



AGNICO EAGLE

MEADOWBANK GOLD MINE

**WASTE ROCK AND TAILINGS MANAGEMENT REPORT & PLAN
- 2019**

JULY 2019

EXECUTIVE SUMMARY

Agnico Eagle Mines Ltd. Meadowbank Division (AEM) is operating the Meadowbank Gold Mine (the Mine), located on Inuit-owned surface lands in the Kivalliq region approximately 70 km north of the Hamlet of Baker Lake, Nunavut. The Mine is subject to the terms and conditions of both the Project Certificate issued in accordance with the Nunavut Land Claims Agreement Article 12.5.12 on December 30, 2006, and the Nunavut Water Board Water License No. 2AM-MEA1526 issued on July 23, 2015. This report presents an interim update of the Mine Waste Rock and Tailings Management Plan for Meadowbank mine following the acceptance of the in-pit deposition amendment.

The Meadowbank Mine consists of several gold-bearing deposits: Vault, Portage and Goose Island. Prior to beginning of mining a series of dikes were built to isolate the mining activities from neighbouring lakes.

Waste rock from the Portage and Goose Island Pits is stored in the Portage Rock Storage Facility (Portage RSF), and in the Portage Pit as infill. Pit infill is carried out in areas where mining is completed, and, as such, contributes to the overall fish habitat compensation approved by Fisheries and Oceans Canada (DFO). The Portage RSF was constructed in a way to minimize the disturbed area and is capped with a 4m layer of non-acid-generating rock to constrain the active layer within relatively inert materials as part of progressive reclamation. This control strategy is designed to minimize the onset of oxidation and the subsequent generation of acid rock drainage through freeze control of the waste rock as a result of permafrost encapsulation and capping with an insulating convective layer of NAG rock. The waste rock below the capping layer is expected to freeze, resulting in low rates of acid rock drainage (ARD) in the long term. Thermistors currently installed in the Portage RSF indicate that freezing is occurring.

Mining commenced at the Vault Pit mining operation in 2014. Waste rock from the Vault Pit, Phaser Pit and BBPhaser Pit mining operation is stored in the Vault Waste Rock Storage Facility (Vault RSF). Geochemical predictions indicate that a capping layer will not be required at the Vault RSF as the majority of waste rock produced is NAG. To date, through the ARD testing program, it has been determined that approximately 85.5 % of the waste rock generated is NAG. As a precaution, PAG waste rock is placed in the middle of the Vault RSF and this material will be covered with at least 4m of NAG to minimize any generation of ARD to promote freeze back.

The Tailings Storage Facility (TSF) is located with the Portage Pit Area and is comprised of the South Cell and the North Cell. These cells are delimited by tailings retaining dikes that are progressively built as capacity is required. The division of the TSF into cells allows tailings management in



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comparatively smaller areas with shorter beach lengths that reduce the amount of water that is trapped and permanently stored as ice. Operation in cells also allows progressive closure and cover.

Tailings are deposited sub-aerially and sub-aqueously as a slurry using the end of pipe technique.

Tailings deposition is alternated between North Cell and South Cell, depending on the tailings deposition plan. In 2018 tailings deposition occurred in the North Cell from August to October and in the South Cell for the remainder of the year.

As the Cells are filling with tailings, additional engineered structures are required. In 2018:

- North Cell Internal Structure (NCIS) was partially constructed to variable El (152-154 m) to increase the North Cell tailings capacity and promote closure landforms;
- Central Dike was raised to El. 145m to increase the South Cell tailings capacity;
- South Cell Permeable berm was constructed to maintain reclaim capability;

Following the authorization of the in-pit amendment the tailings deposition plan was reviewed to include tailings deposition in Goose Pit, Portage Pit A and Portage Pit E. This strategy will allow storage of tailings within mine out pit to achieve the required capacity until 2021 without requiring further raises of the North Cell and South Cell of the TSF.

Following mine operations, a minimum 2-m thick cover of NAG rockfill will be placed over the tailings in the North Cell and the South Cell of the TSF as an insulating convective layer to confine the active layer within relatively inert materials. The final thickness of the rockfill cover layer will be confirmed in the final design based on thermal monitoring to be completed during operations. The control strategy to minimize water infiltration into the TSF and the migration of constituents out of the facility includes freeze control of the tailings through permafrost encapsulation. Progressive capping is ongoing in the North Cell since 2015.

Thermal monitoring is ongoing to observe the freezeback of the TSF and RSFs. Additional instruments will be installed at closure.

All infrastructures needed for mine operations, closure and reclamation, including mine waste management areas, will be re-contoured and/or surface treated during closure, according to site specific conditions, to minimize windblown dust and erosion from surface runoff.

Recommendations received following the 2017 Meadowbank Annual Report Review were kept in this update of the 2018 Waste Management Plan.

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DOCUMENT CONTROL

Version	Date (YM)	Section	Page	Revision
1	2009/10	All	All	Original Plan
2	2013/04	All	All	Comprehensive update to Original Plan
3	2014/03	All	All	Comprehensive update to Original Plan
4	2015/03	Section 1, 2, 3, 4, 5, 6		Updated with the actual Life of Mine (LOM) for operations ending in Q3 2017
		Section 7		Updated according to the tailings deposition plan and water balance for the actual Life of Mine (LOM) for operations ending in Q3 2017
		Section 8		Updated according to additional instruments installed and future monitoring plan
		Section 9		Updated according to additional monitoring plan for final closure design
5	2016/03	All	All	Comprehensive update to Original Plan
6	2017/03	All	All	Comprehensive update to Original Plan
7	2018/03	All	All	Comprehensive update to Original Plan
8	2019/03	All	All	Comprehensive update to Original Plan.
9	2019/07			Interim update to 2018 plan to include in-pit disposal following authorization of amendment

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Appendix

Appendix A: Meadowbank Mined Material Balance (2009-2019)

Appendix B: TSF Integrated Deposition Plan

Appendix C: RSF and TSF Thermal Monitoring – List of Instruments

1 INTRODUCTION

Agnico Eagle Mines Ltd. Meadowbank Division (AEM) is operating the Meadowbank Gold Mine (the Mine), located on Inuit-owned surface lands in the Kivalliq region approximately 70 km north of the Hamlet of Baker Lake, Nunavut. The Mine is subject to the terms and conditions of both the Project Certificate issued in accordance with the Nunavut Land Claims Agreement Article 12.5.12 on December 30, 2006, and the Nunavut Water Board Water License No. 2AM-MEA1526 issued on July 23, 2015.

This report is an interim update version of the Waste Management Plan 2018. The management, monitoring and closure strategies for both waste rock storage facility and tailings storage facility are presented in this document.

This interim update includes an updated tailings management strategy.

1.1 RECOMMENDATION FROM 2017 WASTE MANAGEMENT PLAN

Recommendations obtained during the 2017 Meadowbank Annual Report Review have been included in the 2018 Waste Management Plan :

- CIRNAC recommended that AEM provides a comparison of the volume of waste rock generated annually to FEIS prediction. This is addressed in Section 3.1.
- CIRNAC recommends that AEM review the status of current climate change literature to ensure that the design used in the FEIS is still appropriate. This is addressed in Section 2.1.3.1.
- CIRNAC recommends that instrumentation be added to confirm Vault WRSF freezeback predictions. This is addressed in Section 8.1.2.
- ECCC would like further discussion on tailings cover thickness and why the cover thickness is different that for the WRSF. This is addressed in Section 7.
- ECCC request that the Bay-Goose Fault be discussed further. This is addressed in Section 2.1.2.
- ECCC requests that AEM clarify whether the 'coarse material' placed within the RSF cover would be sufficiently compacted for the purpose of limiting the amount of air and water that interacts with the waste rock underneath. This is addressed in Section 7.2.



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- ECCC recommends that the proponent clarify where the ultramafic rockfill (soapstone) used for the tailings cover will be sourced from and the effect of using it in the cover. This is addressed in Section 7.1 and Section 9.1.

2 BACKGROUND INFORMATION

2.1 SITE CONDITION

The location of the Meadowbank mine site is shown in Figure 2.1.



Figure 2-1 : Meadowbank Mine Location



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2.1.1 Climate

The Meadowbank region is located within a low Arctic Eco climate described as one of the coldest and driest regions of Canada. Arctic winter conditions occur from October through May, with temperatures ranging from +5°C to -40°C. Summer temperatures range from -5°C to +25°C with isolated rainfall increasing through September (Table 2-1).

Table 2-1: Estimated Average Monthly Climate Data – Meadowbank Site

Month	Max. Air Temp. (°C)	Min. Air Temp. (°C)	Rainfall (mm)	Snowfall (mm)	Total Precip. (mm)	Lake Evap. (mm)	Min. Relative Humidity (%)	Max. Relative Humidity (%)	Wind Speed (km/h)	Soil Temp. (°C)
January	-29.1	-35.5	0	11.2	11.2	0	67.1	75.9	16.3	-25.5
February	-27.8	-35.2	0	10.5	10.5	0	66.6	76.5	16.0	-28.1
March	-22.3	-30.5	0.1	14.6	14.6	0	68.4	81.4	16.9	-24.9
April	-13.3	-22.5	2.3	16.7	19.0	0	71.3	90.1	17.3	-18.1
May	-3.1	-9.9	9.8	11.3	21.1	0	75.7	97.2	18.9	-8.0
June	7.6	0.0	14.5	3.9	18.4	8.8	62.6	97.2	16.4	2.0
July	16.8	7.2	36.7	0.0	36.7	99.2	47.5	94.3	15.1	10.5
August	13.3	6.4	45.5	0.9	46.4	100.4	59.2	97.7	18.4	9.3
September	5.7	0.9	30.1	8.8	38.9	39.5	70.8	98.6	19.3	3.6
October	-5.0	-10.6	3.5	30.3	33.8	0.1	83.1	97.4	21.4	-2.8
November	-14.8	-22.0	0	23.6	23.6	0	80.6	91.1	17.9	-11.7
December	-23.3	-29.9	0	15.0	15.0	0	73.3	82.7	17.7	-19.9

Note: Data from Baker Lake A station is available from 1946 to 2011. During this period, the data quality is good, with the exception of years 1946 to 1949, and 1993 which were removed from the compilation.

The long-term mean annual air temperature for Meadowbank is estimated to be approximately 11.1°C. Air temperatures at the Meadowbank area are, on average, about 0.6°C cooler than Baker Lake air temperatures, and extreme temperatures tend to be larger in magnitude. This climatic difference is thought to be the effect of a moderating maritime influence at Baker Lake.

The prevailing winds at Meadowbank for both the winter and summer months are from the northwest. A maximum daily wind gust of 93 km/h was recorded on September 1, 2009. Light to moderate snowfall is accompanied by variable winds up to 70 km/h, creating large, deep drifts and occasional whiteout conditions. Skies tend to be more overcast in winter than in summer.

Table 2-1 presents monthly rainfall, snowfall and total precipitation values for the mine site. August is the wettest month, with a total precipitation of 43.4 mm, and February is the driest month, with a total precipitation of 6.1 mm. During an average year the total precipitation is 249.6 mm, split between 147.5 mm of rainfall and 102.1 mm of snowfall precipitation.

2.1.2 Faults

Two main faults are inferred in the Portage deposit area and included in the groundwater model (Golder, 2011) used to estimate groundwater inflows and brackish water upwelling to the pits during mine life. These are the Bay Zone Fault and the Second Portage Fault shown in Figure 2.2 by clear blue lines,

The Second Portage fault trends to the northwest under Central Dike and the Tailings Storage Facilities (TSF), roughly parallel to the orientation of Second Portage Lake. This fault has been identified a potential pathway for Central Dike Seepage.

The Bay Zone Fault trend from South to North and cross Third Portage Lake, Goose Pit and Portage Pit. This fault is a potential pathway for water infiltration from Third Portage lake into Goose pit.

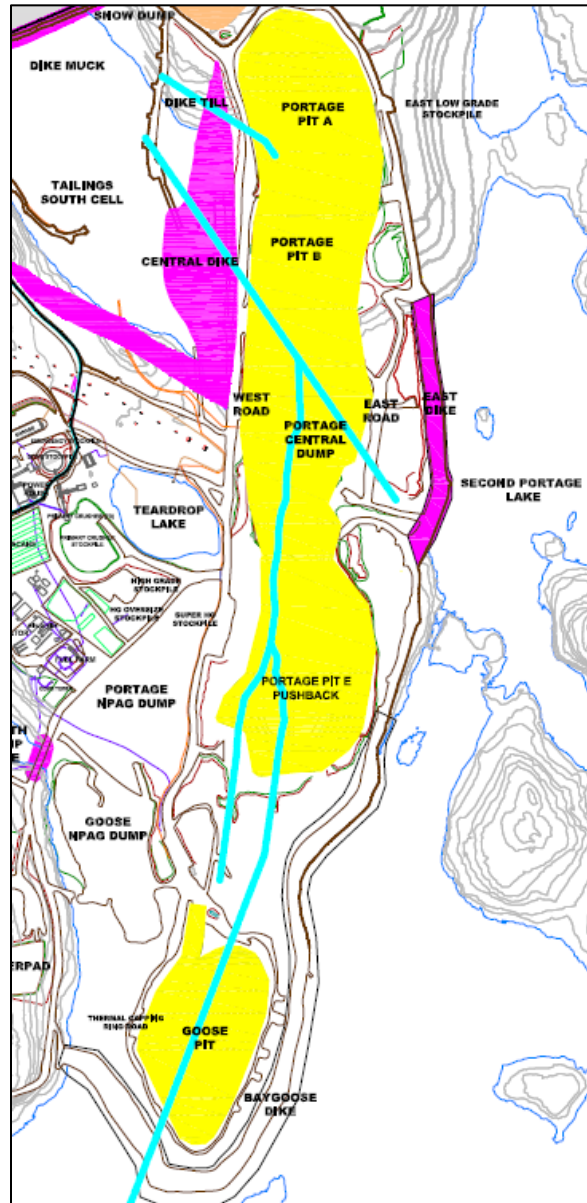


Figure 2-2 : Portage Pit Area Fault location

2.1.3 Permafrost

The Meadowbank Gold Mine is located in an area of continuous permafrost. Lake ice thicknesses between 1.5 m and 2.5 m have been encountered in mid to late spring during geotechnical

investigations and sampling campaigns. Taliks (areas of permanently unfrozen ground) are expected where water depth is greater than about 2 to 2.5 m. Based on thermal studies and measurements of ground temperatures (Golder, 2003), the depth of permafrost at site is estimated to be in the order of 450 to 550 m, depending on proximity to lakes. The depth of the active layer is about 1 to 1.5 m and vary based stratigraphy, presence of overburden and vegetation and proximity to lakes.

Based on ground conductivity surveys and compilation of regional data, the ground ice content is expected to be low. Locally on land, ice lenses and ice wedges are present, as indicated by ground conductivity, and by permafrost features such as frost mounds. These areas of local ground ice are generally associated with low-lying areas of poor drainage.

2.1.3.1 Impact of Climate Change on Site Conditions

Table 2-2 presents a summary of climate change predictions used on a number of northern projects that have been reported in the engineering and scientific literature. Further study incorporating climate change reference will be done using the climate change predictions from the IPCC (Intergovernmental Panel on Climate Change) RCPs (Representative Concentration Pathways) RCP6.

Table 2-2: Summary of Reported Climate Change Rates Used in Northern Projects Engineering Studies

Reference	Increase in MAAT by Year 2100 (°C)	Notes
Hayley (2004)	4.7	Used in design studies for the Inuvik Regional Health Center. Reported as increase of 0.47°C per decade.
Hayley and Cathro (1996)	5.0	Used for Raglan Dam analyses.
Diavik	3.2	Used for the Processed Kimberlite Containment Facility Design
Burn (2003)	6.0	For use in the Western Arctic for pipeline design projects. Reported as increase of 1.75°C over a 29 year period
Intergovernmental Panel on Climate Change (AR5)	See Figure 2.3	RCP 6.0 to be used as base case

As part of the Intergovernmental Panel on Climate Change's (IPCC) Fifth Assessment Report (AR5), the IPCC adopted new Representative Concentration Pathways (RCPs) to replace the previous



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emission scenarios of the Special Report on Emission Scenarios (SRES) (IPCC 2013). The four adopted RCPs differ from the SRES in that they represent greenhouse gas concentration trajectories, not emissions trajectories. The four scenarios (RCP2.6, RCP4.5, RCP6.0 and RCP8.5) are named after the radiative target forcing level for 2100, which are based on the forcing of greenhouse gases and other agents and are relative to pre-industrial levels.

The climate change database for Meadowbank and Amaruq project was developed following the recommendations outlined on the Canadian Climate Data and Scenarios (CCDS) website, which is wholly supported by ECCC (CCDS, 2018). The website recommends the use of statistical downscaling to “downscale” a GCM’s predictions to a specific location based on historical observations. Statistical downscaling is a two-step process consisting of i) development of statistical relationships between local climate variables (e.g., surface air temperature and precipitation) and large-scale predictors (e.g., pressure fields), and ii) application of such relationships to the output of GCM experiments to simulate local climate characteristics in the future. The Pacific Climate Impact Consortium (PCIC) at the University of Victoria provides statistically downscaled daily temperature and precipitation under the RCP2.6, RCP4.5 and RCP8.5 scenarios for all of Canada at a resolution of approximately 10 km (PCIC, 2018). The second-generation Canadian Earth System Model (CanESM2), developed by the Canadian Centre for Climate Modelling and Analysis (CCCma), was used as the predictor GCM to downscale and make climate change databases representative of site condition.

Statistical downscaling is limited by the availability of large-scale predictors. Current CCCma CanESM2 model runs are limited temporally to 2100. In order to predict beyond 2100, the radiative forcing trend was applied to the temperature. RCP4.5 and RCP6.0 are expected to stabilize shortly after 2100, while RCP8.5 is expected to continue along the same trend until after 2200.

Temperatures are anticipated to rise at about the same rate (approximately 0.06°C/year) for RCP4.5 and RCP6.0 until approximately 2070, after which RCP4.5 estimates a reduction in the temperature increase rate. Under RCP8.5, temperatures are expected to increase at a higher rate (approximately 0.12°C/year) for the duration of the modelled period. All three scenarios predict an increase in precipitation with time of approximately 0.5 mm/year (75 mm total increase over 150 years) for RCP4.5, 0.6 mm/year (90 mm total increase over 150 years) for RCP6.0 and 0.7 mm/year (100 mm total increase over 150 years) for RCP8.5.



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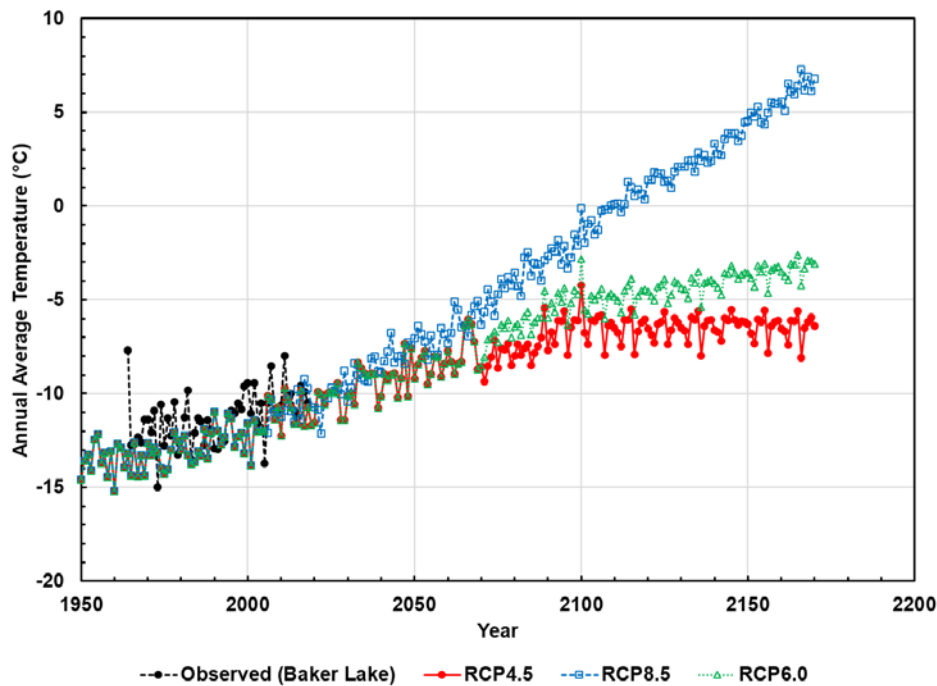


Figure 2-3 : Annual average temperature estimated for the RCP4.5, RCP6.0 and RCP8.5 climate change scenarios. Observed temperature at Baker Lake is also shown.

2.2 MINING OPERATION DESCRIPTION

Mining is a truck-and-shovel open pit operation. The current Meadowbank mining plan indicates that approximately 0.5 Mt of ore will be mined over a nominal remaining mine life of approximately 0.33 years, ending in November 2019.

The Meadowbank Gold Mine consists of several gold-bearing deposits within reasonably close proximity to one another. The three main deposits are: Vault (including Phaser and BBPhaser), Portage (South, Center and North Portage deposits), and Goose.

2.2.1 Portage Pit Area

The Portage area located between the Third Portage Lake (3PL) and Second Portage Lake (2PL) contains most of the infrastructure of the Meadowbank mine site including but not limited to the Portage Rock Storage Facility (RSF), North and South Tailings Storage Facilities (NC & SC TSF), the mill, the camp and the Stormwater Management Pond.

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The South Portage deposit is located on a peninsula, and extends northward under Second Portage Lake (2PL) and southward under Third Portage Lake (3PL). The North Portage deposit is located on the northern shore of 2PL. The South, Center and North Portage deposits are mined as a single pit, termed the Portage Pit, which extends approximately 2 km in a north-south direction. Subsequent renaming of the pits led to the nomenclature for each pit (A, B, C, D and E.) Portage Pit is isolated from the Second Portage Lake by the East Dike built in 2008-2009 and the Bay-Goose Dike (Pit E) built from 2009 to 2011.

Mining in Pits A, B, C, and D (representing the North and Central Portage area is completed and these areas are currently subject to pit infilling operations with waste rock material (which will form part of fish habitat compensation). In 2018, an expansion was done in pit E to extend mining and mill feed to bridge the gap between the end of mining activities in Meadowbank, and the start of mining activities at the Amaruq project. As a result, mining activities in the Portage area in 2019 are only ongoing in Pit E.

Figure 2-4 shows the Portage Pit Area and surrounding infrastructures.



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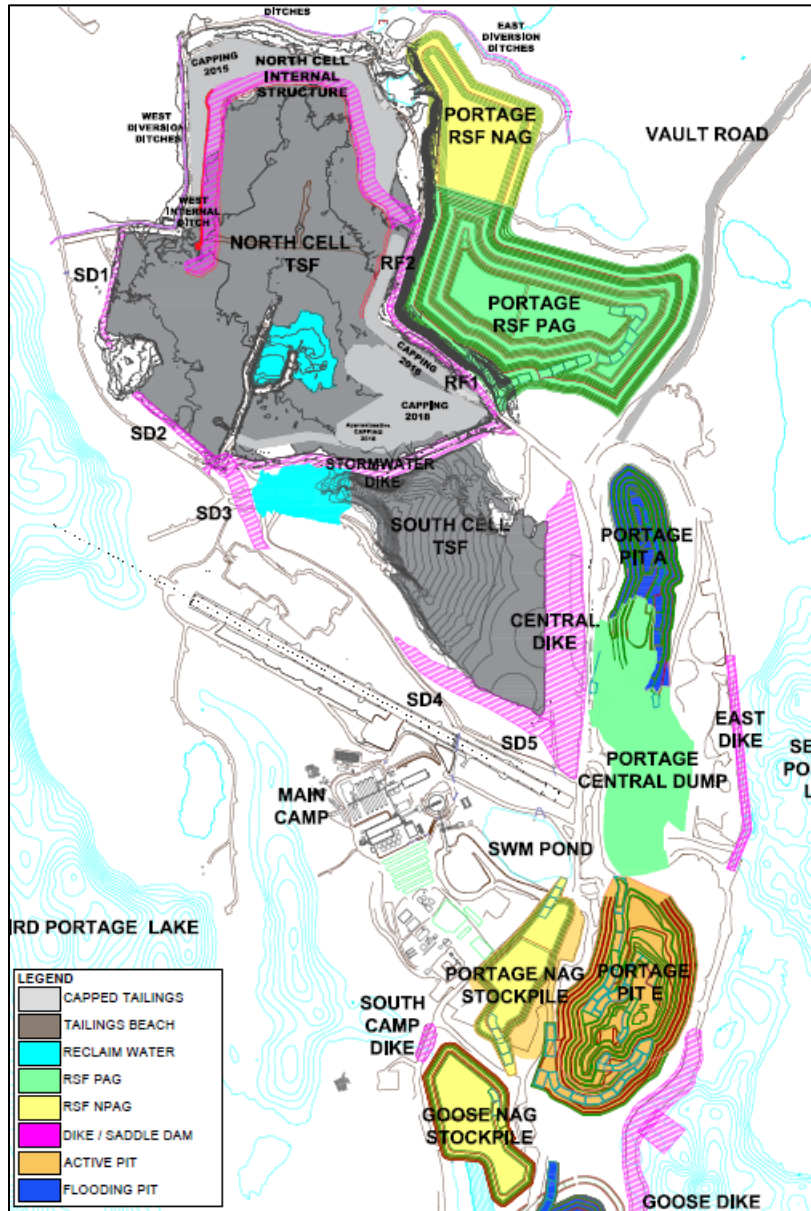


Figure 2-4 : Portage Pit and Tailings Storage Facility Infrastructures



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2.2.2 Goose Pit Area

The Goose deposit lies approximately 1 km to the south of the Portage deposit, and beneath 3PL. The pit is isolated from the Second Portage Lake and the Third Portage Lake by the Bay-Goose Dike and the South Camp Dike constructed in 2009-2010. Mining in Goose pit began in 2012 and was completed in April 2015. The Northern part of the pit was historically used as for pit infilling. The Goose Pit area and surrounding infrastructure are illustrated in Figure 2-5.

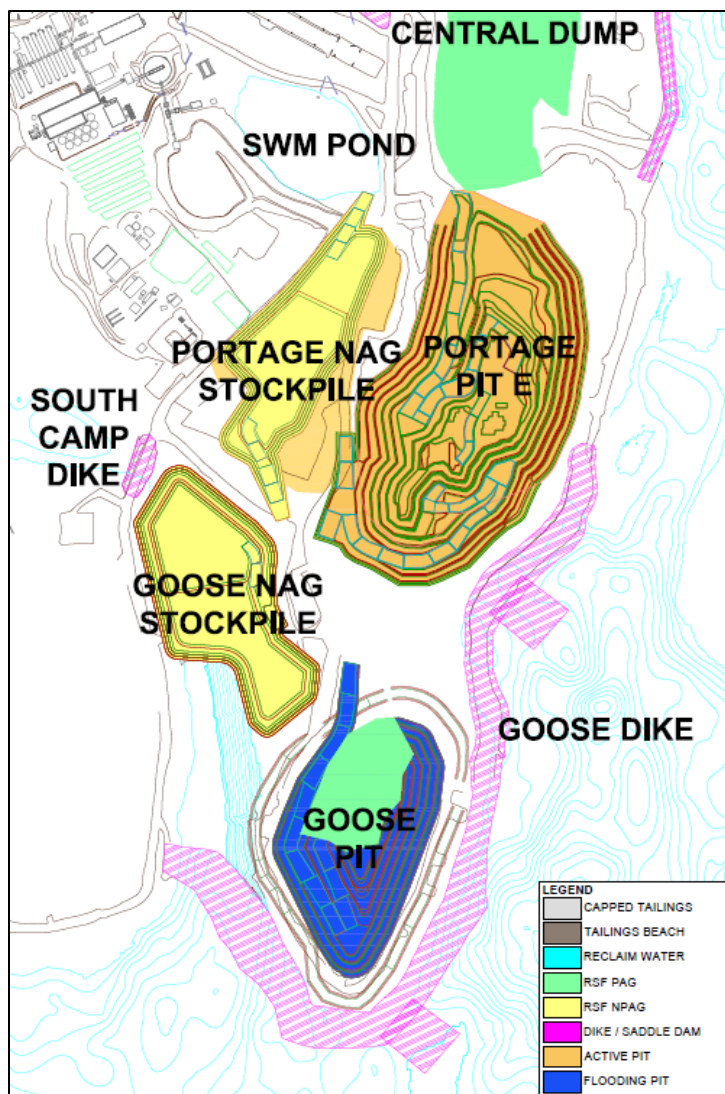


Figure 2-5 : Goose Pit Area Map

2.2.3 Vault Pit Area

The infrastructure of the Vault Pit area includes the Vault RSF, ore and marginal pads, Vault dike, Vault pit, Phaser Pit, BB Phaser Pit, Vault attenuation pond and emergency shelter. Figure 2-6 illustrates the Vault Pit area and surrounding infrastructure.

