





#### PRESENTATION SUMMARY

- Overview of Whale Tail Expansion Project
- Water Use and Management
- · Waste Disposal and Management
- Adaptive Management
- Closure, Reclamation, and Security
- Water Compensation
- Revisions to Management and Monitoring Plans
- Overview of Proposed Licence Amendments
- Response to Final Written Submissions







# AGNICO EAGLE HISTORY AND APPROVED PROJECTS IN NUNAVUT



Event	Meadowbank	Whale Tail Pit	Whale Tail Pit Expansion	Meliadine
First gold discovery	1987	1972	1972	1972
AEM acquisition	2007	2007	2007	2010
AEM first drilling activity	2007	2013	2013	2010
Approval for construction	2007	2017	2019	2017
Construction period	2007-08-09-10	2018-19	2020	2017-18-19
Commercial production	2010	2019	2020	2019
End of production	2019	2022	Q4 2026**	**2033

<sup>\*\*</sup> Based on current life of mine estimates

#### WHALE TAIL PIT APPROVED PROJECT



- Whale Tail Pit Project approved and permitted by Nunavut Impact Review Board Project Certificate No.008 on March 15, 2018 (herein referred to as the Approved Project)
- The Type A Water Licence 2AM-WTP1826 was approved by the Minister on July 11, 2018 to begin construction and operation of the Whale Tail Pit
- As a satellite operation, the Whale Tail Pit is approved to operate and will continue to:
  - feed the Meadowbank Mill and Tailings Storage Facility
  - use associated Meadowbank Mine infrastructure under Project Certificate No. 004 and Type A Water Licence 2AM-MEA1526

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#### WHALE TAIL PIT EXPANSION PROJECT



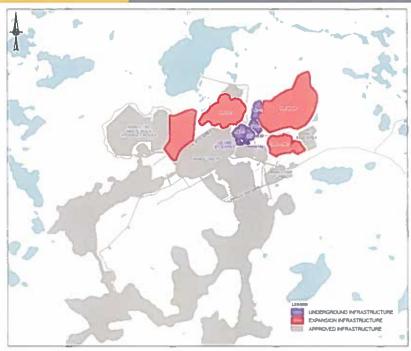
- Agnico Eagle is seeking approval to expand and extend the Whale Tail Pit Project through a reconsideration of NIRB Project Certificate No. 008 and Type A Water Licence Amendment to include the:
  - Expansion of the Whale Tail Pit
  - IVR Pit; and
  - Underground mine
- The deposits will be mined, and ore will be stockpiled and then hauled to the approved infrastructure at Meadowbank Mine for milling
- Life of Mine will be increased by 4 years
- A positive ministerial decision for the NIRB reconsideration process was received on January 22, 2020

#### WHALE TAIL PIT EXPANSION



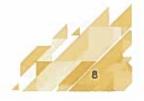
- 2019 2020 Continue operating Whale Tail Pit, as approved while reviewing the Expansion Reconsideration and Type A Water Licence
- 2020 2022 Begin operation of the expanded Whale Tail Pit, IVR pit stripping and build infrastructure
- 2020 2025 Operate Whale Tail Pit Expansion
- 2026 2042 Closure Pit Flooding
- 2043 Post-Closure

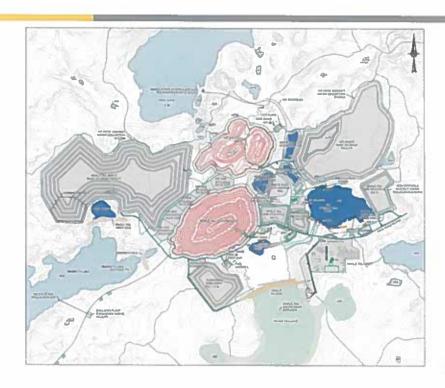






Whale Tail Pit Approved and Expansion Project Infrastructure









#### WHALE TAIL PIT EXPANSION



To summarize the Whale Tail Pit Expansion Project, we present the following video –
 3D rendering of the Project

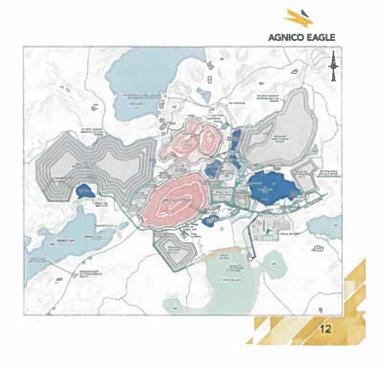
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#### **WATER MANAGEMENT**

