











AEM's addendum FEIS Vault Expansion into Phaser Lake Dec 1 and 2, 2015





OVERVIEW OF AGNICO EAGLE





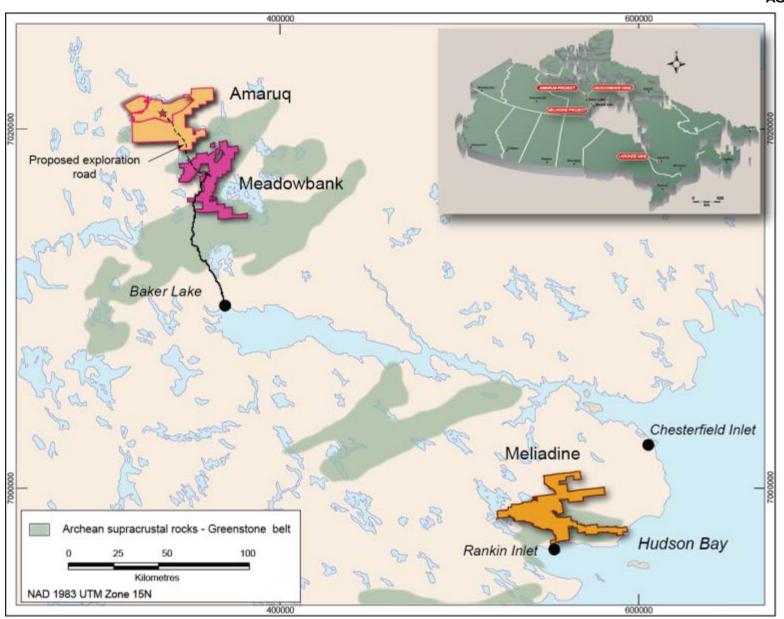


Canadian-based company:

- Trades on TSX & NYSE (AEM);
- Nine (9) operating mines in Nunavut, Quebec, Finland and Mexico;
- More than 6,400 employees;
- Successful in 2014 with recorded net income of \$83.0M vs a net loss record of \$687M in 2013;
- Meadowbank was a major contributor to the success of the company in 2014:
 - 452,877oz
 - AISC ≈ \$900/oz
 - Safety record LTI-MWI 1.06

AGNICO EAGLE IN NUNAVUT





AGNICO EAGLE IN NUNAVUT



Significant contributor to the economy

- One mine, three projects;
- **C\$7.1B** in capital & operating expenditures since 2007;
- C\$2.8B Northern expenditures since 2007;
- Potential of C\$2.2B in capital & operating expenditures by 2020;
- 815 employees at Meadowbank and Meliadine;
- Potential for 600 additional employees by 2020 in Nunavut.





AGNICO EAGLE IN NUNAVUT



Meadowbank & Meliadine Project Expenditures since 2007

Value of Contracts Awarded - Capital & Operations

- Total for all suppliers = \$2.8B
 - NTI Registered Companies = \$810M
 - Nunavut Based Suppliers = \$1.2B
 - Northern Based Suppliers = \$1.4B
 - Baker Lake Suppliers = \$430M
 - Rankin Inlet Suppliers = \$110M







MEADOWBANK AND VAULT EXPANSION

MEADOWBANK OVERVIEW



History Facts

- •2003: Application to NWB and NIRB
- •2006: Project Certificate Issued by NIRB
- •2008: All Permits Received
 - ✓ Water License A
 - ✓ Amendment no1 Tank farm expansion
 - ✓ Amendment no2 Fresh water uses
 - ✓ DFO Authorization
 - ✓ MMER Schedule 2
- 2008: Construction of Dikes and Pit Stripping start
- up
- •2010: Start of Commercial Production
- •2015: Renewal of the Water License A
- •End of 2018: Expected End of Operation
- •2018 and Beyond: Closure and Potential future plans



June 2008



August 2009



Meadowbank Mine

CNICO EACLE

Three open pits currently in operation (Portage, Goose, Vault)

Gold production

- 2010 to 2014 = 1.8M oz (produced)
- 2015 to 2017 = 1.0M oz (estimated)

