHWATER INTAKE
NEMO LAKE
C38
ROAD AROUND WRSF
SADDLE / COFFER DAM #1
WHALE TAIL WASTE ROCK STORAGE FACILITY
WHALE TAIL LANDFILL
WRSF POND
WRSF DIKE
NORTH CHANNEL
MAMMOTH CHANNEL CULVERT
MAMMOTH LAKE DIFFUSER
MAMMOTH DIKE
MAMMOTH CHANNEL CULVERT
MAMMOTH LAKE
A16
NORTHEAST POND
NORTHEAST DIKE
STORM WATER STORAGE POND
COMMUNICATION TOWER
BERM
EXPLORATION RAMP PORTAL
EXPLORATION LAYDOWN AREA
CRUSHING AREA (2X CRUSHER)
6508-WHL-001-001
ORE STOCKPILE 1
ORE STOCKPILE 2
WHALE TAIL BULK FUEL STORAGE FACILITY
HAUL ROAD
EXPLORATION RAMP VENT RAISE
WHALE TAIL ATTENUATION POND
WATER TREATMENT PLANT
SADDLE / COFFER DAM
WHALE TAIL CAMP
ORE STOCKPILE 3
OVERBURDEN STORAGE
WHALE TAIL DIKE
WHALE TAIL EAST CHANNEL
WHALE TAIL LAKE (SOUTH BASIN)
A17
A53
A56
A55
A58
EXPLOSIVE MAGAZINE 35 000kg
CAP MAGAZINE
ELEVATION ZONE EL. 156m
WHALE TAIL DIVERSION CHANNEL
A45
A63
A64
A18
A62
A60
A59
A61
ARCHAEOLOGICAL SITE 2015-14
HAZARDOUS MATERIAL STORAGE AREA
WHALE TAIL BULK FUEL STORAGE FACILITY
POWERPLANT
WHALE TAIL CAMP
EXPLORATION CAMP AREA
KITCHEN
DINING ROOM
OFFICE
SMOKE SHACK
LUBE STORAGE TOTE
PUMPMAN SHOP
COLD STORAGE
WAREHOUSE
HEATED COVERALL
MINE DRY
SEWAGE TREATMENT SYSTEM
POTABLE WATER TREATMENT PLANT
200
M

Y:\burnaby\CAD-GIS\Client\Agnico_Eagle_Mines_Ltd\Whale_Tail\99_PROJECTS\1541520_FEIS\02_PRODUCTION\FEIS\MXD\1300_Documentation\1340_Project_Description\Report\1541520_FIG_1.2-1_SITE_LAYOUT.mxd

LEGEND

- FINAL WHALE TAIL WASTE ROCK STORAGE FACILITY
- WHALE TAIL LAKE (SOUTH BASIN) FLOODED LIMIT (WATER LEVEL 156.0m)
- NATURAL WATERSHED
- DIKE
- POND/SUMP
- ARCHAEOLOGICAL SITE
- ROAD
- TEMPORARY ROAD
- DIVERSION CHANNEL
- COLLECTION CHANNEL
- CULVERT
- INTAKE WATER PIPE
- CONTACT WATER PIPE
- FRESHWATER PIPE
- WATERCOURSE
- WATERBODY

REFERENCE

1. INFRASTRUCTURE OBTAINED FROM AGNICO EAGLE MINES LIMITED FROM 6108-600-210-002_R2(2019)s.dwg.
2. WATERCOURSE AND WATERBODY DATA OBTAINED FROM PHOTOSAT

DATUM: NAD 83 CSRS PROJECTION: UTM ZONE 14

400 0 400
METRES

PROJECT

AGNICO EAGLE

AGNICO EAGLE MINES LIMITED:
MEADOWBANK DIVISION
WHALE TAIL PIT PROJECT

TITLE

SITE LAYOUT

Golder Associates

PROJECT		1541520	FILE No.	
DESIGN	JR	24 Mar. 2016	SCALE AS SHOWN	REV. 0
GIS	CDB	05 May 2016		
CHECK	JR	09 May 2016	FIGURE 1.2-1	
REVIEW	LY	09 May 2016		

1.2.1.2 Project Need

The Meadowbank Mine is scheduled to exhaust its mineable reserves by Q3 of 2018. The Kivalliq Region of Nunavut offers limited, and usually seasonal, employment opportunities. The population is predominately young with a high level of unemployment. Elders have stated that the young must find jobs in the wage economy as they will not be able to live off the land as Inuit did in the past. Agnico Eagle will continue exploration activities with the objective to extend Meadowbank Mine life beyond Q3 of 2018. The Project is expected to last about seven years followed by post-closure, including filling of the open pit. The addition of the Whale Tail Pit will add an additional three to four years to the LOM for Meadowbank Mine. Pre-development will begin as soon as permits are received and the construction and site preparation is planned to start in early 2018, dike construction in Q2 2018, followed by excavation and stockpiling of ore and waste rock in Q4 of 2018, and milling of ore commencing in Q3 of 2019 and extending into 2022.

The Government of Nunavut describes the vision for Nunavut to the year 2030 and lists an improved standard of living; active, healthy, and happy individuals and families; self-reliant communities with strong Inuit societal values, and recognition for Nunavut's unique culture. Nunavut's economic and social development plans focus on the economic sectors that can provide the most growth and employment potential, without harming the environment. These sectors are mining, tourism (and arts and crafts), and commercial fishing.

The current Meadowbank Mine is an important contributor (through employment income and training opportunities) to the economy of Baker Lake and to the economy of the Kivalliq Region, especially to the communities of Arviat and Rankin Inlet. The development of the Whale Tail Pit would mean opportunities for continued employment, as well as forthcoming benefits and revenue stream to NTI and KIA, from direct taxes paid to governments, personal income tax, and sales tax from employment.

Continued operations of Meadowbank Mine will reduce dependence on government, without compromising the health of the people or the land, through the creation of stable private sector employment that will both contribute to a better standard of living for the residents of Kivalliq as well as reducing dependence on social assistance programs. The continued operation will also contribute to the economic vision of a more self-reliant Nunavut as a key contributor to the future economic well-being of Canada as projected by the Government of Canada (GN 2009).

The Meadowbank Mine extension will support the vision and contribute to the goals of Inuit Beneficiaries of Nunavut as expressed by NTI and KIA. Benefits will accrue to Inuit from the IIBA, and also from royalties paid to NTI over the extended operating life of the mine.

Article 17.1.1 of the NLCA states the purpose of IOL:

> is to promote economic self-sufficiency of Inuit through time, in a manner consistent with Inuit societal and cultural needs and aspirations" and this economic self-sufficiency will be obtained through balanced economic development and selection of IOL that holds value both for renewable resources and the development of non-renewable resources (NLCA 17.1.2 and 17.1.3)".

Approximately 90% of all IOL identified in the NLCA is IOL-Surface lands in which Inuit Organizations administer surface rights only. The remaining IOL is designated to have both surface and subsurface (mineral) rights administered by Inuit organizations. The Whale Tail Pit is located on IOL (Figure 1.1-1) where the surface rights

and subsurface mineral rights are administered for the benefit of Inuit Beneficiaries by Inuit Organizations, KIA, and NTI, respectively.

The purpose of the proposed Project is to extend mining at Meadowbank Mine to maximize benefits from site construction, process the ore on-site to extract the gold as a gold bullion, and then to ship the gold bullion for final refining and subsequent sale into the world gold markets. Gold is used in a number of uses including jewelry, electronics, and underpinning the value of money. The extension of Meadowbank Mine life will:

- contribute to durable social and economic benefits;
- create employment for Canadians;
- create employment for Nunavummiut;
- contribute to the vision and goals of Nunavummiut in terms of sustainable development (employment, training, career development, economic stability for residents of the Kivalliq Region, and the creation of new business opportunities for Nunavut based businesses);
- contribute to the vision and goals of Inuit Beneficiaries through royalty payments to NTI and through land use fees, water compensation payments and IIBA benefits to the KIA allowing both NTI and KIA to pursue their goals for sustainable development of IOL;
- provide revenue to the Government of Canada through corporate and income taxes allowing Canada to continue funding northern development and northern programs;
- provide revenue to the Government of Nunavut through payroll taxes, equivalent municipal taxes, and fuel taxes allowing the Government of Nunavut to pursue its goals and vision for Nunavut; and
- generate a return on the investment made by Agnico Eagle on behalf of its shareholders (return on investment) and generate a profit for Agnico Eagle and its shareholders.

The proposed development of the Project will be financed by Agnico Eagle from its own operating revenue stream. A statement of financial responsibility and overview of Agnico Eagle's past performance is provided in Appendix 1-A.

1.2.2 Project Components and Activities

The Project facilities will consist of a personnel camp (i.e., Main Camp), power plant, heli-pad, maintenance shop, tank farm, a waste rock storage facility (WRSF), an ore stockpiling facility, an attenuation pond, a water and sewage collection and treatment system, haul roads, access road, water management infrastructure (e.g., collection ponds, channels, dikes, dams, and culverts), and the Whale Tail Pit. The general mine site layout is provided in Figure 1.2-1 The Project will also require widening of the exploration access road between the Whale Tail Pit site and the existing Meadowbank Mill, Tailings Storage Facility (TSF), and Camp (referred to in the subsequent text as the Meadowbank Mine).

The Project scope is defined in Table 1.1-1. The facilities are similar to those required for the approved Vault Pit operations (which are located 8 km from the Meadowbank Mill, TSF, and Camp); however, the Whale Tail deposit is located approximately 50 km northwest of Meadowbank Mine.

A list of all engineering figures is provided in Appendix 1-C.

1.2.2.1 Deposit, Mining Methods, and Production of Whale Tail Pit

Consistent with the FEIS, production will be by surface or open pit mining. Approximately 8.3 million tonnes (Mt) of ore will be mined from the Whale Tail Pit and processed over a three to four year mine life. The mine operations will generate approximately 8.3 Mt of tailings, 46.1 Mt of mine waste rock, and 5.7 Mt of overburden soil, with very limited organic material.

The Whale Tail Pit is an open pit that extends across the northern edge of Whale Tail Lake (Figure 1.2-1). There are some rock types, specifically intermediate intrusive and southern greywacke waste rock (during early mine development) from the Whale Tail deposit that are suitable for construction. There is no acid rock drainage (ARD) or metal leaching (ML) concern from the esker material tested; indicating that this material can be used for road construction. The report titled Evaluation of the Geochemical Properties of Waste Rock, Ore, Tailing, Overburden and Sediment from the Whale Tail Pit and Road Aggregate Materials (Volume 5, Appendix 5-E) provides detailed assessment of geochemical properties. Segregation of waste will be important to the operation of the Whale Tail Pit and is outlined in the addendum to the approved Operational ARD-ML Sampling and Testing Plan (Volume 8, Appendix 8-E.5).