The Vault deposit is located adjacent to Vault Lake, approximately 6 km north of the Portage deposits. The deposit is isolated from the Wally Lake by the Vault Dike built in 2013.

The Vault pit began pre-mining operations in 2013 with active mining starting in 2014 and is expected to be completed in the first quarter of 2019. The dewatering of Phaser Lake occurred during summer 2016 in preparation for mining activity in Phaser and BB Phaser Pit. Phaser Pit mining activities were completed in October 2018. BB Phaser mining began in early 2018 and was completed in June 2019.

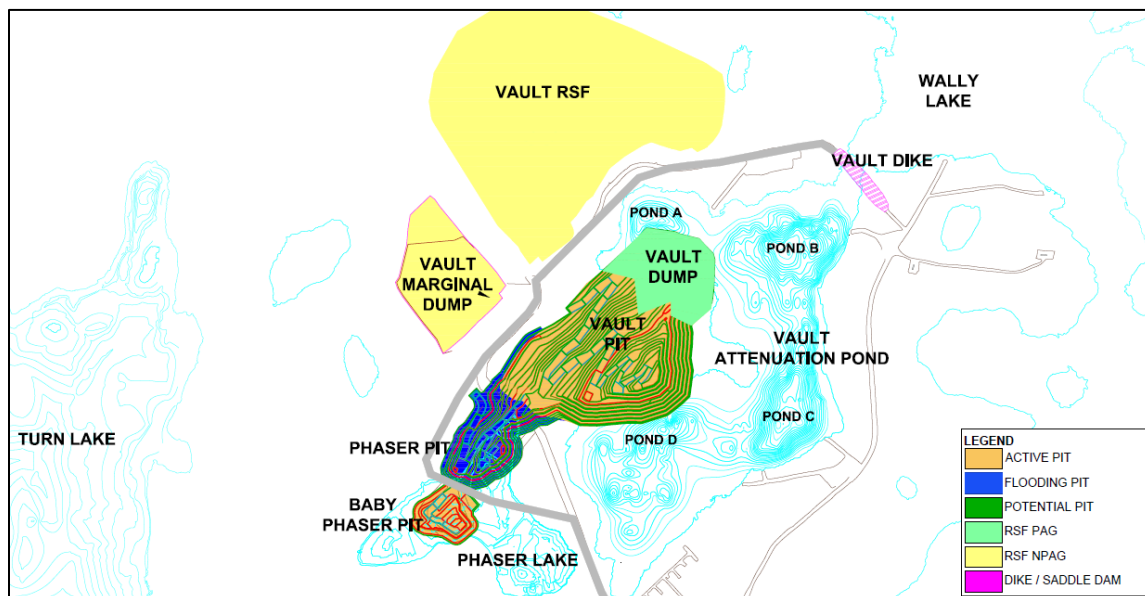


Figure 2-6 : Vault Pit Area Map

2.3 TAILINGS STORAGE FACILITY DESCRIPTION

The Tailings Storage Facility (TSF) is located with the Portage Pit Area and is comprised of the South Cell and the North Cell. These cells are delimited by tailings retaining dikes that are progressively built as capacity is required. The configuration of the TSF is presented on Figure 2-4. A summary of the TSF infrastructure is presented in Table 2-3.

Stormwater Dike, constructed in 2009-2010, is an internal dike (El. 150m) that divides the TSF in the North and South Cell.

The peripheral structures of the North Cell are SD1, SD2, RF1 and RF2 built to El 150 m from 2009 to 2010. In 2018, an internal structure was built in the Northern part of the North Cell over the existing tailings (variable El. From 152 to 154 m) to increase the tailings storage capacity.

The peripheral structures of the South Cell are SD3, SD4, SD5 and Central Dike built to El. 145 m from 2012 to 2018.

A permeable berm was built in the South Cell in 2017, to prevent tailings from reaching the reclaim pump area.

The diversion ditches (East and West), located around the perimeter of the North Cell TSF and the Portage RSF, are designed to collect the non-contact water runoff from the surrounding watershed.

2.3.1 In-Pit Tailings Storage Description

In-Pit tailings storage will occur in mined out area of Goose Pit, Portage Pit A and Portage Pit E.

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Table 2-3 : TSF Infrastructure Description

Containment Area	Structure	Construction date	Purpose
North Cell	Saddle Dam 1	Built to el. 141m - 2009 Raised to el. 150m - 2010	Peripheral Dike Tailings Retention
	Saddle Dam 2	Built to el. 150m - 2011	Peripheral Dike Tailings Retention
	Rockfill road structure 1 (RF1)	Built to el. 150m – 2009 Till Plug Constructed in 2013	Access Road Tailings Retention
	Rockfill road structure 2 (RF2)	Built to el. 150m - 2009	Access Road Tailings Retention
	Stormwater Dike	Built to el. 140m - 2009 Raised to el. 148m – 2010 Raised to el. 150m - 2013	Divider Dike Tailings Retention
	North Cell Internal Structure	Built to el. variable 152-154m - 2018	Internal Structure Tailings Retention
	North Cell Capping	2015 to 2019	Progressive closure
South Cell	Saddle Dam 3	Built to el. 140m - 2015 Raised to el. 143m - 2016 Raised to el. 145m – 2017-2018	Peripheral Dike Tailings Retention
	Saddle Dam 4	Built to el. 140m - 2015 Raised to el. 143m - 2016 Raised to el. 145m - 2017	Peripheral Dike Tailings Retention
	Saddle Dam 5	Built to el. 143m - 2016 Raised to el. 145m - 2017	Peripheral Dike Tailings Retention
	Central Dike	Built to el. 110m - 2012 Raised to el. 115m - 2013 Raised to el. 132m - 2014 Raised to el. 143m - 2016 Raised to el. 145m - 2017-2018	Peripheral Dike Tailings Retention
	Permeable Berm 1	Built to el. 137.25 - 2017	Water management

	Permeable Berm 2	Built to el. 141.5 - 2019	Water management
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3 MINE DEVELOPMENT PLAN

3.1 MINE WASTE PRODUCTION SEQUENCE

The current mine plan (2019) indicates that 0.6 Mt of Meadowbank ore will be processed in 2019, over a nominal mine life of 0.75 years.

The material balances from 2009 to 2019 is presented in Appendix A. This balance indicates the distribution of the following categories of materials by rock type:

- Mine rock for construction;
- Mine rock for dike construction;
- Mine rock for capping; and
- Mine rock to RSFs and Portage Pit fill.

Table 3-1 to **Table 3-3** show the material destination distribution for Portage and Vault Pits, as well as material taken from NAG stockpiles. Please note, the values presented in these tables are for the entirety of the 2019 year, and not only July 2019 to December 2019. **Table 3-4** compare the amount of waste mined to the FEIS prediction. It is to be noted that the difference in PAG and NPAG mined compared to the FEIS does not impact the management strategy and the closure concept.

NAG classified waste rock produced by pre-stripping and generic mining activities will be used for construction of the remaining mine infrastructure and dikes at the site, as has been the practice to date. Based on current material balance calculations, sufficient quantities of suitable rock fill and till borrow materials will be available for capping activities and closure/reclamation projects.

**2018 MINE WASTE ROCK AND TAILINGS
MANAGEMENT PLAN**
Table 3-1: Meadowbank PAG Destinations & Tonnages (2019)

	2019
Portage Rock Storage Facility (PAG Dump)	192,766
	17%
Portage Pit Fill	742,186
	65%
Central Dike	0
	0%
Stockpile Marginal Material	201,577
	18%
Vault Rock Storage Facility (PAG)	0
	0%
All PAG Destinations	1,136,529
	100%

Note: To prevent acid mine drainage potential, the relatively small expected volume of PAG material from Vault and Phaser Pits will be capped with NAG waste rock as dumping proceeds. However, Vault marginal and sub-marginal materials have been included in the "Stockpile Marginal Material" category.

Table 3-2: Meadowbank NAG Destinations & Tonnages (2019)

	2019
Portage Rock Storage Facility (NAG Dump)	0
	0%
Central Dike	0
	0%
Capping TSF (North Cell) <small>*Includes 219,821 m3 for North Cell Internal Structure</small>	522,191
	51%
Saddle Dams	0
	0%
Goose NAG Dump	0
	0%
Portage NAG Stockpile	0
	0%
Other destinations	497,903
	49%
Vault Rock Storage Facility (NAG)	0
	0%
All NAG Destinations	1,020,094
	100%

Note: The NAG rehandling stockpiles: The Goose NAG dump, the Central dump NAG stockpiles, and the Portage NAG stockpile will also be used for NAG rehandling at closure.

**2018 MINE WASTE ROCK AND TAILINGS
MANAGEMENT PLAN**

Table 3-3: NAG Stockpile for mine closure requirements, Destinations & Tonnages (2019)

	2019
Capping Portage Rock Storage Facility (PAG Dump) with NAG	0 0%
Capping TSF (North Cell)	255,976 100%
Capping TSF (South Cell)	0 0%
Central Dike	0 0%
Saddle Dams	0 0%
Primary Crusher NAG capping	0 0%
Goose Rock Garden/Finger Dikes (fish habitat compensation)	0 0%
Stormwater Dike Capping	0 0%
Capping Marginal Dump	0 0%
NAG Stockpiles	0 0%
All Portage NAG to be Stockpiled	255,976 100%

Table 3-4 : Waste rock mined compared to FEIS prediction

	Portage/Goose			Vault		
	Non-PAG	Uncertain	PAG ¹	Non-PAG	Uncertain	PAG ¹
FEIS Estimated Quantity (10 ⁶ tonnes)	64.3	8.9	28.8	51.0	7.5	9.5
Mined Quantity (10 ⁶ tonnes)	53.9	0	90.5	53.9	0.0	23.7

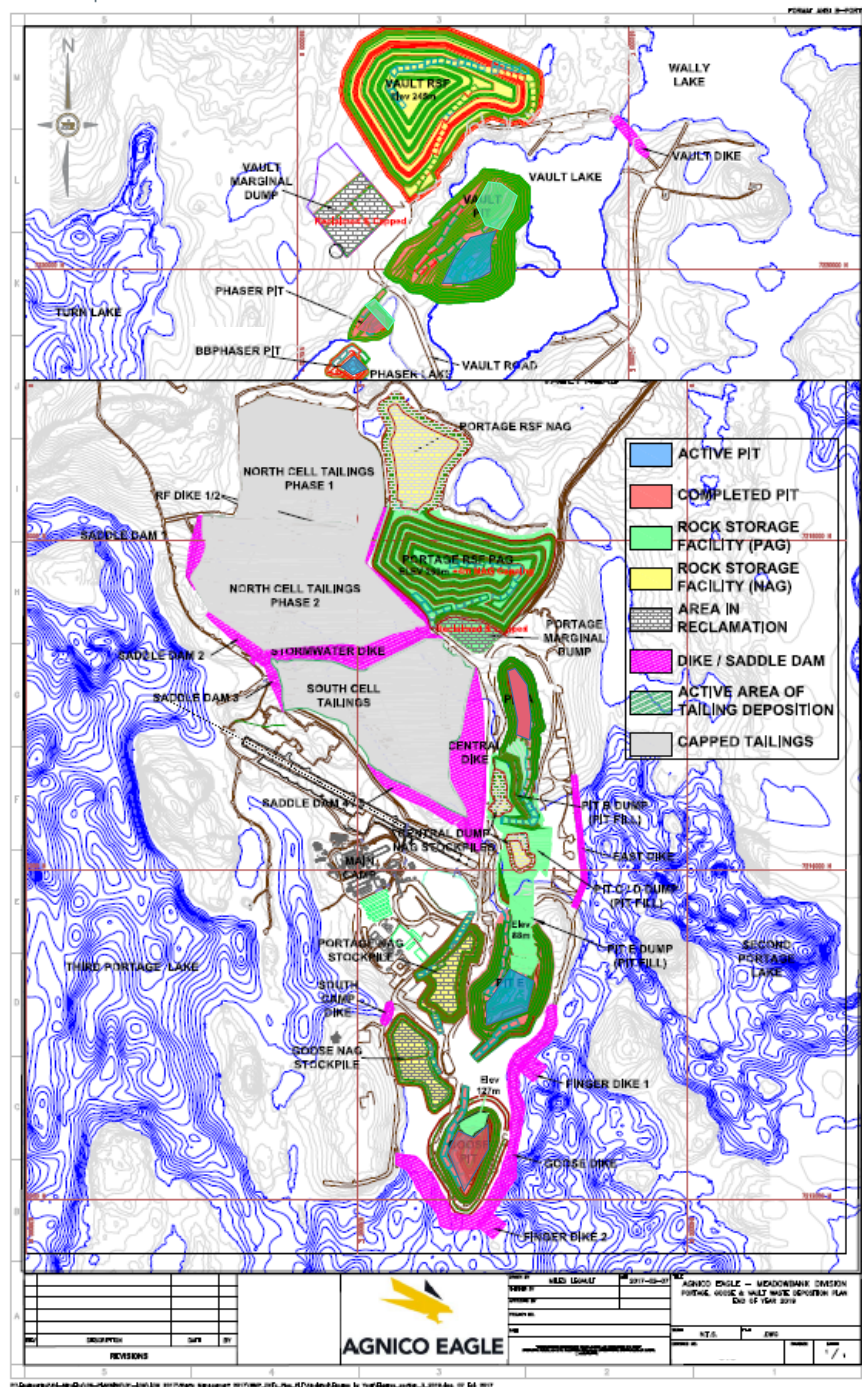
¹ PAG quantity includes ORE for Mined Quantity

3.2 MINE DEVELOPMENT SEQUENCE (2019)

The general sequence of mine development over the operating life is listed in Table 3-5 and illustrated in Figure 3-1 to Figure 3-3. A conceptual sequence of pit development over the life of mine is illustrated in Figure 3-4

Table 3-5: Mine Development Sequence

Year	Items
2019	<ul style="list-style-type: none"> - Finish mining of BB Phaser Pit - Finish mining of Portage Pit E - Continue progressive capping of North Cell TSF - Continue progressive reclamation of Portage RSF - Portage Pit infilling



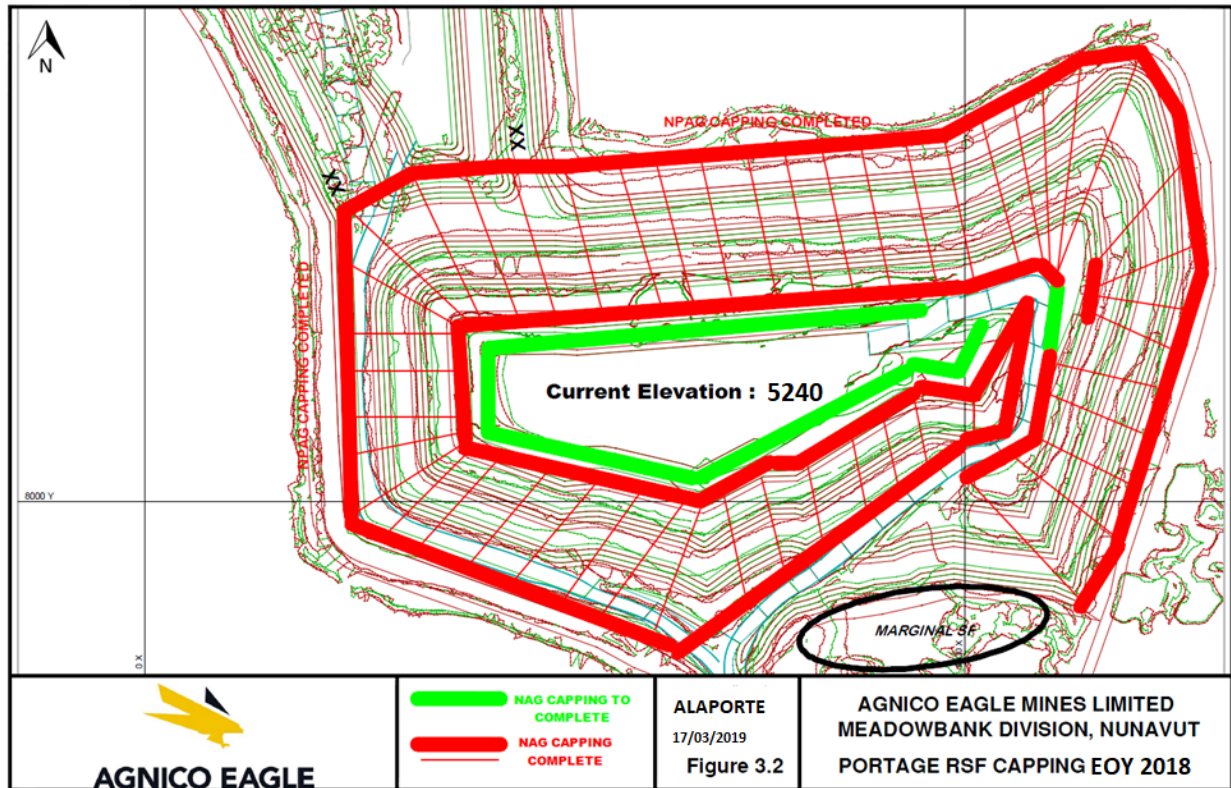


Figure 3-2: EOY 2018 Status Capping Portage Rock Storage Facility with NAG

Legend:

- ACTIVE PIT
- COMPLETED PIT
- ROCK STORAGE FACILITY (PAG)
- ROCK STORAGE FACILITY (NAG)
- AREA IN RECLAMATION
- DIKE / SADDLE DAM
- ACTIVE AREA OF TAILING DEPOSITION
- CAPPED TAILINGS

Map Labels:

- VAULT RSP (Rev 24/06)
- VAULT MARGINAL DUMP
- PHASER PIT
- BBPHASER PIT
- PHASER LAKE
- VAULT ROAD
- VAULT LAKE
- VAULT DIKE
- WALLY LAKE
- TURN LAKE
- PORTAGE RSF NAG
- NORTH CELL TAILINGS PHASE 1
- NORTH CELL TAILINGS PHASE 2
- SADDLE DAM 1
- SADDLE DAM 2
- SADDLE DAM 3
- STORMWATER DIKE
- SOUTH CELL TAILINGS
- CENTRAL DIKE
- CENTRAL DUMP
- PORTAGE MARGINAL BUMP
- PORTAGE NAG STOCKPILE
- SOUTH NAG STOCKPILE
- GOOSE NAG STOCKPILE
- THIRD PORTAGE LAKE
- SECOND PORTAGE LAKE
- GOOSE DIKE
- FINGER DIKE 1
- FINGER DIKE 2
- PIT B DUMP (PIT FILL)
- EAST DIKE
- PIT OLD DUMP (PIT FILL)
- PIT E DUMP (PIT FILL)

Map Information:

DATE: 2011-02-27
 AGNICO EAGLE - MEADOWBANK EXTENSION PROJECT
 PORTAGE ROAD & VAULT MARGINAL DUMP
 END OF YEAR 2011

AGNICO EAGLE

22

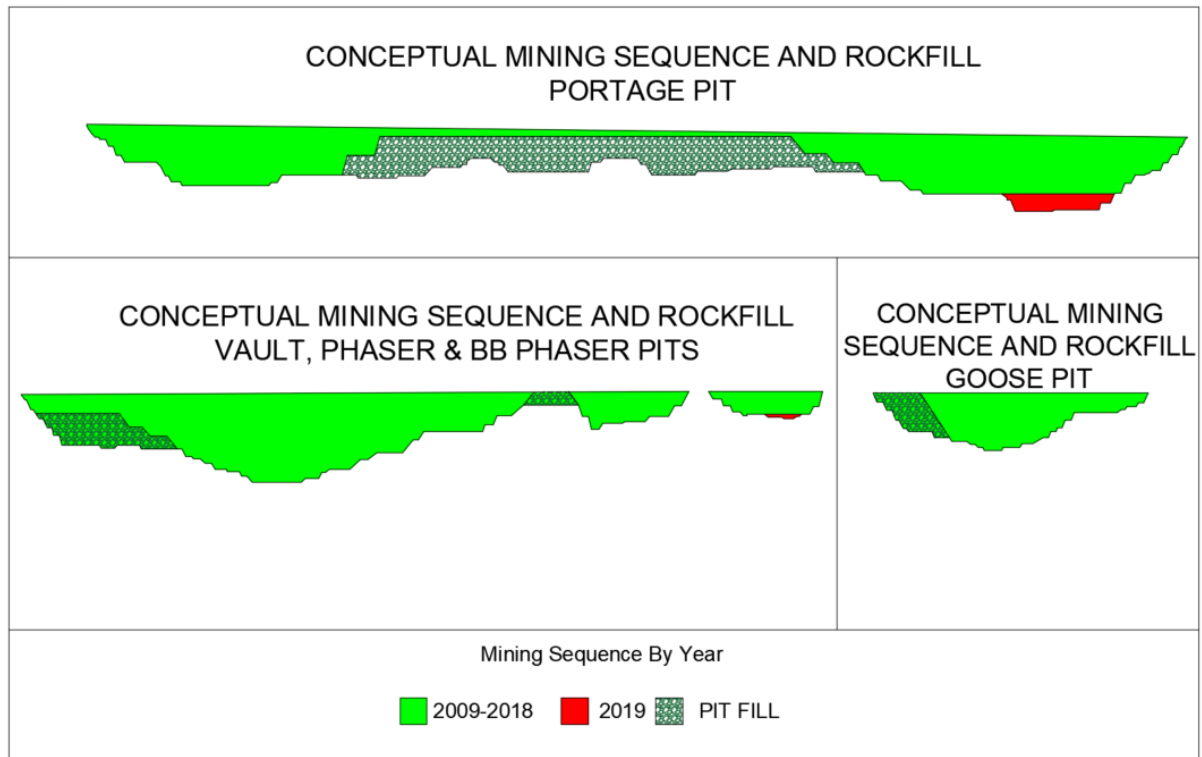


Figure 3-4: Conceptual mining sequence by year

4 OVERBURDEN MANAGEMENT

4.1 LAKEBED SEDIMENTS

The lakebed sediment consists of soft, fine-grained sedimentary deposits that can be found at the bottom of lakes.

The thickness of lake bottom sediments at Meadowbank is variable and can range from a few centimeters up to 10 meters and more as suggested by geophysical surveys and information obtained from various drilling programs and construction activities.

Lakebed sediments were excavated and managed during the construction of Stormwater Dike, Central Dike and of the dewatering dikes as well as and during pre-stripping of the Pits.

The strategy to manage lakebed sediment removed during construction or pre-stripping was to place it in either the Portage or Vault RSF.

4.2 TILL

The remainder of the overburden materials consists of till materials (mix of silt, sand, gravel, cobbles and boulder) with alluvial deposits of silt and sand intermixed. The till material is generally described as a silty sand/gravel. It contains cobble and boulder-sized particles with an average of 30 to 40% silt particles. The average till thicknesses throughout the Mine area varies based on location and may range from zero to upwards of 18 m.

The management strategy for till was to stockpile a part of it to be used for construction of the tailings management infrastructure as required. The remaining quantity of till was placed within the RSFs and mixed with waste rock.

In 2018, a total of 401,194 tonnes of lakebed sediment and till material were managed from the Vault zone (BBPhaser pit) by placement in the Vault RSF and were mixed with waste rock.

5 WASTE ROCK MANAGEMENT

The strategy to manage waste rock from the open pit mines, not used for site development purposes, is to store it within a Waste Rock Storage Facilities (RSFs).

Due to the distance between the Portage mining area and the Vault mining area, two separate waste rock storage facilities are required. Waste rock from the Portage and Goose Pits is stored in a storage facility located near to these pits (Portage RSF or Goose Pits), while waste rock from the Vault, Phaser and (potential) BBPhaser Pits will be stored in a separate storage facility adjacent to the Vault Pit (Vault RSF). Waste rock is also stored within mined out area of pit (pit-infilling).

5.1 WASTE ROCK PROPERTIES

The estimated quantities to be stored in each of the RSFs and other destinations as well as their geochemical classification (NAG or PAG) are summarized in Table 5-1.

Table 5-1: Quantities of Waste Rock by Destination

Destinations (RSF and others)	Rock Type	Quantity*
Portage RSF	Waste Rock (about 19% of NAG)	73.5 Mt**
Portage Pit Filling	Waste Rock (about 100% of PAG)	14.7 Mt
Construction	Waste Rock (NAG)	25.0 Mt
Tailings Capping	Waste Rock (100% of NAG)	16.8 Mt
Rock Garden	Waste Rock (about 100% of PAG)	0.3 Mt
Goose NAG Dump	Waste Rock (100% of NAG)	4.5 Mt
Vault RSF	Waste Rock (about 95% of NAG and 5% PAG)	56.3 Mt
Vault Pit Filling	Waste Rock (about 95% of NAG and 5% PAG)	3.1 Mt
Phaser Pit Filling	Waste Rock (about 95% of NAG and 5% PAG)	0.6 Mt

*The quantities have been adjusted as the loose density assumption changed from 2.15 to 2.04.

** The maximum quantity of PAG is realized at the end of mine life. The maximum quantity of NAG is realized at the end of 2018 (before the start of reclamation). The figure reported here reflects the maximum quantity at any one time, which is reached at the end of 2019. Quantities also include NAG capping.

5.2 WASTE ROCK MANAGEMENT STRATEGY

Waste rock is managed within the RSF as well as within the mined out area of Portage, Goose and Phaser Pits. The waste rock is qualified with testing as non-acid generating (NAG) or Potentially acid generating (PAG). The management strategy for NAG and PAG material is different.

Placement of waste rock within the Portage RSF commenced closest to the Portage Pit and has progressed westward over the entire footprint, then upward to further benches during the development of the mine. In 2012, an extension of the Portage WRSF was done to store NAG material within a temporary area (Figure 5-1).

Placement of waste rock within the Vault RSF has commenced closest to the Vault Pit and proceeded in a northward direction, rising upward as pit development progresses.

PAG rockfill is managed within the Portage RSF, Vault RSF, Portage Pit infill and Vault and Phaser Pit infill. The PAG rockfill within the Portage RSF is placed outside of the capping area (which consist of a thickness of 4 m at surface). At the Vault RSF the majority of the rockfill is NAG with the PAG placed within the middle area.

NAG rockfill is managed as construction material, capping material for the TSF, Goose Pit infill, Vault infill, Phaser infill and within the Portage and Vault RSF. At the Portage RSF the NAG is stored within a temporary NAG stockpile area and is also used as capping for the PAG material. In the Vault RSF, NAG material consists of the majority of the RSF.

5.3 WASTE ROCK STORAGE FACILITY CHARACTERISTIC

Table 5-2 summarizes the overall (final) physical dimensions and aspects of the Portage and Vault RSFs.