Average annual gold production 350,000 oz

Estimated life of mine

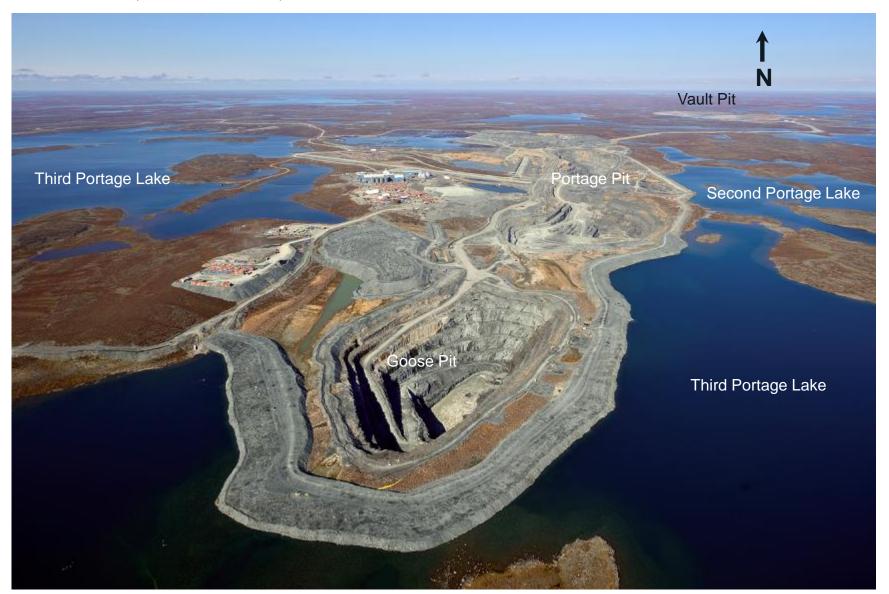
- 2010-2018
- 2018 and more ???







PORTAGE PIT, GOOSE PIT, CENTRAL DIKE – SEPT. 2014



INFRASTRUCTURE AND MILL







TAILINGS STORAGE FACILITY NORTH CELL



TAILINGS STORAGE FACILITY – SOUTH CELL – PHASER DEPOSITION





MEADOWBANK OVERVIEW





Meadowbank includes:

- 3 Open Pits Goose, Portage, Vault Pit; 4 Dewatering Dikes; 2 TSF Cells;
- 2 main RSF Portage and Vault

PHASER LAKE AND VAULT LAKE 2012





PHASER LAKE, VAULT LAKE AND WALLY LAKE - 2013





VAULT PIT – SEPTEMBER 2015







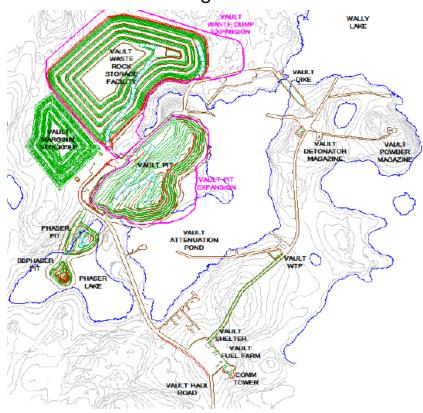
VAULT WASTE ROCK FACILITY – PHASER PIT WASTE ROCK



VAULT PIT EXPANSION IN PHASER LAKE



- AEM is proposing to expand the Vault open pit, that is currently being mined, to include two small extensions known as the Phaser Pit and the BB Phaser Pit.
- This expansion is around 30 days of mining activity and uses the existing Meadowbank Mill, Vault Waste Rock Facility, tailings storage facility, infrastructure and Vault haul road, which were assessed in the original FEIS.



TIMING AND PRODUCTION ESTIMATES



- → Phaser Pit Proposed Mining Q4 2016 or Q1 2017 operations during the winter months from approximately December 2016 to January 2017 (~30 days of milling)
- Dewatering in parallel with a Fishout beginning July August 2016
- Dewatering of 510,000m3 of water beginning in July to August 2016 total volume of 410,000m3 will be dewatered in 30 days but will be managed concurrently with the fishout

Phaser and BB Phaser Pit Production

Table 4.10.1: Overall Mine and Vault Pit Production as compared to the proposed Vault Expansion to include BB Phaser and Phaser Pit

	Meadowbank Mine (LOM 2013)	Vault Pit	% of Mine	Proposed Phaser pit	% of Mine	% of Vault Pit	Proposed BBPhaser pit	% of Mine	% of Vault Pit
Total Rock Removed (tonnes)	241,739,796	84,968,055	35%	2,554,366	1.1%	3.0%	793,499	0.3%	0.9%
Waste Rock (tonnes)	211,902,397	74,270,813	35%	2,284,928	1.1%	3.1%	660,549	0.3%	0.9%
Ore (tonnes)	29,837,399	10,697,242	36%	269,438	0.9%	2.5%	132,950	0.4%	1.2%





