# Appendix A2

# 2014 Mine Plan V2



# MEADOWBANK GOLD PROJECT

# Production Lease KVPL08D280 2014 Mine Plan Version 2

February 2014

#### **EXECUTIVE SUMMARY**

Condition 5.09 of Production Lease KVPL08D280 for the Meadowbank Gold Project states:

On or before January 1<sup>st</sup> in each year of the Term, AEM shall deliver to KIA its annual Mine Plan for the next calendar year, detailing at least the following:

- (i) a description of the activities and work that AEM proposes to perform in that year on the Leased Land, together with a listing of major equipment to be brought onto the Leased Land; and
- (ii) a description of the topographical features and any natural or manmade features, structures, works and waters that may be affected.

This document presents the 2014 Annual Mine Plan for the Meadowbank Gold Project.

The Meadowbank gold mine began the operations phase of the project in February 2010, and thus, is entering its five year of operations. In addition to routine activities throughout the 2014 season, a number of secondary construction/modification projects will be undertaken near the main mine site area and Vault area, and dewatering activities will be completed in the Vault area. Construction of the Central Dike will resume in 2014.

Environmental monitoring (wildlife, aquatic effects, groundwater, noise and air) will continue through 2014 in support of all operational undertakings at the Meadowbank site as required by the NWB Type A Water License 2AM-MEA0815, NIRB Project Certificate No.004, DFO authorizations, and MMER regulations.

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#### **SECTION 1** • INTRODUCTION

The Meadowbank gold mine began the operations phase of the project in February 2010, and thus, is entering its five year of operations. In addition to routine activities throughout the 2014 season, a number of secondary construction/modification projects will be undertaken near the main mine site area and Vault area, and dewatering activities will be completed in the Vault area. Construction of the Central Dike will resume in 2014.

The following sections outline the exploration, construction, operation and environmental activities planned for 2014 at the Meadowbank Gold Project, conducted in accordance with Production Lease KVPL08D280.

## **SECTION 2** • 2014 PLANNED EXPLORATION ACTIVITIES

The 2014 exploration program for the Meadowbank Gold Project area will be conducted by the Exploration Division of Agnico Eagle Mines Ltd. Consequently, this work will be performed under KIA Commercial Exploration Lease KVCL303H305.

#### SECTION 3 • 2014 PLANNED CONSTRUCTION ACTIVITIES

Construction activities at the Meadowbank mine are mainly complete. There are a number of secondary projects and modifications to existing infrastructure that will continue in 2014. Major works were completed in 2013 for the production of Vault pit beginning of 2014.

#### 3.1 DIKE CONSTRUCTION

In 2014, dike construction and water management activities will include the following:

- Construction of Central Dike Phase 3 (to El. 130m); and
- Finalize dewatering of Vault Lake.

#### SECTION 4 • 2014 PLANNED OPERATION ACTIVITIES

#### 4.1 MINING PLAN

In 2014, AEM mining plan is to operate Portage, Goose and Vault pits at the Meadowbank mine site. A total of 33.5 Mt of rock will be hauled from these three pits during the year. The mine plan consists of moving 28.9 Mt of waste rock and 4.2 Mt of ore from the open pits and 0.4 Mt of ore from the stockpiles.

11.2 Mt of material will be mined out from Portage pit and by the second half of the year the mining activities in Portage will be focused in its ultimate phase. Goose pit will be almost depleted by the end of the year with a total production of 4.6 Mt of material and Vault pit will start commercial production ramping-up to a total of 17.3 Mt. According to the plan, no low grade material (1.05 g/t) will be hauled to the mill in this year.

#### 4.1.1 Portage Pit

Portage pit will see its phase 2 and 3 depleted by end of the second quarter of 2014 and the mining activities will be focused in the ultimate phase by the second half of 2014 until the end of life of mine; the ultimate phase will take place in the North and South ends of Portage.

The mine plan in Portage for next year is to move 11.2 Mt of rock from which, 9.7 Mt will be waste and 1.5 Mt will be ore. This translates to a stripping ratio of 6.5 to 1. The ore coming from Portage will have an average of 3.06 g/t. The Portage stockpiles will feed the mill with 0.2 Mt of ore at a grade of 3.10 g/t.

#### 4.1.2 Goose Pit

Goose pit will be almost depleted by the end of 2014, leaving just ~137,000t for January 2015 to finish mining in Goose.

The mine plan for 2014 in Goose is to haul approximately 4.6 Mt of rock from which, 3.3 Mt will be waste and 1.3 Mt will be ore. The ore coming from Goose will have an average of 4.45 g/t. The stripping ratio in Goose is expected to be of 2.5 to 1.