Table 5-2: Details of Rock Storage Facilities

Descriptors	Portage Rock Storage Facility	Vault Rock Storage Facility
Approximate storage volume	39.3 Mm ³	29.1 Mm ³
Approximate final crest elevation	254 m	246 m
Approximate final height	100 m	80 m
Maximum elevation of adjacent topography	192 m	190 m
Approximate footprint area	80.8 ha	61.0 ha

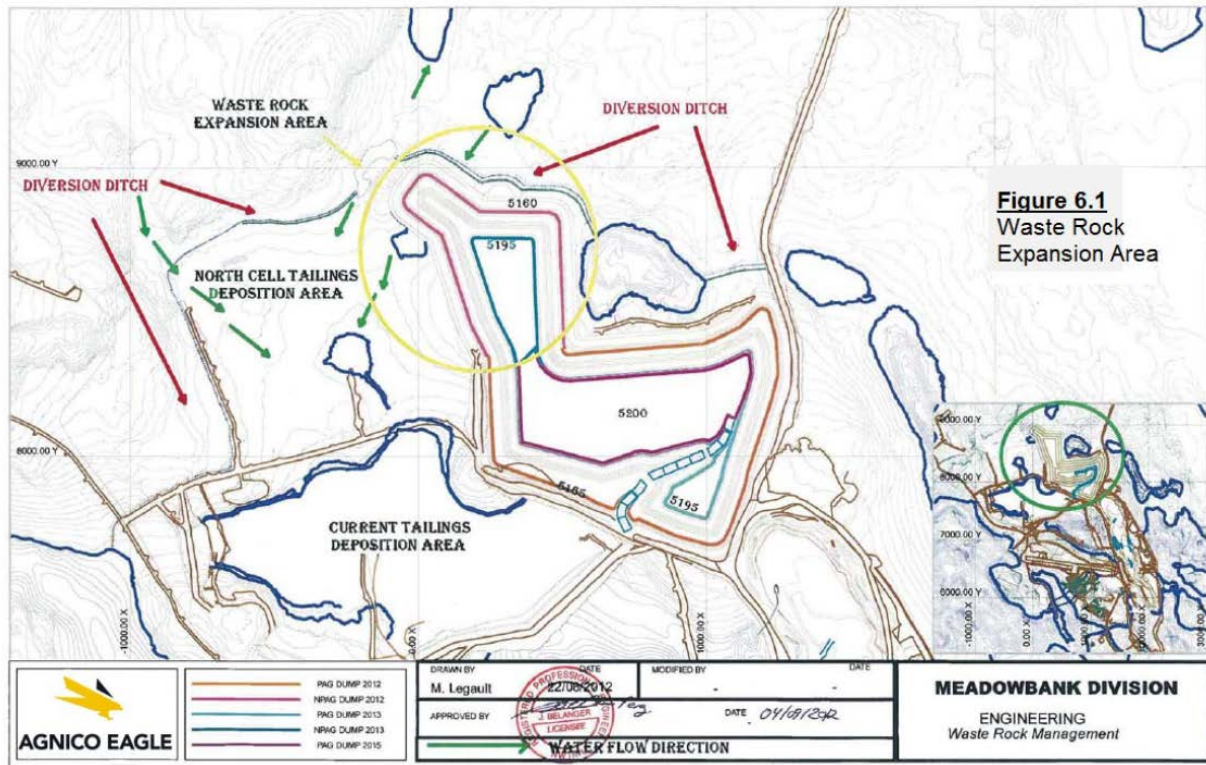


Figure 5-1: Waste Rock Expansion Area (temporary NAG storage area)



2018 MINE WASTE ROCK AND TAILINGS MANAGEMENT PLAN

6 TAILINGS MANAGEMENT

Tailings are the material by-product of the gold recovery process produced by the process plant. Tailings are pumped as a slurry from the process plant to the Tailings Storage Facility or to the mined out area of Goose and Portage Pits.

The tailings storage facility (TSF) is a permanent storage facility for tailings produced during the operation of the mine. It is located north of the Process Plant Site within the dewatered portion of the northwestern arm of Second Portage Lake.

Tailings containment in the TSF is achieved by the construction of a series of dikes. The structures of the TSF are raised as additional tailings capacity is required. The maximum allowed El. of the North Cell and South Cell peripheral structures is El. 150 masl, while the maximum allowed El. of the North Cell Internal Structure is El. 154 m. Refer to Section 2.3 for description of the tailings containment infrastructures and their current elevation.

Tailings containment in the in-pit deposition is achieved by depositing tailings in the mined out area of Goose pit and Portage Pit.

6.1 TAILINGS MANAGEMENT STRATEGY

Tailings deposition is done using end of pipe deposition with one active point at a time. The deposition point location and duration is determined from the tailings deposition plan. Changing between deposition points on a given line consist of stopping the flow of tailings in the line, redirecting it through a by-pass, flushing the line, relocating the deposition point pipe and then switching tailings from the by-pass to the newly installed deposition line.

6.1.1 TSF Tailings Management strategy

The TSF was designed in two cells, (North and South) in order to allow tailings management in smaller areas with shorter beach lengths, reducing the amount of water that is trapped and permanently stored as ice, which would result in losing TSF capacity. Operation in cells also allows progressive closure, cover trials, and cover construction.

Due to the arid climate and permafrost environment, tailings in the TSF are disposed in a manner promoting freezeback. Given the length of time that water at the site is ice covered, sub aqueous disposal is preferred. It is anticipated that the tailings will eventually become encapsulated by permafrost; thus limiting oxygen diffusion and water infiltration into the tailings, seepage from the tailings, and the generation of acid mine drainage. Refer to the 2018 water management plan for information on how water is managed within the TSF.



2018 MINE WASTE ROCK AND TAILINGS MANAGEMENT PLAN

The tailings deposition plan within the TSF is aligned with the tailings management strategy and considers the following aspect:

- The deposition sequence inform the dike construction activity and ensure enough capacity to store the life of mine tailings while maintaining adequate freeboard (2.0m for water and 0.5m for tailings)
- The deposition sequence maintains a reclaim pond with sufficient depth for efficient operation of the reclaim pumping system while minimizing pond volume as TSF operation best practices.
- The deposition sequence maintains beaches on the upstream faces of perimeter dikes
- The deposition sequence promote sub-aqueous deposition in winter to limit ice entrapment
- The deposition sequence promotes freezing of the tailings during the operating period and;
- The deposition sequence maximizes certain areas of the TSF earlier in order to promote rockfill capping during operation.

6.1.2 In-Pit Tailings Management strategy

In-pit tailings disposal will occur in Goose Pit, Pit E, and Pit A. The deposition strategy is to start in-pit tailings deposition in Goose Pit and then alternate tailings deposition between Pit E and Pit A as to limit the gradient between these two pits and the Portage Dump.

In-pit tailings disposal will occur using crest and ramp deposition points. Crest deposition will be performed in summer, while tailings will be discharge along the pit ramp in winter, in order to facilitate water transfers.

The in-pit tailings deposition strategy will ensure the respect of these freeboard criteria:

- 8 m tailings freeboard with Third Portage Lake water elevation (maximum tailings El. 125.6masl). This freeboard is required to ensure a minimum water cover of 8 m at closure;
- Portage Pit A and Pit E water elevation to maintain a 2 m freeboard with the lowest point of the West Road (which is planned to be raised at El. 130 masl);
- Goose Pit tailings freeboard to respect a highest elevation of 120masl, to ensure a 13.6m freeboard near Bay Goose Dike.



2018 MINE WASTE ROCK AND TAILINGS MANAGEMENT PLAN

During in-pit tailings deposition, reclaim water is pumped to the mill from either Portage Pit A or Pit E. Reclaim water is pumped from a pit where no deposition is occurring to ensure low Total Suspended Solid (TSS) are returned to the mill. The volume that is reclaimed will be adjusted to ensure a minimum water cover of 3 m during in-pit deposition.

In addition, to ensure that the water level in Goose Pit remains below 128 masl during operation, water from Goose Pit is transferred to Portage Pit A or Pit E every summer. Water transfer from Goose Pit will only occur in summer period. Switch of pit for tailings deposition will be scheduled from May to September.

The tailings deposition plan is aligned with the tailings management strategy.

6.2 TAILINGS DEPOSITION – 2018

Table 6-1 presents the history of tailings deposition in the TSF. Deposition was done according to the deposition plan, which considers various factors such as construction sequence, remaining capacity and limiting ice entrapment during winter deposition.

Table 6-2 presents the amount of tailings deposited in 2018 and their properties measured at the mill.

In 2018, the tailings deposition strategy in the South Cell was to push the pond of water against SD3 and Stormwater Dike, while maintaining tailings beach against the other peripheral structure (SD4, SD5, Central Dike). The objective was to keep the pond as far as possible from these structures with a minimum beach length target of 20 m.

In 2018, the deposition strategy in the North Cell was to deposit tailings from the North Cell Internal Structure to secure sufficient capacity until further construction campaigns, while optimizing tailing landform for closure purposes. Due to the length of the beaches in the North Cell, and the objective to limit aerial deposition in the winter, deposition only occurred in the summer months.



2018 MINE WASTE ROCK AND TAILINGS MANAGEMENT PLAN

Table 6-1: Deposition location (realized)

Date	Deposition location	Tailings deposited (dried tonnes)
February 2010 to November 2014	North Cell	16.0Mt
November 2014 to July 2015	South Cell	2.7Mt
July 2015 to October 2015	North Cell	1.0Mt
October 2015 to August 2018	South Cell	10.8Mt
August 2018 to October 2018	North Cell	0.5Mt
October 2018 to December 2018	South Cell	0.7Mt

Table 6-2: 2018 Processed Tailings Volume and Associated Properties

	Total Tailings Slurry (tonnes)	Density of Tailings (% solid)	Density of Slurry (tonnes / m ³)	Tailings Placed in TSF (m ³)
January-18	500,787	59.0%	1.612	310,708
February-18	522,314	55.2%	1.566	333,600
March-18	428,691	57.5%	1.596	268,679
April-18	441,143	57.7%	1.591	277,343
May-18	516,754	58.4%	1.615	320,050
June-18	501,379	57.3%	1.593	314,670
July-18	616,890	56.3%	1.592	387,433
August-18	602,007	50.4%	1.495	402,744
September-18	466,772	51.0%	1.507	309,715
October-18	410,910	58.3%	1.620	253,595
November-18	366,738	58.7%	1.645	222,967
December-18	414,542	59.2%	1.653	250,774
TOTAL-18	5,788,926	56.4%		3,652,278

6.2.1 Parameter Analysis - 2018

The June 2018 bathymetry of the South Cell was used to do a parameter analysis by comparing the results to the previous bathymetries realized since 2014. Results of this analysis are presented in *Table 6-3*.

Based on the 2018 bathymetric analysis, 25% of the water from the slurry is entrapped within the capillary void spaces of the tailing, and up to 40% is entrapped within the TSF as ice depending on the time of the year.

The tailings dry density (TDD) and the tailings beach slopes in the South Cell during 2018 are lower than previous years. For example, yearly average TDD was 1.26 t/m³ in 2018 compared to 1.30 in 2017, and tailings beach slope was estimated to 2.36% sub-aqueous in 2018 compared to 2.94% in 2017. This difference can be explained by a closer discharge to the pond which leads to lower ice entrapment.

For North Cell, the key parameters used was from the last bathymetry done in 2014 which gave a TDD of 1.28 t/m³ and an ice entrapment of 90% in the winter months and 30% in the summer months.

The analysis of the water balance in 2018 leads to a revised ice-entrapment of 61% instead of the 38% measured in 2017 for the South Cell.

Table 6-3: Yearly tailings deposition parameter evolution - South Cell and North Cell

	Tailings Dry Density (t/m ³)	Sub-aerial beaches (%)	Sub-Aqueous beaches (%)	Ice entrapment (%)
2014 (North Cell and South Cell)	1.28	0.45	4.00	60%
2015 (South Cell)	1.45	1.10	3.60	36%
2016 (South Cell)	1.48	0.88	3.03	39%
2017 (South Cell)	1.30	0.73	2.95	38%
2018 (South Cell)	1.26	0.58	2.36	61%
2018 (North Cell)	1.28	0.45	2.36	61%

Note: Yearly averages are presented

6.3 TAILINGS DEPOSITION PLAN – 2019-2021

An updated version of the tailings deposition from 2019 until the end of mine life is presented in Appendix B. This updated tailings deposition plan considers modification to tailings deposition strategy to include in-pit tailings deposition. The water management strategy related to this deposition plan is also presented in Appendix B.

As mill processing rates and tailings characteristics may fluctuate over the life of the mine, the design of the TSF and tailings deposition plan will continue to evolve based on changes in design parameters including mill process rates, tailings beach slopes, ice entrapment, and tailings in-situ densities. These parameters are re-evaluated every time the deposition plan is updated. Table 6-4 present the input parameters that were used to update the tailings deposition plan. The key input parameters that impacts the performance of the tailings deposition are the following:

- Tonnage profile;



2018 MINE WASTE ROCK AND TAILINGS MANAGEMENT PLAN

- Tailings beach slope;
- In-situ dry density;
- Water content entrapment.

Table 6-4 presents a summary of the deposition strategy from 2019 to 2021 based on the output of the deposition modelling. The strategy of the tailings deposition plan was to maximise in-pit tailings deposition starting in July 2019.

The deposition plan demonstrates remaining capacity in the TSF as well as remaining capacity for in-pit deposition.

The tailings deposition strategy in the South Cell is to maintain the reclaim pond against the SD3 and Stormwater Dike structures, while maintaining tailings beach against the other peripheral structure (SD4, SD5, Central Dike). The tailings deposition strategy in the North Cell is to continue building the North Cell Internal Structure to continue tailings deposition while maintaining a pond of water in the middle of the Cell. The water is then transferred to the South Cell for reclaim. The tailings deposition strategy for in-pit deposition is to start tailings deposition in Goose Pit and then to alternate tailings deposition between Portage Pit E and Pit A.

Table 6-5 presents a summary of the deposition schedule and infrastructure requirement.

UPDATED MINE WASTE ROCK AND TAILINGS MANAGEMENT PLAN

Table 6-4: Input parameters for tailings deposition plan – 2019-2021 Deposition plan

Period	Dried Tonnage (tonnes)	Ice Thickness (m)	Water Entrapment (%)	SC TDD (t/m ³)	NC TDD (t/m ³)	IPD TDD (t/m ³)	SC Sub aerial beach (%)	NC Sub aerial beach (%)	Sub aqueous beach (%)
Jan-19	235,249	1.1	65%	1.05	1.08		0.58%	0.45%	2.36%
Feb-19	223,040	1.3	65%	1.05	1.08				
Mar-19	183,000	1.6	65%	1.05	1.08				
Apr-19	239,360	1.7	65%	1.05	1.08				
May-19	210,120	0	40%	1.305	1.32				
Jun-19	239,360	0	25%	1.56	1.56				
Jul-19	287,342	0	25%			1.45			2.36%
Aug-19	281,816	0	25%			1.45			2.36%
Sep-19	242,346	0	25%			1.45			2.36%
Oct-19	287,342	0.2	25%			1.45			2.36%
Nov-19	277,869	0.5	25%			1.45			2.36%
Dec-19	287,342	0.8	25%			1.45			2.36%
Jan-20	276,458	1.1	25%			1.45			2.36%
Feb-20	258,622	1.3	25%			1.45			2.36%
Mar-20	276,458	1.6	25%			1.45			2.36%
Apr-20	271,440	1.7	25%			1.45			2.36%
May-20	280,488	0	25%			1.45			2.36%
Jun-20	271,440	0	25%			1.45			2.36%
Jul-20	270,258	0	25%			1.45			2.36%
Aug-20	270,258	0	25%			1.45			2.36%
Sep-20	261,540	0	25%			1.45			2.36%
Oct-20	287,277	0.2	25%			1.45			2.36%
Nov-20	278,010	0.5	25%			1.45			2.36%
Dec-20	287,277	0.8	25%			1.45			2.36%
Jan-21	279,000	1.1	25%			1.45			2.36%
Feb-21	252,000	1.3	25%			1.45			2.36%
Mar-21	279,000	1.6	25%			1.45			2.36%
Apr-21	270,000	1.7	25%			1.45			2.36%
May-21	279,000	0	25%			1.45			2.36%
Jun-21	270,000	0	25%			1.45			2.36%

**UPDATED MINE WASTE ROCK AND TAILINGS
MANAGEMENT PLAN**

Jul-21	279,000	0	25%			1.45			2.36%
Aug-21	279,000	0	25%			1.45			2.36%
Sep-21	270,000	0	25%			1.45			2.36%
Oct-21	310,000	0.2	25%			1.45			2.36%
Nov-21	300,000	0.5	25%			1.45			2.36%
Dec-21	310,000	0.8	25%			1.45			2.36%

Table 6-5: Deposition plan and infrastructure construction – summary

Date	Discharge Location	Dry Tonnes Deposited	Comments
January to April 2019	South Cell	671,289 Mt	<ul style="list-style-type: none"> February 2019 : South Cell permeable berm to secure reclaim pond
April 2019 to July 2019	North Cell	688,840 Mt	
July 2019 to September 2020	Goose Pit	3.9 Mt	<ul style="list-style-type: none"> July to October 2019: Water transfer from Goose Pit to Pit A February 2020 : Reclaim of water from Pit A July to August 2020: Water transfer from Goose Pit to Pit A August to September 2020: Water transfer from Goose Pit to Pit E
September 2020 to September 2021	Pit E	3.3 Mt	<ul style="list-style-type: none"> September to October 2020: Water transfer from Goose Pit to Pit E June to September 2021: Water transfer from Goose Pit to Pit E Reclaim of water from Pit A
September 2021 to December 2021	Pit A	1.1 Mt	<ul style="list-style-type: none"> Reclaim of water from Pit E

6.4 MONITORING OF TAILINGS SEEPAGE

Following dewatering of 2PL Arm and during investigations and construction of the TSF perimeter dikes, several investigative procedures were used to identify the location and hydraulic properties of faults that are inferred to be present beneath the North Arm of 2PL including mapping of exposed bedrock, and packer testing in boreholes.

The results of the investigations were used to locate monitoring wells and thermistors that are and will be installed within the dikes, and between the Central Dike and crest of the Portage Pit. Thermal data is monitored to evaluate seepage from the TSF and freezeback of the TSF, and of the Central Dike, Saddle Dam and Rockfill perimeter containment foundations.

- If monitoring indicates flow rates and water qualities of concern, then mitigation measures would be undertaken. Collection of any seep water will be required for pumping it back to the TSF. The potential mitigation action would be dependent on observed flow rates and water quality data;
- If, during monitoring, the freezeback of the dike and tailings deposit is found to be occurring at a rate less than predicted, then enhancement by artificial freezing methods (i.e. thermosyphons) may be considered.

Refer to the 2018 Water Management Plan and Report for details on the Central Dike seepage and to the Tailings Storage Facilities OMS Plan for seepage monitoring and mitigation actions, both included in the 2018 Annual Report.

7 CONTROL STRATEGIES FOR ACID ROCK DRAINAGE – COVER DESIGN

Some rock lithologies from the Meadowbank mining activity are potentially acid generating (PAG) which can raise the concern of generating acid drainage. This section describes the control strategy used at Meadowbank to limit acid rock drainage from the tailings and waste rock.

During selection of the acid rock drainage control strategies for the disposal of the mine waste at the Meadowbank Gold Mine, consideration was given to control strategies that are effective in Arctic regions.

Common control strategies for the prevention or reduction of acid mine drainage in cold regions are:

1. Control of acid generating reactions;
2. Control of migration of contaminants; and
3. Collection and treatment.

In assessing the overall control strategies for the Meadowbank Gold Mine, emphasis has been placed on methods that satisfy (1) and (2), which then has an impact on (3) by potentially reducing the requirements for these activities. Table 7-1 presents various acid mine drainage control strategies for Arctic condition that can be found in the literature.

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Table 7-1: Acid Mine Drainage Control Strategies of the Arctic

Strategy	Tailings	Waste Rock
Freeze Controlled	Total or perimeter freezing options can be considered. Can freeze up to 15 m annually if freezing in thin layers. Freezing rate decreased proportionately with depth. Process chemicals could cause high unfrozen water content.	Requires considerable volumes of non-acid waste rock for insulation protection. Better understanding of air and water transport through waste rock required for reliable design.
Climate Controlled	May not be a reliable strategy for saturated tailings.	Requires control of convective airflow through waste rock, infiltration control with modest measures and temperature controls. Better understanding of waste rock air, water, and heat transport for reliable design.
Engineered Cover	Special consideration for freeze-thaw effects. Availability and cost of cover materials are major impediments.	
Subaqueous Disposal	Special considerations for winter ice conditions and pipeline freeze-up.	Very difficult to dispose of waste rock beneath winter ice.
Collection and Treatment	Costly to maintain at remote locations Long term maintenance cost.	
Segregation and Blending	Tailings are normally geochemically homogeneous.	May be very effective. Research and development on-going.

Reference: (MEND 1.61.2, 1996)

The acid rock drainage control strategy for in-pit deposition is subaqueous disposal.

The acid rock drainage control strategies retained at Meadowbank for the TSF and RSF is freeze control and climate control strategies. These strategies involve placing a sufficiently thick cover of non-potential acid generating (NAG) waste rock over the PAG material to provide and insulation protection so that the PAG material stay frozen while the active layer is maintained within the NAG material. Based on the production forecast schedule for Meadowbank, there will be sufficient NAG rock available to provide cover over the Portage RSF and TSF and the Vault RSF. The TSF and RSF cover thickness design will be different as the thermal phenomena within each facility will be different. For example, the tailings are much finer than the waste rock, which will impact the convective airflow model due to lower air conductivity and higher water content.

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Freeze control strategies rely on the immobilization of pore fluids to control acid mine drainage reactions, and the potential migration of contaminated pore water outside of the storage facility. The climate conditions at the Meadowbank Gold Mine site are suitable to freeze control strategies. In addition to immobilization of pore fluids, permafrost can reduce the hydraulic conductivity of materials by several orders of magnitude.

Climate control strategies rely on cold temperatures to reduce the rate at which oxidation occurs. The low net precipitation in permafrost regions limits infiltration of water into waste rock and tailings disposal areas. Consequently, the climate of the Meadowbank Gold Mine area will act as a natural control to reduce the production of acid mine drainage. Climate control strategies are best applied to materials placed at a low moisture content such as waste rock to reduce the need for additional controls on seepage and infiltration.

Research activities have been undertaken since 2014 in collaboration with the Research Institute Mines and Environment (RIME) to optimize the control strategies to be used in Meadowbank for the RSF's and the TSF's.

Thermistors are installed in the Portage RSF and TSF North Cell to monitor thermal behavior as an adaptive management technique.

7.1 TSF COVER DESIGN

Capping trial and test pads have been constructed on the TSF North Cell in 2014 and 2015, in collaboration with the Research Institute on Mines and the Environment (RIME) to gather data that will help determine the most appropriate design for the site conditions. The design of the cover for the North Cell and South Cell has been initiated in 2015 and 2016. The design is still in progress and the final design will be presented in the Final Closure and Reclamation Plan.

Design criteria specific to the cover system design include:

- The tailings material placed within the North Cell should be entirely frozen after a period of 10 years following completion of the capping (frozen defined as tailings temperature $<0^{\circ}\text{C}$).
- The freezing front should continue at depth into the lakebed sediments and the bedrock underlying the North Cell, thus eliminating the talik currently in place. The time required for this phenomenon to take place will be determined from modelling and is to be corroborated by monitoring of ground temperatures following closure.
- The tailings are to remain frozen for a period of over 150 years following closure, taking into account the agreed-upon climate change scenario. This will be based on modelling and monitoring of ground temperatures following closure of the facility.

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- Ground temperature monitoring should be conducted for a minimum of ten years following closure of the TSF and data compared to the modelled scenario. Model parameters are to be adjusted based on monitoring data and future ground temperature predictions refined.
- For 90% of the TSF surface area, the active layer shall remain within the constructed NAG cover system and the underlying tailings material shall remain frozen for a warm year event with a return period of 1 in 100 years, accounting for the climate change scenario.
- In areas where the active layer extends into the tailings material, the thawed layer should be limited to the upper 30 cm of the tailings mass and saturation of the tailings should remain above 85% to limit oxidation of the tailings.
- As an additional method to reduce tailings reactivity, the degree of saturation within the tailings mass should remain above 85%. This will reduce the tailings reactivity should part of the upper region of the tailings mass thaw during a warm year event.

Conceptual cover system designs previously modelled (Golder, 2008) and presented in the interim closure plan (Golder, 2014) rely on aggradation of the tailings material into the surrounding permafrost to limit the production of Acid Mine Drainage (AMD) and the movement of contaminants through surface and groundwater. The construction of a cover system consisting of non-acid generating granular material (NAG) over the tailings material ensures that the active layer (material going through freeze-thaw cycles, overlying permafrost) remains within the benign material. The objectives of the cover system are to maintain the tailings material below 0°C under most conditions and to maintain saturation above 85%.

The design for the engineered cover system is a layer of compacted NAG waste rock (ultramafic) with a minimum thickness of 2.0 m. The design was developed as a result of soil-plant-atmospheric (S-P-A) modelling, as well as thermal and seepage modelling. Visual observation in the field show that the ultramafic material is heterogeneous with coarser and finer zone so it will be possible that some part of the capping is more insulative than others. As the capping is done in winter over frozen tailings using such a material will have advantage as it will allow to better preserve the freezing condition of the tailings while limiting water infiltration in the cover.

Thermal modelling show that the tailings material, beneath the minimum 2.0 m thick cover will remain frozen for all year (excluding the warmest years) from the 100-year database, accounting for climate change. The unfrozen tailings are segregated in the upper 0.5 m of the TSF and

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remain above 85% saturation, thus reducing the risk of oxidation until the material freezes back into the permafrost over time.

The TSF closure design will also include a landform that promotes water shedding from all surfaces covered. TSF landform material will be achieved by backfilling using the same material as the cover. With this strategy, the current closure landform plan indicates that the cover thickness over most of the landform will generally be significantly thicker than 2 m reaching up to 8.0 m in certain portions due to the tailings topography.

Additional thermal monitoring and analysis will be required to verify the performance of the cover system against the design intent and inform on the final cover design. Final cover details for the TSF will be subject to modification depending on the results obtained from the site trials as well as from data provided from the Thermal Monitoring Program.

Results of the modelling and the cover design will be provided in the Final Closure and Reclamation plan for Meadowbank site.

7.2 IN-PIT COVER DESIGN

An 8 m water cover will be maintained at closure for in-pit deposition. This will be achieved by maintaining an 8 m tailings freeboard from the Pit crest and by performing pit flooding at closure. This water cover depth will ensure that the tailings will not be re-suspended due to wave effect and ice formation, and limit access of aquatic life to it.

7.3 RSF COVER DESIGN

For the Portage waste rock storage, the current plan considers a cover of NAG rock placed over the PAG material present in the waste rock piles. The majority of the Portage RSF is covered with NAG material during operations. For Vault, the waste rock is mainly NAG, and the PAG waste rock is encapsulated in the center of the pile during operations.

Based on the results of the initial thermal modelling, it is expected that the material within the RSFs will freeze within two years of placement. The use of coarse rockfill material within the waste dump will allow the development of convective cooling during winter, and insulation through trapped air within voids during summer. Given the high evaporation rate and low annual average precipitation at the site, the water infiltration into the pile is expected to be low.

The RSF cover design from the FEIS consists of a 4 m thick layer of non-acid generating (NAG) rockfill to contain the active layer within the NAG cover. The depth of cover was selected based on thermal modelling and instrumentation to assess the probable thickness of the active layer at closure including climate change. The NAG cover will not be compacted during construction, but this is taken into account in the thermal model and in the thickness of the cover.



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Additional thermal monitoring and analysis will be required to verify the performance of the cover system against the design intent and inform on the final cover design. Final cover details for the RSF will be subject to modification depending on the results obtained the Thermal Monitoring Program.

8 THERMAL MONITORING PLAN

To observe the freezeback of the Tailing Storage Facility (TSF) and the Rockfill Storage Facilities (RSF's), a series of subsurface thermistors have been installed at strategic locations.

The purposes of the TSF thermistors are to monitor the talik temperatures underneath the TSF as freezing progresses and to monitor the freezing of the tailings. The purpose of the thermistors in the RSF is to monitor the RSF temperature as freezing progresses. See Figure 8-1 and Figure 8-2 for the locations of the thermistors installed. Appendix C list all thermistor installed for thermal monitoring of the RSF and TSF.

The thermistors are monitored regularly and this will continue throughout the operational period as well as during closure and post closure. The results collected are to be used to evaluate the predicted thermal response of the facilities with the actual thermal response. This will allow adjustments to the tailings deposition plan, the Waste Rock deposition and the final Closure Plan.

8.1 INSTRUMENT SPECIFICATIONS

Each thermistor installed as part of the thermal monitoring plan must comply with the general specifications presented in Table 7-2 .

Table 7-1: Thermistor Specifications

Items	Specifications
Accuracy	1 degree Celsius
Thermistor temperature range	-40 to 40 degree Celsius
Method of cable termination	Amphenol connector and DAS direct connection
Cable termination enclosures	Weatherproof Animal resistant
Readout and data logger	Manual and DAS

8.2 THERMAL MONITORING PLAN OF TSF

The monitoring program for the TSF will provide the data required to validate the predictions of freezeback within the tailings and support the cover design. The objectives of the TSF North and South Cell cover systems and landforms are to ensure long-term landform stability, encourage TSF freeze-back into the surrounding permafrost, and maintain either subzero temperature or a high degree of saturation (>85%) in the tailings at all times. If it is determined by monitoring during operations that the tailings are freezing at lower rates than predicted, then mitigation procedures would be implemented.

An instrumentation plan for TSF is planned to be developed to define the required instrumentation at closure once capping of the TSF is completed. The purpose of the performance monitoring system is to ensure that the cover perform as per its design intent.

The instrument installed in the North Cell TSF were done in location where tailings deposition was not planned to resume at the time. No instruments are currently installed within the tailings of the South Cell.