Whale Tail Pit development will occur in three phases:

- Construction Phase (refers to construction of surface facilities beginning as early as 2018, pending regulatory approval, including the Whale Tail Dike and dewatering of Whale Tail Lake (North Basin)) which is planned to begin in Q2 (June), 2018;
- Operational Phase (refers to the extraction of ore and waste material) set to begin in Q4 of 2018. Upon regulatory approval, milling of ore is planned to begin at the latest in Q3 2019 until 2022; and
- Closure Phase (refers to active rehabilitation activities, such as removal of surface infrastructure, and commencement of pit flooding, and restoration of Whale Tail Lake water levels) occurring from 2022 to 2029. This will be followed by passive closure measures until the pit has flooded, Whale Tail Lake water levels are restored, and runoff from the Whale Tail WRSF is shown to be suitable for uncontrolled release.

The pit design and geotechnical stability will be monitored using the same best practices currently applied at Meadowbank Mine. The geological setting of the ore body is important for open pit slope design. The main lithologies encountered at the Project are summarized in Volume 5, Appendix 5-E. Project design considerations for the open pit slope design and a typical cross-section of the deposit is shown in Appendix 1-D. Agnico Eagle will use the same equipment already on-site that is currently in use for the Meadowbank operations, with the addition of specialized long-distance haul trucks. Project design considerations are discussed in Section 1.2.14 and detailed Volume 2.

Explosives management and blasting practices will be consistent with practices in place for Meadowbank Mine. Refer to the addendum to the Ammonia Management Plan (Volume 8, Appendix 8-D.1) for additional details. For additional information on explosives production and storage, refer to Section 1.2.10.

The production details of the proposed Whale Tail Pit are presented in Table 1.2-1.

Table 1.2-1: Summary of Mine Life Materials Balance

Year	Ore Mined (t)	Waste Rock Excavated (t)	Overburden Excavated (t)	Ore Stockpile Balance (t)
2018	160,020	1,481,594	1,418,078	160,020
2019	2,289,976	13,797,463	4,118,981	807,495
2020	3,352,314	21,504,494	81,300	874,809
2021	2,476,834	9,320,843	0	66,644
2022[a]	0	0	0	0
Total	**8,279,144**	**46,104,394**	**5,618,359**	**-**

[a] Preliminary economics do not include ore mined in 2022.

1.2.2.2 Processed Ore Containment (and Tailings Storage Facility)

Agnico Eagle proposes to process the Whale Tail ore and dispose of the tailings slurry at the existing Meadowbank Mine TSF, which is authorized under the current Project Certificate and Type A Water Licence. Ore from Whale Tail Pit will be segregated by grade and temporarily stored in one of three stockpiles at the Whale Tail Pit site, if deemed necessary, it will be crushed pending transport to the main Meadowbank Mine for milling. The mill rate is not expected to change significantly and remain on average 9,000 tonnes per day (t/day) and up to a peak mill throughput of 12,000 t/day (which is the current rate capacity at Meadowbank Mill).

Excavated ore material will be hauled to the ore stockpile facility, or if needed to the crushing facility, located east of the pit using mine trucks. Material will either be dumped into a chute, which feeds the jaw crusher, or dumped on the ground and then dumped into the chute using a wheel loader. The throughput for the crusher will be approximately 9,000 to 12,000 t/day. The conceptual layout of the crushing facility is provided in Appendix 1-C.

All tailings produced by Meadowbank Mine are deposited in accordance with the approved Mine Waste Rock and Tailings Management Plan (Volume 8, Appendix 8-A.1). Tailings will be generated as a result of the milling process and deposited in the existing TSF at the Meadowbank site. The 8.3 Mm^3 of tailings produced from processing of Whale Tail ore will be accommodated within the existing footprint of the TSF by building an internal structure in the north cell of the approved TSF and within the current footprint of the south cell of the TSF (see Volume 8, Appendix 8-A.1). Neither the footprint of the facility nor the chemical nature of the tailings and process water are expected to change from current operations. The Whale Tail tailings have a slightly different geo-environmental properties but similar parameters of environmental interest as compared to current Meadowbank tailings. Whale Tail tailings will require the same long-term environmental control mechanisms as the Meadowbank tailings.

1.2.3 Overburden and Waste Rock Disposal

The Whale Tail Pit operations will remove a total of 46.1 Mt of waste rock plus approximately 5.7 Mt of overburden (see Table 1.2-1). Approximately 2.1 Mt of waste rock will be used for construction activities such as roads, pads, and water management facilities (i.e., dike, berm, rip rap, etc.). The remaining waste rock and overburden material will be hauled to the Whale Tail WRSF, which is located northwest of the pit area as shown on Figure 1.2-1. A second, temporary overburden storage for staging purposes is located west of Whale Tail Lake (see Figure 1.2-1).

A summary of the geochemical properties of the overburden and waste rock including a summary of waste rock for use as construction material is provided in the Mine Waste and Tailings Management Plan (Volume 8, Appendix 8-A.1) and detailed geochemical properties are presented in Volume 5, Appendix 5-E.

Overburden will mainly be produced during the construction phase of the Project. Waste rock will be produced during both construction and operations. Waste rock and overburden will be co-disposed together in one of the two piles constituting the storage facility. These piles have the potential to merge into one at the end of the LOM.

The Whale Tail WRSF will be approximately 80 metres (m) high, with bench heights of 20 m and an overall slope of 23 degrees. The design is similar to the approved Vault WRSF. A typical cross section of the facility is provided in Appendix 1-C.

1.2.4 Freshwater Supply

Freshwater to support the Meadowbank Mill, TSF, and Camp is authorized under the existing Type A Water Licence (No. 2AM-MEA1525). Water supply for milling will continue to be sourced from the reclaim pond located near the mill and freshwater from Third Portage Lake as approved in the existing water licence.

Freshwater for the Whale Tail Camp will be sourced from Whale Tail Lake and from Nemo Lake. Freshwater usage includes potable use, fire suppression, dust suppression, drilling water (if contact water is not available), and water for the truck shop. The freshwater source at the Whale Tail site is Whale Tail Lake during the first part of construction (i.e., Q1 and Q2 of 2018) and closure, and Nemo Lake during construction and operations. Freshwater will also be required to refill Whale Tail Lake (North Basin) at closure and will be sourced from the Whale Tail Lake (South Basin), and natural inflows to Whale Tail Lake (North Basin). Agnico Eagle will endeavour to minimize the amount of freshwater required for the Project, where possible.

1.2.4.1 Freshwater Requirements

The Whale Tail Camp will have a water treatment plant for potable (domestic) water. The design flow rate for the potable water for the main camp and accommodations (i.e., kitchen, laundry) is 84 cubic metres per day (m^3/day), based on a 350 people camp capacity, using both the existing exploration camp and additional 210 units and a nominal consumption of 240 litres (L)/day/person from Nemo Lake.

In total, 118,625 m^3/year will be required during operations from Nemo Lake, with 241 m^3/day required for freshwater use and 84 m^3/day required for potable water use. During construction, freshwater will be sourced from Whale Tail Lake and Nemo Lake. Approximately 48 m^3/day of freshwater will be required during construction. During construction, 8,760 m^3/year will be required from Whale Tail Lake (approximately Q1 and Q2 of 2018) and 8,760 m^3/year will be required from Nemo Lake (approximately Q3 and Q4 of 2018). Freshwater use will switch from Whale Tail Lake to Nemo Lake once the water intake in Nemo Lake is constructed. Approximately 17,520 m^3/year will be required during closure from Whale Tail Lake, based on a requirement of 48 m^3/day of freshwater.

During closure, the Whale Tail Pit and Whale Tail Lake, north of the Whale Tail Dike, will be allowed to flood naturally with non-contact freshwater from direct precipitation, runoff from adjacent land, and Whale Tail Lake (South Basin). It is anticipated that approximately 24,000,000 m^3 over eight years is required to fill the mined-out Whale Tail Pit (i.e., approximately 17,000,000 m^3) and Whale Tail Lake (North Basin) (i.e., approximately 7,000,000 m^3) to its original level, including approximately 2,300,000 m^3/year from Whale Tail Lake (South

Basin), 120,000 m^3/year from tributaries to Whale Tail Lake (North Basin), and 580,000 m^3/year from direct precipitation to Whale Tail Lake (North Basin).

1.2.4.2 Freshwater Source and Capacity

Freshwater supply for the Whale Tail site will be sourced from Nemo Lake and during a portion of construction and during closure from Whale Tail Lake. The freshwater intake locations are shown in Figure 1.2-1, with a typical layout and cross-section provided in Appendix 1-C.

Nemo Lake

The Nemo Lake catchment has a total area of 17.6 km^2 (including 14.4 km^2 of land surface area and 3.24 km^2 lake catchment surface area). The average outflow rates for baseline at the outlet of Nemo Lake are 0.05 cubic metres per second (m^3/s) for June, 0.02 m^3/s for August, and 0.01 m^3/s for September (Volume 6, Appendix 6-C).

Whale Tail Lake (South Basin)

The Whale Tail Lake catchment has a total area of 28.1 km^2, of which 3.9 km^2 (i.e., north of the Whale Tail Dike) will be diverted as part of operations. The average outflow rates for baseline at the outlet of Whale Tail Lake are 4.23 m^3/s for June, 0.19 m^3/s for August, and 0.01 m^3/s for September (Volume 6, Appendix 6-C).

1.2.4.3 Freshwater Infrastructure

Intakes

The intakes will consist of vertical filtration wells fitted with vertical turbine pumps that supply water on demand. The intakes will be connected to the pump houses with piping buried under a rockfill causeway (Appendix 1-C). The intake pipe inlets will be located at the bottom of the causeways, and will be fitted with a stainless steel screen. The rockfill causeways will act as a secondary screen to prevent fish from becoming entrained in the pumps. The stainless steel screen design for the water intakes will be consistent with DFO criteria (1995).

Pump Houses, Pipelines, and Storage Tanks

A pump station will be located adjacent to the intakes and will house two freshwater pumps for distribution, one operating and one on standby. In addition, two fire pumps will be housed in the vicinity of the Nemo Lake intake. One fire pump will be equipped with an electric motor and the other with a diesel motor.

Freshwater will be pumped from the lakes through overland pipelines to insulated storage tanks located at the main camp for potable water treatment, and south of the camp for process water. The freshwater pipelines will be high density polyethylene pipe, which will be insulated and heat traced.

Storage capacity on-site will be approximately 150 m^3 for potable water and 400 m^3 for freshwater. The storage tank located at the personnel camp will provide both fire suppression water and freshwater storage prior to potable water treatment. The tank is adequate for two hours of firefighting.

Potable Water Treatment

In the portable water treatment plant, the freshwater will first go through sand filters and then be pumped through ultraviolet units, and finally be treated with chlorine. The treated water will be stored within a potable water tank. Potable water will be monitored according to the Health Canada regulations for total and residual chlorine and

microbiological parameters. Treated potable water will be piped to facilities requiring potable water, including the camp.