- Surface contact water
  - Pits
  - Waste Rock Storage Facilities and Water Collection System
  - Attenuation Ponds
  - Operational Water Treatment Plant
  - Receivers
- Underground contact water
  - Underground mine
  - Groundwater Storage Ponds
  - Waste Rock Storage Facilities
  - Saline Water Treatment Plant
  - Receivers



# WATER USE DURING OPERATIONS



Purpose	Approved Project		Expansion Project	
	Volume (Annual)	Source	Volume (Annual)	Source
Consumption (domestic camp use) Dust suppression (site)	191,750 m <sup>3</sup>	Nemo Lake	209,544 m <sup>3</sup>	Nemo Lake
Dewatering (Completed under Fisheries and Oceans Canada authorization)	0 m <sup>3</sup>		153,736 m <sup>3</sup>	A53 and other takes listed as per Application
Drilling	0 m <sup>3</sup>		109,135 m <sup>3</sup>	Small ponds/lakes proximal to drilling sites as per application
Emulsion plant	2,500 m³	Unnamed take	2,500 m <sup>3</sup>	Memmoth Lake
Dust suppression (Haul Road) – Transferred from Licence 8BC- AEA1525	109,135 m³	Small ponds / lakes proximal to Haul Road	109,135 m <sup>3</sup>	Small ponds/lakes proximal to Haul Road
Subtotal	240,000 m <sup>3</sup> + 109,135 m <sup>3</sup>		584,049 m <sup>3</sup>	
Contingency (20%)	0 m <sub>2</sub>		116,810 m <sup>3</sup>	
Total	240,000 m <sup>3</sup> + 109,135 m <sup>3</sup>		700,859 m <sup>3</sup>	

# WATER USE DURING CLOSURE



Purpose	Approved Project		Expansion Project	
	Volume (Annual)	Source	Volume (Annual)	Source
Re-flooding	10,637,400 m <sup>3</sup>	Whale Tail South Basin	10,655,000 m <sup>3</sup>	Whale Tail South Basin
Re-flooding	0 m <sup>3</sup>		1,710,000 m <sup>3</sup>	Lake D1
Consumption	17,600 m <sup>3</sup>	Whale Tail Lake South Basin	14,672 m³	Nemo Lake
Subtotal	10,655,000 m <sup>3</sup>		12,379,672 m³	
Contingency (20%)	0 m <sup>3</sup>		2,475,934 m³	
Total	10,655,000 m <sup>3</sup>		14,855,606 m³	



#### WATER MANAGEMENT DURING WET YEARS



Table 1: Exceedance Volumes for Different Scenarios in 2020

	Volume exceedance for 1:10 years wet scenario (m³)	Volume exceedance for 1:100 years wet scenario (m³)
1950-2018 climate data set	145,000	232,000
2000-2018 climate data set	161,000	499,000

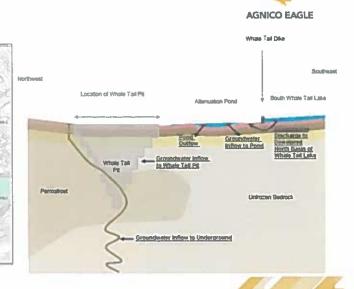
Table 2: Storage Capacity of Water Infrastructure

	Capacity (m³)	1950-2018 Climate, 1:10 year	1950-2018 Climate, 1:100 year	2000-2018 Climate, 1:10 year	2000-2018 Climate, 1:100 year
Quarry 1	343,000	X	X	X	X
GSP 1	263,000				Υ
Total	606,000	X	X	X	X+Y

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# 15

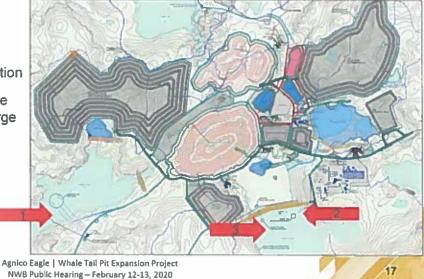
#### **GROUNDWATER MANAGEMENT**



## **CURRENT AND ADDITIONAL LOCATIONS FOR DISCHARGE** OF TREATED EFFLUENT



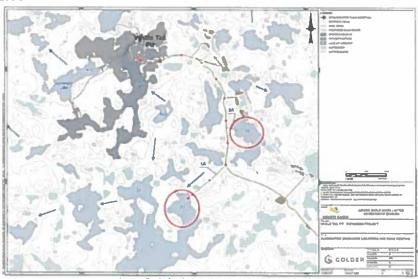
- 1. Mammoth Lake Effluent Discharge Location
- 2. Whale Tail South Basin **Effluent Discharge Location**
- 3. Whale Tail Dike Seepage Collection Pond Discharge Location