These installations will continue to take place as the TSF is filled with tailings. Initially, some of the installations may be 'sacrificial' or temporary; in other words, installations may be used to collect data over a short period and then may be destroyed or inaccessible as deposition progresses. The rationale behind installing such thermistors is to monitor the thermal conditions within and beneath the TSF from a very early stage in the life of the facility. As the TSF reaches final elevation, thermistors will be installed from the final tailings surface, and directly into the underlying bedrock. These will likely be on the order of 50 m to 75 m in length (potentially deeper) with nodes placed at intervals to monitor temperatures within the tailings and within the bedrock.

8.2.1.1 Thermal Performance of TSF

At this time the thermistors indicate that freezeback is occurring within the North Cell TSF thermistors installed in the tailings. An active layer can be observed as most instruments are installed entirely within the tailings.

There is currently not enough thermistor installed within capping material to be able to conclude on the effectiveness of TSF cover. When more instruments will have been installed in the TSF capping, a study will be undertaken to compare the thermal performance of the cover to the predicted performance.

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8.3 THERMAL MONITORING PLAN OF RSF

Thermistors are installed within the Portage RSF. No instruments are installed within the Vault RSF.

Additional thermistors are planned to be installed within the Portage and Vault RSF at closure. An instrumentation plan will be developed to define the required instrumentation at closure.

8.3.1.1 Thermal Performance of RSF

At this time the thermistors indicate that freezeback is occurring within the Portage RSF structures. The instruments show that the active layer is variable in thickness based on the thermistors location.

A mandate is currently ongoing for the Amaruq WRSF to calibrate the thermal model and develop an instrumentation plan to assess the cover performance. Once this mandate is over a similar approach will be used at Vault and Portage RSF to obtain information to assess the performance of the Portage cover. This mandate is expected to be initiated in 2019.

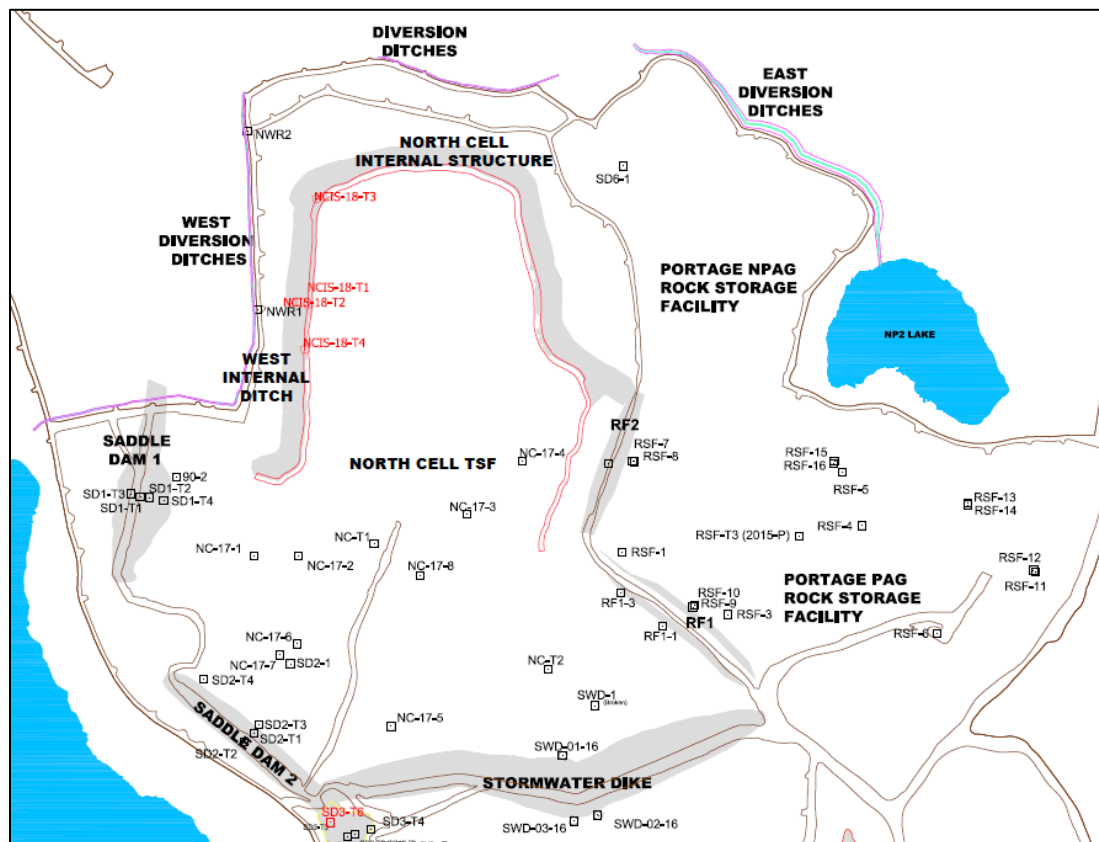


Figure 8-1: Thermistor Location in Portage RSF and TSF North Cell (red: installed in 2018, black: existing)

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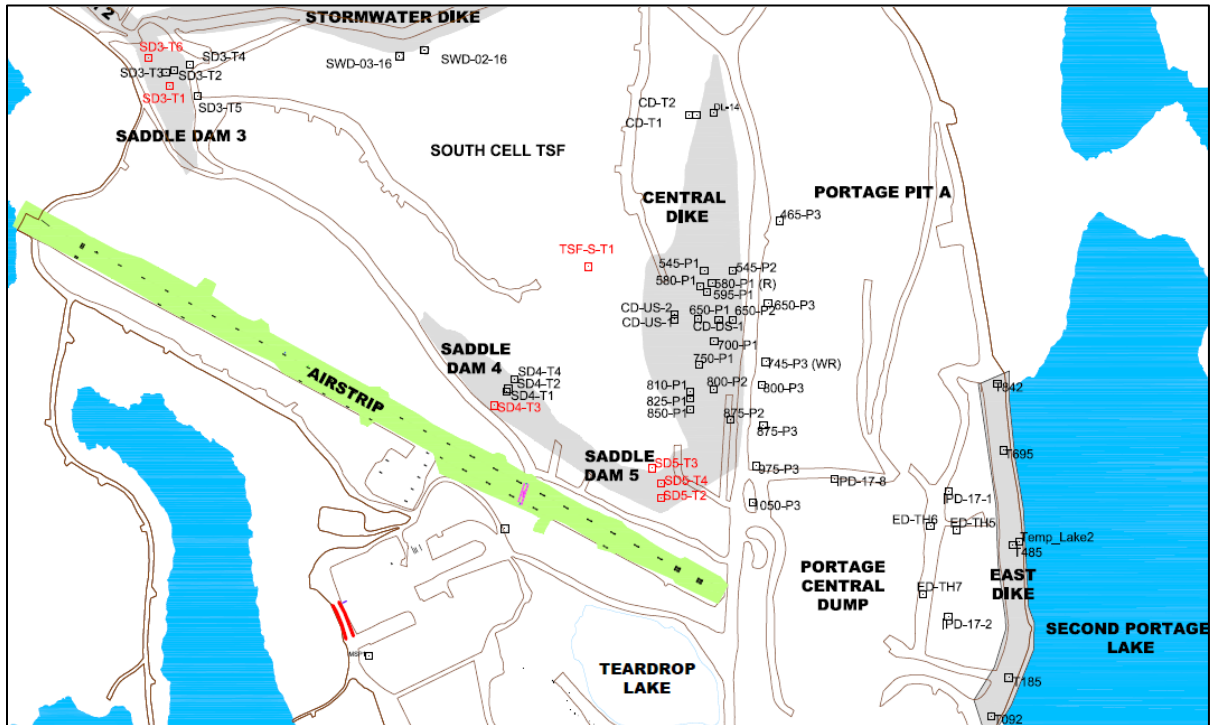


Figure 8-2: Thermistor Location in TSF South Cell (red: installed in 2018, black: existing)

9 MONITORING AND CLOSURE

Mine closure and reclamation will utilize accepted management practices and appropriate mine closure techniques that comply with accepted protocols and standards. Closure will be based on project design and operation to minimize the area of surface disturbance, stabilize disturbed land surfaces and permafrost against erosion, and return the land to post-mining uses for traditional pursuits (MMC, 2007a). An updated Interim Closure and Reclamation Plan was prepared by Golder in January, 2014. The document was included as part of AEM's 2013 Annual Report.

All infrastructure associated with waste management facilities will be re-contoured and/or surface treated according to site specific conditions to minimize windblown dust and erosion from surface runoff, avoid acid rock drainage and to enhance the re-establishment of natural vegetation and wildlife habitat. A Final Reclamation and Closure Plan will be issued in accordance with the Water License.

The post-closure general concept for the Meadowbank site is illustrated in Figure 9-1. Mine waste rock storages for Portage and Vault and the North Cell TSF will be progressively closed during mine operations.

9.1 TSF RECLAMATION

The ultimate goals for reclamation of the TSF are to mitigate long-term environmental effects to the aquatic receiving environment and to establish a landform similar to that of the natural surrounding area.

To achieve the goals and criteria for the reclaimed TSF, the final design will consist of a landform that promotes water shedding from all surfaces covered by an engineered cover system. During the post-closure period, the tailings are predicted to freeze with time, resulting in permafrost encapsulation.

The final landform will consist of two watersheds in the North Cell, each one having its own outlet, and one landform for the South Cell. Around half of the North Cell area discharges through a first outlet in a sump and ditch at the North leading to 3PL. The second outlet discharges via a spillway to the lower South Cell cover. From this point, this water is mixed with the South Cell watershed going through a sump and ditch system in such a way that water is drained from both covers, in line with closure requirements. Design objectives are to minimize cover material volumes and tailings excavation by taking advantage of the tailings surface and balancing the required excavation and cover system material volumes. Several scenarios were prepared on both the North Cell and South Cell to minimize rockfill volumes and the most optimal ones were chosen.

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Facility minimum slope angle for the cover surface is 1%. Water is moved off the cover using a surface water management system consisting of grading the plateau areas towards engineered surface runoff drainage channels. The runoff drains have a minimum slope of 0.5%.

The surface water management plan for the reclaimed TSF is to minimize erosion, thus reducing suspended sediment loading to the receiving environment, and to safely convey runoff water in the event of a storm event coupled with spring snowmelt. To achieve this, the surface water management system will be constructed using riprap-lined drainage channels and riprap-lined aprons at the outlet of each catchment. It should be noted that run off water will be directed to the South Cell or to the Portage Pit until it meets criteria for direct discharge to Third Portage Lake. This is discussed in the 2018 Water Management Plan.

At closure water will be removed from the South Cell and North Cell of the TSF. Once the North Cell and South Cell TSF reclaim ponds will be dewatered, the migration of seep water into the talik beneath the North Arm of Second Portage Lake can only occur by diffusion. The rate of advance of the freezing front into the talik beneath the 2PL is expected to exceed the rate of advance of diffusive transport.

North Cell progressive capping occurred from winter of 2015 to 2018 using mainly ultramafic rockfill from the Portage Pit operation. Capping will be completed once the operation of the North and South Cell is completed. During the operation, AEM is evaluating on a regular basis favorable locations for progressive capping.

9.2 IN-PIT CLOSURE

The closure strategy for in-pit consist of pit flooding and dike breaching once the water quality is met. Details of this strategy are presented in the water management plan.

9.3 RSF CLOSURE

For the Waste Rock Storage Facility, the current closure plan considers the placement of a 4m cover of NAG rock placed over the PAG material. This capping is continually ongoing around the perimeter as parts of the RSF reach their limits. To date, approximately 80% of the Portage RSF has been covered. The final capping will be completed at closure. Based on the results of the planned thermal monitoring and additional thermal modeling it is possible that additional capping will be required to achieve performance of the cover meeting design intent. Details of the Portage RSF closure will be presented in the Final Closure and Reclamation Plan.

For Vault, the waste rock stored is mainly NAG, and the PAG waste rock is encapsulated in the center of the pile during operations resulting in a thickness of NAG superior to 4 m acting as a cover.



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The surfaces of the Portage and Vault RSFs will be contoured where required to direct drainage respectively to the TSF (see) and towards Vault Pit (see). Note that Section A in is conceptual and does not represent the design work of the TSF North Cell completed. The runoff water from the Vault and Portage RSFs will be monitored at closure.

UPDATED MINE WASTE ROCK AND TAILINGS MANAGEMENT PLAN

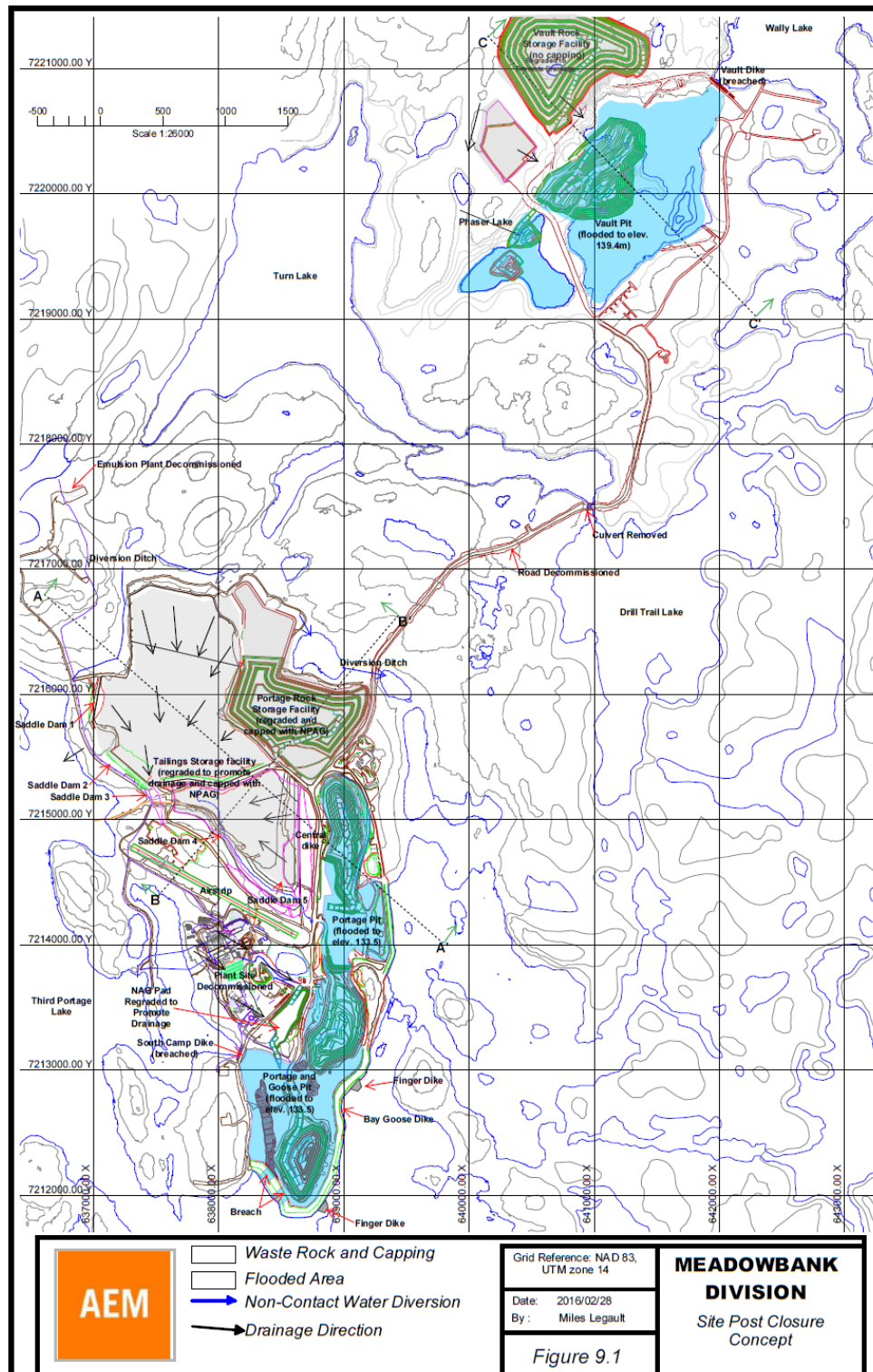


Figure 9-1: Site Post Closure Concept

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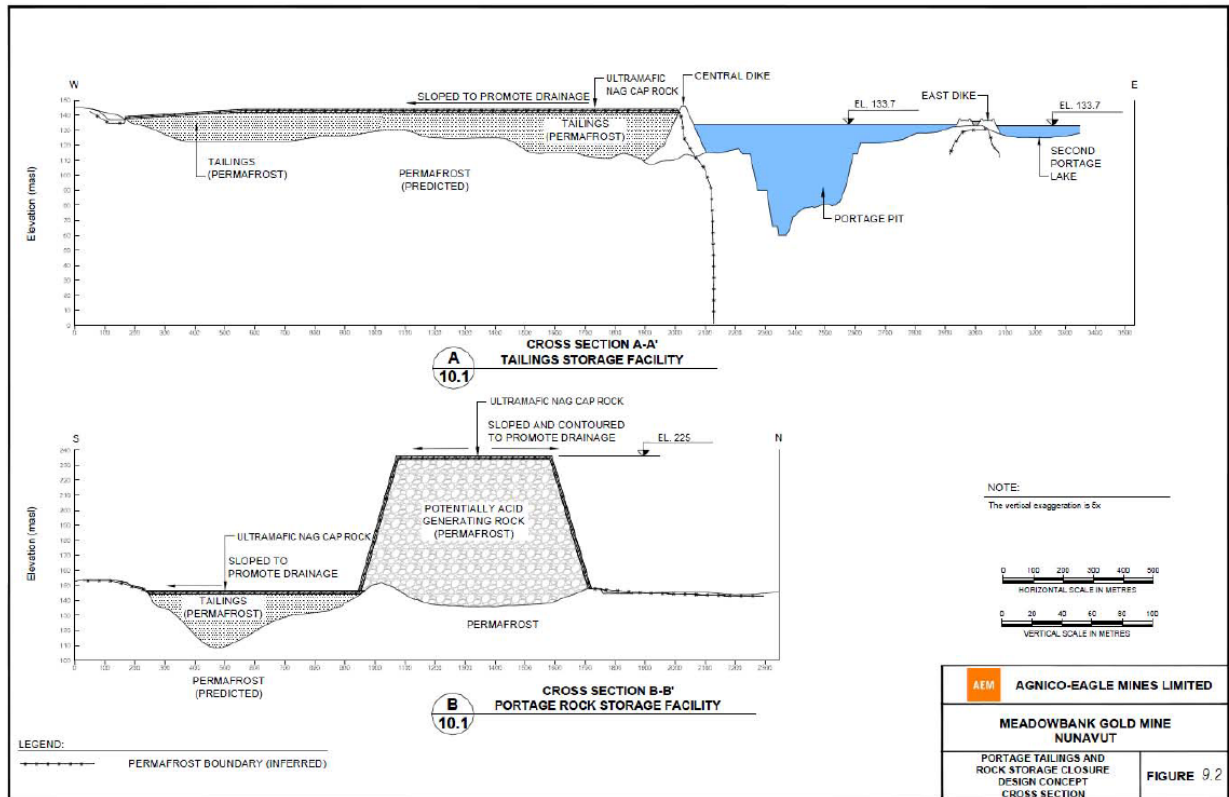


Figure 9-2: Portage Tailings and Rock Storage Closure Design Concept Cross Section

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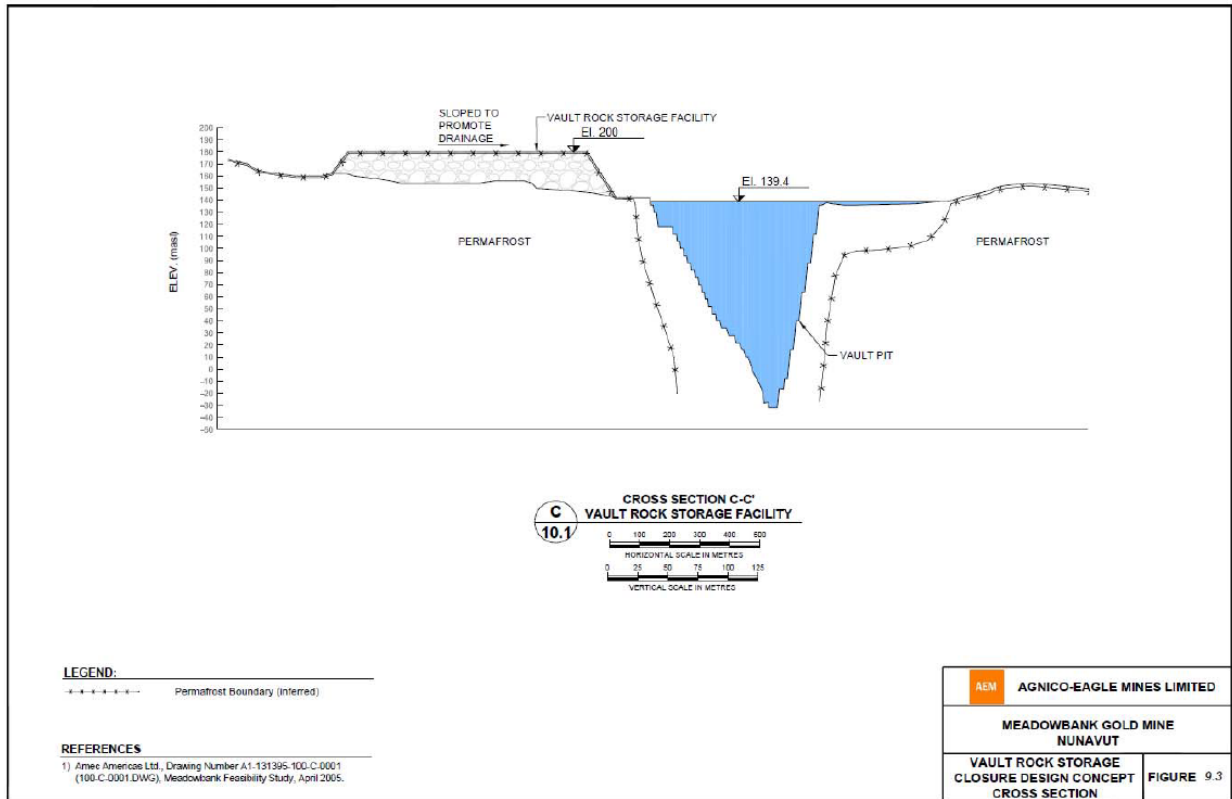


Figure 9-3: Vault Rock Storage Closure Design Concept Cross Section

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APPENDIX A

Meadowbank Mined Material Balance (2009-2019)

Table B: Meadowbank Mined Tonnages for 2010

	Portage Pit (tonnes)									Ore Processed in Mill (tonnes)
	Ore	Waste Rock								
		Dikes	Roads	Crushers	Waste Dump ¹	Landfill	Stockpiles	Other	Total	
January	97,446	223,842	190,281	156,162	173,736	-	-	-	744,021	-
February	43,979	281,368	46,654	123,727	359,649	-	32,298	1,295	844,991	47,745
March	75,333	503,299	107,635	-	197,125	23,540	-	-	831,599	163,399
April	116,940	258,416	63,100	171,451	428,814	-	-	6,196	927,977	176,857
May	136,444	258,481	10,019	148,576	672,724	-	-	50,073	1,139,873	177,610
June	152,606	534,039	24,748	126,155	401,748	-	-	12,632	1,099,322	215,389
July	236,768	471,106	176,169	127,379	237,095	-	-	-	1,011,749	193,422
August	225,467	493,626	506,385	168,085	115,930	-	-	-	1,284,026	215,559
September	272,675	503,624	606,044	161,673	214,866	5,621	-	-	1,491,828	227,502
October	232,888	235,924	595,322	56,337	461,627	53,522	-	-	1,402,832	198,394
November	247,401	3,813	104,087	8,991	963,805	-	-	-	1,080,596	218,260
December	323,641	-	299,167	8,991	1,118,767	-	-	-	1,426,925	214,400
TOTAL	2,161,588	3,767,538	2,729,611	1,257,527	5,345,886	82,683	32,298	70,196	13,285,739	2,048,537

1. Waste Rock disposed at the waste dump includes overburden stripped for exploitation of Portage Pit

Table C: Meadowbank Mined Tonnages for 2011

	Portage Pit (tonnes)									Ore Processed in Mill (tonnes)
	Ore	Waste Rock								
		Dikes	Roads	Crushers	Waste Dump ¹	Landfill	Stockpiles	Other	Total	
January	231,025	-	113,259	37,096	1,109,543	-	-	2,544	1,262,442	193,748
February	133,165	-	25,308	51,280	766,807	-	-	404	843,798	213,313
March	86,161	-	21,288	33,271	662,028	-	-	1,044	717,631	221,615
April	235,303	-	77,596	85,064	1,497,859	-	-	11,504	1,672,024	223,041
May	207,399	-	64,171	137,980	1,448,630	-	-	49,069	1,699,851	186,811
June	326,108	8,744	291,067	176,248	1,592,345	-	-	26,615	2,095,019	257,401
July	340,966	54,927	99,513	74,750	1,869,449	-	-	19,140	2,117,779	284,295
August	326,808	122,696	4,674	117,745	1,484,613	-	-	2,384	1,732,111	275,766
September	412,783	333,829	27,199	148,545	1,724,305	-	-	22,884	2,256,762	306,020
October	389,418	22,085	136,862	53,614	1,791,385	-	-	162,725	2,166,671	306,756
November	321,180	12,725	29,518	83,943	1,972,577	-	-	110,214	2,208,976	214,868
December	334,768	164,399	55,516	52,137	1,913,103	-	-	53,454	2,238,609	294,088
TOTAL	3,345,084	719,404	945,971	1,051,671	17,832,645	-	-	461,981	21,011,673	2,977,722

1. Waste Rock disposed at the waste dump includes overburden stripped for exploitation of Portage Pit

Table D: Meadowbank Mined Tonnages for 2012

	Portage Pit, Goose Pit & Vault Pit (tonnes)									Ore Processed in Mill (tonnes)
	Ore	Waste Rock								
		Dikes	Roads	Crushers	Waste Dump ¹	Landfill	Stockpiles	Other	Total	
January	312,546	-	25,347	853	1,707,100	-	-	568,896	2,302,196	275,186
February	320,370	-	57,299	-	1,859,479	-	-	276,030	2,192,808	307,134
March	311,938	-	4,574	33,835	1,760,145	-	-	374,271	2,172,825	304,740
April	318,550	-	29,748	171,964	2,187,929	-	-	183,366	2,573,007	285,702
May	253,947	37,372	200,732	103,650	2,000,982	-	-	231,500	2,574,236	320,542
June	276,731	78,343	281,403	64,460	1,866,369	-	-	226,695	2,517,270	294,829
July	354,765	9,991	342,978	134,006	1,791,752	-	-	268,051	2,546,777	337,110
August	271,444	260,083	261,459	214,516	1,327,154	-	-	720,701	2,783,914	352,831
September	364,410	674,872	515,804	7,309	1,446,572	-	-	273,284	2,917,841	313,014
October	119,100	-	488,259	-	2,163,147	-	-	590,936	3,242,342	358,860
November	133,041	6,880	281,560	7,439	2,081,931	-	-	337,974	2,715,783	356,646
December	176,287	105,724	142,448	-	2,178,832	-	-	577,195	3,004,199	314,317
TOTAL	3,213,129	1,173,266	2,631,610	738,031	22,371,392	-	-	4,628,899	31,543,198	3,820,911

1. Waste Rock disposed at the waste dump includes overburden stripped for exploitation of Portage Pit & Goose Pit

Table E: Meadowbank Mined Tonnages for 2013

	Portage Pit, Goose Pit & Vault Pit (tonnes)									Ore Processed in Mill (tonnes)
	Ore	Waste Rock								
		Dikes	Roads	Crushers	Waste Dump ¹	Landfill	Stockpiles	Other	Total	
January	184,536	-	14,052	531	2,486,541	-	-	222	2,501,346	320,729
February	196,802	-	61,036	8,913	2,495,018	-	-	-	2,564,967	329,709
March	311,380	1,520	58,325	393	2,691,265	-	-	294	2,751,797	368,323
April	271,823	317,845	79,530	77,730	2,071,408	-	-	82,810	2,629,323	309,458
May	336,532	269,930	51,645	-	2,299,765	-	-	29,650	2,650,990	363,625
June	249,724	397,170	252,710	153,310	1,443,285	-	-	494,975	2,741,450	355,498
July	330,024	54,525	16,010	111,360	2,234,897	-	-	340,655	2,757,447	368,058
August	316,136	-	92,460	145,385	2,824,875	-	-	125	3,062,845	321,294
September	307,532	-	61,465	5,940	2,774,724	-	-	98,255	2,940,384	357,595
October	353,697	-	33,470	-	2,504,101	-	-	188,000	2,725,571	377,118
November	282,046	-	35,365	-	2,637,689	-	-	-	2,673,054	300,779
December	299,298	-	18,490	-	2,073,386	-	-	125	2,092,001	370,655
TOTAL	3,439,530	1,040,990	774,558	503,562	28,536,954	0	0	1,235,111	32,091,175	4,142,841