1.2.5 Water Management

In support of the Project, Agnico Eagle has prepared a fully revised addendum in form of an Appendix to the Meadowbank Mine detailed Water Management Plan. The addendum is provided in Volume 8, Appendix 8-B.2 while a brief summary is provided below.

The main objectives pertaining to water management are to limit and/or stop the flow of surface water runoff in the pit and to limit the impact on the local environment. In developing the water management plan, the following principles were followed:

- keep the different water types separated as much as possible;
- control and minimize contact water through diversion and containment;
- minimize freshwater consumption by recycling and reusing the contact and process water wherever feasible; and
- meet discharge criteria before any site contact water is released to the downstream environment.

The preferred site water management option was selected based on four aspects: society, environment, economy, and viability (see Section 1.10.6). The selected option consists of isolating the pit area located in Whale Tail Lake with two dikes (Whale Tail Dike and Mammoth Dike), and raising the water level of the Whale Tail Lake by 4 m to reroute water flow towards the Northwest passage through a channel. Mammoth Dike is required for dewatering the pit area and to limit the water flow from Mammoth Lake into the pit during important flood events.

The Project site was divided into nine sectors. These sectors were also assigned to one of two categories based on the type of surface runoff to manage: contact water and non-contact water. Contact water will be collected in several ponds or sumps and pumped to the Attenuation Pond before being treated and discharged into Mammoth Lake. Non-contact water will be rerouted or discharged directly into the environment without treatment.

1.2.5.1 Water Management Infrastructure

The Project will include construction of the following water management infrastructure:

- four turbidity curtains;
- three contact water collection ponds (Attenuation, Whale Tail WRSF, and Whale Tail Camp);
- two freshwater collection ponds (South Whale Tail and Northeast);
- three water diversion channels (South Whale Tail, East, and North);
- four water retention dikes (Whale Tail, Mammoth, Whale Tail WRSF, and Northeast);
- two coffer/saddle dams;
- seven culverts;

- a freshwater intake causeway and pump system;
- a Water Treatment Plant and associated intake causeway;
- a water treatment plant for construction;
- a Sewage Treatment Plant;
- pipeline and associated pump system;
- a potable water treatment plant; and
- a discharge diffuser located in Mammoth Lake.

Design criteria with required design drawings for water management control structures are provided in Appendix 1-C. In addition for further information refer to the addendum to the Water Management Plan found in Volume 8, Appendix 8-B.2. Prior to construction detailed design drawings will be submitted to the NWB in accordance with the Type A Water Licence. Based on experience at the Meadowbank Mine, one saddledam and one channel may not be required and are dependent on the potential presence and volume of water. Any refinements to the Water Management Plan will be submitted to the NWB prior to construction. The discharge diffuser will be conceptually similar to the diffuser for the Vault Pit discharge (Agnico Eagle 2013).

The water management infrastructure required for the access road (i.e., bridges and culverts) have already been assessed and construction is underway. Works are authorized under Type B Water Licence 8BC-AEA1525.

1.2.5.2 Non-Contact Water Management

The addendum to the Water Management plan defines non-contact water as surface water or runoff that is not physically or chemically affected by a mining project's development areas and/or activities. The Water Management Plan (Volume 8, Appendix 8-B.2; and Figure 1.2-2) provides additional detail on non-contact water management.

The non-contact water sectors are:

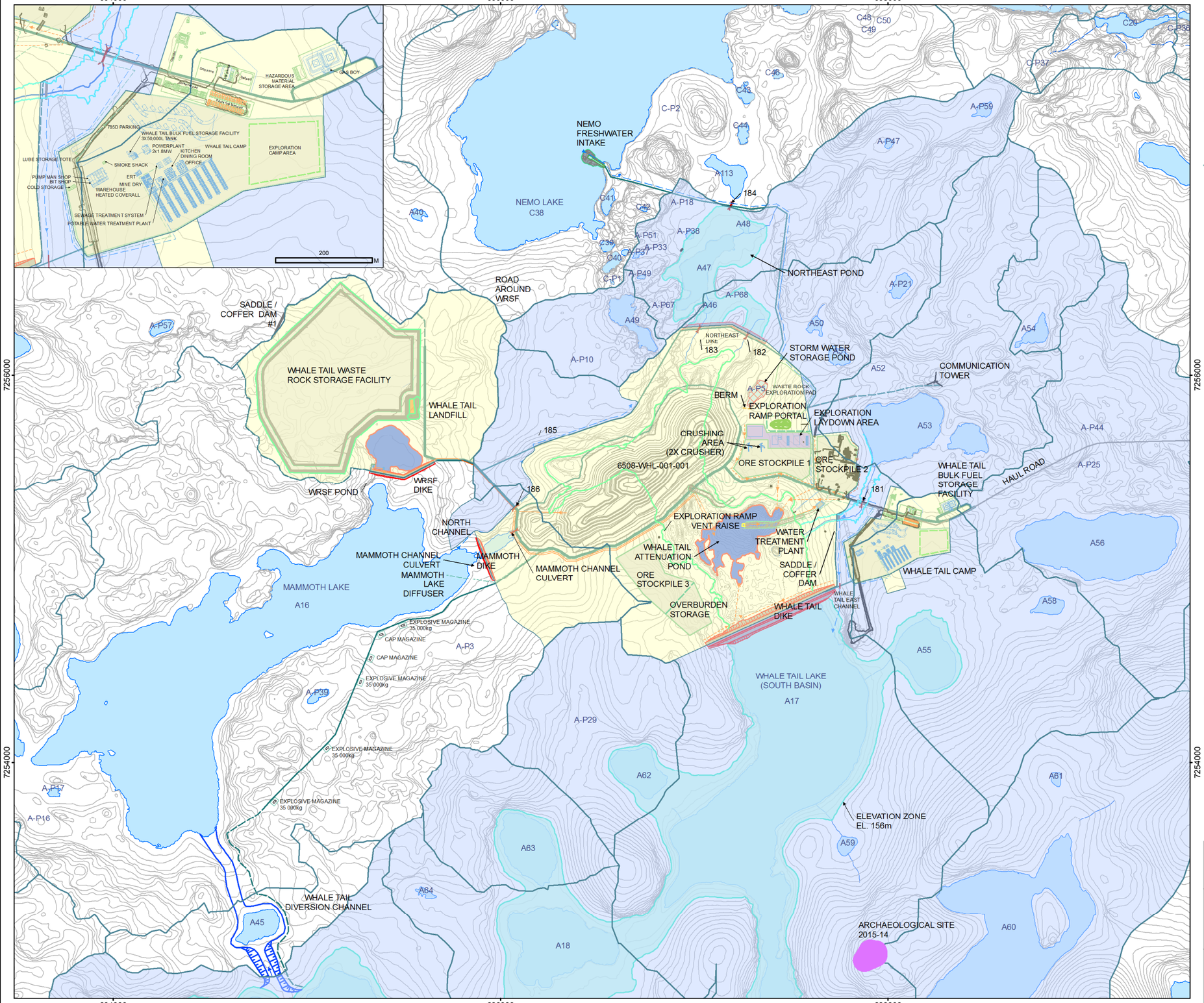
- South Whale Tail Lake Sector: The water will then flow through the South Whale Tail Diversion Channel and into Mammoth Lake.
- Northeast Sector: The water will be contained using a retaining dike and will flow toward Nemo Lake.
- East Sector: To limit the flow of non-contact water into the Attenuation Pond, a diversion channel (East Channel) will intersect the lake's final effluent. The East Channel will collect and divert the flow of Lake A53 to Whale Tail Lake.
- North Channel Sector: The construction of the road, or if deemed necessary the North Channel, located to the north of the pit will prevent non-contact runoff water from reaching the pit. This runoff water will flow by gravity towards Mammoth Lake.

1.2.5.3 Contact Water Management

Contact water is defined as surface water or runoff that has been in contact with Project development areas and/or activities. The Water Management Plan (Volume 8, Appendix 8-B.2, and Figure 1.2-2) provides additional detail on contact water management. Contact water was categorized into the following five sectors:

- Whale Tail Waste Rock Storage Facility Sector: The water is considered to be contact water, such that a dike is required to contain the water in a pond to prevent flow to Mammoth Lake.
- Industrial Camp Sector: Pads in the industrial sector and in the crushing area will be graded to redirect contact water towards the collection channel. The contact water will then flow by gravity to the Attenuation Pond.
- Main Camp Sector: Water will drain from the camp sector pad will be directed toward the Whale Tail Attenuation Pond.
- Pit Sector: All water not collected within the other sectors upstream of the pit will flow into it. Runoff from precipitation and ground will be pumped out of Whale Tail Pit, into the Attenuation Pond.
- Whale Tail Attenuation Pond Sector: Will collect all the water from the other contact water sectors, as well as the contact water from its own watershed and seepage from the Whale Tail Dike.

Contact water management associated with the existing facilities at Meadowbank Mine (i.e., tailings storage facility) is authorized under the Type A Water Licence No. 2AM-MEA1525 and will continue to be managed in the same way.



LEGEND

- FINAL WHALE TAIL WASTE ROCK STORAGE FACILITY
- WHALE TAIL LAKE (SOUTH BASIN) FLOODED LIMIT (WATER LEVEL 156.0m)
- DIKE
- POND/SUMP
- ARCHAEOLOGICAL SITE
- NATURAL WATERSHED
- CONTACT WATER SECTOR
- NON-CONTACT WATER SECTOR
- ROAD
- TEMPORARY ROAD
- DIVERSION CHANNEL
- COLLECTION CHANNEL
- CULVERT
- INTAKE WATER PIPE
- CONTACT WATER PIPE
- FRESHWATER PIPE
- WATERCOURSE
- WATERBODY

REFERENCE

1. INFRASTRUCTURE OBTAINED FROM AGNICO EAGLE MINES LIMITED FROM 6108-600-210-002_R2(2019)s.dwg.
2. WATERCOURSE AND WATERBODY DATA OBTAINED FROM PHOTOSAT

DATUM: NAD 83 CSRS PROJECTION: UTM ZONE 14

400 0 400
METRES

PROJECT
AGNICO EAGLE

AGNICO EAGLE MINES LIMITED:
MEADOWBANK DIVISION
WHALE TAIL PIT PROJECT

TITLE

WHALE TAIL SITE CONTACT VS. NON-CONTACT WATER

Golder Associates

PROJECT		1541520	FILE No.	
DESIGN	JR	24 Mar. 2016	SCALE AS SHOWN	REV. 0
GIS	CDB	05 May 2016		
CHECK	JR	13 May 2016		
REVIEW	LY	13 May 2016		

FIGURE 1.2-2

Y:\burnaby\CAD-GIS\Client\Agnico_Eagle_Mines_Ltd\Whale_Tail\99_PROJECTS\1541520_FEIS\02_PRODUCTION\FEIS\MXD\1300_Documentation\1340_Project_Description\Report\1541520_FIG_1-2-2_CONTACT_NON_CONTACT_WATER.mxd

1.2.5.4 Whale Tail Lake (North Basin) Dewatering

Agnico Eagle proposes to begin to dewater Whale Tail Lake from February through September 2019 following the construction of the dike and the fish out from July through September 2018. To allow the mining of the Whale Tail Pit, Whale Tail Lake will be partly dewatered once the Whale Tail Dike is constructed. The estimated total volume of Whale Tail Lake is 8.5 million m^3, inclusive of 3.4 million m^3 in Whale Tail Lake (North Basin) (i.e., where Whale Tail Pit is located), and 5.1 million m^3 in Whale Tail Lake (South Basin). Whale Tail Lake (North Basin) will be dewatered to either Whale Tail Lake (South Basin) or to Mammoth Lake through the discharge diffusor. It is assumed that approximately 66% of the volume (i.e., approximately 2.2 million m^3) will be pumped directly to Whale Tail Lake (South Basin) if it meets discharge criteria, and the remaining 34% (i.e., 1.2 million m^3) will be pumped to the water treatment plant first and then discharged to Lake A16 (Mammoth Lake). The dewatering activity is planned from February to May 2019 to Whale Tail Lake (South Basin) and from June to September 2019 to Mammoth Lake.