FEIS ADDENDUM - VAULT EXPANSION INTO PHASER LAKE



- Within the Scope of the NIRB Project certificate
 - Within the approved 9- 10 years of construction and operation (2009 to 2018)
 - Is within the local study area assessed in the original FEIS
 - Is within the KIA production lease
 - Uses the approved infrastructure:
 - Tailings Storage Facility
 - Vault Waste Rock Facility
 - Mill
 - Camp
 - Fuel Storage
 - Airstrip
 - All Weather Access Road
 - Uses NWB Type A approved dewatering and monitoring plans
- AEM does not deem this as a significant change from the original Scope of the FEIS
 - For examples, we were approved to dewater lakes and fishout
- Additional Requirements:
 - A few new pit roads and connecting haul roads that were not originally planned
 - DFO approval for the loss of Phaser Lake and associated serious harm to fish
 - DFO authorization for dewatering and mining in Phaser Lake
 - AEM began this review process of Phaser Pit with DFO in 2012 and submitted the Phase Lake DFO application for authorization in July 2014.

FEIS ADDENDUM - VAULT EXPANSION INTO PHASER LAKE



- Terms and condition to be modify or remove
 - Condition 48 to be remove
 - 48. Cumberland shall demonstrate to the satisfaction of the DFO that the water management framework, including the embankment details and diversion ditch, will permit the maintenance of over-wintering fish habitat in Phaser Lake through the life of the Project.
 - Condition 49 to add Phaser Lake
 - 49. Cumberland shall develop, implement and report on the fish-out programs for the dewatering of Second Portage Lake, Third Portage Lake, and Vault Lake and Phaser Lake. This must be done in consultation with the DFO, Elders and the HTOs, and in a manner that optimizes the acquisition of northern fisheries science and augments baseline fisheries data to support monitoring programs and the final design of fish habitat compensation for the Project.



QUESTIONS?









PHYSICAL ENVIRONMENT

DEWATERING PLAN FOR PHASER LAKE



Dewatering Phase 1 – July to August

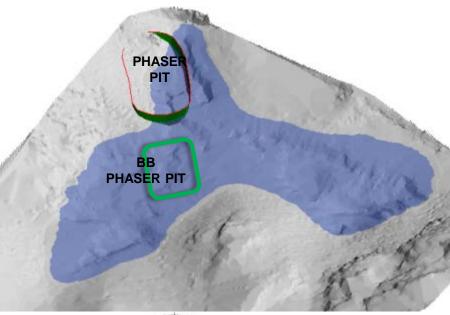
- Begins early July 2016
- → Bathymetry completed July 20th, 2014, the Phaser lake water elevation was at 139.732melev representing a total lake volume of 514,549m³.
- To mine Phaser Pits, a total of 405,665m³ which will represent up to 30 days of pumping using an HL250
- Fishout Begins early July 2016 (3 weeks)
- First phase of dewatering, 354,347m³ of water would need to be removed from the Phaser Lake.

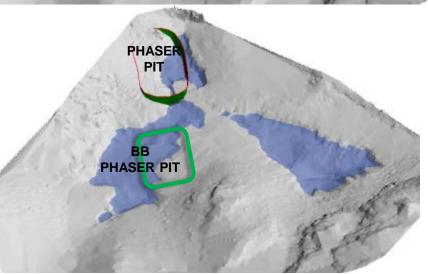
Dewatering Phase 2 – ~ August

- Fishout is completed within 3 small basins in August (last 2 weeks of August)
- the water level in the Pond will be reduced to elevation 137.4melev by removing 32,790m³ of water

Dewatering Phase 3 and 4 – ~ September to October

Complete the dewatering – pump an additional 29,388 m3.