#### 4.1.3 Vault Pit

Vault pit will start commercial production in this year, as it was expected in previous plans, we estimated to ramp-up production from 0.8 Mt to 1.7 Mt of total material per month as we progress and expand the mining activities along the year.

The mine plan for 2014 in Vault is to mine approximately 17.3 Mt of rock from which, 15.8 Mt will be waste and 1.5 Mt will be ore with an average mined ore grade of 2.61 g/t.

Waste removed from pre-stripping used to build the infrastructure of the pit was accomplished successfully in 2013; therefore no infrastructure construction is required in 2014. The Mine is located approximately 9 km North East of the Portage Pit Area. The Vault stockpiles will feed the mill with 0.2 Mt of ore at a grade of 2.30g/t.

Table 4.1 shows the 2014 Mine production schedule of Meadowbank on a monthly basis.

**Table 4-1 Mine Production Schedule** 

	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	2014
T. (   D. vi e v. D')													
Total Portage Pit  Total Ore mined from the pit t	93,258	213,927	183,933	160,270	235,458	223,775	85,757	29,603	80,304	8,284	89,776	65,916	1,470,260
Ounces   Oz.	9,150	23,940	15,361	16,244	21,831	18,026	7,836	2,314	10,227	998	10,541	8,216	144,683
Grade(g/t)	3.05	3.48	2.60	3.15	2.88	2.51	2.84	2.43	3.96	3.75	3.65	3.88	3.06
Overburden t	5,518				-				-	-	-		5,518
Waste t	1,249,724	1,047,073	985,755	847,729	844,542	766,225	697,382	683,397	609,696	731,216	624,224	673,584	9,760,548
Total	1,348,500	1,261,000	1,169,688	1,008,000	1,080,000	990,000	783,139	713,000	690,000	739,500	714,000	739,500	11,236,326
Total Goose Pit	1												
Total Ore mined from the pit t	109,096	88,852	119,368	93,120	135,918	146,452	85,110	84,770	130,162	77,905	125,615	109,325	1,305,693
Ounces oz.	19,436	12,643	19,604	14,611	20,771	19,726	14,097	13,536	18,050	9,035	12,874	12,627	187,012
Grade (g/t)	5.54	4.43	5.11	4.88	4.75	4.19	5.15	4.97	4.31	3.61	3.19	3.59	4.45
Overburden t	528,904	483,148	518,632	326,880	314,082	303,548	193,890	194,230	139,838	1 <u> </u>	70,385	93,675	3,292,306
Total	638,000	572,000	638,000	420,000	450,000	450,000	279,000	279,000	270,000	203,000	196,000	203,000	4,597,999
	· · · · · · · · · · · · · · · · · · ·	,	•	•	•	•	,	,	•	·	,	•	
Total Vault Pit			T 75.450	T 400.747	T 440,000		100.514	100 105	170 054	104 475	140.045	100 000	4 470 700
Total Ore mined from the pit t Ounces oz.	32, <u>695</u> 5,272	49,940 4,840	75,458 6,303	132,717 13,602	142,389	98,869 7,423	129,514 9,049	12 <u>9,435</u> 11,078	17 <u>0,051</u> 13,440	194,475 15,979	140,945 11,282	180,236 14,563	1,476,722 123,767
Ounces         oz.           Grade         (g/t)	5.02	3.01	2.60	3.19	2.39	2.34	2.17	2.66	2.46	2.56	2.49	2.51	2.61
Overburden t	416,595	271,403	506,188	442,414	1,750	1,400	78,575	163,275	-	-	-		1,881,600
Waste t	391,709	380,657	438,166	796,869	1,100,861	1,159,731	1,674,771	1,660,290	1,719,948	1,545,525	1,539,055	1,559,764	13,967,346
Total	841,000	702,000	1,019,811	1,371,999	1,245,000	1,260,000	1,882,860	1,952,999	1,889,999	1,740,000	1,680,000	1,740,000	17,325,668
TOTAL MINED FROM PITS													
Ore t	235,049	352,719	378,759	386,107	513,764	469,096	300,381	243,808	380,517	280,664	356,335	355,477	4,252,676
<u>Ounces</u>	33,859	41,423	41,268	44,457	53,538	<u>45,175</u>	30,982	26,927	41,717	<u> 26,012</u>	34,698	35,407	455,462
Grade (g/t) Overburden	4.48 422,113	3.65	3.39 506,188	3.58 442,414	3.24	3.00	3.21	3.44	3.41	2.88	3.03	3.10	3.33 1,887,118
Waste	2,170,337	1,910,878	1,942,553	1,971,479	2,259,485	2,229,504	2,566,043	2,537,916	2,469,482	2,401,836	2,233,665	2,327,023	27,020,201
Total Mined from Pits t	2,827,499	2,535,000	2,827,500	2,799,999	2,774,999	2,700,000	2,944,999	2,944,999	2,849,999	2,682,500	2,590,000	2,682,500	33,159,994
Total from Portage, Goose and Vault	Stockniles												
Total Ore mined from the pit t	125,946		T — — — -	T — — — ·	T — — —	Ţ — — — —	60,614	81,196	]	80,331		5,518	353,605
	8,528	-	-	-	-		7,400	7,421		6,272	-	431	30,052
Ounces oz. Grade (g/t)	2.11	-	-	-		-	3.80	2.84	-	2.43		2.43	2.64
Total Ore Milled *   t	360,989	288,994	367,015	348,984	325,016	354,996	360,989	325,016	348,984	360,989	313,992	360,989	4,116,953
Total Waste Hauled t	2,592,450	2,182,281	2,448,741	2,413,892	2,261,235	2,230,904	2,644,618	2,701,191	2,469,482	2,401,836	2,233,665	2,327,023	28,907,319
Total Material Hauled t	2,953,445	2,535,000	2,827,500	2,799,999	2,774,999	2,700,000	3,005,613	3,026,195	2,849,999	2,762,831	2,590,000	2,688,018	33,513,600