1.2.5.5 Water Treatment, Contact Water Ponds, and Attenuation Pond

Actiflo Clarifier, having an approximate hydraulic capacity of 2,000 m^3/h, will be used to remove the suspended solids during dewatering of Whale Tail Lake (North Basin). The Actiflo Clarifier process is based on the coagulation/flocculation/clarification principle. Water will be treated to meet the discharge criteria and pumped to the receiving environment (Mammoth Lake) via the discharge pipeline and the submerged diffuser.

1.2.5.6 Re-Filling

Following completion of mining, the open pit will be filled with natural runoff and water pumped from Whale Tail Lake (South Basin). During the summer of the Year 4 (2022), the water accumulated in Whale Tail Lake (South Basin) over the years of operations will be pumped into the open pit. It will take approximately 4 years to refill the pit. Following this first pumping summer, the water elevation in Whale Tail Lake (South Basin) will be back to the baseline value (152.5 metres above sea level [masl]) and no outlets will be available for this basin as the Whale Tail Lake (South Basin) Diversion Channel is at the elevation 156 masl and the Whale Tail Dike is maintained in place. During the following years and until Whale Tail Lake (North Basin) reaches the same water elevation as Whale Tail Lake (South Basin) (i.e., baseline water surface elevation of 152.5 masl), the yearly accumulated water in Whale Tail Lake (South Basin) (i.e., over the baseline water surface elevation of 152.5 masl) is pumped to Whale Tail Lake (North Basin). The north and south basins of Whale Tail Lake will be at the same elevation eight years after the end of the operational phase and then the Whale Tail Dike and the Mammoth Dike will be breached if the water quality monitoring results meet discharge criteria to allow water to naturally flow to the outside environment.

1.2.6 Marine Area

Meadowbank Mine relies on marine transportation for most of its supplies including fuel, construction and operation equipment, materials and consumables, including dangerous goods, food, household goods, and other non-perishable supplies. Consistent with existing Meadowbank operation materials will be transported to Baker Lake via barge and will either be directly transported to Meadowbank Mine and/or the Whale Tail Pit site or held for a short period of time in the Baker Lake marshalling area.

Dry cargo is shipped from Becancour using multipurpose ocean-going vessels, which transit through Hudson Strait and Hudson Bay until reaching an established freight transfer (lightering) site located approximately 20 nautical miles (nm) east of Chesterfield Narrows, near Helicopter Island, Nunavut. The ship is anchored at

this point and cargo is unloaded onto two barges using the multipurpose crane system (P. Paquette, NSSI, 2016, pers. comm.). The barges then transport the shipment through Chesterfield Narrows to Baker Lake. Dry cargo shipments are provided by Nunavut Sealink & Supply Inc.

Fuel is supplied to Baker Lake by marine fuel tankers at an annual volume of 66.8 million L (65 million L of ULSD and 1.8 million L of Jet A). The fuel is transported by ocean-going tankers between Lewisporte, NL and a fuel transfer (lightering) site located near Helicopter Island, Nunavut. Once the fuel tankers are securely anchored, fuel is transferred to either tug-assisted fuel barges or smaller shuttle tankers. The fuel barges / shuttle tankers then transport the fuel shipment through Chesterfield Narrows to Baker Lake. Fuel shipping is provided by Woodland Coastal Shipping Ltd.

Agnico Eagle does not forecast changes to the existing transportation requirements related to the marine environment; in other words no additional ship trips are expected to be added by this Project as compared to the level of shipping currently required to re-supply the Meadowbank Mine on an annual basis. The proposed marine activity will simply be extended for an additional three to four years of operations.

1.2.7 Haul Roads, All-Weather Roads, and Winter Roads

The current operational components include marshalling facilities in Baker Lake and the 110 km AWAR between Baker Lake and the Meadowbank Mine. Vault Pit is approximately 8 km northeast of the main mine site. In 2015, Agnico Eagle received approval to construct a 64.1 km long exploration access road from Vault to the Amaruq exploration camp site in support of exploration activities. Agnico Eagle is proposing to upgrade this exploration road to a haul road to support the development of Whale Tail Pit and the hauling of ore and supplies needed between the Whale Tail Pit and the Meadowbank Mill. No changes are proposed for the Meadowbank AWAR to Baker Lake.

The proposed upgrade of the exploration road mainly entails widening from the current 6.5 m width to 9.5 m width. Road surfacing will be constructed using waste rock or aggregates from the quarry sites and esker material already permitted and leased. Typical cross-sections of the upgraded road based on underlying ground conditions are provided in Appendix 1-C. The bridges are already designed at the exploration stage to accommodate potential for use of the exploration road as a haul road. Culverts are already designed and will be extended to allow for adequate drainage. The bridges and culverts for the access road have been screened by NIRB and approved by the NWB and DFO for construction.

On-site standard culverts will be installed similar to haul roads within the Meadowbank Mine site. Typical cross-section and profile for culverts is provided in Appendix 1-C.

Agnico Eagle has developed the Whale Tail Pit Haul Road Management Plan. Refer to Volume 8, Appendix 8-C.1.

1.2.8 Maintenance, Warehouse, and Laydown

Primary maintenance will occur using existing infrastructure at Meadowbank Mine. For light maintenance the industrial site adjacent to the Whale Tail Pit will include one maintenance shop for mine equipment and one for haul trucks. Agnico Eagle may also include a wash bay, a machine shop, and a welding shop. The concrete foundation will be designed according to the type of bay (e.g., for a wash bay, drains in the foundation will be designed for used water with a sump for an oil separator).

1.2.9 Airport Facilities

There are no anticipated changes to the currently approved airport facilities at Meadowbank Mine. The small airstrip at the exploration site will be progressively reclaimed, and potentially 4,000 m^3 of existing airstrip surface material may be reused as construction material for the proposed infrastructure at the Whale Tail site.

1.2.10 Explosives Production and Storage Sites

The existing emulsion plant located near the Meadowbank Mine will be maintained with deliveries on an as need basis during operations. The haul road will be used to truck explosives between Meadowbank Mine and the Whale Tail site, with a minimum amount of explosives to be stored at the Whale Tail Pit site. Explosives truck(s) will be based at the emulsion plant at Meadowbank Mine. The location of general infrastructure for the management of explosives at the Whale Tail site are shown on Figure 1.2-1.

The Whale Tail site will primarily use emulsion based explosives during construction and operations to minimize the use of ammonium nitrate/fuel oil (ANFO). Presplit explosives will also be used to control the final pit walls, where required.

The explosives storage facilities will be safely located away from vulnerable facilities, as stipulated by the federal and territorial *Explosives Use Act* and *Regulations*. The minimum setback distances between the proposed explosives storage facilities and the other mine site facilities will be governed by the *Quantity-Distance Principles User's Manual,* as published by the Explosives Branch of Natural Resources Canada. Use of these setback distances will ensure that the location of these proposed facilities meet all federal and territorial regulations regarding safe siting of such facilities. Agnico Eagle has also taken into account for stoppage of haul road closures due to caribou migration and weather by appropriately sizing the on-site ore storage stockpile both at the Whale Tail Pit site and at Meadowbank Mine.

Fuel and raw materials for manufacturing explosives will continue to be supplied to Meadowbank Mine using the approved shipping routes.

1.2.11 Fuel Storage Sites

The construction and operations of the Whale Tail site will require the use of fuel (P-50 Fuel Diesel ULSD-43). Fuel usage between the Meadowbank Mill and operations at the Whale Tail site is projected to be approximately 66.8 million L/year. The Whale Tail Bulk Fuel Storage Facility will be located east of the Whale Tail Camp adjacent to the mine operations haul road (see Figure 1.2-1). Fuel storage at the Whale Tail site will be in one above ground storage tank with approximately 500,000 L capacity. The bulk fuel tank will be re-filled by a fuel truck on a regular basis throughout the year.

The diesel tanks will be single-walled, constructed of welded steel, and designed, constructed, and located to meet the Canadian Council of Ministers of the Environment guidelines for *Aboveground Storage Tank Systems Containing Petroleum and Allied Petroleum Products*. The fuel unloading facility will be located within a lined and bermed area sized to hold 110% of the volume of the largest tank. All other petroleum fuel and lubricant products will be delivered and stored in the original packing containers as delivered from the manufacturer.

The approved fuel storage facilities at Meadowbank Mine and Baker Lake marshalling area remain unchanged as a result of the proposed development of Whale Tail Pit and associated infrastructure. No additional marine shipping beyond current annual requirements will be needed; however, the activities will be extended by three to four years. The haul road will be used to truck fuel between Meadowbank Mine and the Whale Tail site.

1.2.12 Waste (Domestic and Hazardous) Management

All hazardous waste will be properly shipped to approved disposal facilities in the south. All organic material from the Whale Tail site will similarly be disposed of using the existing Meadowbank incinerator. Waste oil will be collected and used on-site in waste oil burners. Peak incinerated waste volumes are expected to remain similar to those occurring under current operational conditions at Meadowbank. Construction debris and domestic waste generated on-site will be disposed of in an on-site landfill to be located in the Whale Tail WRSF. The total capacity of this landfill is to be 59,000 m^3.

1.2.13 Power

The Power Plant will be a diesel-fueled facility using reciprocating engines housed in a modular building with a floor area 215 square metres (m^2). The two 1.8 MW/600 Volt (V) gensets will be relocated from the Vault Mine site to Whale Tail. An initial load estimation has been completed which gives us an expected load of 1,358 kW representing less than 85% of the one genset capacity. One spare unit will be installed for standby and/or service maintenance.