VAULT ATTENUATION POND AND DEWATERING

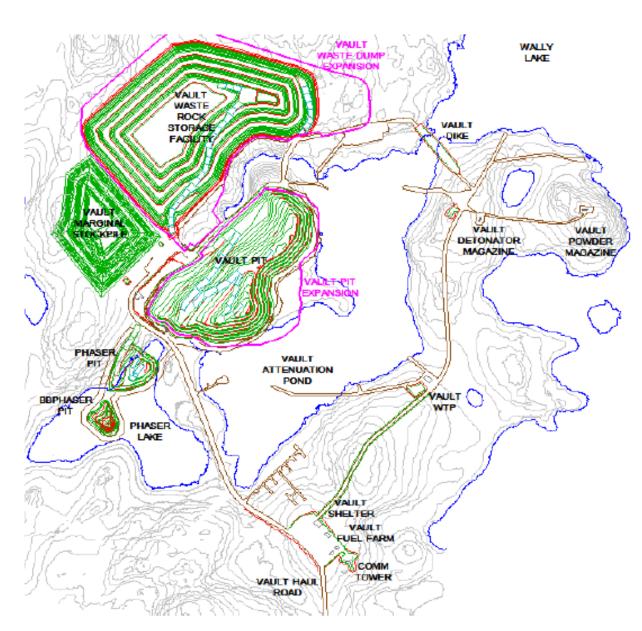




PHASER LAKE DEWATERING



- Phaser Lake dewatering
- Water will either be will be stored in the Vault Attenuation Pond.
- If required will be treated at the Vault WTP for TSS and will meet Type A Water License requirements
- MMER sampling will be completed
- Dikes and Dewatering plan will be followed.



PHASER LAKE DEWATERING



- The suspended solids removed by the Water Treatment Plant (WTP) consist of lake-bottom sediment stirred up during dewatering.
- These solids are referred to as WTP. sludge. The sludge are essentially lake bottom material.
- 7 The sludge will be placed back into the Vault Attenuation Pond and will become lakes sediments.
- 7 This same process was followed during the use of the WTP at the Portage Attenuation pond.



RE-FLOODING



- AEM committed in the original Meadowbank FEIS water management plan to monitor the Wally Lake water level to ensure that during closure and refilling of the pits, that Wally Lake and the lakes downstream are not significantly impacted.
- 7 This commitment extends to Phaser Pit reflooding management and practices.
- As per NWB Type A Part D Item 5 AEM has developed a protocol for monitoring and maintaining water levels in Wally Lake within the natural variation.
- 7 If an extreme "driest 10-year" period occurs, AEM will adjust the reflooding practices to ensure the Part D Item 5 is respected. The reflooding of the Vault Pits then the time to fully re-flood these pits would be extended. In its closure plans, AEM has committed to remain in management control of the site until this reflooding has been completed and until it can be shown that the in pit water quality is suitable to allow the re-flooded pits to be reconnected to Wally Lake.



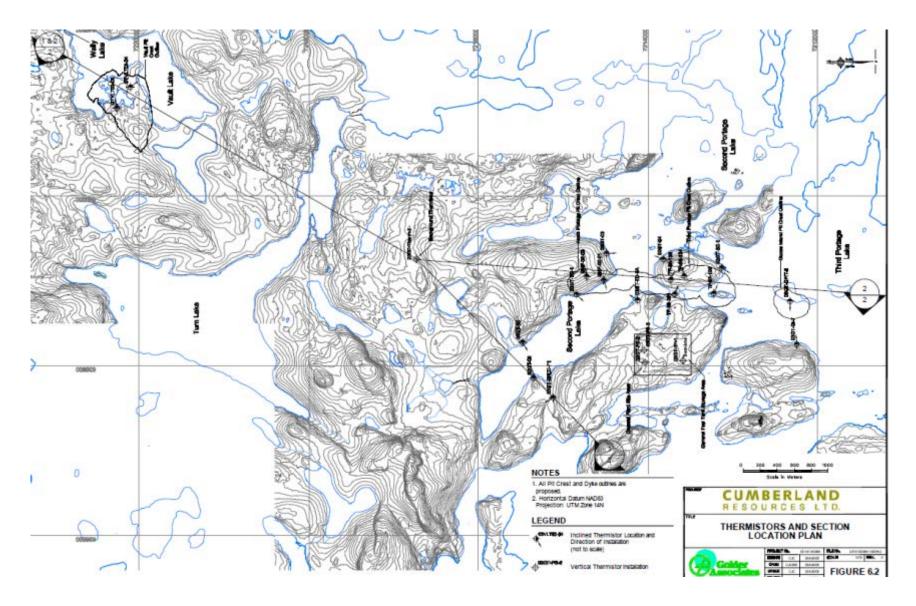
GROUNDWATER INFLOWS



- AEM proposes to will deal with any future groundwater inflows from the shallow active layer into the Phaser and Phaser BB pits in the same manner proposed and previously approved by the NWB for the Vault Pit.
- Any groundwater inflows that could develop and report to the pit at closure or possible talik formation will be considered and will contribute to pit reflooding.
- The water quality will be monitored, including the sampling of any stratification of the water column in the flooded open pit.
- As per the commitments made in the Closure and Reclamation Plan AEM would not breach the Vault Dike until the water quality meets CCME Criteria for the Protection of Aquatic Life or other site specific criteria developed for parameters not subject to CCME (i.e. background levels).
- Based on our experience from the mining of the Vault Pit in the summer of 2014 and 2015 we do not see an issue with groundwater inflows into the Phaser and Phaser BB pits.
- A talik may well develop below the re-flooded Vault and Phaser combined pit but this talik is not likely to extend beyond the edge of the flooded pit.