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#### ALTERNATIVE LOCATIONS FOR DISCHARGE OF TREATED **EFFLUENT**







#### WATER BALANCE AND WATER QUALITY FORECAST



**AGNICO EAGLE** 

- Agnico Eagle completed the Project assessment by running a variety of water quality models which include:
  - Operations, closure, and post-closure site and downstream receiving environment water quality
  - Models with varying optimization conditions
  - Pit lake and receiver hydrodynamic models
  - Climate change scenarios RCP6.0 and RCP8.5
  - 1-10 and 1-100 year flood event scenarios
  - Cryo-concentration effects
  - Contamination of the WRSF thermal cover with high arsenic leachable material
- The results of each of these continue to provide show water quality is expected to meet operational and post-closure objectives
- Additionally, site monitoring data collected during the operations and closure phases will be used to
  annually recalibrate and update the site water quality models to validate projected post-closure conditions
  - Before entering the post-closure phase, Agnico Eagle will have at least 24 years of data and updated water quality predictions from monitoring through operations and closure

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19



#### WASTE MANAGEMENT



- Description of infrastructure for disposal of different types of waste:
  - Storage of waste rock in existing Whale Tail and new IVR and Waste Rock Storage Facilities
  - Storage of overburden materials within Waste Rock Storage Facility and/or within Non-Potentially Acid Generating overburden stockpile
  - Operation of existing landfill
  - Construction and operation of new Incinerator/Composter and Landfarm
  - Disposal of hazardous material in approved offsite facilities

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#### WASTE ROCK MANAGEMENT

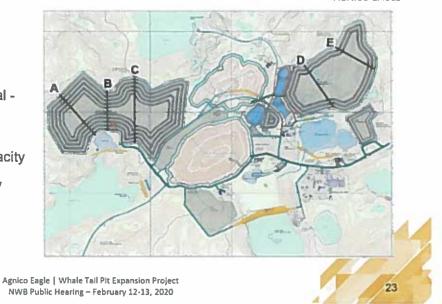


- Waste rock management practices proposed are consistent with the Approved Project waste management strategy
- Approximately 167.8 MT of waste rock will be generated by the Whale Tail Project
- Waste rock material is sampled and tested to verify Acid-Rock Drainage and Metal Leaching potential in support of waste segregation (>40,000 samples/year)
- NPAG/NML material to be used for Construction and put aside for capping
- PAG material to be placed in Waste Rock Storage Facility and encapsulated within NPAG/NML material during progressive closure and closure
- Underground waste rock temporarily stored on surface before being returned underground as backfill material
- Waste rock storage facility will be monitored to demonstrate geochemical stability, safe environmental performance and efficiency of the waste management procedure

# THERMAL MODELLING FOR WASTE ROCK STORAGE FACILITY DESIGN



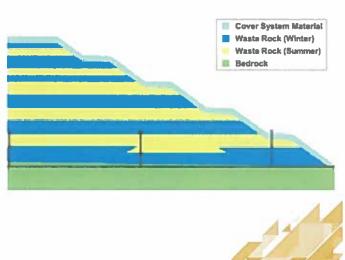
- Hydrological Conceptual Model
- Enhanced and Updated through Coupled Thermal -Hydrologic Numerical Modelling
  - High Infiltration Capacity
  - Low Runoff Capacity
  - Very Low BasalSeepage

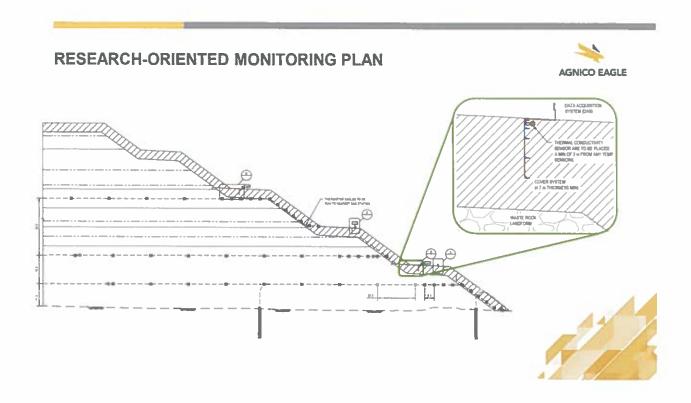


THERMAL MODELLING FOR WASTE ROCK STORAGE FACILITY DESIGN



- Some interflow occurs through infiltration along the slope of the lowest bench of the WRSF
- This flow path interacts with the entire 4.7 m depth of the cover system, along a maximum flow path of approximately 10 m
- Interflow does not interact with the potentially acid generating and metal leaching waste rock
- Interveners comments included in final design submitted December 20, 2019