During construction, four 600 V diesel generator sets will be used to provide power for temporary facilities, such as office trailers and power for construction activities. These generators will progressively be bought during the construction period to provide power when needed (e.g., new building, and temporary power). After construction is completed, these generators will be consolidated and used as an emergency standby system. There will be no change to the power requirements at the Meadowbank Mine than is currently present.

1.2.14 Borrow Pits and Quarry Sites

Construction of the exploration access road utilized a series of quarry sites from which road construction material is sourced (the 6.5 m wide exploration road is currently under construction). These quarries will be expanded (first by depth, and if needed in width) to obtain material for haul road construction. Quarry material on the Whale Tail site will also be used for industrial site pad, access roads, and dikes. Proposed and currently licensed quarry sites are shown in Appendix 1-C. Ripping frozen borrow pit material will be attempted using a dozer. This loosens the material and allows it to be picked up using a loader or a hydraulic shovel. Should this fail, standard drill and blast procedures would be used. The sequence of steps under this circumstance follows that for waste rock from the Vault Pit.

While ARD/ML testing has been conducted as a measure to avoid using reactive road building materials; if sufficient water volume accumulates in the borrow sources, water quality monitoring of seeps from borrow pits will be conducted to provide information on possible impacts on the environment should the water reach any nearby waterbodies. A buffer of at least 31 m of undisturbed land will be maintained between borrow pits and waterbodies, and best management practices will prevent direct drainage away from the quarry sites. However, any significant seeps originating from the borrow pits that are likely to reach receiving waters will be sampled and analysed for a full suite of water quality parameters. Any problematic water will be directed away from waterbodies, or held if possible. If necessary, silt curtains will be used to control suspended sediments in water seeping from the borrow pits. Although erosion is not expected to originate from water flow from borrow pits, any evidence of erosion will be repaired by placing riprap over the affected area, and measures will be taken to reduce the velocity of the water with, for example, silt curtains.

Agnico Eagle has developed the Whale Tail Pit Haul Road Management Plan in support of Project operations. Refer to Volume 8, Appendix 8-C.1 for specific details.

1.3 Project Design

Agnico Eagle continues to conduct feasibility and design studies with both the cold northern climate and remote location as the principal engineering considerations for successful design, construction, and operations. Consistent with the FEIS (Cumberland 2005), the Whale Tail Pit was designed to minimize the areas of surface disturbance, stabilize disturbed land surfaces against erosion, and return the land to a post-mining use for traditional pursuits and wildlife habitat. This will mainly be achieved by rapidly dewatering during the open water season, mining the pit as efficiently as possible, and then refilling as early as possible during closure.

Design criteria with required design drawings for Project infrastructure are provided in Appendix 1-C.

1.4 Pace, Scale, and Timing of Project

As stated in Section 1.2.1.2 Project Need, Meadowbank Mine is scheduled to exhaust its mineable reserves by Q3 of 2018. The Kivalliq Region of Nunavut offers limited, and usually seasonal, employment opportunities. Agnico Eagle will continue exploration activities with the objective to extend Meadowbank Mine life beyond Q3 2018.

Agnico Eagle is actively exploring the Amaruq exploration property and expects to begin construction in 2018 and ultimately have full production in 2019. However, if permits are received earlier construction on-site will begin immediately thereafter.

By extending the LOM at Meadowbank, Agnico Eagle will progressively close portions of the Meadowbank Mine while operating. More specifically, the Whale Tail Pit operations will allow Agnico Eagle to progressively close the Vault Pit operations during extended operations (i.e., closing roads, infrastructure, Vault WRSF and refilling the pits, Phaser Lake and Vault Lake) according to the approved interim Meadowbank Closure Plan. Furthermore, Agnico Eagle will optimize closure planning by progressively closing portions of the Meadowbank Mine (i.e., Portage WRSF, reflooding Goose Pit and Portage Pit and reclaiming unused roads). Figure 1.4-1 provides a graphical representation of the key phases of Whale Tail and key phases at Meadowbank Mine.

The development sequence for the mine infrastructure and water management infrastructure is summarized in Table 1.4-1.

Figure 1.4-1: Key Phases at Whale Tail Pit and Meadowbank Mine

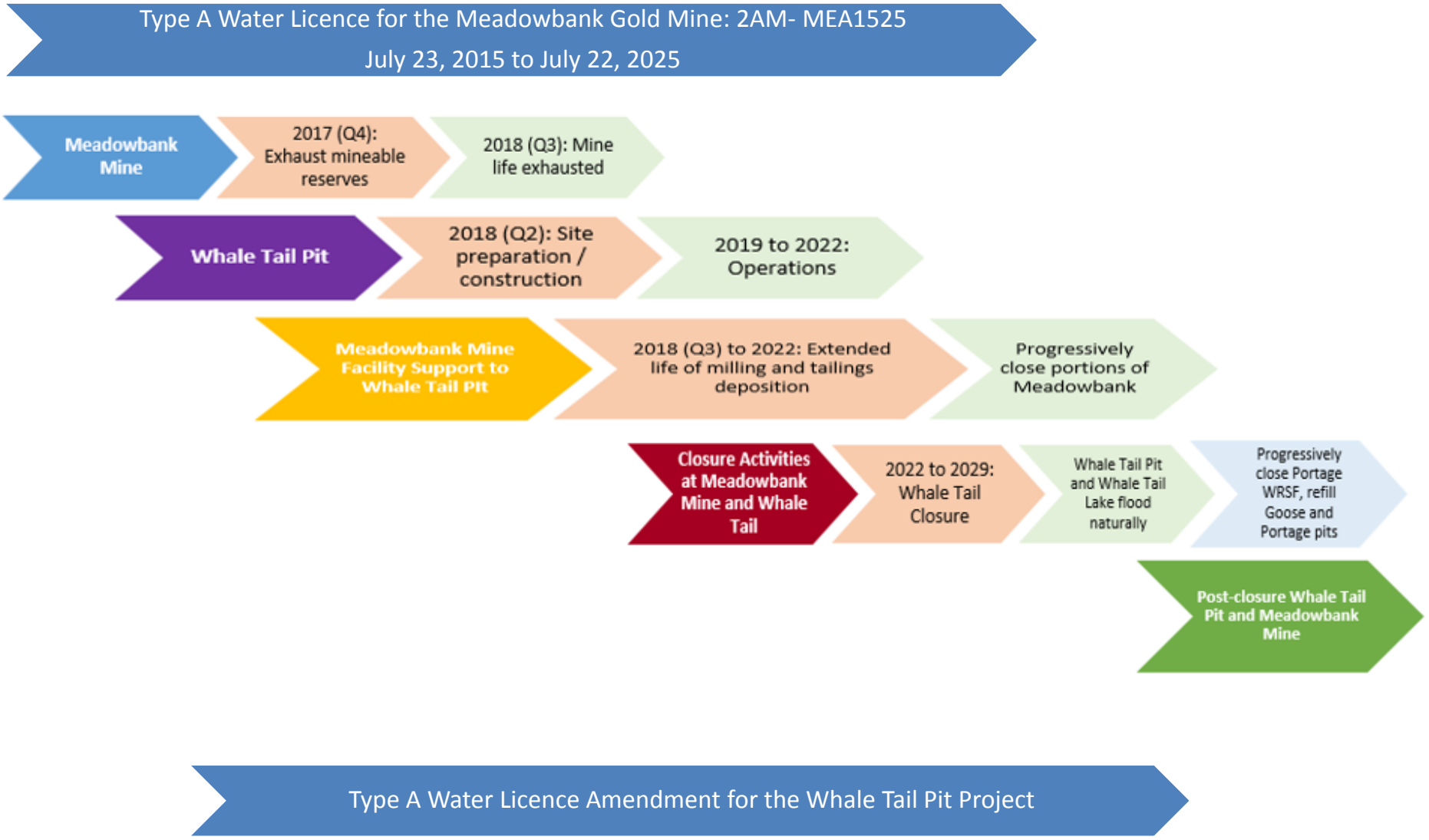


Table 1.4-1: Mine Development Sequence and Key Activities

Mine Year	Mine Development Sequence and Key Activities
Year -1 (2018) Construction	• Start the widening of the exploration access road to a haul road • Start the stripping of the open pit • Start to place waste rock and overburden in the Whale Tail WRSF area • Start the construction of the industrial pad and associated buildings • Start the construction of ore stockpiles and overburden storage • Start the construction of Whale Tail Dike • Start the construction of Mammoth Dike • Start the construction of the access roads on site • Start the construction of the contact water intake causeway in the Whale Tail Attenuation Pond • Construct Whale Tail WRSF Dike • Fish out Whale Tail Lake (North Basin) • Construct fresh water intake causeway in Nemo Lake • Construct the Water Treatment Plant • Construct the explosive magazine pads
Year 1 (2019) Operations	• Complete the widening of the haul road • Complete the construction of the industrial pad and associated buildings • Complete the construction of ore pads and overburden storage pad • Complete the construction of Whale Tail Dike • Complete the construction of Mammoth Dike • Complete communication tower construction • Complete the construction of the access roads on-site • Complete the construction of the causeway in the Attenuation Pond • Construct North East dike • Complete the construction of the water management infrastructure • Perform the dewatering of Whale Tail Lake (North Basin) • Construct discharge diffuser in Mammoth Lake • Construct the South Whale Tail Diversion Channel • Construct the water management Channel in the North Sector • Construct and operate the landfill • Start the cover with NPAG waste in the Whale Tail WRSF area
Year 3 (2021) Operations	• Complete the mining of the open pit
Year 4 (2022) Closure	• Complete the trucking of the ore to the Meadowbank Mill • Complete the cover with NPAG waste in the Whale Tail WRSF area • Decommission non-essential mine infrastructure and support buildings • Draw-down of Northeast sector and breach the Northeast dike • Draw-down of the raised Whale Tail Lake (South Basin) to natural elevation to contribute to refilling of the mined-out open pit • Start to reclaim the non-essential infrastructure • Start to fill the mined-out open pit by active pumping and natural flow • Start the monitoring period

Table 1.4-1: Mine Development Sequence and Key Activities (continued)

Mine Year	Mine Development Sequence and Key Activities
Year 6 (2024) Closure	• Complete the decommissioning of non-essential mine infrastructure and support buildings (except the water treatment plant and related infrastructures) • Complete the reclaiming of non-essential infrastructure
Year 7 (2025) Closure	• Refill the mined-out open pit by actively pumping from Whale Tail Lake (South Basin) and natural flow • Move the water treatment plant to the Whale Tail WRSF area, if necessary
Year 11 (2029) Post-closure	• Refill Whale Tail Lake (North Basin) • Breach the Whale Tail Dike when North Basin and South Basin of Whale Tail Lake are at the same elevation
Year 14 (2032) Post-closure	• Complete the decommissioning and the reclaiming • Breach the Whale Tail WRSF Dike
Year 16 (2034) Post-closure	• Complete the monitoring period

WRSF = waste rock storage facility; NPAG = non-potentially acid generating.