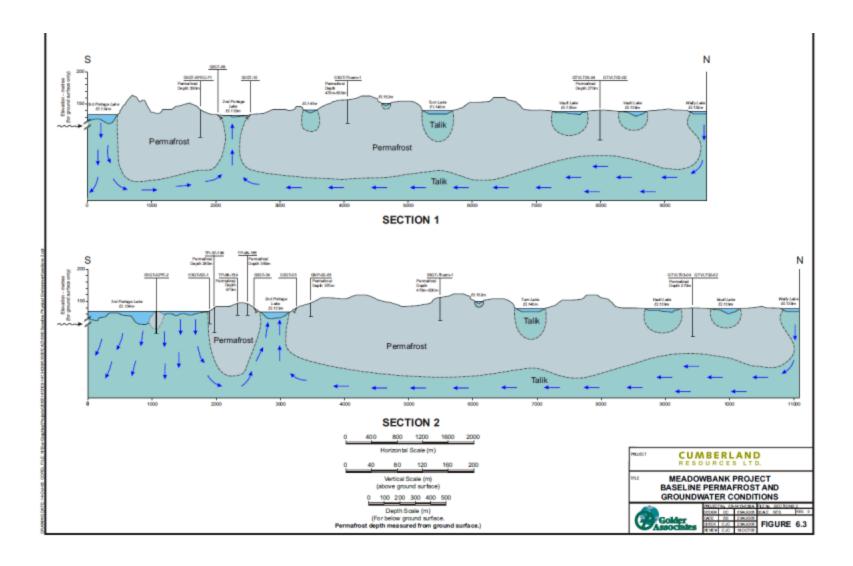
PERMAFROST





PERMAFROST

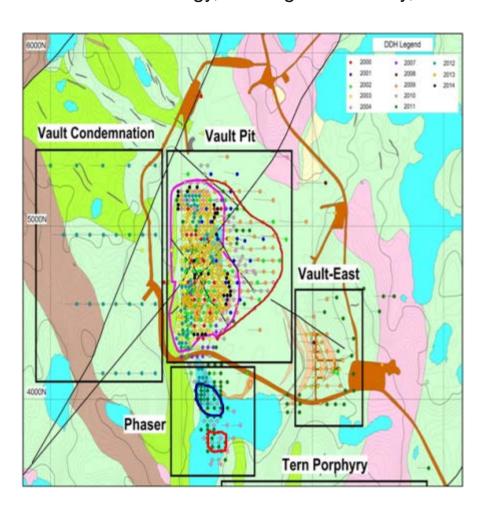


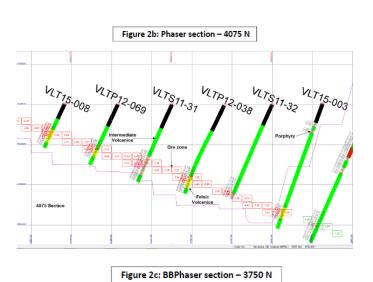


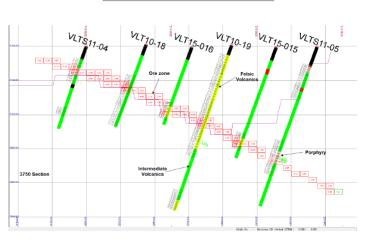
WASTE ROCK MANAGEMENT



Same Lithology, same geochemistry, same method for segregating waste



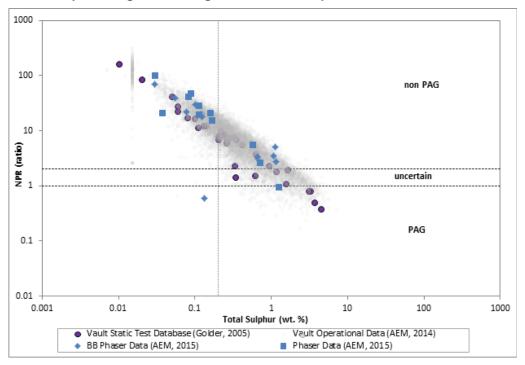




WASTE ROCK AND ARD MANAGEMENT



- A series of representative drill core samples was sent to the lab for standard ABA testing. The results have recently come back from the lab. The following is an early summary of what we are learning from this group of ABA tests.
- All BB Phaser and Phaser samples analyzed follow a similar trend to the Vault data as shown in the figure below. All samples are non-PAG with the exception of one sample of intermediate volcanic (V9) from the BB Phaser pit (BBPhaser-001), which reports an NPR value of 0.6 and is confirmed by an acidic NAG pH of 4.0. This sample reports low sulphur content (0.1%) and is outside of the trend observed for the Vault pit data.
- So all-in-all, the samples from Phaser and BB Phaser pits follow the same trend previously seen for the Vault Pit as was previously predicted and thus using the existing operational sampling/monitoring techniques that we currently apply at both Vault and Portage pits will be adequate to identify and manage any potentially acid generating rock that may be encountered.



AIR QUALITY AND NOISE



- The generation of dust and emissions was identified as a potential effect generated by the mine activity in Vault Pit Area and hauling between the Vault Pit and the Meadowbank mill.
- 7 There is a small increase in overburden stripping, excavation and mine activity in the Vault expansion to include BB Phaser Pit and Phaser Pit, but the increase is within the original project footprint.
- However there are no additional mining equipment or haul trucks required or planned for this expansion and existing dust mitigation plans will be followed (i.e. a dedicated water truck is presently in use around the Vault operations).
- The related changes to air quality and noise is insignificant and the dust control and noise abatement strategies will apply to the expansion; therefore the BB Phaser and Phaser Pit operations is considered unchanged from the predictions made in the original FEIS* for air and noise.



TERRESTRIAL ECOSYSTEM

VEGETATION



- The loss of vegetation and vegetation degradation were identified in the original FEIS as a potential effect as a result of operations at Vault Pit.