#### ADAPTIVE MANAGEMENT PLAN



- Adaptive Management requires continuous monitoring in order to validate prediction models and evaluate whether existing plans are protective. In effect, it results in a feedback loop for continuous improvement
- Since the technical meeting, meetings were held with KivlA, CIRNAC, DFO, NWB, and ECCC to develop an Adaptive Management Plan (December 3, 2019, January 8, 2020). Final version for approval was submitted to the NWB on January 30, 2020
- · Fruitful discussions were held on:
  - Definitions
  - Threshold and triggers and options for adaptive management actions
  - Adaptive Management Decision Tree
- For greater clarity, all actions and management strategies described in the approved Adaptive Management Plan are included in the Scope of the Type A Water Licence (see Part A, Item 1) and can proceed without modification or amendment to the Type A Water Licence

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# ADAPTIVE MANAGEMENT PLAN



Adaptive Management Level	Threshold	Management Strategy		
Lavel 0 (htmms/ operating condition)	·	Continue monitoring as per Water Quality and Flow Monitoring Plan     Update water balance and water quality forecast as part of the Annual Report		
Levet 1 (Area of concern)	Difference between predicted base case values and two subsequent exceedances above level of in valetar quality measured values in the receiver are 20% or greater AND.  Two subsequent exceedances above Level 0 in water quality measured values in the raceiver are less than 90% of the CCME Water Quality Guidelines for the Protection of Aquatic Life criteria or situations.	Continue Level 0 management strategy Complete analysis of sits wide water quantity and quality data to identify and assess cause(s) of the difference(s) and reported to the NWB Report results of data review in annual reporting to the NWB including implications on the Water management plan and the evaluation of potential militarities strategies such as a Enhance water treatment plant efficiency and reduce intoxiciation strategies such as concentration by 10%, and Review water management practices to stay within assimilative capacity of the receiver of Discharge in the two receivers stimultaneously (Mamenoth and Whale Tail South Basin) to reduce overall leading per receivers.		
Level 2 (Area of concern)	Otherence between predicted base case values and two subsequent exceedances above. Level 1 in water quartly measured values in the receiver are 20% or greater AND. Two subsequent exceedances in Level 1 water quality measured values in the receiver are between 80% and 100% of the CCAE. Water Quality Qualetines for the Protection of Aquatic Life criteria or alte-specific water quality objectives.	Continue Level 1 management strategy Report results of data review to the NYMB in the Annual Report, including implications on the Water management plant and the evaluation of potential instigation strategies such as  Enhance water treatment plant efficiency and reduce maximum efficient discharge conceivation by 20%. Respects moniformy frequency needs, Look at opportunity to use new treatment lechnologies, Inplement in-time value treatment process in the ensite of conceins to reduce continuent it the source.  Move discharge focation to an approved receiver (Maximoth or Whate Tail South Basin). Complete assessment of potential discharge in takes D1 or D5 in case level 3 is reached, with approval from the NVMB as per NMB Project Certificate Conditions.		
Level 3 (High Risk situation)	Difference between predicted base case values and two subsequent exceedances in Level 2 water quality measured values in the receiver are 20% or greater, AND	Continue Level 2 management strategy     Report results of data review in the Annual Report to the HVMB including implications on the Water management plan end the evaluation of potential imbigation strategies such as a Review overall water management strategy to stay within assemblative capacity of the receivers;     Implement new water treatment unit, and		

### **ADAPTIVE MANAGEMENT PLAN**



Adaptive Menagement Level	Threshold	Management Strategy
	Two subsequent exceedances in Level 2 water quality measured values in the receiver are between 100% and 120% of the CCME Water Quality Guidelines for the Protection of Aquatic Life criteria or affe-specific water quality objectives	<ul> <li>Move discharge location in an approved receiver in Lakes D1 or D5, with approved from the NWB as per NRRB Project Certificate Condition</li> <li>Continue monitoring in the original receiver to evaluate if they recover and define threshold to restart using them</li> </ul>
	Difference between predicted base case values and two subsequent exceedances in Level 3 water quality measured values in the receiver are 20% or greater.  AND  Two subsequent exceedances in Level 3 water quality measured values in the receiver are above 120% of the CCME Water Quality Dischless for the Protection of Aquatic Life criteria or site-specific water quality objectives.	Continue Level 3 management strategy Report results of detailed data review in the Annual Report to the NWB, including implications on the Water management plan and the evaluation of potential mitigation strategies such as.  Move discharge location in an approved receiver or in Lakes D1 or D5, and Suspended effluent discharge until receiver recovery Continue monitoring in the original receiver to evaluate it they recover and define threshold to restart using them Evaluate potential new discharge location to resume operation