1.5 Environmental Assessment Summary

The FEIS (Cumberland 2005) and this FEIS Amendment applies an ecosystem-based approach by describing the ecological function of each ecosystem component or VC, indicating the ecological and cultural pathways of the potential impacts that are predicted, and designing mitigation and monitoring plans to deal with those impacts.

Baseline programs have been completed for the Project and have included data collection for the physical environment (e.g., terrain and soils, permafrost, geochemistry, noise, and surface water quantity and quality), biological environment (e.g., vegetation, terrestrial wildlife and birds, and fish and other aquatic organisms), and the cultural environment (e.g., IQ, archaeology, and socio-economics). Baseline data are summarized in a series of baseline reports that are included as supporting documents to the FEIS Amendment and/or are provided on the NIRB website (NIRB 2015).

In general the approach and methods for analysing, assessing, and determining the significance of environmental impacts included defining and describing these key elements:

- valued components;
- special and temporal boundaries;
- existing conditions;
- pathway analysis;
- residual effects analysis (includes project specific and cumulative effects);
- prediction confidence and uncertainty;
- residual impact classification and determination of significance; and
- monitoring and follow-up (including steps to be taken to fill gaps where applicable).

An impact assessment was completed for terrain, permafrost, and soils, air quality, noise, surface water quantity, surface water quality, fish, vegetation, terrestrial wildlife and birds, archaeology, traditional land use, socio-economic, and cumulative effects. Key impacts are related to localized changes in water quantity from dewatering, water quality changes from effluent discharge, impacts to local fish populations from dewatering Whale Tail Lake (North Basin), sensory disturbance to wildlife from the haul road and mining activity, localized changes to vegetation as a result of dust deposition, direct wildlife habit loss, socio-economics, including employment, government revenues, income, and traditional use effects from the extension of the LOM of the Meadowbank Mine. While there will be some short-term positive and negative impacts from the Project, long-term, high magnitude negative impacts are not anticipated.

Detailed FEIS addendum and baseline studies used to assess the impacts of extending the Meadowbank LOM, from mining the Whale Tail deposit is provided in Volumes 2 to 8 of the FEIS submission. It includes a detailed description of the approach taken for the addendum, an assessment of atmospheric, terrestrial, freshwater, human environment, and presents associated mitigation and monitoring plan addendums that are consistent with approved Meadowbank plans.

1.6 Adaptive Management and Precautionary Principle

Making good use of adaptive management requires the recognition that it is a structured, iterative approach to environmental management decision making (CPR 2011). Many valued components applicable to the Project are part of dynamic natural and socio-economic systems where uncertainty can be a significant factor. The goal is to reduce uncertainty over time by incorporating learnings from design, monitoring, mitigation, and changes in operations into environmental management at the proposed mine site. For example, the exploration and haul road alignment was altered based on community feedback and the construction schedule for the haul road was altered to focus on winter construction to reduce permafrost degradation. Where applicable, an adaptive management strategy or approach will be used for those VCs that will be monitored by Agnico Eagle.

Agnico Eagle has taken steps to integrate its sustainable development program into all aspects of its business through the development and implementation of an internal Health, Safety, Environment and Community Relations Management System, labelled the RMMS. Trends are compiled, followed, and analyzed in the RMMS and compared to the pre-established goals/thresholds. Any action plan and corrective actions to be taken are documented through the RMMS.

In 2014, Agnico Eagle continued development and implementation of its RMMS, the company's internal Health, Safety, Environment and Community Relations Management System. Its approach is to ensure that its system is consistent with the ISO 14001 standard for environmental management and the OHSAS 18001 standard for health and safety management. System documentation is supported by Intelex software. The RMMS is designed to integrate management of the requirements of the TSM initiative, the International Cyanide Management Code, the Carbon Disclosure Project, the Global Reporting Initiative, and the Conflict-Free Gold Standard.

The system is designed to quickly identify any adverse impact that could result from design features, mitigation measures, practices, and procedures that are mistakenly absent or not as effective as anticipated. The main concern in these instances is to evaluate the potential severity of the anticipated effect, and prioritize actions plans to mitigate impacts. Each of the management plans developed for the Project include an intrinsic process of continuous improvement that is aimed at evaluating the effectiveness of the design features, mitigation measures, operating practices, and procedures put in place.

Monitoring and adaptive management are essential tools for ensuring that a project is implemented as planned, that mitigation measures are successful, that the procedures and practices are effective, that potential adverse impacts are avoided or minimized, and that enhancement measures are effective. It is through monitoring that any unanticipated adverse environmental impacts can be discovered. Adaptive management is particularly useful in implementing the appropriate remedial measures in these instances. Additionally, the objectives of monitoring and adaptive management are to verify that:

- commitments are fulfilled;
- regulatory and other requirements are met;
- adverse effects are avoided or minimized; and
- benefits are enhanced.

As described above, adaptive management is used within the feedback process to make decisions to minimize or eliminate an adverse effect. It is employed where operations are planned and implemented, monitoring data collected and analyzed, and practices and procedures adjusted to reduce or eliminate any observed adverse effects. Continual use of the feedback loop allows environmental and socio-economical management decisions to be made on an ongoing basis and can lead to improvements in environmental management over time. Successful adaptive management will be evidenced in mitigation measures being effective. Should the measures employed not be successful, the particular activities will be curtailed while a detailed analysis is carried out to find the cause.

The precautionary principle, in conjunction with adaptive management, will be used in decision-making. In the face of uncertainty, conservative approaches will be used with an aim to reducing uncertainty over time via monitoring and mitigation.

Inspection precedes maintenance. Inspections, combined with monitoring, will signal when adaptive management must be used to mitigate possible negative effects.

1.7 Performance Measurement and Monitoring

As part of the Mining Association of Canada, Agnico Eagle reports its global performance through its annual Corporate Social Responsibility report. This report includes, notably, the indicators of the Global Reporting Initiative and Towards Sustainable Mining Initiative and have been incorporated into the Meadowbank RMMS. Main indicators to follow will be selected by taking into account:

- the compliance with relevant regulatory requirements and permitting targets;
- activities trends; and
- the progress towards achieving targets.

Regulatory requirements and targets are identified in each of the management plans, as appropriate. Corrective actions will be triggered when those thresholds are reached. The RMMS will link the thresholds to appropriate corrective actions and establish accountability.

The performance of the management plans will be monitored periodically and the results communicated. Independent researchers or consultants may be engaged to review performance where necessary. The

accuracy of the environmental impact predictions and the effectiveness of the mitigation measures will be verified through that process. If unusual or unforeseen adverse environmental impacts are noticed, corrective action will be put in place. Through the adaptive management process, the existing mitigation measures will be adjusted or new mitigation measures implemented if necessary. External reporting will be completed, as required.

A follow-up program will verify the effectiveness of any mitigation measures taken in response to expected and unexpected adverse environmental effects. An environmental effects monitoring program, will monitor the effectiveness of all mitigation measures. This program will include a reporting and response system.

Consistent with the existing Meadowbank Water Licence, Agnico Eagle will continue to comply with annual reporting requirements to the NIRB, KIA, and NWB.

1.8 Potential Future Developments

Agnico Eagle will continue exploration activities with the objective to extend Meadowbank Mine life beyond Q3 2018. Exploration is the act of searching for the purpose of discovery additional resources for potential future development. A list of current authorization and permits for exploration is provided in Appendix 1-B and ongoing baseline data collection activities are provided in Volume 2, Appendix 2-D.

In the original Project Certificate (Item 29) NIRB acknowledged that planned changes and project alternatives has potential and that ongoing expansion of Meadowbank was a possibility. Item 29 states:

> [Agnico Eagle] report to the NIRB if and when [Agnico Eagle] develops plans for an expansion of the Meadowbank Gold Mine…

The right to explore and develop the mineral resources at the Amaruq property (formerly the IVR project) was acquired by Agnico Eagle in April 2013 subject to a mineral exploration agreement with NTI. The development of Whale Tail Pit as proposed represents a portion of the mineralization identified for the Whale Tail zone. The 408 km^2 Amaruq property has potential for future development (refer to Figure 1.7-1 and Figure 1.7-2) as:

- the initial exploration target areas of mineralization potential the “I zone”, “V Zone” and “R Zone” intersects;
- underground mining of the Whale Tail ore body;
- expansion or pushback of proposed Whale Tail Pit; and
- Mammoth intersect potential underground and/or open pit.