- Pit stripping is primarily within Phaser Lake, thus the direct loss of vegetation is not expected to significantly change from the original predictions. It is anticipated that only 3.94 ha of terrestrial vegetation is lost as compared to 867 ha which were originally approved.
- Current mine site ELC unit losses amount to 775.71 ha of lost habitat, which is a difference of 91.13 less than predicted in the original FEIS (AEM, 2015, wildlife monitoring report). As a result, this additional loss of lichen-rock and Heath tundra habitat is within the original impact predictions.
- Monitoring and mitigation strategies remain unchanged during Phaser Pit and BB Phaser Pit operations; the original predictions for impacts to vegetation are still applicable and are not expected to significantly change due to the Vault expansion, which is primarily in Phaser Lake.

RAPTORS, BREEDING BIRDS AND WATERFOWL



- 7 The potential effects on raptors, birds and waterfowl were identified in the FEIS due to Vault Pit mining activity. Specifically, loss and disturbance of foraging habitat, mortality due to collisions with traffic, reduction in habitat use due to noise, habitat degradation due to dust and emissions, and potential for increased contaminant loading in prey. Similar effects on raptors and breeding birds are not expected to significantly be impacted. None of these potential effects have been observed to date during the initial mining of Phaser Pit and BB Phaser Pit.
- 7 Despite the temporary loss of Phaser Lake waterfowl habitat, there are no significant changes predicted due to waterfowl habitat loss as only 1 water bird (1 common loon was observed in 2005 on Phaser Lake, pers. comm. Martin Gebauer on May 2, 2014) has been observed occupying Phaser Lake.
- Similar monitoring and mitigation strategies will be implemented as originally proposed and currently applied; the original predictions for impacts to raptors, other breeding birds and waterfowl are still applicable and are not expected to significantly change due to the expansion into Phaser Lake.

MAMMALS AND UNGULATES



- 7 The potential effects on mammals and ungulates were identified in the FEIS due to Vault Pit mining activity. Specifically, loss and disturbance of foraging habitat, mortality due to collisions with traffic, reduction in habitat use due to noise, habitat degradation due to dust and emissions, and potential for increased contaminant loading in prey.
- 7 None of these potential effects have been observed to date during the initial mining of the Vault Pit.
- 7 No significant residual impacts on mammals and ungulates were anticipated; this remains unchanged with the additional operations of BB Phaser Pit and Phaser Pit.