1. Waste Rock disposed at the waste dump includes overburden stripped for exploitation of Portage Pit & Goose Pit

Table F: Meadowbank Mined Tonnages for 2014

	Portage Pit, Goose Pit & Vault Pit (tonnes)									Ore Processed in Mill (tonnes)
	Ore	Waste Rock								
		Dikes	Roads	Crushers	Waste Dump ¹	Landfill	Stockpiles	Other	Total	
January	223,588	-	-	-	1,731,954	-	-	28,475	2,187,943	364,275
February	291,542	-	-	-	1,032,536	-	-	5,554	1,876,728	314,877
March	400,472	-	246	-	1,768,995	-	-	7,891	2,681,239	303,462
April	314,088	49,640	-	98,086	1,792,686	-	-	21,683	2,598,780	355,557
May	239,028	40,939	-	40,939	1,435,491	-	-	332,704	2,673,027	339,395
June	337,659	123,348	-	123,348	1,852,273	-	-	348,606	2,573,438	356,065
July	347,514	470,324	-	470,365	1,052,263	-	-	810,414	2,650,362	361,983
August	333,746	284,388	-	284,389	1,117,766	-	-	728,531	2,602,482	341,168
September	307,532	-	-	-	1,473,602	-	-	397,963	2,431,958	354,171
October	360,860	451	-	-	1,534,790	-	-	33,932	2,214,199	308,014
November	324,971	-	-	-	1,565,615	-	-	57,065	2,265,457	349,780
December	350,972	-	-	-	1,441,827	-	-	5,447	1,960,172	369,259
TOTAL	3,987,859	969,093	246	98,086	17,799,797	0	0	2,778,266	28,715,785	4,118,006

1. Waste Rock disposed at the waste dump includes overburden stripped for exploitation of Portage Pit, Goose Pit, & Vault Pit

Table G: Meadowbank Mined Tonnages for 2015

	Portage Pit, Goose Pit & Vault Pit (tonnes)									Ore Processed in Mill (tonnes)
	Ore	Waste Rock								
		Dikes	Roads	Crushers	Waste Dump ¹	Landfill	Stockpiles	Other	Total	
January	386,670	240	105,275	240	1,210,880	-	382,115	328,000	2,413,420	363,485
February	319,494	-	3,836	2,894	1,340,755	-	376,732	220,739	2,264,450	304,126
March	413,718	-	164,531	15,439	1,535,819	-	79,336	246,948	2,455,791	322,865
April	326,603	-	45,986	19,698	1,701,286	-	38,059	941,986	3,073,618	301,220
May	421,329	7,743	87,127	1,155	1,550,668	-	417,637	914,675	3,400,334	358,783
June	300,844	15,732	19,602	19,438	1,654,038	-	476,220	522,338	3,008,212	359,079
July	383,427	282,843	96,679	68,334	1,447,386	-	549,248	308,208	3,136,125	353,824
August	293,046	234,032	24,069	45,617	2,149,965	-	460,273	129,812	3,336,814	361,766
September	298,214	102,009	54,488	25,549	2,675,549	-	230,741	136,669	3,523,219	280,235
October	361,340	31,103	137,850	-	2,839,411	-	156,915	-	3,526,619	354,968
November	350,347	783	11,090	-	2,438,493	-	184,551	43,385	3,028,649	358,507
December	289,204	-	84,473	7,331	2,651,063	-	-	-	3,032,071	313,994
TOTAL	4,144,236	674,485	835,006	205,695	23,195,313	-	3,351,827	3,792,760	36,199,322	4,032,852

1. Waste Rock disposed at the waste dump includes overburden stripped for exploitation of Portage Pit, Goose Pit, & Vault Pit

Table H: Meadowbank Mined Tonnages for 2016

	Portage Pit & Vault Pit (tonnes)									Ore Processed in Mill (tonnes)
	Ore	Waste Rock								
		Dikes	Roads	Crushers	Waste Dump ¹	Landfill	Stockpiles	Other	Total	
January	292,365	17,453	155,335	45,232	2,353,611	0	43,056	21	2,614,708	346,009
February	234,713	108,151	476,263	23,721	1,814,074	0	50,523	27	2,472,760	300,954
March	244,497	51,826	67,814	116,657	2,345,902	0	18,217	112	2,600,527	298,552
April	260,323	31,133	98,223	43,404	2,491,605	0	45,545	130	2,710,040	330,863
May	327,610	128,385	21,503	3,734	2,522,759	0	57,936	36,009	2,770,327	351,932
June	311,403	68,802	94,678	19,090	2,640,740	0	86,615	122	2,910,047	310,702
July	398,530	49,347	520	38,145	2,571,022	0	107,503	28	2,766,566	356,517
August	410,800	14,305	273,580	170,705	2,120,975	0	103,675	129	2,683,369	325,639
September	377,414	79,939	23,053	169,733	2,099,627	0	95,243	27	2,467,621	279,249
October	364,792		117,665	335	1,994,464	0	6,456	17	2,118,937	339,157
November	438,954	6,741	8,294	16,164	1,834,572	0	17,275	1,036	1,884,082	326,841
December	370,247	17,092	346	17,786	1,544,266	0	23,590	165	1,603,246	348,687
TOTAL	4,031,648	573,175	1,337,274	664,707	26,333,617	0	655,634	37,823	29,602,230	3,915,102

1. Waste Rock disposed at the waste dump includes overburden stripped for exploitation of Portage Pit & Vault Pit

Table I: Meadowbank Mined Tonnages for 2017

	Portage Pit & Vault Pit (tonnes)									Ore Processed in Mill (tonnes)
	Ore	Waste Rock								
		Dikes	Roads	Crushers	Waste Dump ¹	Landfill	Stockpiles	Other	Total	
January	386,298	45,991	0	12,301	1,498,959	0	14,815	6	1,572,073	331,889
February	374,894	6,084	22,937	23,998	1,251,365	0	404,648	2,977	1,712,008	314,269
March	376,855	167	8,508	12,614	919,668	0	483,332	583	1,424,872	279,684
April	355,410	0	10,674	17,671	1,002,425	0	655,770	10	1,686,550	328,391
May	437,319	0	135,889	84,180	933,559	0	434,648	27,889	1,616,165	344,961
June	401,035	12,537	14,316	88,241	977,125	0	522,816	2,588	1,617,623	322,939
July	334,363	183,868	66,559	6,647	1,016,081	0	523,311	0	1,796,466	336,222
August	391,414	485,008	12,182	2,361	1,271,636	0	97,549	19,925	1,888,662	326,409
September	343,504	13,148	107,454	14,945	1,246,694	0	509,366	189	1,891,796	275,754
October	364,663	259,074	57,565	528	1,169,063	0	255,796	1,991	1,744,017	328,028
November	321,403	21,676	653	5,395	1,406,720	0	69,651	1,362	1,505,456	330,465
December	352,291	0	401	571	1,781,334	0		7	1,782,313	334,023
TOTAL	4,439,449	1,027,553	437,137	269,453	14,474,629	0	3,971,701	57,528	20,238,001	3,853,034

1. Waste Rock disposed at the waste dump includes overburden stripped for exploitation of Portage Pit & Vault Pit

Table J: Meadowbank Mined Tonnages for 2018

	Portage Pit & Vault Pit (tonnes)									Ore Processed in Mill (tonnes)
	Ore	Waste Rock								
		Dikes	Roads	Crushers	Waste Dump ¹	Landfill	Stockpiles	Other	Total	
January	298,411	308	8,958	1,292	1,286,572	0	378	41,538	1,637,457	290,277
February	236,865	0	83,624	27,237	1,199,432	0	251	149,036	1,696,445	288,375
March	256,063	675	5,961	22,917	1,310,619	0	1,446	165,562	1,763,243	246,416
April	225,990	56,338	440	101,881	1,228,920	0	86,609	229,113	1,929,291	254,528
May	230,283	0	50,282	0	1,198,847	0	13,831	150,173	1,643,416	301,915
June	222,227	0	3,360	0	929,405	0	1,112	119,259	1,275,363	287,319
July	190,331	0	2,918	0	681,804	0	3,196	166,296	1,044,545	347,236
August	179,509	0	7,002	0	606,678	0	661	49,324	843,174	303,191
September	210,884	0	3,482	0	609,036	0	12,180	126,692	962,274	237,935
October	174,656	0	2,510	0	494,411	0	272	118,340	790,189	239,674
November	194,071	0	1,768	0	532,824	0	336	119,821	848,820	215,299
December	204,293	0	1,066	0	508,417	0	3,392	69,652	786,820	244,500
TOTAL	2,623,583	57,321	171,371	153,327	10,586,965	0	123,664	1,504,806	15,221,037	3,256,665

1. Waste Rock disposed at the waste dump includes overburden stripped for exploitation of Portage Pit & Vault Pit

Table K: Projected Meadowbank Mined Tonnages (2019)

		2019
Portage Pit	Total Waste Rock (t)	1,499,946
	<i>NAG (~ %)</i>	38%
	<i>PAG (~ %)</i>	62%
	Till (t)	0
	Ore (t)	448,065
Vault Pit	Total Waste Rock (t)	23,342
	<i>NAG (~ %)</i>	100%
	<i>PAG (~ %)</i>	<1%
	Till (t)	0
	Ore (t)	42,571
BB Phaser Pit	Total Waste Rock (t)	465,098
	<i>NAG (~ %)</i>	100%
	<i>PAG (~ %)</i>	<1%
	Till (t)	0
	Ore (t)	106,488

Note: Difference between pit mill feed and total mill feed is due to stockpiled material to be processed.



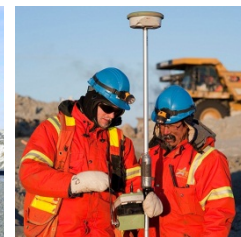
MEADOWBANK GOLD PROJECT
UPDATED MINE WASTE ROCK AND TAILINGS
MANAGEMENT PLAN

APPENDIX B

TSF Integrated Deposition Plan

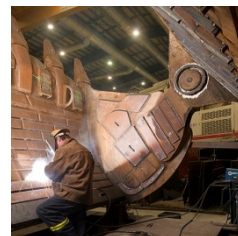


AGNICO EAGLE



MEADOWBANK

**INTEGRATED TAILINGS DEPOSITION PLAN
2019**



IPD DEPOSITION PLAN

Introduction

- The objectives for the 2019 Tailings Deposition Plan are as follows:
 - Minimize freshwater consumption
 - Identify crest deposition needs
 - Identify construction requirements (until 2021)
 - Identify water transfer requirements
- 2019, 2020 & 2021 deposition plan is done on a monthly time step
- The starting surfaces are:
 - *Initial Pit Topography.mgrid*

IPD DEPOSITION PLAN

Introduction

- The millfeed used in the deposition plan come from the version LOM2019_V1B

YEAR 2019		YEAR 2020		YEAR2021	
Month	Tonnage/month	Month	Tonnage/month	Month	Tonnage/month
2019-01	235,249	2020-01	272,009	2021-01	279,000
2019-02	223,040	2020-02	254,460	2021-02	252,000
2019-03	183,000	2020-03	272,009	2021-03	279,000
2019-04	239,360	2020-04	271,432	2021-04	270,000
2019-05	210,120	2020-05	280,480	2021-05	279,000
2019-06	239,360	2020-06	271,432	2021-06	270,000
2019-07	287,342	2020-07	270,249	2021-07	279,000
2019-08	281,816	2020-08	270,249	2021-08	279,000
2019-09	242,346	2020-09	261,532	2021-09	270,000
2019-10	287,342	2020-10	287,273	2021-10	310,000
2019-11	277,869	2020-11	278,006	2021-11	300,000
2019-12	287,342	2020-12	287,273	2021-12	310,000
Total tonnage 2019	3,051,190	Total tonnage 2020	3,276,405	Total tonnage 2021	3,377,000
TOTAL TONNAGE			9,704,595		
TOTAL TONNAGE FROM JUNE 2019			8,630,609		

- The design parameters considered in the deposition plan include mill process rates, tailings beach slopes, water entrapment, and tailings in-situ densities
- The following slides will present the parameters used in the deposition plan

IPD DEPOSITION PLAN

June 2019 – Updated Model Parameters

The In-Pit Deposition parameters come from the previous analysis and SNC design report and was adjusted based on Water&Tailings Engineer professional experience. The parameters are considered to be conservatives. Parameters will be updated as deposition is ongoing.

PARAMETER	VALUE	REFERENCE
Beach slope angle (%)	2.36	Previous experience
Waste Dump porosity (%)	30	SNC Design Report
Tailings density (t/m ³)	1.45	SNC Design Report

YEAR	MONTH	ICE THICKNESS (m)	WATER ENTRAPMENT (%)
2019, 2020 & 2021	January	1.1	25
	February	1.3	25
	March	1.6	25
	April	1.7	25
	May	0	25
	June	0	25
	July	0	25
	August	0	25
	September	0	25
	October	0.2	25
	November	0.5	25
	December	0.8	25
Annual Average		-	25%

TSF Deposition Plan

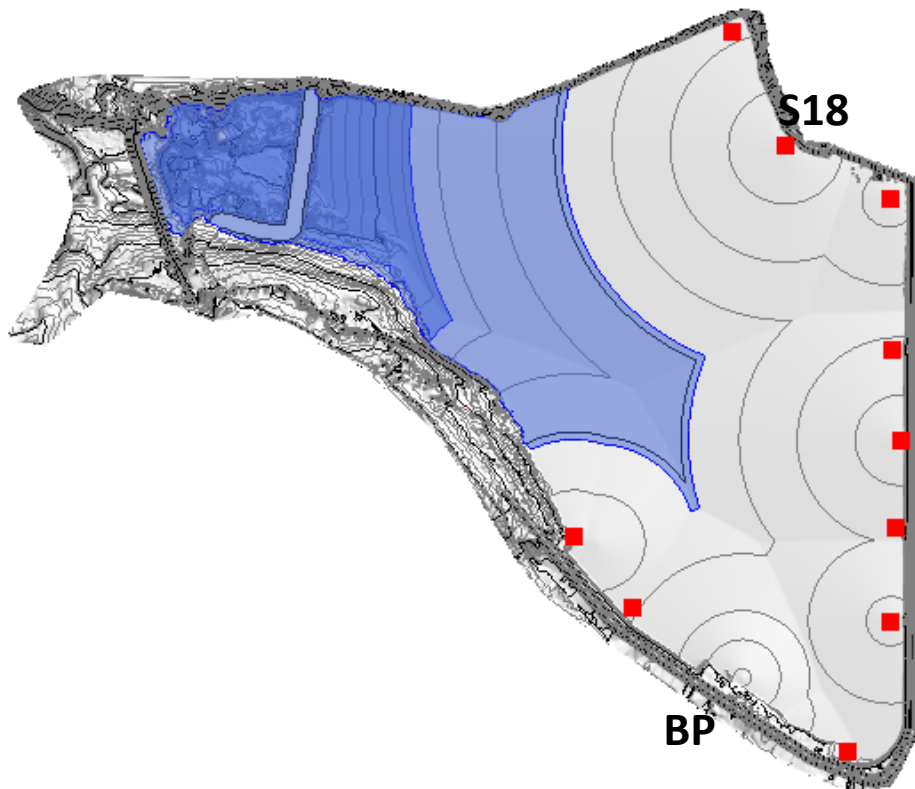
February 2019 – South Cell

Duration	Deposition Point	Tonnes	Elevation (m)
27.5	S18	219,929	144.494
0.5	BP	3,999	144,652

MODEL INPUT	
Pond Volume (m ³)	126,427
Ice thickness (m)	1.3
Tonnes (t)	223,040

MODEL OUTPUT	
Total water volume (m ³)	300,331
Free water volume (m ³)	126,365
Ice volume (m ³)	173,966
Pond elevation (m)	142.564
Free water elevation (m)	141.264
Pond bottom elevation (m)	137.2
Ice ratio (%)	58%
Water entrapment (%)	65%

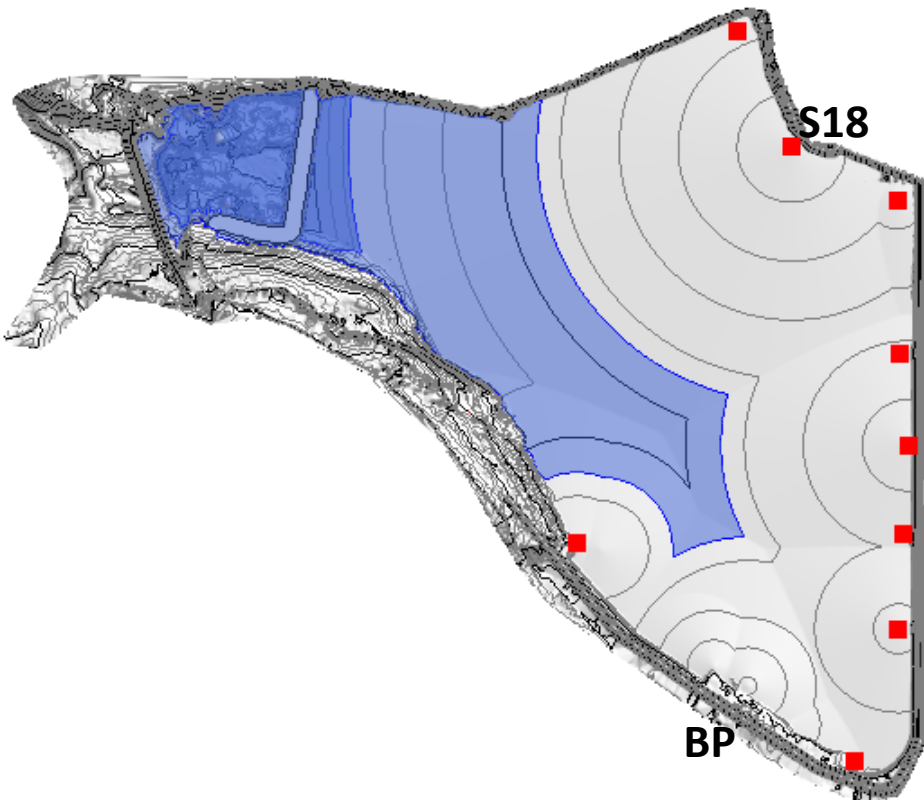
Comments: South Cell permeable berm to be completed



TSF Deposition Plan

March 2019 – South Cell

Duration	Deposition Point	Tonnes	Elevation (m)
30.5	S18	180,287	144.964
0.5	BP	2,956	144,453



MODEL INPUT	
Pond Volume (m ³)	80,714
Ice thickness (m)	1.60
Tonnes (t)	183,000

MODEL OUTPUT	
Total water volume (m ³)	260,380
Free water volume (m ³)	80,695
Ice volume (m ³)	179,685
Pond elevation (m)	142.800
Free water elevation (m)	141.200
Pond bottom elevation (m)	137.2
Ice ratio (%)	69%
Water entrapment (%)	65%

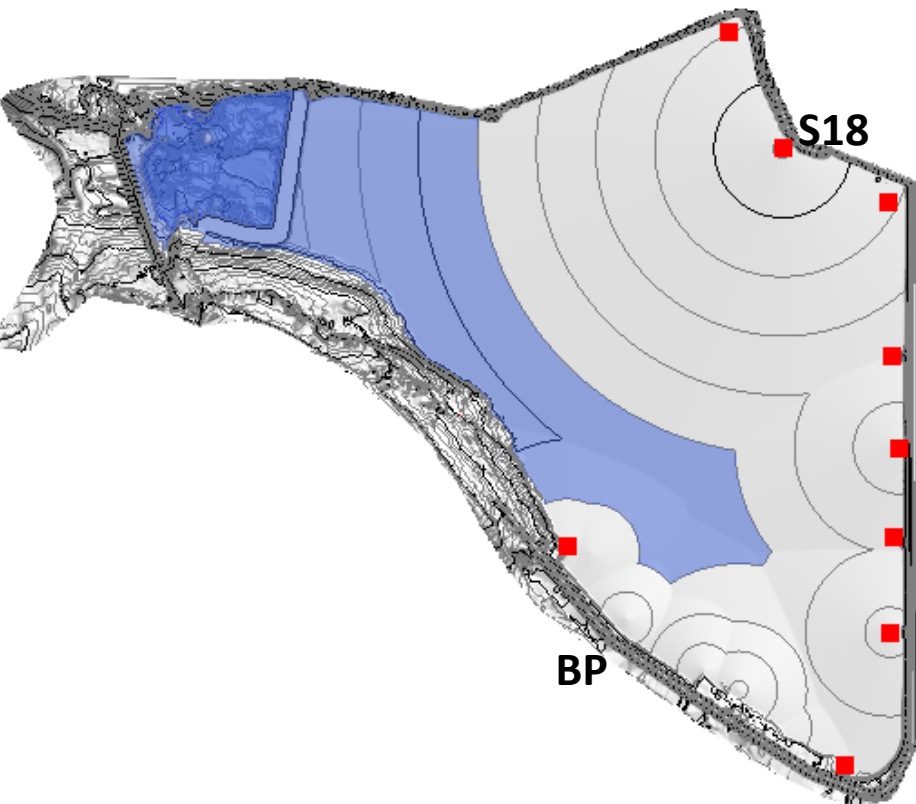
Comments:

- 1-By-Pass needs to be moved
- 2-Pond elevation is at 142.8m
- 3-Pond free water volume is less than 100,000m³, however pond elevation near max.
- 4-Tailings elevation at S18 is higher than 144.5m however the natural ground topo. allows higher elevation.

TSF Deposition Plan

April 2019 – South Cell

Duration	Deposition Point	Tonnes	Elevation (m)
29.5	S18	235,394	145.580
0.5	BP	3,990	143.950



MODEL INPUT	
Pond Volume (m ³)	75,688
Ice thickness (m)	1.70
Tonnes (t)	239,360

MODEL OUTPUT	
Total water volume (m ³)	219,882
Free water volume (m ³)	75,688
Ice volume (m ³)	144,194
Pond elevation (m)	143.000
Free water elevation (m)	141.3
Pond bottom elevation (m)	137.2
Ice ratio (%)	66%
Water entrapment (%)	65%

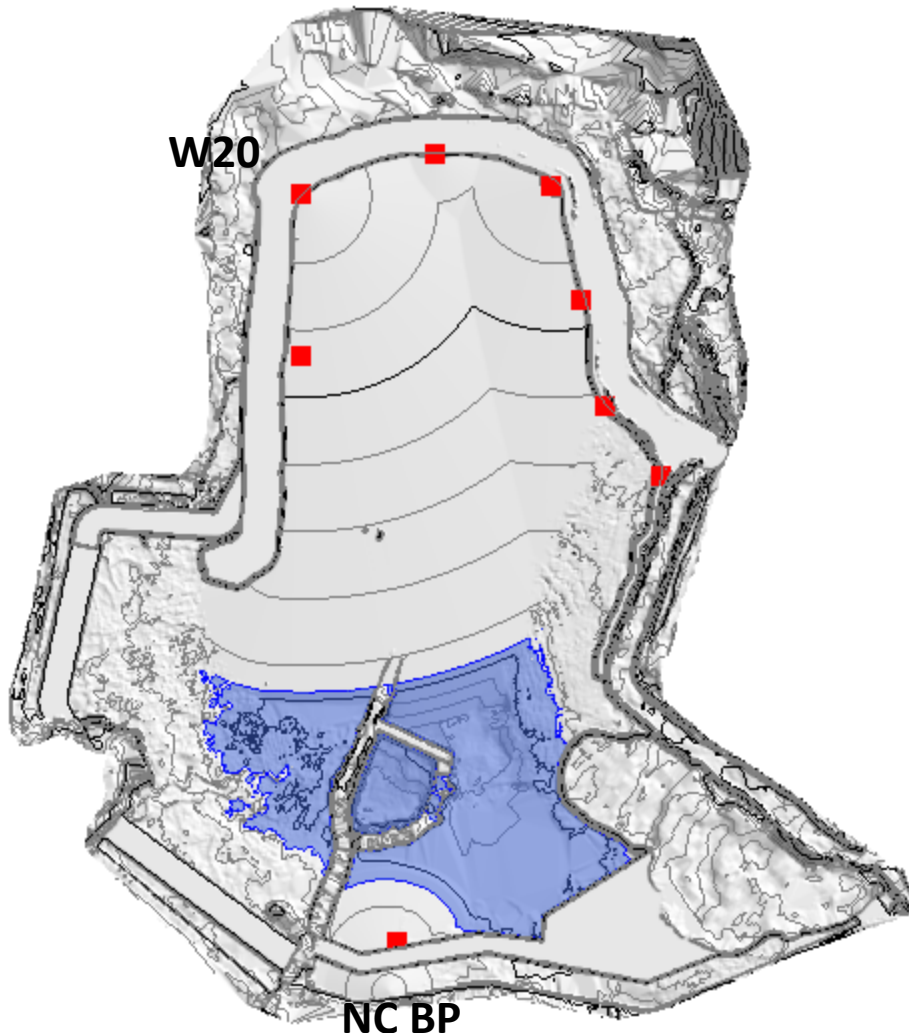
Comments:

- 1-By-Pass needs to be moved
- 2-Pond elevation is at 143m (max. elevation)
- 3-Pond free water volume is less than 100,000m³, however pond elevation at max.
- 4-Tailings elevation at S18 is higher than 144.5m however the natural ground topo. allows higher elevation.