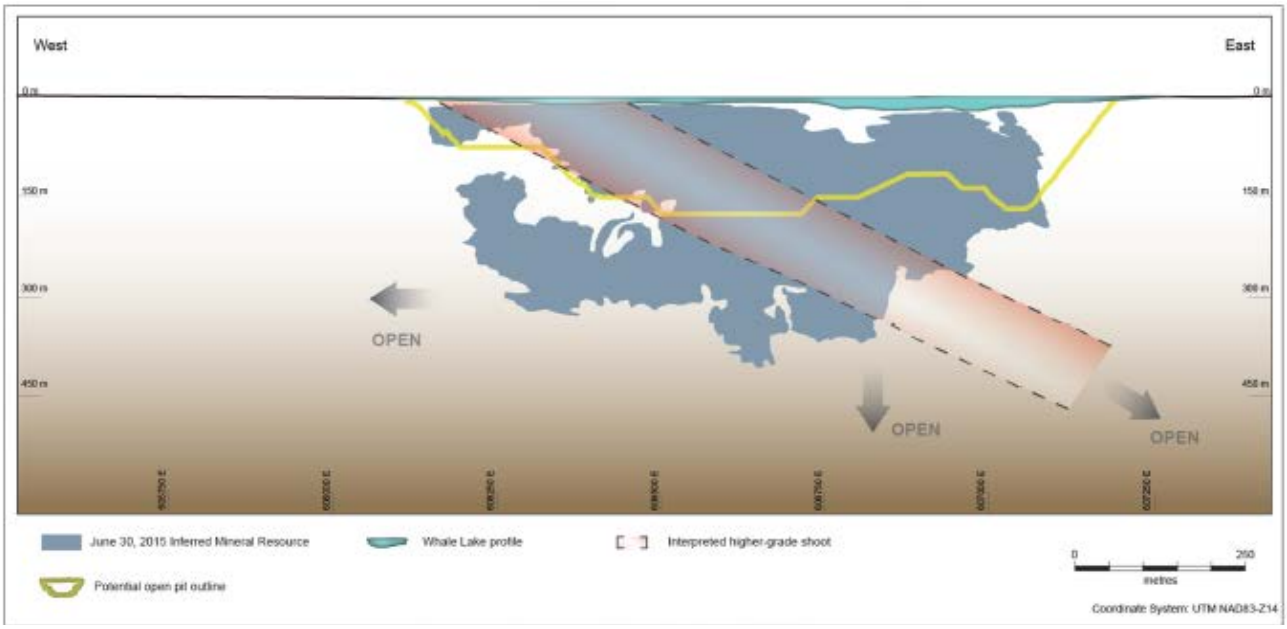


Figure 1.7-1: Underground Potential of the Whale Tail Ore Body

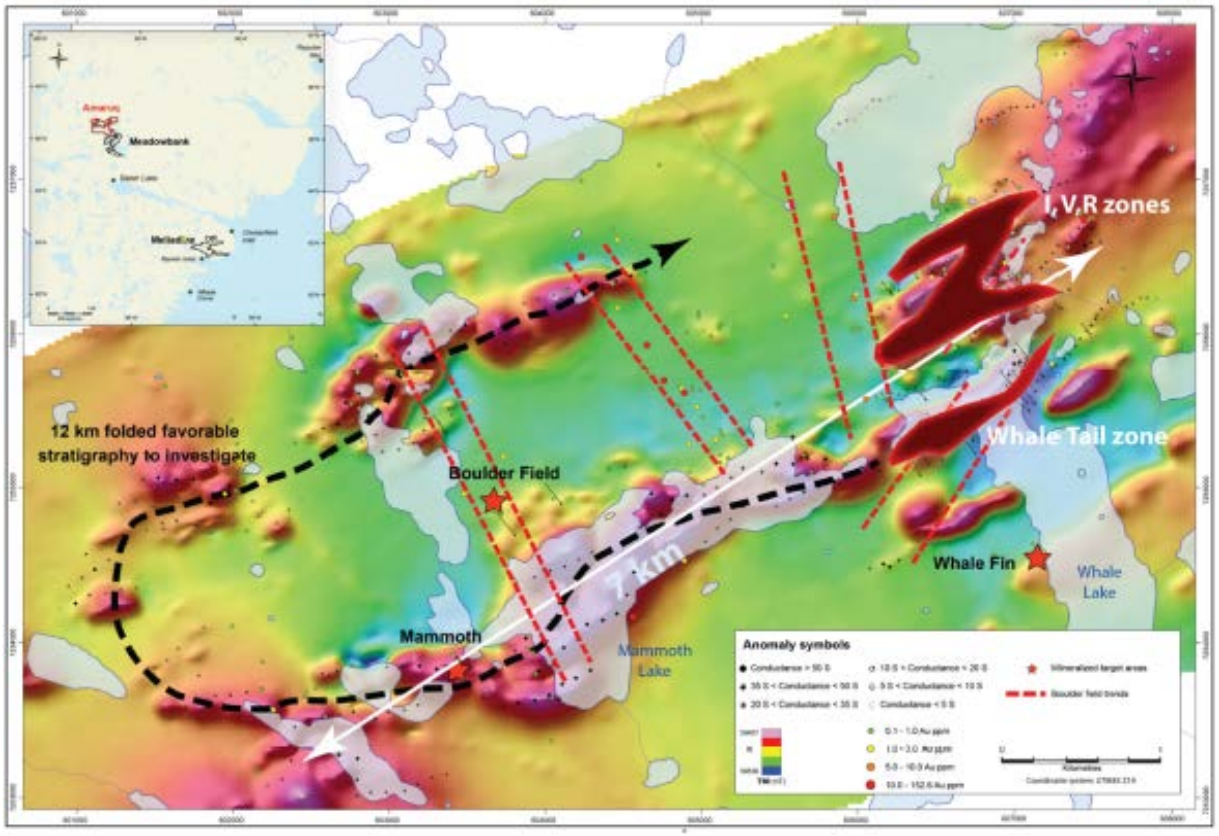


Figure 1.7-2: Geophysics Survey of the Amaruq Exploration Site and Future Development Opportunities

In March 2016, Agnico Eagle requested an amendment to the Type B exploration water licence to expand ongoing exploration of the Whale Tail zone to include advanced exploration and a bulk sample to assess the underground mining potential of the Whale Tail ore body.

Agnico Eagle proposes to continue delineation drilling of the IVR and Mammoth intersect zones in 2016.

The areas of potential future development are within the study area for the current Project. If proven economically viable the exploitation of the additional deposits would extend the LOM for Meadowbank Mine operations. Agnico Eagle would seek the appropriate modifications and/or amendments, if applicable.

1.9 Technology

The most current concepts have been selected for Project design (i.e., mining, processing, and effluent treatment). Although the technologies are considered state-of-the-art, the Meadowbank project team have adapted to difficult climatic conditions and have designed infrastructure accordingly and used up-to-date technology to solve problems.

For example, Agnico Eagle will continue to work with researchers at RIME (Research Institute of Mine and Environment) as part of an ongoing research project to evaluate tailings encapsulation at Meadowbank, as well as waste rock facility performance.

Presently two experimental cells have been built in the TSF:

- one with a cover of NPAG material of 2.0 m over the tailings; and
- one with a cover of NPAG material of 4.0 m over the tailings.

The experiment cells are instrumented with temperature probes, water content probes, suction probes, and oxygen consumption probes. The data from the instrumentation is collected by Agnico Eagle and sent to RIME for analysis. As additional data becomes available (i.e., after a complete year of instrumentation readings), the data will be presented and commented on in the 2015 Annual Report to NIRB and regulators. Additional test pads may be constructed over the tailings in 2016. The information collected will also be used by Agnico Eagle in developing a final design for tailings cover required at closure.

Furthermore, Agnico Eagle continues to work with academic and government researchers to improve the ability to predict and monitor environment impacts (specifically related to socio-economics, caribou, predatory birds, vegetation covers, and fisheries monitoring) in the north.

The mining and processing techniques proposed for Whale Tail Pit are an extension of current mining practices, thus Agnico Eagle intends to use familiar, proven approaches seen at many mining operations in production today however the company is continually addressing problems using proven newest technologies to improve mining efficiency, production efficiency, reduce fuel consumption, and ultimately reduce emissions.

1.10 Alternatives to the Project

Project alternatives were considered during all stages of Project design. Consultation and regulatory engagement discussions have been considered as part of the alternatives assessment. In general, Project alternatives were evaluated according to the following criteria:

- Environmental - potential impacts to the environment, project footprint, reclamation;

- Engineering and Viability – best engineering practices, technology, permitting, risk, and flexibility;
- Economy – cost implications, construction capital, operating costs, maintenance cost for reclamation; and
- Society – community acceptance or preference, traditional knowledge, health and safety, quality of life, employment, and socio economic effects.

The alternatives that shaped the overall Project include the following:

- Project Go/No-Go decision;
- Deposit, Mining Method, and Production;
- Processed Ore Containment and Tailing Storage;
- Overburden and Waste Rock Disposal;
- Water Management;
- Transportation, Access, and Quarry Development; and
- Infrastructure Support.

1.10.1 Project Go/No-Go Decision

The proposed Project is an opportunity made real by existing mining and milling facilities at Meadowbank Mine. Without these existing facilities it is not likely that Whale Tail Pit ore reserves could be economically mined. Without the Project expansion, the Meadowbank Mine will close in Q3 of 2018.

From the economic and societal view, the no-go alternative would result in a substantial lost opportunity. Tax and royalty revenues to government and employment and business contracting opportunities to individuals and companies would be lost.

From an environmental perspective, the no-go alternative would mean no additional impacts from mining. Existing site facilities would be decommissioned and the area disturbed by exploration would be restored within the terms of the existing licenses.

Delays in the Project associated with permitting may affect the long-term economic viability of the Project. Agnico Eagle has an obligation and commitment to reclaim infrastructure through progressive reclamation as facilities are no longer needed. To reduce economic and environmental liability for the proposed Project and existing Meadowbank Mine, Agnico Eagle's key objective is to minimize the "gap" in time between Meadowbank closure due to lack of resources and the mining/processing of additional resources from the proposed Project.

1.10.2 Infrastructure, Transportation Access, and Quarry

To improve economics for the Project, Agnico Eagle has minimized Project footprint, reduced potential impacts to the environment, and reduced infrastructure requiring reclamation by using as much as possible, the established Meadowbank Mine infrastructure.

In 2015 the NIRB and regulators approved the exploration access road to support the level of exploration needed by Agnico Eagle to evaluate the economic viability of further deposits.

The Project will require the expansion of the approved 6.5 m wide access road to a proposed 9.5 m wide haul road. The access road allows Agnico Eagle to use Meadowbank infrastructure to the fullest extent possible. If no road existed and Project economics supported the development of Whale Tail Pit, the project would require additional on-site support infrastructure including maintenance shop, administration, larger accommodation, and increased fuel storage. The existence of the road allows Agnico Eagle to minimize Project footprint.

Consultation was undertaken in development of the exploration access road and road selection alternatives were discussed with community representatives (Volume 7, Appendix 7-A). Agnico Eagle modified the road route to take into account community preference and traditional knowledge, are working with the Department of Culture and Heritage to respectfully mitigate existing cultural heritage sites, and have avoided all burial sites.

Quarry selection and use options were evaluated in the application filed for the exploration access road. Agnico Eagle, where possible, has prioritized use based on feedback from the community and KIA.

1.10.3 Deposit, Mining Method, and Production

Agnico Eagle outlined the potential for future development of the Amaruq property (Section 1.8) these options were considered as Project alternatives.

Initial drilling results for the IVR zones are promising; however, the Whale Tail Pit drilling results were more favorable and therefore advanced significantly through extensive drilling in 2014 and 2015 to confirm prefeasibility level economic viability. Additional deposits within the Amaruq property including IVR zones and underground require further exploration to assess economic viability.

Agnico Eagle considered delaying the Project and mining open pit and underground or solely underground to mine the Whale Tail zone; however, this would increase the overall gap between Meadowbank closure and continued mining beyond 2018 to at least two to three years given the present knowledge of the underground potential; without advanced exploration the current understanding is insufficient to support development. In March 2016 Agnico Eagle submitted an application to regulators to undertake advanced exploration of the Whale Tail zone to further evaluate the economic viability of underground mine development.

Agnico Eagle also considered widening the open pit footprint of Whale Tail Pit and adding in the mining of several smaller pits, including IVR. However, tailings storage facility capacity within the footprint of the approved TSF limited the size of the pits. Ultimately the size of the pits and Whale Tail WRSF were kept small in size to reduce the footprint of the Whale Tail Pit site and to remain within the approved Meadowbank TSF footprint and closure concept.

1.10.4 Processed Ore Containment and Tailing Storage

The processing of ore and disposal of tailings using the existing Meadowbank Mine facilities:

- reduces potential impacts to the environment by reducing Project footprint and need for reclamation of additional facilities;
- the raise in the north cell assists in contouring the TSF to control contact water runoff in closure;
- applies proven engineering best practices and technology which has been in use since 2006;
- reduces need for permitting of an additional tailings containment area;

- reduces the overall capital cost and operating cost by using existing processing facilities and existing tailings storage facilities;
- leverages operational knowledge;
- reduces reclamation costs and long-term environmental liability with respect to added infrastructure; and
- preferred by the KIA as land owner.