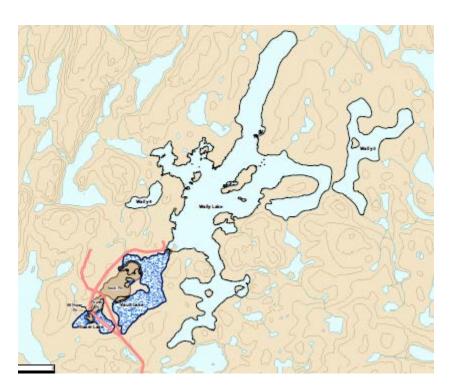


FISH AND FISH HABITAT

FISH COMPOSITION OF PHASER LAKE

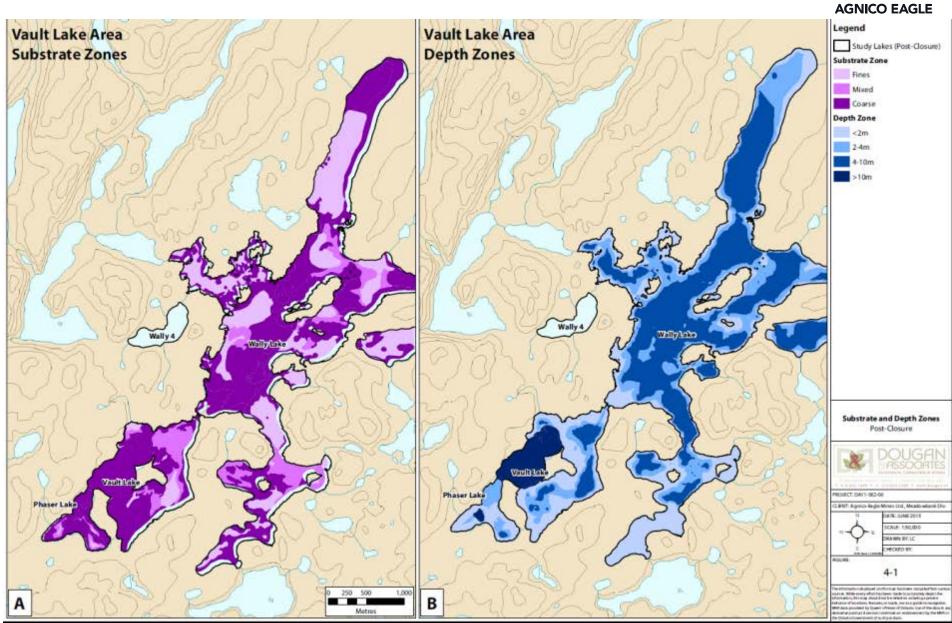


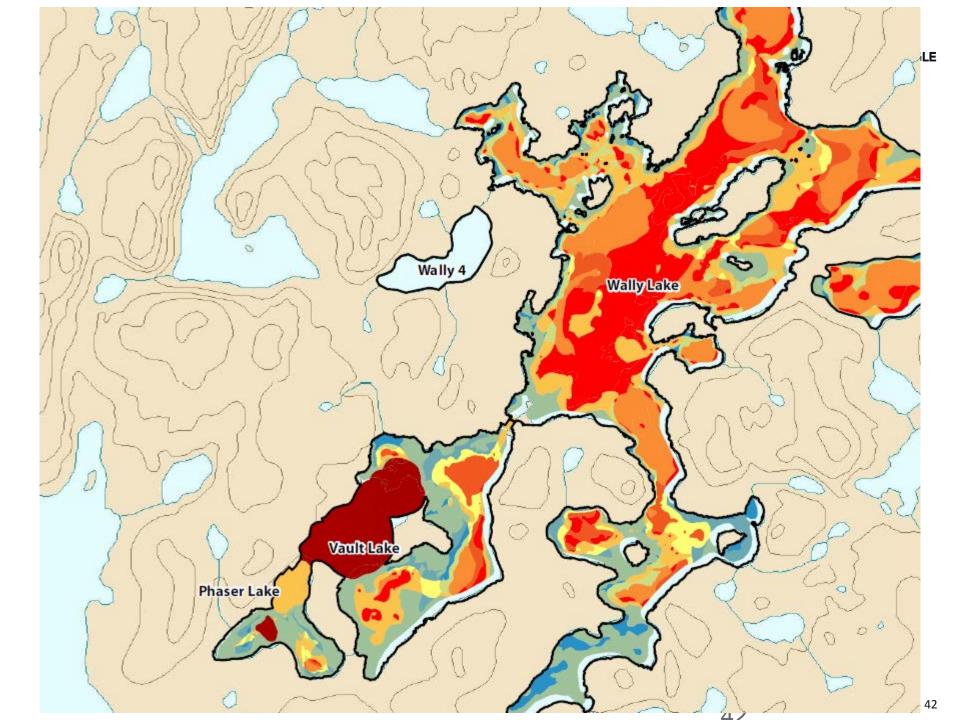
- Land locked or off line lake
- Maximum depth of ~5 meters
- Baseline studies completed in 2005 and 2006 and followed up in 2011
- → Biomass Lake trout (67%) and Round whitefish (32%) and Burbot (1%); no arctic char