TSF Deposition Plan

May 2019 – North Cell

Duration	Deposition Point	Tonnes	Elevation (m)
30.5	W20	206,776	151.500
0.5	NCBP	3,390	149.327



MODEL INPUT	
Pond elevation (m)	147.80
Ice thickness (m)	0
Tonnes (t)	210,120

MODEL OUTPUT	
Total water volume (m ³)	140,798
Free water volume (m ³)	140,798
Ice volume (m ³)	0
Pond elevation (m)	147.800
Free water elevation (m)	147.800
Pond bottom elevation (m)	143.5
Ice ratio (%)	0%
Water entrapment (%)	40%
Transfer to South Cell (m ³)	56,442

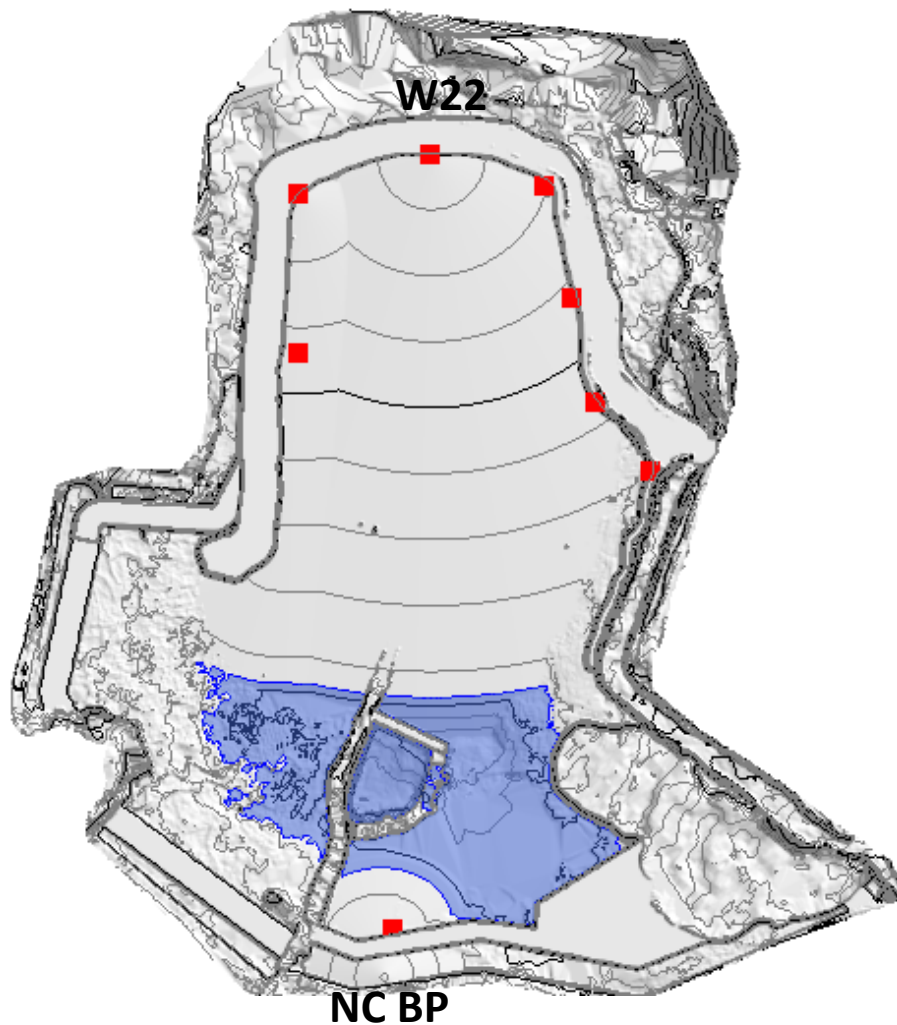
Comments:

- 1-Pond elevation is maintained at 147.8 m
- 2-North Cell permeable berm to be built prior discharging in North Cell

TSF Deposition Plan

June 2019 – North Cell

Duration	Deposition Point	Tonnes	Elevation (m)
29.5	W22	236,316	151.909
0.5	NCBP	4,005	149.577



MODEL INPUT	
Pond elevation (m)	147.80
Ice thickness (m)	0
Tonnes (t)	239,360

MODEL OUTPUT	
Total water volume (m ³)	121,863
Free water volume (m ³)	121,863
Ice volume (m ³)	0
Pond elevation (m)	147.800
Free water elevation (m)	147.800
Pond bottom elevation (m)	143.5
Ice ratio (%)	0%
Water entrapment (%)	25%
Transfer from NC to SC (m ³)	410,086
Transfer from SC to Pit (m ³)	307,240

Comments:

- 1-Pond elevation is maintained at 147.8 m
- 2-By-Pass needs to be moved at the end of June

IPD DEPOSITION PLAN

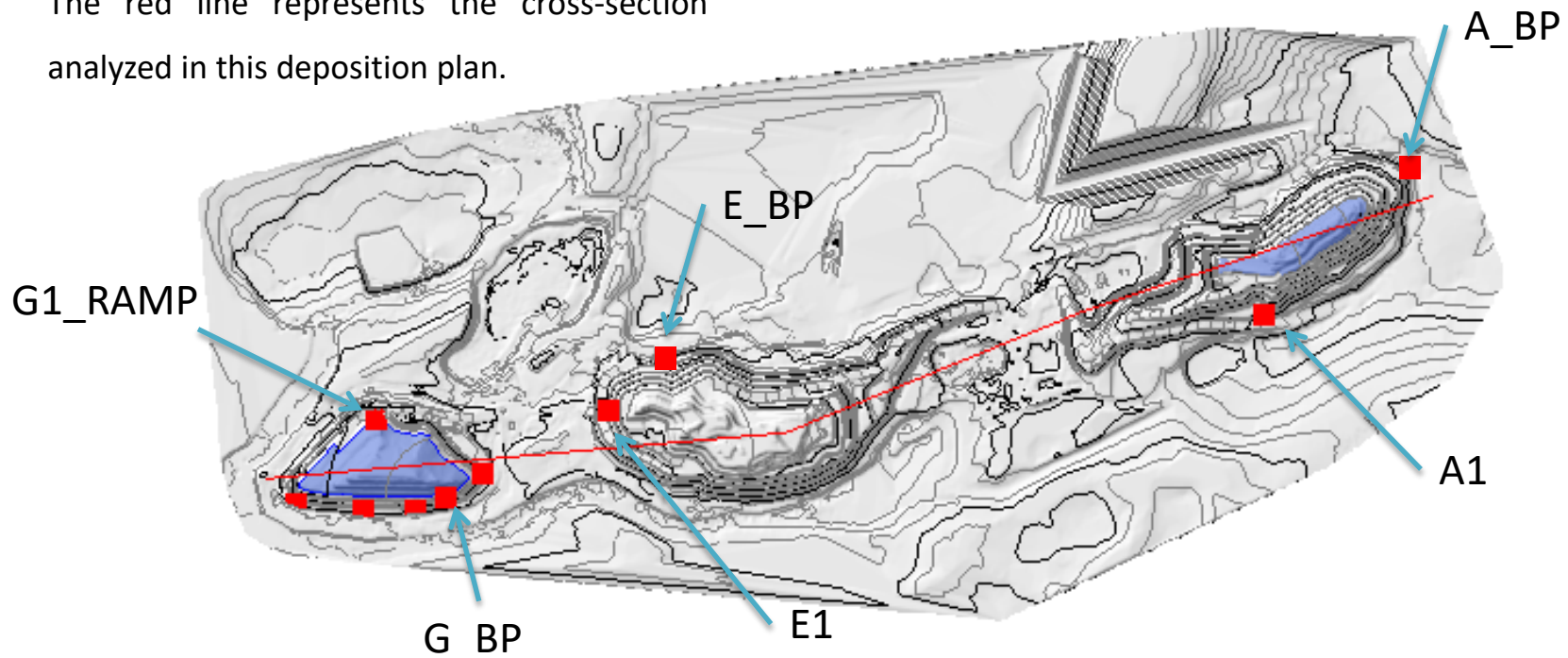
June 2019 – Updated Deposition Strategy

IPD Structures

The figure below depicts the geometry of the three pits at the end of June 2019 based on the deposition plan presented hereafter.

CONDITIONS, AS OF JUNE 2019			
	Goose Pit	Pit A	Pit E
Water Elevation (m)	84.04	37.35	-
Total Free Water Volume (m ³)	2,294,292	594,795	-

The red line represents the cross-section analyzed in this deposition plan.



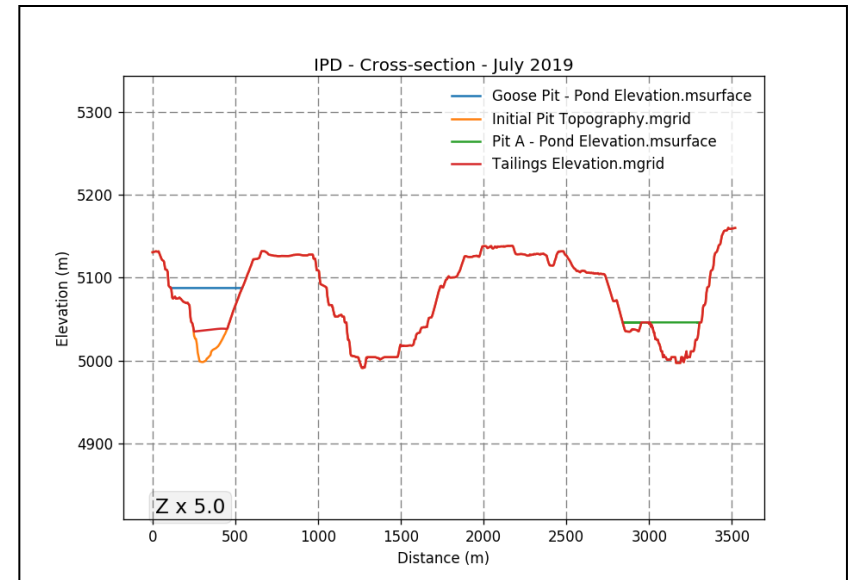
IPD DEPOSITION PLAN

July 2019 – Goose Pit

DEPOSITION POINT	Duration (d)	Tonnage (t)	Elevation (m)
G_BP	31	285,571	39.00

MODEL & WATER BALANCE OUTPUTS				
Discharge Pit		Goose	Pit A	Pit E
Total Water Volume	(m ³)	2,352,425	955,948	-
Pond Elevation	(m)	87.53	45.97	-
Tailings Elevation	(m)	39.00	-	-
Water Depth	(m)	48.53	45.97	-

OPERATIONAL DATA				
Pit		Goose	Pit A	Pit E
Water Reclaim Volume	(m ³)	-	-	-
Water Transferred - Inflow	(m ³)	-	167,400	-



COMMENTS:

- Deposition occurs in Goose Pit;
- Pit E3 is in minning operation;
- No water reclaim planned for July 2019;
- Beginning of water transfer from Goose Pit to Pit A.

IPD DEPOSITION PLAN

August 2019 – Goose Pit

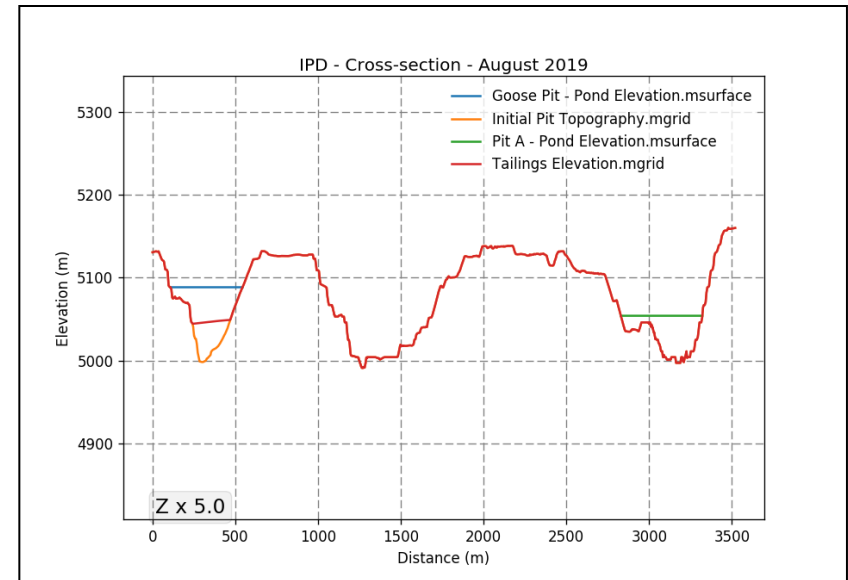


AGNICO EAGLE
MEADOWBANK

DEPOSITION POINT	Duration	Tonnage	Elevation
	(d)	(t)	(m)
G_BP	31	281,148	50.13

MODEL & WATER BALANCE OUTPUTS				
Discharge Pit		Goose	Pit A	Pit E
Total Water Volume	(m ³)	2,257,730	1,472,141	-
Pond Elevation	(m)	88.79	54.01	-
Tailings Elevation	(m)	50.13	-	-
Water Depth	(m)	38.66	54.01	-

OPERATIONAL DATA				
Pit		Goose	Pit A	Pit E
Water Reclaim Volume	(m ³)	-	-	-
Water Transferred - Inflow	(m ³)	-	334,800	-



COMMENTS:

- Deposition occurs in Goose Pit;
- Pit E3 is in minning operation;
- No water reclaim planned for August 2019;
- Water transfer from Goose Pit to Pit A.

IPD DEPOSITION PLAN

September 2019 – Goose Pit

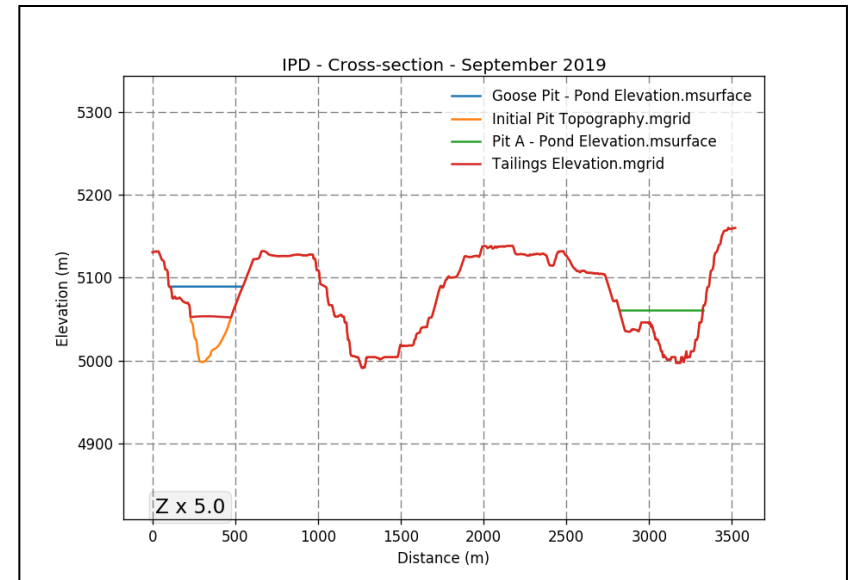


AGNICO EAGLE
MEADOWBANK

DEPOSITION POINT	Duration	Tonnage	Elevation
	(d)	(t)	(m)
G_BP	15	121,160	53.38
G1_RAMP	15	121,526	56.04

MODEL & WATER BALANCE OUTPUTS				
Discharge Pit		Goose	Pit A	Pit E
Total Water Volume	(m ³)	2,130,548	1,955,218	-
Pond Elevation	(m)	89.28	60.77	-
Tailings Elevation	(m)	56.04	-	-
Water Depth	(m)	33.24	60.77	-

OPERATIONAL DATA				
Pit		Goose	Pit A	Pit E
Water Reclaim Volume	(m ³)	-	-	-
Water Transferred - Inflow	(m ³)	-	324,000	-



COMMENTS:

- Deposition occurs in Goose Pit;
- Deposition point location changes in the middle of the month of September 2019;
- Pit E3 is in minning operation;
- No water reclaim planned for September 2019;
- Water transfer from Goose Pit to Pit A.

IPD DEPOSITION PLAN

October 2019 – Goose Pit

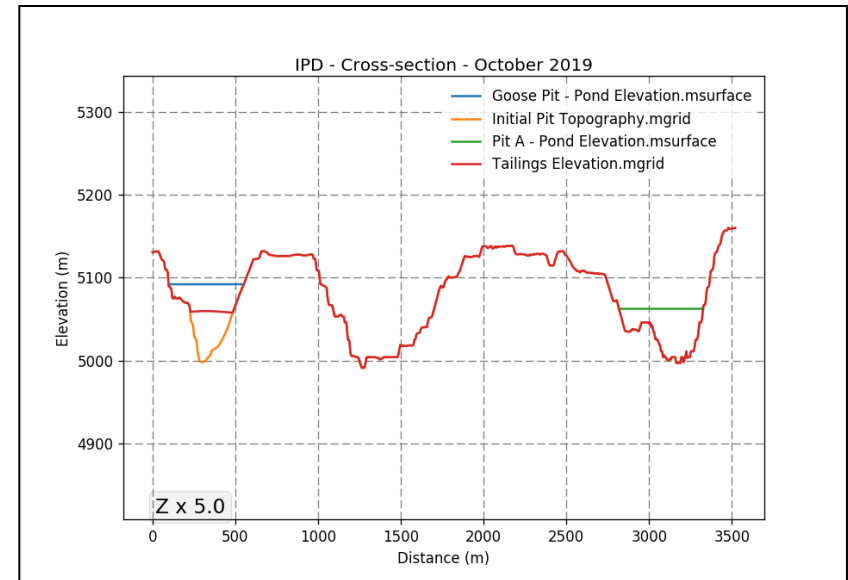


AGNICO EAGLE
MEADOWBANK

DEPOSITION POINT	Duration	Tonnage	Elevation
	(d)	(t)	(m)
G1_RAMP	31	287,243	62.33

MODEL & WATER BALANCE OUTPUTS				
Discharge Pit		Goose	Pit A	Pit E
Total Water Volume	(m ³)	2,176,902	2,122,596	14,964
Pond Elevation	(m)	92.12	63.00	-15.79
Tailings Elevation	(m)	62.33	-	-
Water Depth	(m)	29.79	63.00	-15.79

OPERATIONAL DATA				
Pit		Goose	Pit A	Pit E
Water Reclaim Volume	(m ³)	-	-	-
Water Transferred - Inflow	(m ³)	-	167,400	-



COMMENTS:

- Deposition occurs in Goose Pit;
- Pit E3 mining is completed;
- Beginning of natural water inflow in Pit E;
- No water reclaim planned for October 2019;
- Water transfer from Goose Pit to Pit A.

IPD DEPOSITION PLAN

November 2019 – Goose Pit

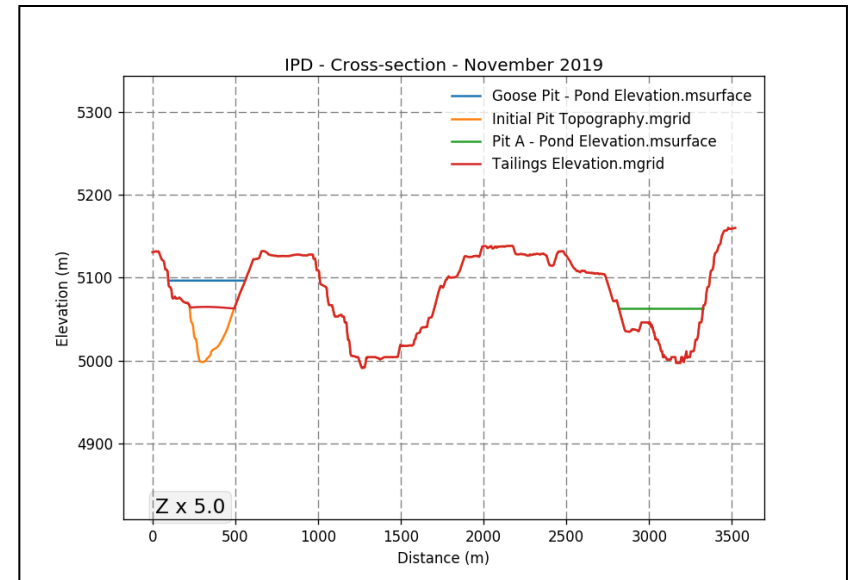


AGNICO EAGLE
MEADOWBANK

DEPOSITION POINT	Duration	Tonnage	Elevation
	(d)	(t)	(m)
G1_RAMP	30	277,850	67.72

MODEL & WATER BALANCE OUTPUTS				
Discharge Pit		Goose	Pit A	Pit E
Total Water Volume	(m ³)	2,383,772	2,122,596	29,964
Pond Elevation	(m)	96.53	63.00	-12.76
Tailings Elevation	(m)	67.72	-	-
Water Depth	(m)	28.81	63.00	-12.76

OPERATIONAL DATA				
Pit		Goose	Pit A	Pit E
Water Reclaim Volume	(m ³)	-	-	-
Water Transferred - Inflow	(m ³)	-	-	-



COMMENTS:

- Deposition occurs in Goose Pit;
- No water reclaim planned for November 2019;
- End of water transfer from Goose Pit to Pit A;
- No water transfer planned for November 2019.

IPD DEPOSITION PLAN

December 2019 – Goose Pit

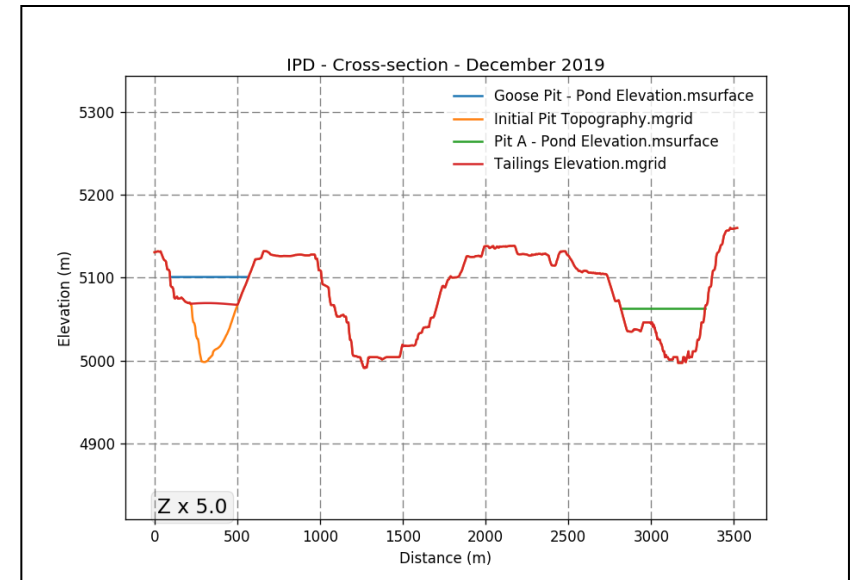


AGNICO EAGLE
MEADOWBANK

DEPOSITION POINT	Duration (d)	Tonnage (t)	Elevation (m)
G1_RAMP	31	286,910	72.38

MODEL & WATER BALANCE OUTPUTS				
Discharge Pit		Goose	Pit A	Pit E
Total Water Volume	(m ³)	2,597,396	2,122,596	44,892
Pond Elevation	(m)	100.88	63.00	-10.27
Tailings Elevation	(m)	72.38	-	-
Water Depth	(m)	28.50	63.00	-10.27

OPERATIONAL DATA				
Pit		Goose	Pit A	Pit E
Water Reclaim Volume	(m ³)	-	-	-
Water Transferred - Inflow	(m ³)	-	-	-



COMMENTS:

- Deposition occurs in Goose Pit;
- No water reclaim and no water transfer planned for December 2019.

IPD DEPOSITION PLAN

January 2020 – Goose Pit

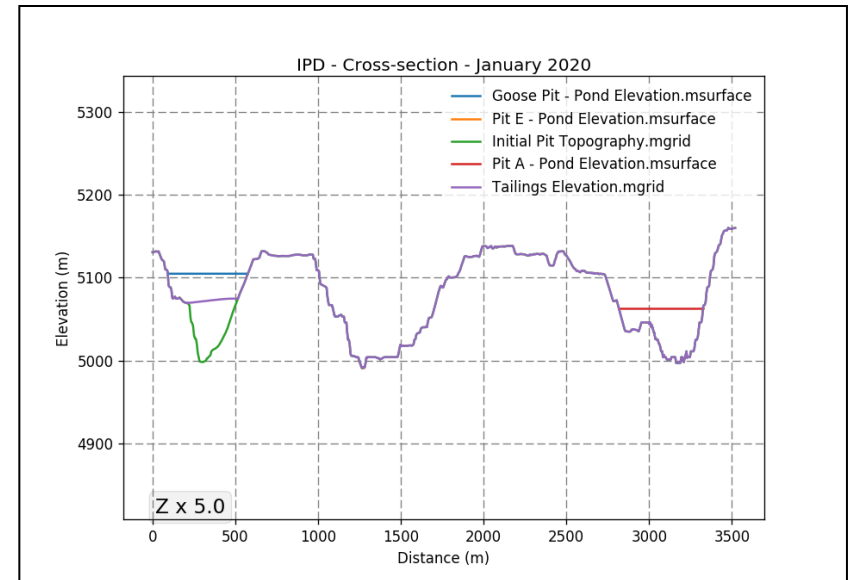


AGNICO EAGLE
MEADOWBANK

DEPOSITION POINT	Duration	Tonnage	Elevation
	(d)	(t)	(m)
G_BP	31	271,737	75.93

MODEL & WATER BALANCE OUTPUTS				
Discharge Pit		Goose	Pit A	Pit E
Total Water Volume	(m ³)	2,800,604	2,122,596	59,856
Pond Elevation	(m)	104.84	63.00	-8.61
Tailings Elevation	(m)	75.93	-	-
Water Depth	(m)	28.91	63.00	-8.61

OPERATIONAL DATA				
Pit		Goose	Pit A	Pit E
Water Reclaim Volume	(m ³)	-	-	-
Water Transferred - Inflow	(m ³)	-	-	-



COMMENTS:

- Deposition occurs in Goose Pit;
- Deposition point location changes between December 2019 and January 2020;
- No water reclaim and no water transfer planned for January 2020.

IPD DEPOSITION PLAN

February 2020 – Goose Pit

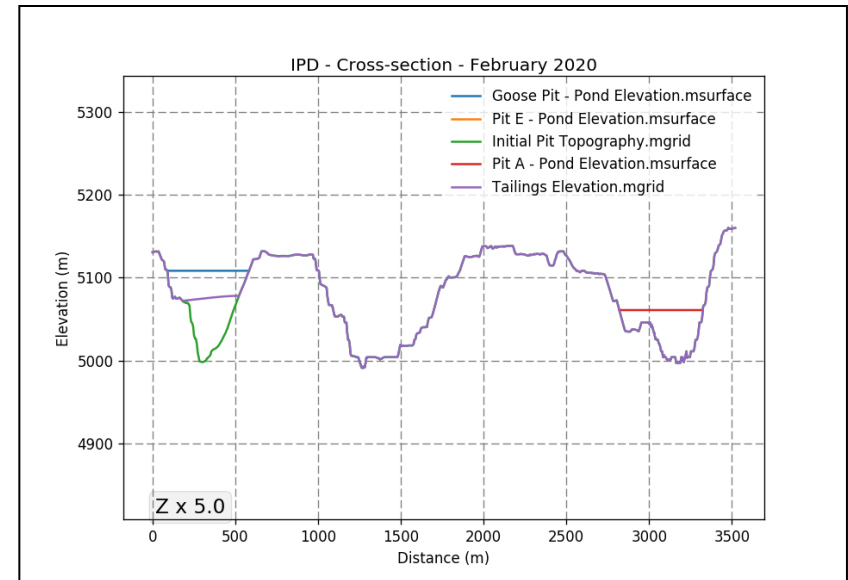


AGNICO EAGLE
MEADOWBANK

DEPOSITION POINT	Duration	Tonnage	Elevation
	(d)	(t)	(m)
G_BP	29	254,446	80.02

MODEL & WATER BALANCE OUTPUTS				
Discharge Pit		Goose	Pit A	Pit E
Total Water Volume	(m ³)	2,992,999	1,962,511	74,820
Pond Elevation	(m)	108.40	60.87	-7.09
Tailings Elevation	(m)	80.22	-	-
Water Depth	(m)	28.18	60.87	-7.09

OPERATIONAL DATA				
Pit		Goose	Pit A	Pit E
Water Reclaim Volume	(m ³)	-	160,086	-
Water Transferred - Inflow	(m ³)	-	-	-



COMMENTS:

- Deposition occurs in Goose Pit;
- Beginning of water reclaim from Pit A;
- No water transfer planned for February 2020.

IPD DEPOSITION PLAN

March 2020 – Goose Pit

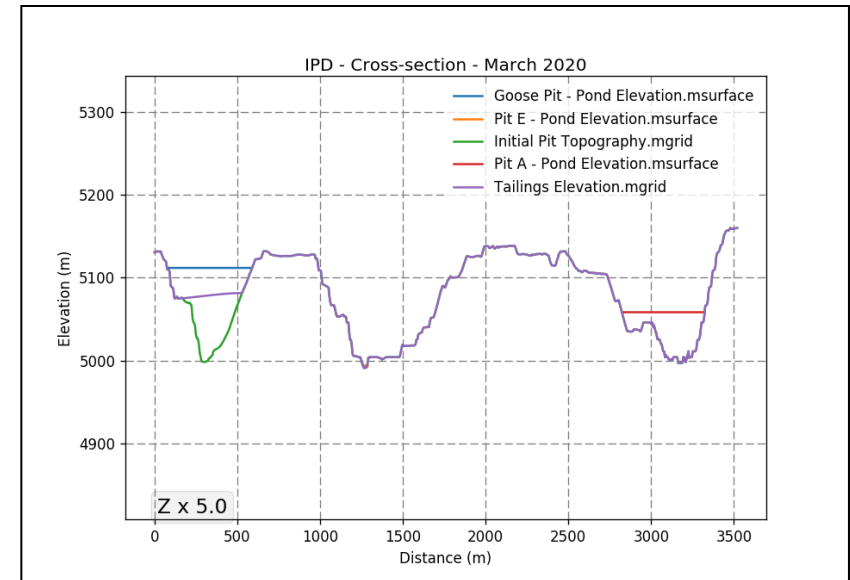


AGNICO EAGLE
MEADOWBANK

DEPOSITION POINT	Duration	Tonnage	Elevation
	(d)	(t)	(m)
G_BP	31	271,981	83.38

MODEL & WATER BALANCE OUTPUTS				
Discharge Pit		Goose	Pit A	Pit E
Total Water Volume	(m ³)	3,196,329	1,791,384	89,784
Pond Elevation	(m)	111.85	58.54	-5.66
Tailings Elevation	(m)	83.38	-	-
Water Depth	(m)	28.47	58.54	-5.66

OPERATIONAL DATA				
Pit		Goose	Pit A	Pit E
Water Reclaim Volume	(m ³)	-	171,126	-
Water Transferred - Inflow	(m ³)	-	-	-



COMMENTS:

- Deposition occurs in Goose Pit;
- Water reclaim from Pit A;
- No water transfer planned for March 2020.