A new TSF on-site at Whale Tail would increase the Project footprint, require additional engineering (i.e., water management control structures), and increase environmental and post-closure monitoring obligations.

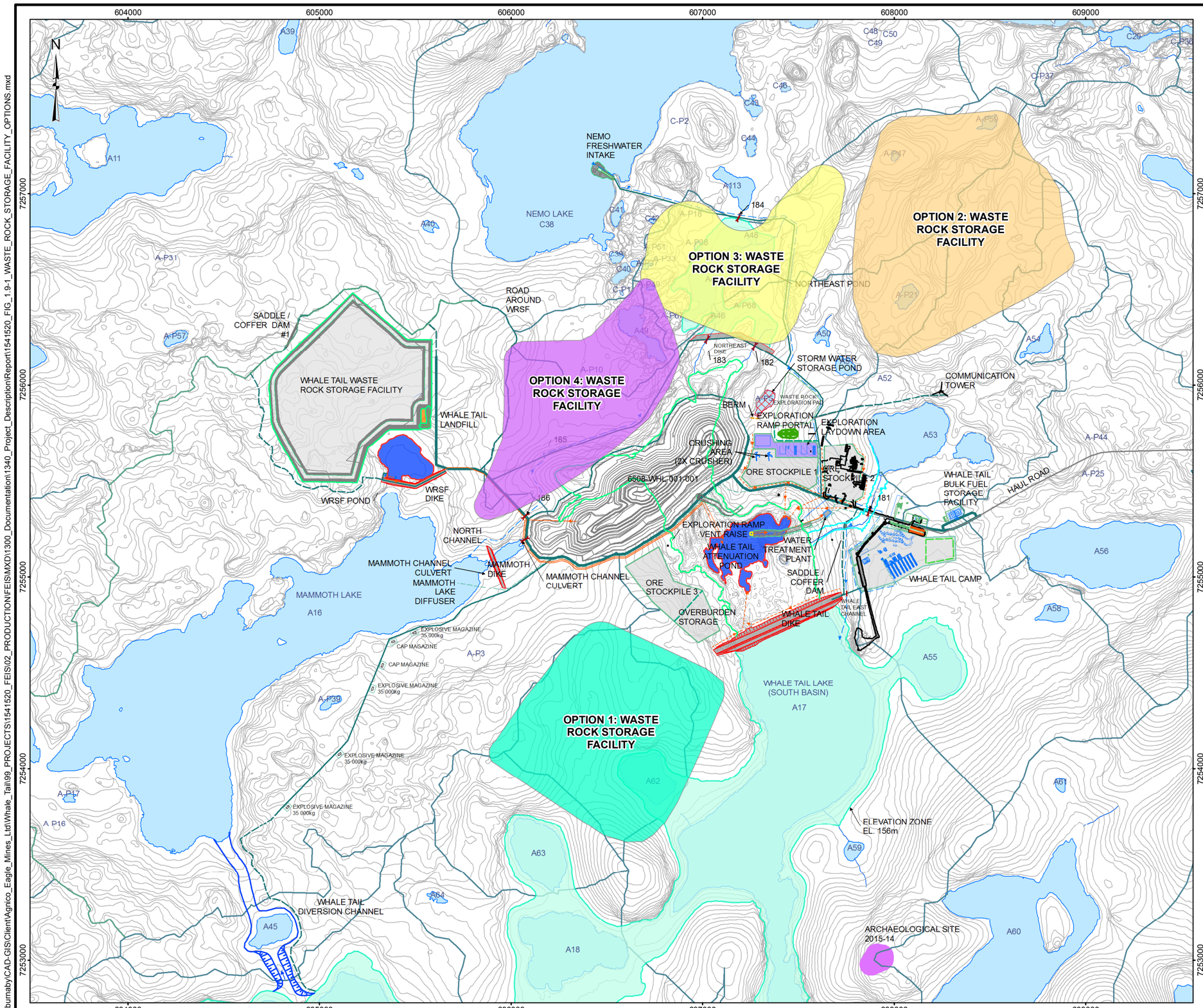
Other TSF options were considered near to the Meadowbank Mill, including, but not limited to deposition in Portage Pit or Bay-Goose Pit. These and other TSF expansion concepts are promising for future expansions and may be discussed with regulators and stakeholders in the future. However, under the current Whale Tail Pit operating life of mine of 3 to 4 years, these options were not evaluated as they are outweighed by the factors listed above, and specifically, the opportunity to optimize the approved TSF and the importance of staying within the approved TSF closure concept.

1.10.5 Overburden and Waste Rock Disposal

Agnico Eagle is continuing to explore within the Amaruq Exploration property and it was important that proposed infrastructure site locations were not sited over potential mineralization, that might prove economical in the future. Understanding the location of existing and potential future mineralization on the Amaruq property was key in the proposed siting of the overburden and waste rock disposal areas; site water management also played a key role in siting the Whale Tail WRSF. Whale Tail WRSF and overburden pile placements was determined by taking into account the potential for environmental impacts in consort with facilities engineering to minimize the amount of contact water generated, requiring treatment, or requiring containment during operations and especially post-closure.

Agnico Eagle considered various locations for the Whale Tail WRSF, while simultaneously looking at water management. The locations for Whale Tail WRSF options and the selected facility are presented in Figure 1.9-1. The selected option is also provided in Figure 1.9-1. Ultimately, the location was determined based on a number of reasons listed above, but the primary decision criteria used to select the Whale Tail WRSF option was:

- to reduce the risks to the downstream waterbodies;
- to reduce the direct impacts on waterbodies; and
- to reduce interaction of surface water with the Whale Tail WRSF.



LEGEND

- FINAL WHALE TAIL WASTE ROCK STORAGE FACILITY
- WHALE TAIL LAKE (SOUTH BASIN) FLOODED LIMIT (WATER LEVEL 156.0m)
- NATURAL WATERSHED
- DIKE
- POND/SUMP
- ARCHAEOLOGICAL SITE
- ROAD
- TEMPORARY ROAD
- DIVERSION CHANNEL
- COLLECTION CHANNEL
- CULVERT
- INTAKE WATER PIPE
- CONTACT WATER PIPE
- FRESHWATER PIPE
- CONTOUR (1 m INTERVAL)
- WATERCOURSE
- WATERBODY

WASTE ROCK STORAGE FACILITY OPTIONS

- OPTION 1
- OPTION 2
- OPTION 3
- OPTION 4

REFERENCE

1. INFRASTRUCTURE OBTAINED FROM AGNICO EAGLE MINES LIMITED FROM 6108-600-210-002_R2(2019)s.dwg.
2. WATERCOURSE AND WATERBODY DATA OBTAINED FROM PHOTOSAT

DATUM: NAD 83 CSRS PROJECTION: UTM ZONE 14

400 0 400

METRES

PROJECT

AGNICO EAGLE

AGNICO EAGLE MINES LIMITED:
MEADOWBANK DIVISION
WHALE TAIL PIT PROJECT

TITLE

WASTE ROCK STORAGE FACILITY OPTIONS

Golder Associates

PROJECT		1541520	FILE No.	
DESIGN	JR	27 Apr. 2016	SCALE AS SHOWN	REV. 0
GIS	MH	05 May 2016		
CHECK	JR	09 May 2016		
REVIEW	LY	09 May 2016		

FIGURE 1.9-1

Y:\burnaby\CAD-GIS\Client\Agnico_Eagle_Mines_Ltd\Whale_Tail\99_PROJECTS\1541520_FEIS\02_PRODUCTION\FEIS\MXD\1300_Documentation\1340_Project_Description\Report\1541520_FIG_1.9-1_WASTE_ROCK_STORAGE_FACILITY_OPTIONS.mxd

1.10.6 Water Management

In the fall of 2014 SNC-Lavalin on behalf of Agnico Eagle initiated a scoping study, performed a conceptual study of the geotechnical and water management infrastructure for the Project, as well as completion of permitting level engineering. A detailed water management multiple account analysis (MAA) was completed on various options for Project water management. The MAA is provided in Appendix 1-E and summarized herein.

Five options were assessed in the MAA as follows:

- Option 1 – Pumping towards Mammoth Lake.

  The concept is to block the flow of water with a dike 10 m high and 800 m long, to obtain sufficient capacity, and divert inflow to Mammoth Lake by pumping, to maintain the raised water level of Whale Tail Lake (South Basin).

- Option 2 – Channel from Whale Tail Lake to Mammoth Lake

  The concept is to block the flow of water of Whale Tail Lake (South Basin) with a dike to promote its diversion via a diversion channel directed towards Mammoth Lake. The proposed dike would be about 6 m high and 750 m long (4 m lower than with Option 1).

- Option 3 – Rerouting Water towards Mammoth Lake

  Option 3 consists of blocking the water flow with the construction of the Whale Tail Dike and rerouting the water flow towards the Northwest Passage to Mammoth watershed.

- Option 4 – Rerouting Water towards Southern Watershed

  Option 4 is similar to Option 3, but all water is rerouted towards the southern watershed. The dike would need to be constructed at the same elevation as Option 3 (about 14 m high).

- Option 5 – Channel and rerouting water towards Mammoth Lake

  Option 5 consists of blocking the water flow with the construction of the Whale Tail Dike, raising the water level of the Whale Tail Lake to approximately 156 m, and rerouting the water flow towards the Northwest Passage to Mammoth watershed through a channel.

The best option has been assigned this score for its performance in the following categories: health and safety, social acceptability, operating cost during construction, natural hazards, adaptability, and permits. The channel and rerouting water from Whale Tail Lake to Mammoth Lake option (Option 5) obtained the best score, followed by the rerouting water towards Mammoth Lake option (Option 3). Since this option is very similar to Option 5, most of its strengths are similar to the preferred option. Option 3 is not as suitable as Option 5 mainly because of the height of the dike; the construction of the dike represents a higher risk for the workers, higher energy required for the construction, and higher capital costs than the preferred option.

Option 5 suggests lower capital costs due to the height of the dike, and lower operating costs during construction and more likely to be socially accepted as it is a passive water diversion system. With respect to viability, this Option integrates with Meadowbank current operations and allows natural hazards to be better managed. It also proposes a smaller diversion channel (as compared to Option 3) and uses a natural boulder-field prior to discharge into Mammoth Lake. In addition, this option is likely to be positively received by regulatory agencies

since it uses a passive water management approach and creates additional fish habitat during operation and closure, thus offsetting temporal impacts due to the dewatering of Whale Tail Lake (North Basin). Also, its passive water management will facilitate the closure and post-closure periods since the water accumulation from Whale Tail Lake (South Basin) may be used to re-flood the completed pit faster. The main disadvantage of Option 5 is the large zone of land to be flooded, which impacts the seasonal water level and the existing drainage network due to the elevation of the basins that will be disturbed.

1.11 References

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