VAULT PIT AND PHASER PITS

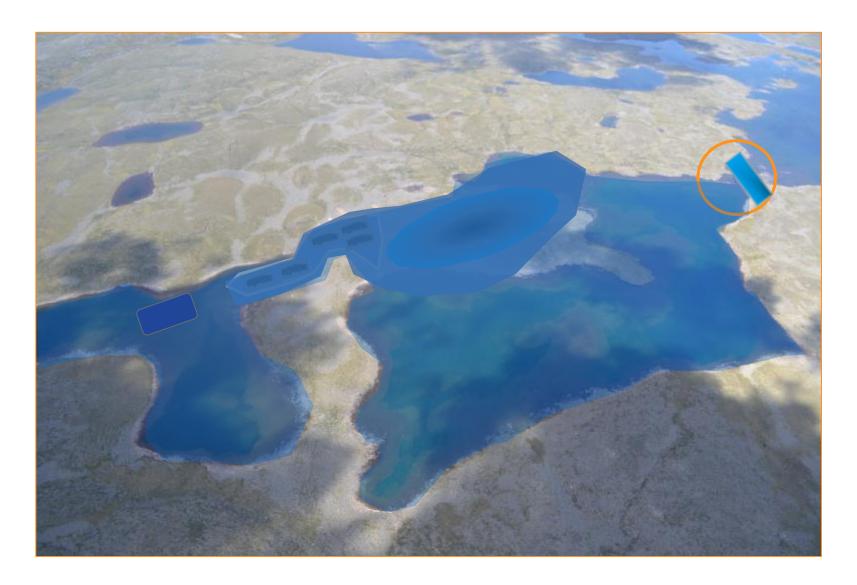




Lake trout were collected in 2005, but not in 2004, passing between Vault and Wally



VAULT PIT MINING AND CLOSURE – OFFSETTING – OPENING UP ACCESS TO WALLY LAKE AND OVERWINTERING HABITAT



PROPOSED OFFSETTING MEASURES



- Offsetting has already been considered and included in Vault Pit offsetting under DFO Authorization NU- 03-0191.4 (as we originally agreed).
- Offsetting Addendum was submitted to NIRB and DFO to include both Phaser Pit and BB Phaser Pit
- Calculated a loss of 5.89 HUs
- Offsetting includes backfilling a portion of Phaser Pit (create shoals) and reflooding and connect to Phaser To Vault To Wally Lake
- → A total gain of 13.22 HUs



SOCIAL ECONOMIC AND CULTURAL COMPONENTS

SOCIAL ECONOMIC AND CULTURAL COMPONENTS



- The Phaser pit in isolation from all other components of the Meadowbank Mine, including the mill and all support facilities (camp, warehouse, maintenance etc.) then mining of the Phaser Pit will create approximately 460 person days of employment in the mine related skills (drilling, blasting, hauling, etc.). This is employment of 17 persons over 27 to 30 days.
- The proposed extension of the Vault Pit into Phaser Lake will not materially change the socio-economic and cultural effects that have and continue to be observed in Baker Lake and other Kivalliq communities resulting from the Meadowbank Mine.
- Overall these effects have been viewed as being net positive to the residents of Baker Lake and the Kivalliq region of Nunavut (that is the positive effects have been viewed as being of greater importance than the negative effects).
- 7 This proposed extension will allow mining and milling activities at the Meadowbank Mine to continue for approximately one additional month beyond the current planned end of mining in late 2017. Consequently the proposed extension will extend these effects (both positive and negative) for one additional month.
- The Socio-economic Monitoring Committee and the socio-economic monitoring program will apply to this proposed amendment.



ARCHAEOLOGY

ARCHAEOLOGY



- No new archaeological sites were identified within the Vault Expansion area (FMA Heritage Inc., 2010), as a result the original predicted impacts in the FEIS remain unchanged.
- 7 It is important to note that only a very small portion of Phaser Pit is on land, while the majority of the operations is on water.





QUESTIONS?

