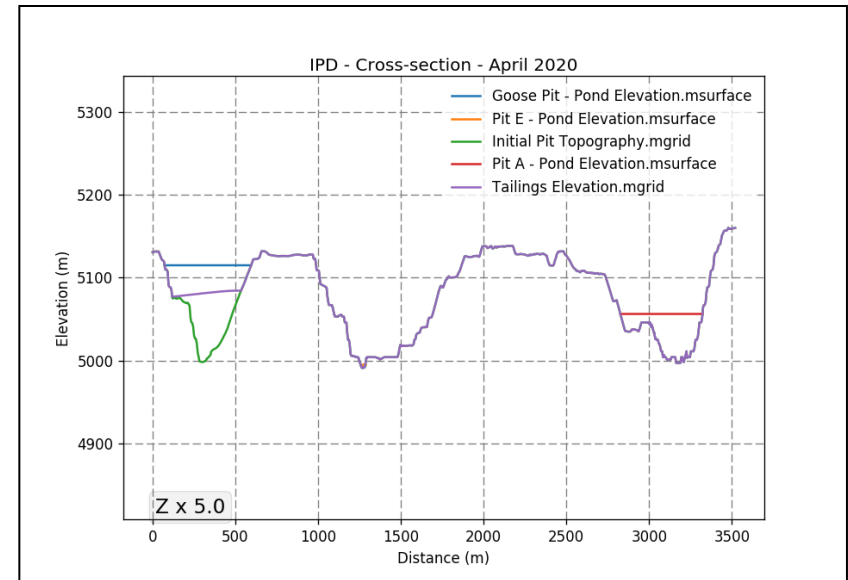
IPD DEPOSITION PLAN

April 2020 – Goose Pit

DEPOSITION POINT	Duration	Tonnage	Elevation
	(d)	(t)	(m)
G_BP	30	271,394	86.39

MODEL & WATER BALANCE OUTPUTS				
Discharge Pit		Goose	Pit A	Pit E
Total Water Volume	(m ³)	3,399,365	1,625,556	104,748
Pond Elevation	(m)	115.05	56.21	-4.29
Tailings Elevation	(m)	86.39	-	-
Water Depth	(m)	28.66	56.21	-4.29

OPERATIONAL DATA				
Pit		Goose	Pit A	Pit E
Water Reclaim Volume	(m ³)	-	165,828	-
Water Transferred - Inflow	(m ³)	-	-	-



COMMENTS:

- Deposition occurs in Goose Pit;
- Water reclaim from Pit A;
- No water transfer planned for April 2020.

IPD DEPOSITION PLAN

May 2020 – Goose Pit

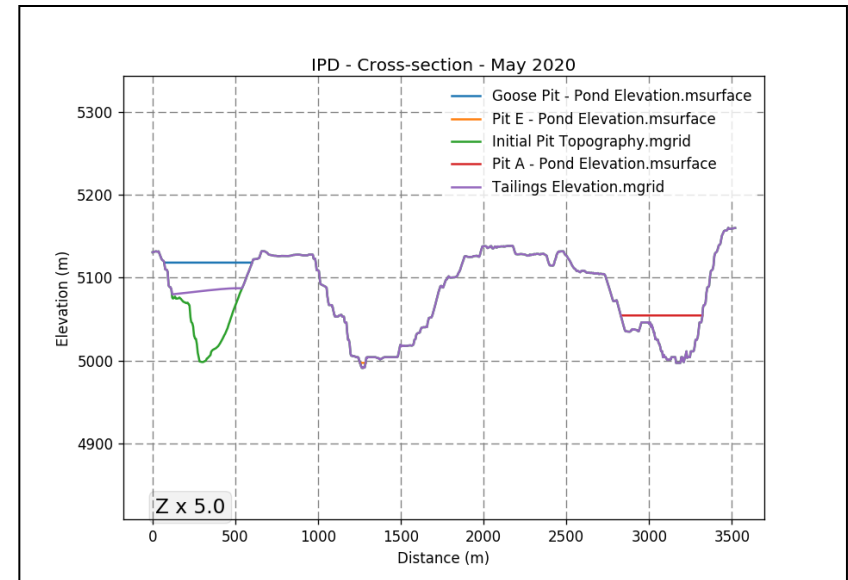


AGNICO EAGLE
MEADOWBANK

DEPOSITION POINT	Duration	Tonnage	Elevation
	(d)	(t)	(m)
G_BP	31	280,435	89.49

MODEL & WATER BALANCE OUTPUTS				
Discharge Pit		Goose	Pit A	Pit E
Total Water Volume	(m ³)	3,608,780	1,498,097	119,711
Pond Elevation	(m)	118.26	54.39	-2.97
Tailings Elevation	(m)	89.49	-	-
Water Depth	(m)	28.77	54.39	-2.97

OPERATIONAL DATA				
Pit		Goose	Pit A	Pit E
Water Reclaim Volume	(m ³)	-	171,356	-
Water Transferred - Inflow	(m ³)	-	-	-



COMMENTS:

- Deposition occurs in Goose Pit;
- Water reclaim from Pit A;
- No water transfer planned for May 2020.

IPD DEPOSITION PLAN

June 2020 – Goose Pit

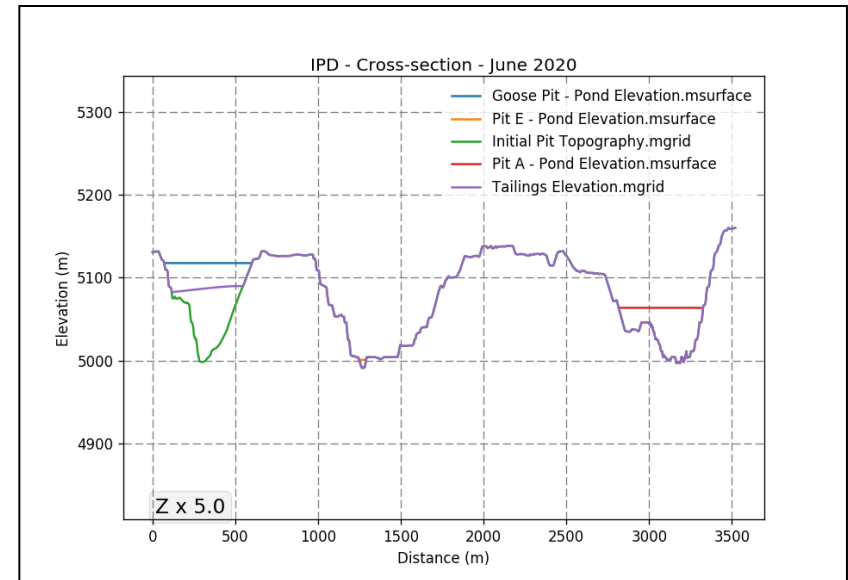


AGNICO EAGLE
MEADOWBANK

DEPOSITION POINT	Duration	Tonnage	Elevation
	(d)	(t)	(m)
G_BP	30	271,371	92.19

MODEL & WATER BALANCE OUTPUTS				
Discharge Pit		Goose	Pit A	Pit E
Total Water Volume	(m ³)	3,349,197	2,169,156	177,086
Pond Elevation	(m)	117.70	63.60	0.74
Tailings Elevation	(m)	92.19	-	-
Water Depth	(m)	25.51	63.60	0.74

OPERATIONAL DATA				
Pit		Goose	Pit A	Pit E
Water Reclaim Volume	(m ³)	-	165,828	-
Water Transferred - Inflow	(m ³)	-	504,000	-



COMMENTS:

- Deposition occurs in Goose Pit;
- Water reclaim from Pit A;
- Beginning of water transfer from Goose Pit to Pit A.

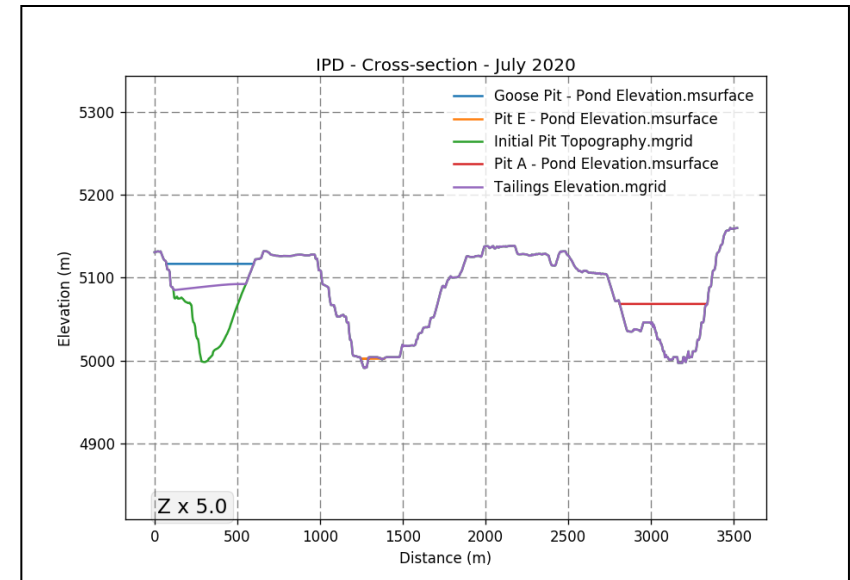
IPD DEPOSITION PLAN

July 2020 – Goose Pit

DEPOSITION POINT	Duration	Tonnage	Elevation
	(d)	(t)	(m)
G_BP	31	270,177	94.68

MODEL & WATER BALANCE OUTPUTS				
Discharge Pit		Goose	Pit A	Pit E
Total Water Volume	(m ³)	3,042,157	2,561,077	203,382
Pond Elevation	(m)	116.74	68.31	2.25
Tailings Elevation	(m)	94.68	-	-
Water Depth	(m)	22.06	68.31	2.25

OPERATIONAL DATA				
Pit		Goose	Pit A	Pit E
Water Reclaim Volume	(m ³)	-	171,021	-
Water Transferred - Inflow	(m ³)	-	520,800	-



COMMENTS:

- Deposition occurs in Goose Pit;
- Water reclaim from Pit A;
- Water transfer from Goose Pit to Pit A.

IPD DEPOSITION PLAN

August 2020 – Goose Pit

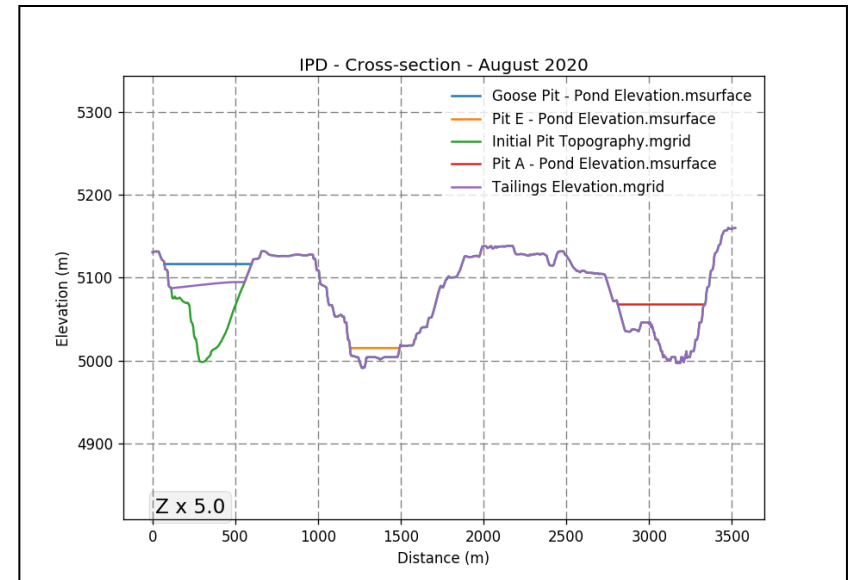


AGNICO EAGLE
MEADOWBANK

DEPOSITION POINT	Duration	Tonnage	Elevation
	(d)	(t)	(m)
G_BP	31	270,225	97.04

MODEL & WATER BALANCE OUTPUTS				
Discharge Pit		Goose	Pit A	Pit E
Total Water Volume	(m ³)	2,827,923	2,501,397	695,325
Pond Elevation	(m)	116.52	67.68	14.99
Tailings Elevation	(m)	97.04	-	-
Water Depth	(m)	19.48	67.68	14.99

OPERATIONAL DATA				
Pit		Goose	Pit A	Pit E
Water Reclaim Volume	(m ³)	-	171,021	-
Water Transferred - Inflow	(m ³)	-	-	446,400



COMMENTS:

- Deposition occurs in Goose Pit;
- Water reclaim from Pit A;
- End of water transfer from Goose Pit to Pit A;
- Beginning of water transfer from Goose Pit to Pit E.

IPD DEPOSITION PLAN

September 2020 – Goose Pit & Pit E

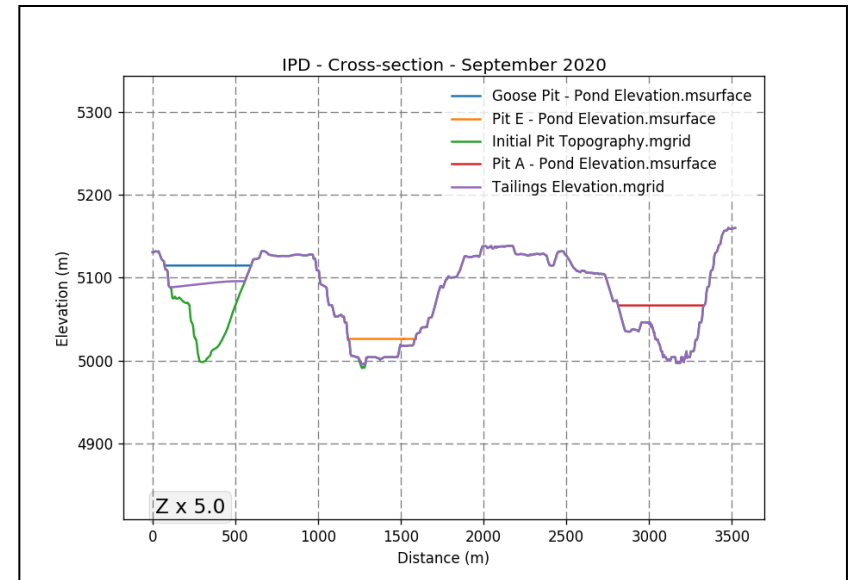


AGNICO EAGLE
MEADOWBANK

DEPOSITION POINT	Duration	Tonnage	Elevation
	(d)	(t)	(m)
G_BP	15	130,732	98.13
E1	15	131,086	-4.00

MODEL & WATER BALANCE OUTPUTS				
Discharge Pit		Goose	Pit A	Pit E
Total Water Volume	(m ³)	2,517,543	2,394,866	1,245,058
Pond Elevation	(m)	114.74	66.47	26.52
Tailings Elevation	(m)	98.13	-	-4.00
Water Depth	(m)	16.61	66.47	30.52

OPERATIONAL DATA				
Pit		Goose	Pit A	Pit E
Water Reclaim Volume	(m ³)	-	165,504	-
Water Transferred - Inflow	(m ³)	-	-	432,000



COMMENTS:

- Deposition occurs in Goose Pit and Pit E;
- Deposition point location changes from Goose Pit to Pit E in the middle of the month of September 2020;
- End of deposition in Goose Pit;
- Water reclaim from Pit A;
- Water transfer from Goose Pit to Pit E.

IPD DEPOSITION PLAN

October 2020 – Pit E

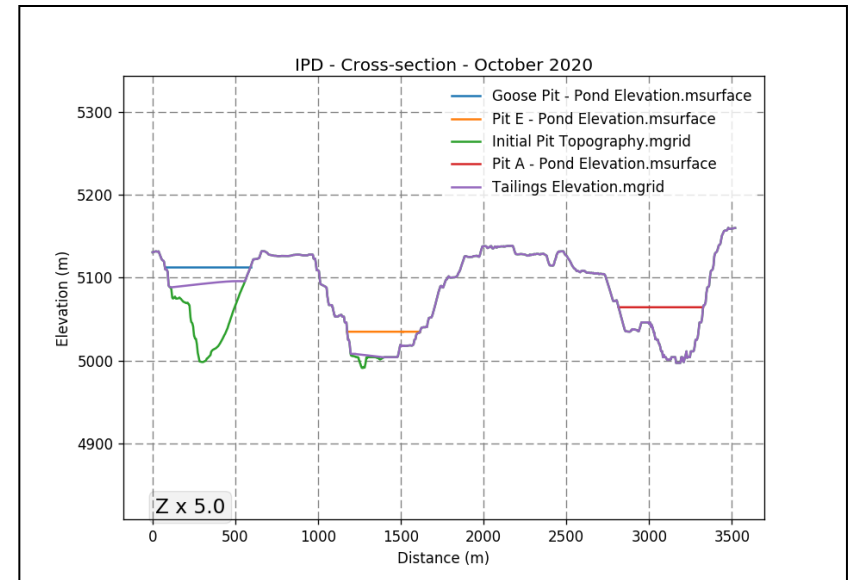


AGNICO EAGLE
MEADOWBANK

DEPOSITION POINT	Duration	Tonnage	Elevation
	(d)	(t)	(m)
E1	31	286,610	8.28

MODEL & WATER BALANCE OUTPUTS				
Discharge Pit		Goose	Pit A	Pit E
Total Water Volume	(m ³)	2,313,474	2,224,056	1,677,798
Pond Elevation	(m)	113.08	64.31	34.72
Tailings Elevation	(m)	98.13	-	8.28
Water Depth	(m)	14.95	64.31	26.44

OPERATIONAL DATA				
Pit		Goose	Pit A	Pit E
Water Reclaim Volume	(m ³)	-	170,810	-
Water Transferred - Inflow	(m ³)	-	-	223,200



COMMENTS:

- Deposition occurs in Pit E;
- Water reclaim from Pit A;
- Water transfer from Goose Pit to Pit E.

IPD DEPOSITION PLAN

November 2020 – Pit E

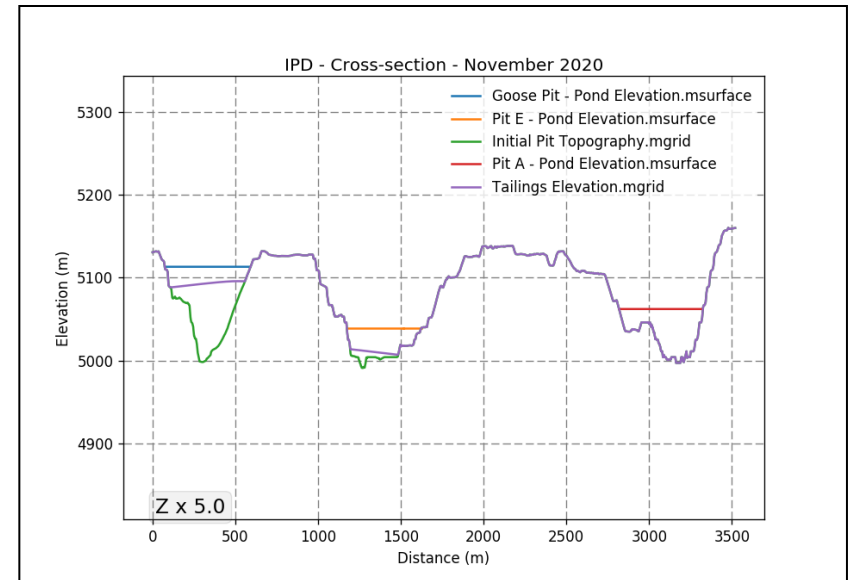


AGNICO EAGLE
MEADOWBANK

DEPOSITION POINT	Duration	Tonnage	Elevation
	(d)	(t)	(m)
E1	30	278,002	13.61

MODEL & WATER BALANCE OUTPUTS				
Discharge Pit		Goose	Pit A	Pit E
Total Water Volume	(m ³)	2,332,787	2,058,756	1,880,413
Pond Elevation	(m)	113.23	62.15	39.27
Tailings Elevation	(m)	98.13	-	13.61
Water Depth	(m)	15.10	62.15	25.66

OPERATIONAL DATA				
Pit		Goose	Pit A	Pit E
Water Reclaim Volume	(m ³)	-	165,300	-
Water Transferred - Inflow	(m ³)	-	-	-



COMMENTS:

- Deposition occurs in Pit E;
- Water reclaim from Pit A;
- End of water transfer from Goose Pit to Pit E;
- No water transfer planned for November 2020.

IPD DEPOSITION PLAN

December 2020 – Pit E

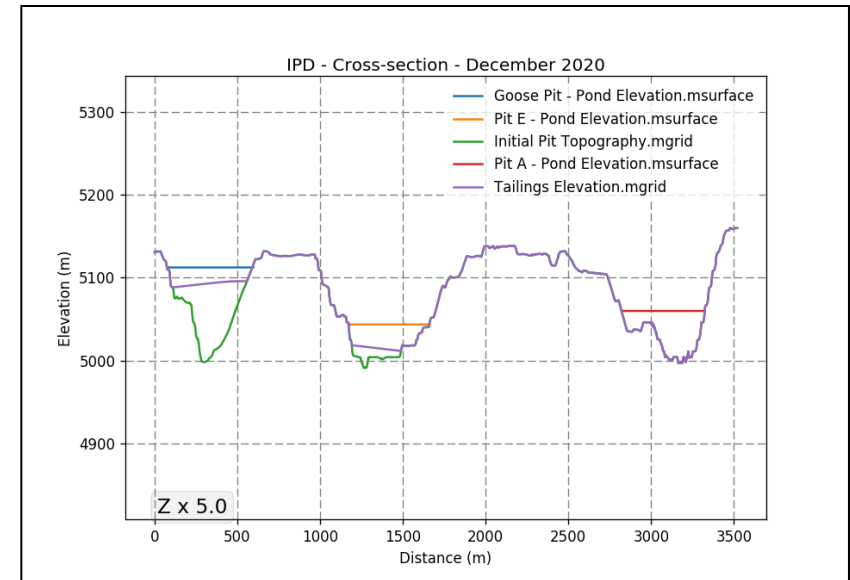


AGNICO EAGLE
MEADOWBANK

DEPOSITION POINT	Duration	Tonnage	Elevation
	(d)	(t)	(m)
E1	31	287,198	18.33

MODEL & WATER BALANCE OUTPUTS				
Discharge Pit		Goose	Pit A	Pit E
Total Water Volume	(m ³)	2,351,918	1,887,946	2,089,823
Pond Elevation	(m)	113.39	59.86	43.53
Tailings Elevation	(m)	98.13	-	18.33
Water Depth	(m)	15.26	59.86	25.20

OPERATIONAL DATA				
Pit		Goose	Pit A	Pit E
Water Reclaim Volume	(m ³)	-	170,810	-
Water Transferred - Inflow	(m ³)	-	-	-



COMMENTS:

- Deposition occurs in Pit E;
- Water reclaim from Pit A;
- No water transfer planned for December 2020.

IPD DEPOSITION PLAN

January 2021 – Pit E

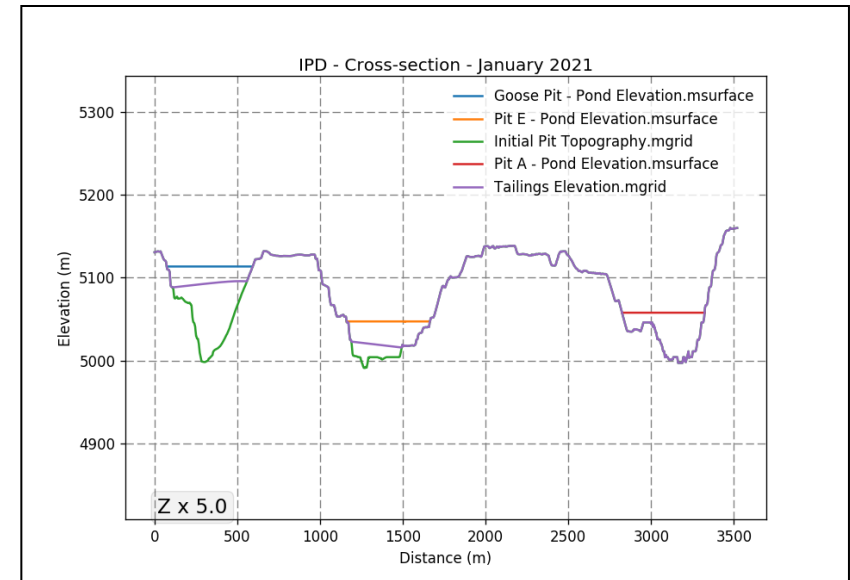


AGNICO EAGLE
MEADOWBANK

DEPOSITION POINT	Duration	Tonnage	Elevation
	(d)	(t)	(m)
E1	31	278,893	22.63

MODEL & WATER BALANCE OUTPUTS				
Discharge Pit		Goose	Pit A	Pit E
Total Water Volume	(m ³)	2,371,049	1,732,151	2,278,698
Pond Elevation	(m)	113.55	57.72	47.16
Tailings Elevation	(m)	98.13	-	22.63
Water Depth	(m)	15.42	57.72	24.53

OPERATIONAL DATA				
Pit		Goose	Pit A	Pit E
Water Reclaim Volume	(m ³)	-	170,760	-
Water Transferred - Inflow	(m ³)	-	-	-



COMMENTS:

- Deposition occurs in Pit E;
- Water reclaim from Pit A;
- No water transfer planned for January 2021.

IPD DEPOSITION PLAN

February 2021 – Pit E

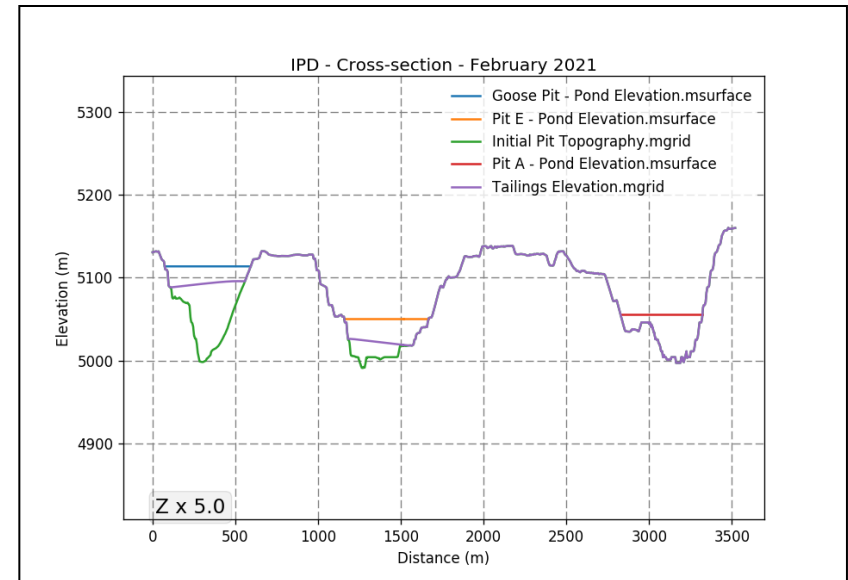


AGNICO EAGLE
MEADOWBANK

DEPOSITION POINT	Duration	Tonnage	Elevation
	(d)	(t)	(m)
E1	28	251,980	26.46

MODEL & WATER BALANCE OUTPUTS				
Discharge Pit		Goose	Pit A	Pit E
Total Water Volume	(m ³)	2,390,362	1,592,880	2,450,081
Pond Elevation	(m)	113.71	55.75	50.08
Tailings Elevation	(m)	98.13	-	26.46
Water Depth	(m)	15.58	55.75	23.62

OPERATIONAL DATA				
Pit		Goose	Pit A	Pit E
Water Reclaim Volume	(m ³)	-	154,235	-
Water Transferred - Inflow	(m ³)	-	-	-



COMMENTS:

- Deposition occurs in Pit E;
- Water reclaim from Pit A;
- No water transfer planned for February 2021.