# AGNICO EAGLE

#### **CLOSURE AND RECLAMATION**

- Updates to Interim Closure and Reclamation Plan
- Final Closure and Reclamation Plan
- Water Quality and reconnection of flooded pit lake
- Site Specific Water Quality Objectives
- Adaptive Management Plan for Closure

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#### **SECURITY**



- Reclamation Cost Estimate
  - Approved Project Type A: \$26,286,000
  - Approved + Expansion Project Type A: \$50,663,508
  - Type B: \$1,200,650
- Security Management Agreement







#### MANAGEMENT AND MONITORING PLANS



- New Plans Created to Address Expansion Project activities:
  - 1. Adaptive Management Plan
  - 2. Conceptual Whale Tail Pit Expansion Offsetting Plan
  - Landfarm Design and Management Plan
  - Incinerator and Composter Waste
     Management Plan
- All other plans submitted with the Water Licence Amendment were updates of existing plans to capture Expansion Project activities
- Agnico Eagle is asking for the Board to approve all of these plans with the issuance of the amended licence

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#### MANAGEMENT AND MONITORING PLANS



- Agnico Eagle is committed to updating the following plans following issuance of amended Water Licence 2AM-WTP1826:
  - Whale Tail Pit Waste Rock Management Plan (V5, May 2019)
  - Whale Tail Pit Water Management Plan (V4, May 2019)
  - Whale Tail Pit Interim Closure and Reclamation Plan (V3, December 2019)
  - Spill Contingency Plan (V7, April 2019)
  - Hazardous Materials Management Plan: Meadowbank Mine Site, Whale Tail Pit Site, Baker Lake Facilities (V4, May 2019)
  - Emergency Response Plan (V1, May 2019)



#### **OVERVIEW OF PROPOSED LICENCE AMENDMENTS**



- Suggested Amended Licence submitted to NWB on December 20, 2019
- Recommendations received from Interveners on January 23, 2020
- Revised Suggested Amended Licence submitted to NWB on January 30, 2020, taking into account Final Written Submissions
- Agnico Eagle recommends its draft to the Board for approval







#### **COMPLIMENTARY MEETINGS**



Date	Stakeholders	Location	Topics discussed
September 19, 2019	ECCC	Edmonton and conference call	Technical Comments
September 20, 2019	KivlA	Winnipeg and conference call	Technical Comments
September 24-25, 2019	CIRNAC	Iqaluit	Technical Comments
September 30, 2019	KivlA and DFO	Edmonton and Yellowknife	Fisheries Offsetting Plan
November 12, 2019	ECCC	Ottawa and conference call	Schedule 2
December 2, 2019	KivIA and CIRNAC	Ottawa and conference call	Financial Security and Closure
December 3, 2019	KivIA, CIRNAC, ECCC	Ottawa and conference call	Adaptive Management
December 13, 2019	ECCC, DFO, KIVIA	Montreal and conference call	Schedule 2, Fisheries Offsetting Plan
January 7, 2020	KivlA	Winnipeg	Financial Security
January 8, 2020	KIVIA, CIRNAC, NWB, ECCC	Winnipeg and conference call	Adaptive Management
January 23, 2020	CIRNAC	Conference call	Financial Security
February 4, 2020	CIRNAC	Conference call	Financial Security

Note: Additional informal conference calls where also held with various Interveners

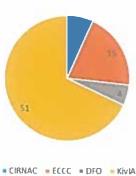
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#### FINAL WRITTEN SUBMISSION SUMMARY

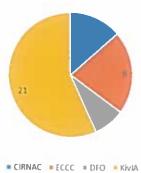


Total of 75 Information Requests in August 2019 Total of 37 Technical Comments in September 2019





Technical Comments

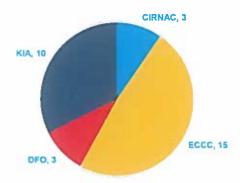


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# FINAL WRITTEN SUBMISSION SUMMARY



Received a total of 31 Final Written Submissions in January 2020



Agnico Eagle considers all these issues as resolved following submission of our response package.

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43