IPD DEPOSITION PLAN

March 2021 – Pit E

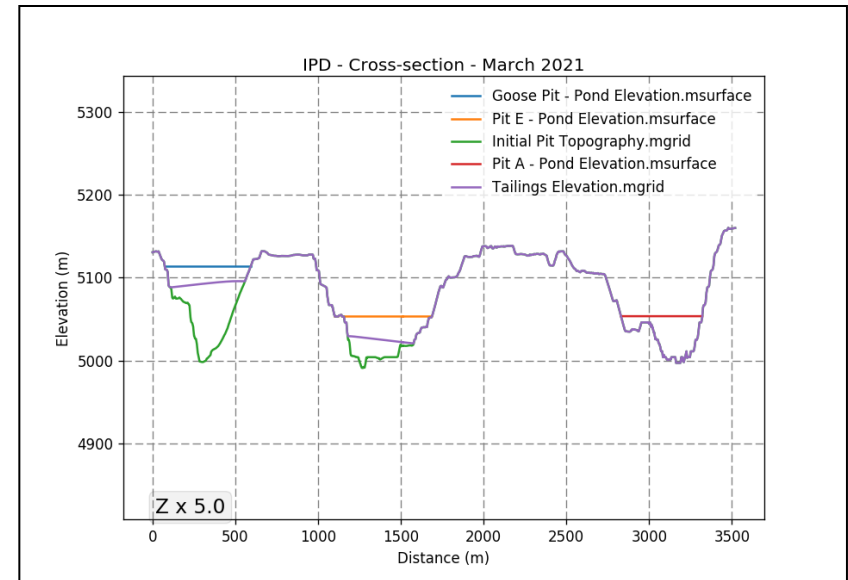


AGNICO EAGLE
MEADOWBANK

DEPOSITION POINT	Duration	Tonnage	Elevation
	(d)	(t)	(m)
E1	31	278,787	29.68

MODEL & WATER BALANCE OUTPUTS				
Discharge Pit		Goose	Pit A	Pit E
Total Water Volume	(m ³)	2,409,493	1,437,084	2,639,082
Pond Elevation	(m)	113.86	53.49	53.13
Tailings Elevation	(m)	98.13	-	29.68
Water Depth	(m)	15.73	53.49	23.45

OPERATIONAL DATA				
Pit		Goose	Pit A	Pit E
Water Reclaim Volume	(m ³)	-	170,760	-
Water Transferred - Inflow	(m ³)	-	-	-



COMMENTS:

- Deposition occurs in Pit E;
- Water reclaim from Pit A;
- No water transfer planned for March 2021.

IPD DEPOSITION PLAN

April 2021 – Pit E

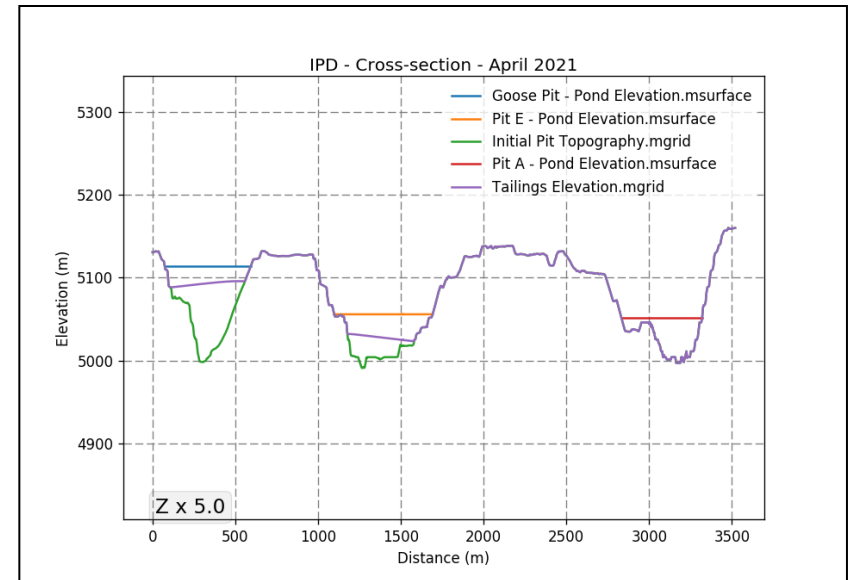


AGNICO EAGLE
MEADOWBANK

DEPOSITION POINT	Duration	Tonnage	Elevation
	(d)	(t)	(m)
E1	30	269,956	32.38

MODEL & WATER BALANCE OUTPUTS				
Discharge Pit		Goose	Pit A	Pit E
Total Water Volume	(m ³)	2,428,624	1,286,797	2,822,003
Pond Elevation	(m)	114.02	51.25	55.78
Tailings Elevation	(m)	98.13	-	32.38
Water Depth	(m)	15.89	51.25	23.40

OPERATIONAL DATA				
Pit		Goose	Pit A	Pit E
Water Reclaim Volume	(m ³)	-	165,251	-
Water Transferred - Inflow	(m ³)	-	-	-



COMMENTS:

- Deposition occurs in Pit E;
- Water reclaim from pit A;
- No water transfer planned for April 2021.

IPD DEPOSITION PLAN

May 2021 – Pit E

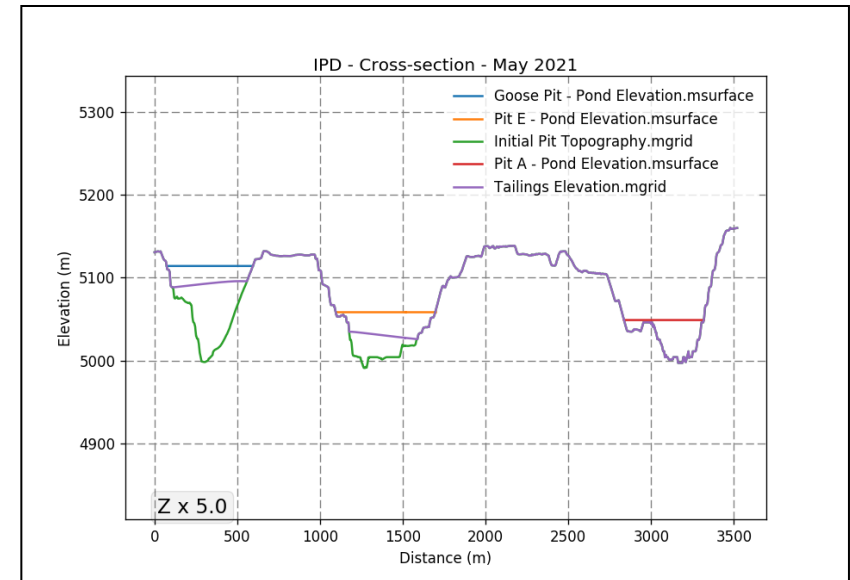


AGNICO EAGLE
MEADOWBANK

DEPOSITION POINT	Duration	Tonnage	Elevation
	(d)	(t)	(m)
E1	31	278,961	35.09

MODEL & WATER BALANCE OUTPUTS				
Discharge Pit		Goose	Pit A	Pit E
Total Water Volume	(m ³)	2,447,937	1,131,001	3,054,984
Pond Elevation	(m)	114.18	48.83	58.73
Tailings Elevation	(m)	98.13	-	35.09
Water Depth	(m)	16.05	48.83	23.64

OPERATIONAL DATA				
Pit		Goose	Pit A	Pit E
Water Reclaim Volume	(m ³)	-	170,760	-
Water Transferred - Inflow	(m ³)	-	-	43,896



COMMENTS:

- Deposition occurs in Pit E;
- Water reclaim from Pit A;
- Beginning of water transfer from Pit A to Pit E.

IPD DEPOSITION PLAN

June 2021 – Pit E

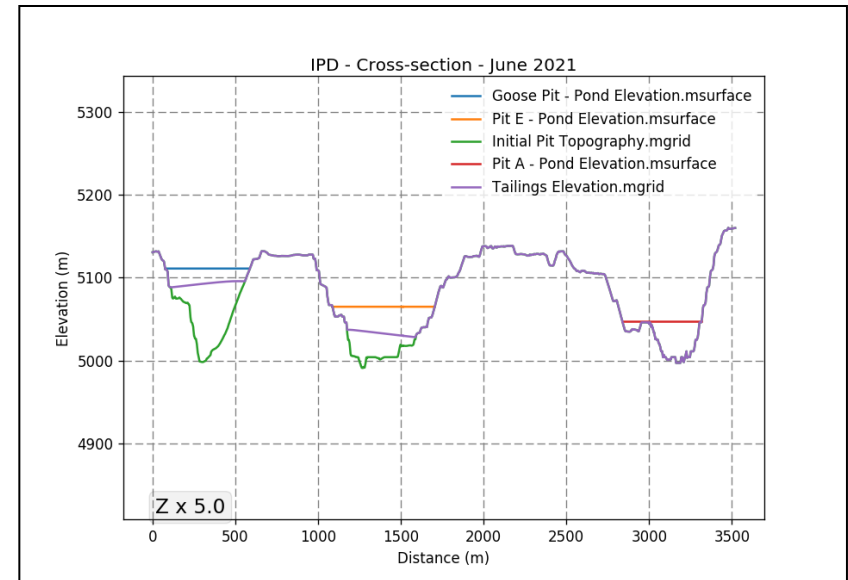


AGNICO EAGLE
MEADOWBANK

DEPOSITION POINT	Duration	Tonnage	Elevation
	(d)	(t)	(m)
E1	31	272,641	37.50

MODEL & WATER BALANCE OUTPUTS				
Discharge Pit		Goose	Pit A	Pit E
Total Water Volume	(m ³)	2,076,653	1,016,841	3,808,873
Pond Elevation	(m)	111.10	47.00	64.93
Tailings Elevation	(m)	98.13	-	37.50
Water Depth	(m)	12.97	47.00	27.43

OPERATIONAL DATA				
Pit		Goose	Pit A	Pit E
Water Reclaim Volume	(m ³)	-	165,251	-
Water Transferred - Inflow	(m ³)	-	-	528,760



COMMENTS:

- Deposition occurs in Pit E;
- Water reclaim from Pit A;
- Water transfer from Pit A to Pit E;
- Beginning of water transfer from Goose Pit to Pit E.

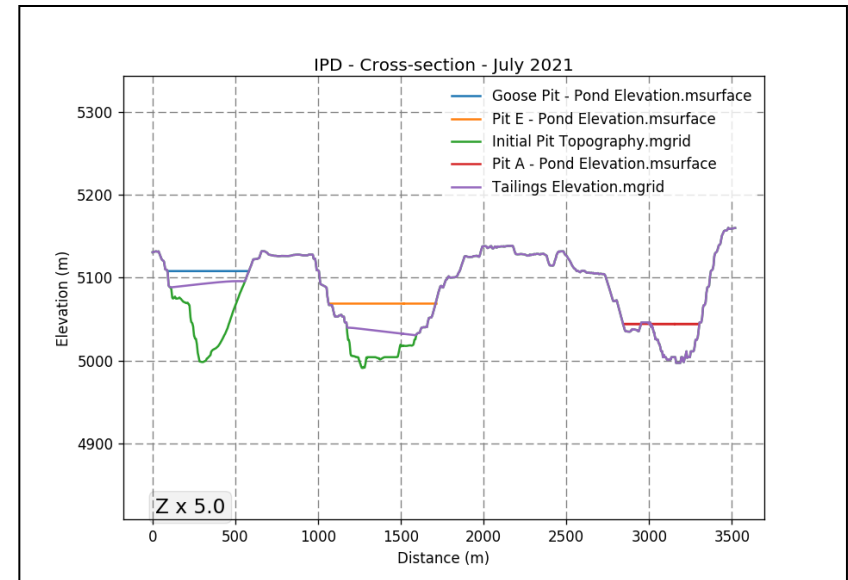
IPD DEPOSITION PLAN

July 2021 – Pit E

DEPOSITION POINT	Duration	Tonnage	Elevation
	(d)	(t)	(m)
E1	31	278,994	40.01

MODEL & WATER BALANCE OUTPUTS				
Discharge Pit		Goose	Pit A	Pit E
Total Water Volume	(m ³)	1,734,895	870,698	4,414,239
Pond Elevation	(m)	108.03	44.11	69.60
Tailings Elevation	(m)	98.13	-	40.01
Water Depth	(m)	9.9	44.11	29.59

OPERATIONAL DATA				
Pit		Goose	Pit A	Pit E
Water Reclaim Volume	(m ³)	-	170,760	-
Water Transferred - Inflow	(m ³)	-	-	404,489



COMMENTS:

- Deposition occurs in Pit E;
- Water reclaim from Pit A;
- Water transfer from Pit A to Pit E and from Goose Pit to Pit E.

IPD DEPOSITION PLAN

August 2021 – Pit E

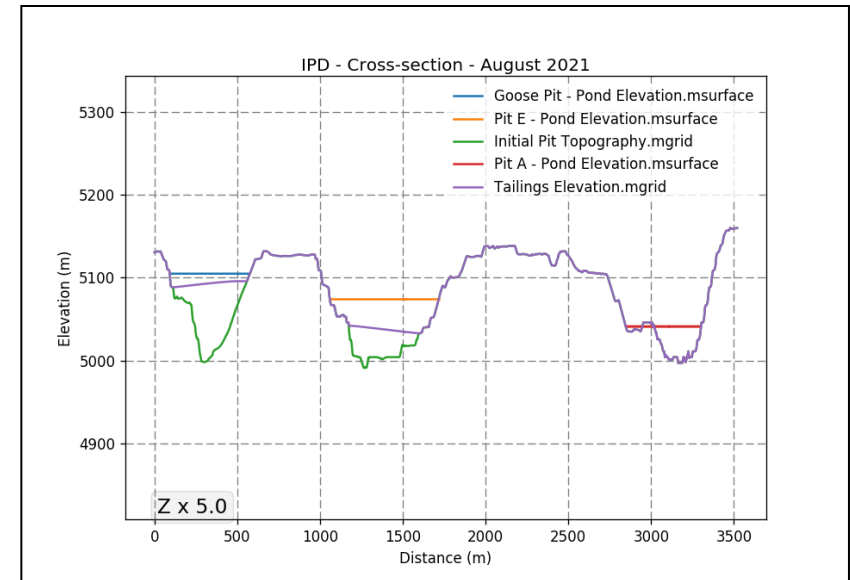


AGNICO EAGLE
MEADOWBANK

DEPOSITION POINT	Duration	Tonnage	Elevation
	(d)	(t)	(m)
E1	31	278,672	42.33

MODEL & WATER BALANCE OUTPUTS				
Discharge Pit		Goose	Pit A	Pit E
Total Water Volume	(m ³)	1,412,192	740,951	5,090,986
Pond Elevation	(m)	104.89	41.07	74.23
Tailings Elevation	(m)	98.13	-	42.33
Water Depth	(m)	6.76	41.07	31.90

OPERATIONAL DATA				
Pit		Goose	Pit A	Pit E
Water Reclaim Volume	(m ³)	-	170,760	-
Water Transferred - Inflow	(m ³)	-	-	457,293



COMMENTS:

- Deposition occurs in Pit E;
- Water reclaim from Pit A;
- Water transfer from Pit A to Pit E and from Goose Pit to Pit E.

IPD DEPOSITION PLAN

September 2021 – Pit E & Pit A

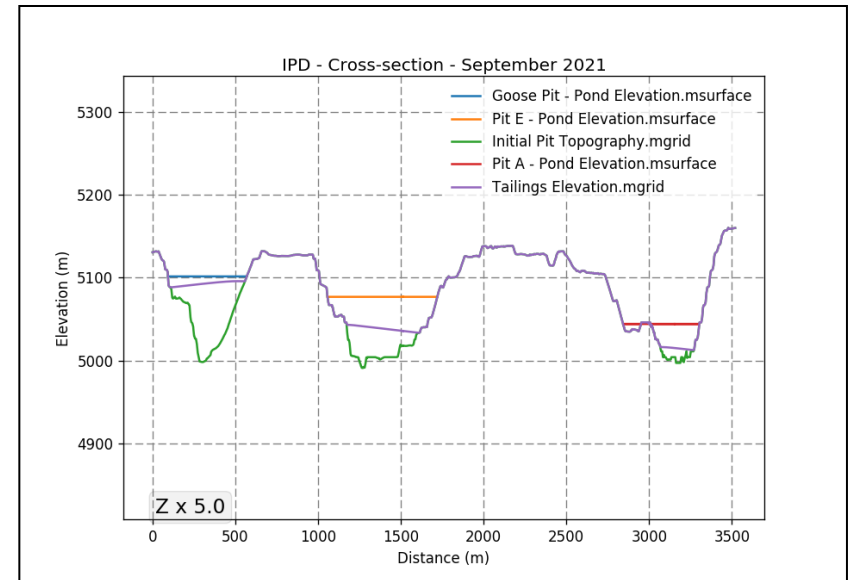


AGNICO EAGLE
MEADOWBANK

DEPOSITION POINT	Duration	Tonnage	Elevation
	(d)	(t)	(m)
E1	15	134,993	43.45
A1	15	134,795	17.19

MODEL & WATER BALANCE OUTPUTS				
Discharge Pit		Goose	Pit A	Pit E
Total Water Volume	(m ³)	1,085,457	776,827	5,520,727
Pond Elevation	(m)	101.59	44.09	76.89
Tailings Elevation	(m)	98.13	17.19	43.45
Water Depth	(m)	3.46	26.90	33.44

OPERATIONAL DATA				
Pit		Goose	Pit A	Pit E
Water Reclaim Volume	(m ³)	-	82,626	82,625
Water Transferred - Inflow	(m ³)	-	-	406,694



COMMENTS:

- Deposition occurs in Pit E and Pit A;
- Deposition point location changes from Pit E to Pit A in the middle of the month of September 2021;
- Water reclaim from Pit A;
- Beginning of water reclaim from Pit E;
- Water transfer from Pit A to Pit E and from Goose Pit to Pit E.

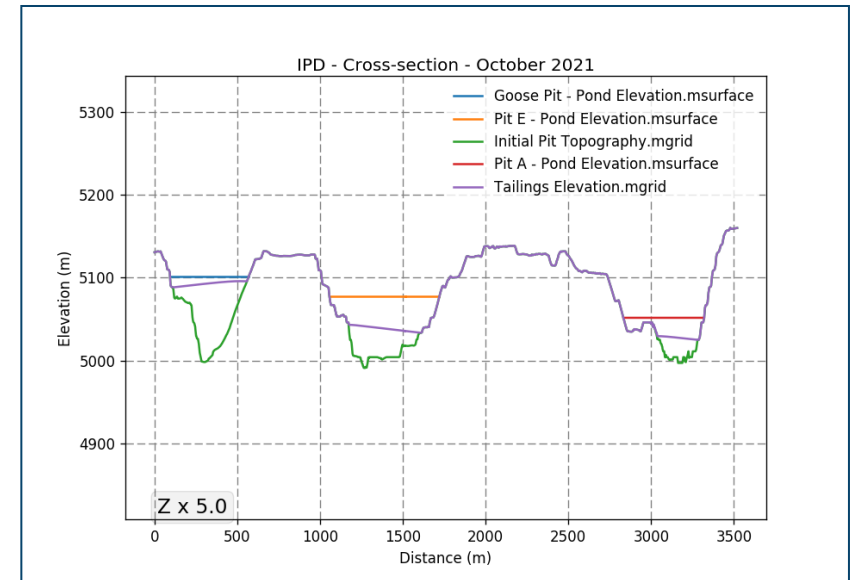
IPD DEPOSITION PLAN

October 2021 – Pit A

DEPOSITION POINT	Duration	Tonnage	Elevation
	(d)	(t)	(m)
A1	31	308,962	30.75

MODEL & WATER BALANCE OUTPUTS				
Discharge Pit		Goose	Pit A	Pit E
Total Water Volume	(m ³)	1,104,588	1,001,967	5,549,429
Pond Elevation	(m)	101.79	51.58	77.04
Tailings Elevation	(m)	98.13	30.75	43.45
Water Depth	(m)	3.66	20.83	33.59

OPERATIONAL DATA				
Pit		Goose	Pit A	Pit E
Water Reclaim Volume	(m ³)	-	-	171,298
Water Transferred - Inflow	(m ³)	-	-	200,000



COMMENTS:

- Deposition occurs in Pit A;
- End of water reclaim from Pit A;
- Water reclaim from Pit E;
- End of water transfer from Goose Pit to Pit E;
- Water transfer from Pit A to Pit E.

IPD DEPOSITION PLAN

November 2021 – Pit A

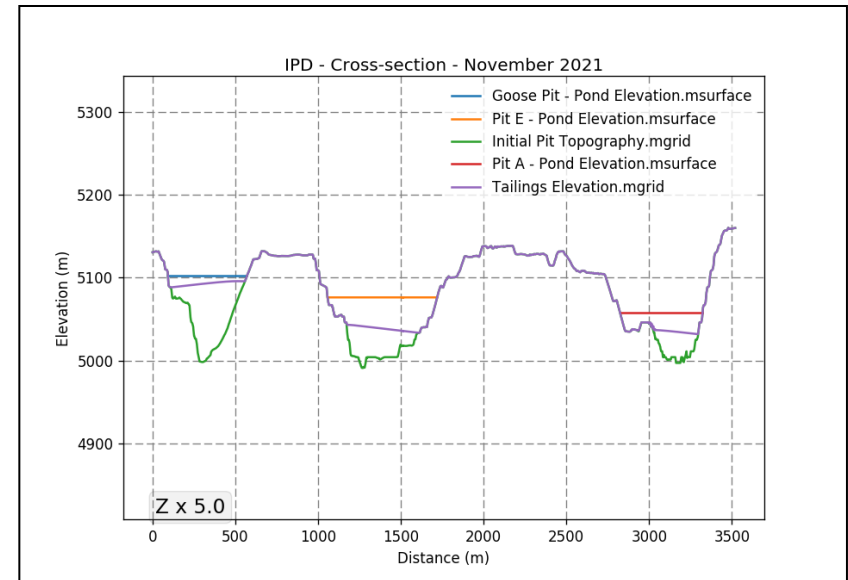


AGNICO EAGLE
MEADOWBANK

DEPOSITION POINT	Duration	Tonnage	Elevation
	(d)	(t)	(m)
A1	30	299,558	38.63

MODEL & WATER BALANCE OUTPUTS				
Discharge Pit		Goose	Pit A	Pit E
Total Water Volume	(m ³)	1,123,901	1,219,636	5,383,656
Pond Elevation	(m)	101.99	57.73	76.20
Tailings Elevation	(m)	98.13	38.63	43.45
Water Depth	(m)	3.86	19.10	32.75

OPERATIONAL DATA				
Pit		Goose	Pit A	Pit E
Water Reclaim Volume	(m ³)	-	-	165,773
Water Transferred - Inflow	(m ³)	-	-	-



COMMENTS:

- Deposition occurs in Pit A;
- Water reclaim from Pit E;
- End of water transfer from Pit A to Pit E;
- No water transfer planned for November 2021.

IPD DEPOSITION PLAN

December 2021 – Pit A

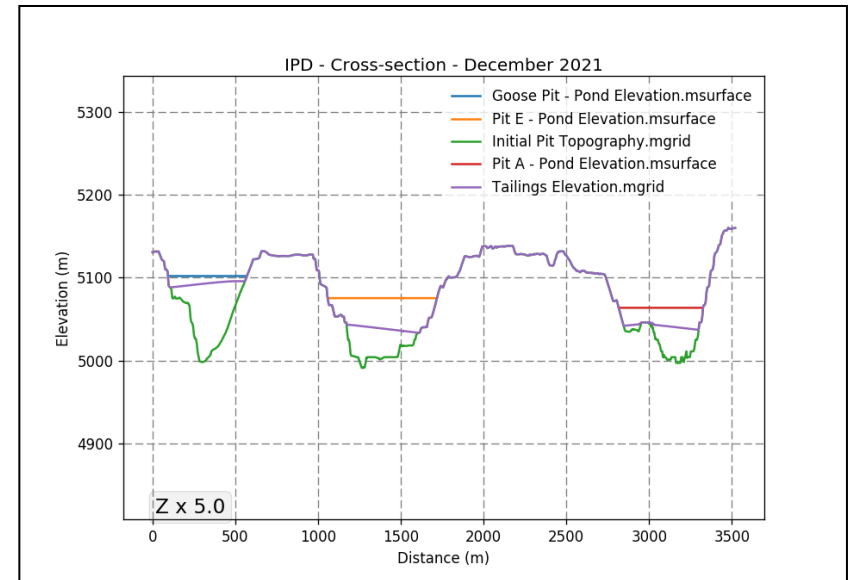


AGNICO EAGLE
MEADOWBANK

DEPOSITION POINT	Duration	Tonnage	Elevation
	(d)	(t)	(m)
A1	31	309,967	44.90

MODEL & WATER BALANCE OUTPUTS				
Discharge Pit		Goose	Pit A	Pit E
Total Water Volume	(m ³)	1,143,032	1,444,637	5,212,358
Pond Elevation	(m)	102.18	63.64	75.33
Tailings Elevation	(m)	98.13	44.90	43.45
Water Depth	(m)	4.05	18.74	31.88

OPERATIONAL DATA				
Pit		Goose	Pit A	Pit E
Water Reclaim Volume	(m ³)	-	-	171,298
Water Transferred - Inflow	(m ³)	-	-	-



COMMENTS:

- Deposition occurs in Pit A;
- Water reclaim from Pit E;
- No water transfer planned for December 2021.

IPD DEPOSITION PLAN

Recommendation



- Re-evaluate deposition parameters every 6 months based on a bathymetry survey
- Re-evaluate water transfer and reclaim flow and schedule based on the updated water level every month
- Minimize crest deposition in winter
- No tailings discharge shall occur on the pit dump
- No tailings discharge shall occur pass the ice wall in Goose Pit ramp



MEADOWBANK GOLD PROJECT
UPDATED MINE WASTE ROCK AND TAILINGS
MANAGEMENT PLAN

APPENDIX C

RSF and TSF Thermal Monitoring – List of Instruments



MEADOWBANK GOLD PROJECT

UPDATED MINE WASTE ROCK AND TAILINGS MANAGEMENT PLAN

Instrument ID	Northing; Easting	Installation date	Status	Data acquisition	Elevation interval in meter (Top - Bottom)	Nb of beads
RSF1	7215831; 638129	2013	Operational	Data logger	172.8-123.10	13
RSF-3(73-1 & RSF3)	7215689; 638370	2013	Operational	Data logger	173.99-128.5	16/29
RSF-4(248 & RSF4)	7215892; 638675	2013	Non-operational	Data logger	210.21-131	16/29
RSF-5(RSF2 & RSF5)	7216014; 638630	2013	Operational	Data logger	193.02-131	13/26
RSF-6(169 & RSF6)	7215647; 638845	2013	Operational	Data logger	197.79-127.8	16/29
RSF-7	7216039; 638153	2015	Operational	Data logger	172.5-168	10
RSF-8	7216038; 638156	2015	Operational	Data logger	172.9-163.9	10
RSF-9	7215707; 638290	2015	Operational	Data logger	170.6-166.1	10
RSF-10	7215711; 638293	2015	Operational	Data logger	171.1-162.1	10
RSF-11	7215787; 639071	2015	Operational	Data logger	192.3-187.8	10
RSF-12	7215791; 639066	2015	Operational	Data logger	192.9-183.9	10
RSF-13	7215943; 638916	2015	Operational	Data logger	190.8-186.3	10
RSF-14	7215939; 638917	2015	Operational	Data logger	190.9-181.9	10
RSF-15	7216038; 638612	2015	Operational	Data logger	191.4-186.9	10
RSF-16	7216033; 638610	2015	Operational	Data logger	191.6-182.6	10
NC-16-01	7215849; 637562	2015	Operational	Manual	147-85	13
NC-16-02	7215562; 637969	2015	Operational	Data logger	148-88	13
NCIS-01	7216395; 637412	2018	Operational	Data logger	151.8-143	16
NCIS-02	7216398; 637377	2018	Operational	Data logger	151.5-142	16
NCIS-03	7216636; 637432	2018	Operational	Data logger	154.1-143.5	16
NCIS-04	7216293; 637405	2018	Operational	Data logger	152-143	16
NC-17-01	7215784; 637292	2017	Operational	Data logger	148.1/107	16
NC-17-02	7215821; 637391	2017	Operational	Data logger	147.6/93.6	16
NC-17-03	7215913; 637776	2017	Operational	Data logger	147.6/93.6	16
NC-17-04	7216037; 637901	2017	Operational	Data logger	148.5/17.58	16
NC-17-05	7215434; 637602	2017	Operational	Data logger	148/106.9	16
NC-17-06	7215615; 637389	2017	Operational	Data logger	147.8/106.3	16
NC-17-07	7215596; 637349	2017	Operational	Data logger	147.9/107	16
NC-17-08	7215805; 637693	2017	Operational	Data logger	146.5/92.5	16
SD1-01	7215758; 637030	2010	Operational	Data logger	149.01/132.84	16
SD2-01	7215420; 637290	2012	Operational	Data logger	148.05/145.31	16
SD4-01	7214480; 638254	2017	Operational	Data logger	143.42/139.63	16
CD-US-0+650 (122.5 & 67.5	7214649; 638626	2014/2016	Operational	Data logger	143.0/111.06	16/32
Rock Storage Facility						
North Cell tailings						
South Cell tailings						