<sup>\*</sup> The Ore Milled is just Ore from the Pits and from the stockpiles sent to the Mill, some Ore from the Pits will be stockpiled at the same time.

#### 4.2 WASTE ROCK MANAGEMENT PLAN

The Waste Management Plan for 2014 is to maximize waste storage facility (WSF) utilization and minimize haulage cycle times which will, in turn, minimize the greenhouse gas emissions and impact on the environment.

Throughout the year most of the potentially acid generator (PAG) material from Portage and Goose pits will be moved to the pit fill dump, this area is the depleted central portion of Portage pit, available now for PAG rock; the dump will reach a maximum elevation of 127m masl. Some PAG rock will be sent to the PAG rock storage facility (PRSF) and the non-acid generator (NAG) will be hauled to place as a 4 m layer of NAG cover to cap the PRSF. NAG will also be stored at the NAG rock storage facility (NRSF) to build a NAG inventory for the closure plan of the mine.

Some additional NAG locations are the Portage NAG stockpile and Goose dump, this latest one used also as inventory for the closure plan of the mine.

Some construction projects will also require NAG material such as the North cell capping by the end of 2014. Some PAG will be required to build the Central dike on the West side of Portage pit.

The Vault dump will store NAG material from Vault pit. It is expected that almost all the material from Vault pit will be NAG, if any PAG rock is found it will be placed in the core area of the dump and capped with NAG material.

### 4.3 EQUIPMENT

Table 4.2 lists the equipment currently at Meadowbank. No new equipment will be bought to site in 2014.

**Table 4-2 Equipment currently at Meadowbank** 

Manufacturer	Unit Number	Model	Description
CATERPILLAR	61BAC03	307	BACKOE CATERPILLAR 307
CATERPILLAR	61BAC04	330	BACKOE CATERPILLAR 330D
CATERPILLAR	61BAC05	345D	BACKOE CATERPILLAR 345DQ
CATERPILLAR	61BAC06	385C	BACKOE CATERPILLAR 385C
CATERPILLAR	61BAC07	345D	BACKOE CATERPILLAR 345DL
KOMATSU	61BAC08	PC1250	BACKOE PC1250 KOMATSU
CATERPILLAR	61BAC09	390DL	BACKOE 390DL CATERPILLAR
TEREX	61BAC10	RH120	BACKOE TEREX O&K RH120-E
TEREX	61BAC11	RH120	BACKOE BUCYRUS RH120-E
CATERPILLAR	61BAC13	6030	BACKOE CAT6030
CATERPILLAR	61DOZ01	D8T	DOZER D8T CATERPILLAR
CATERPILLAR	61DOZ02	D9T	DOZER D9T CATERPILLAR
CATERPILLAR	61DOZ03	D8R	DOZER D8R CATERPILLAR
CATERPILLAR	61DOZ05	D9T	DOZER D9T CATERPILLAR
CATERPILLAR	61DOZ06	D9T	DOZER D9T CATERPILLAR
CATERPILLAR	61DOZ07	D9T	DOZER D9T CATERPILLAR
CATERPILLAR	61DOZ08	834H	DOZER 834H CATERPILLAR
CATERPILLAR	61DOZ09	D6T	DOZER D6T CATERPILLAR
CATERPILLAR	61GRA01	16H	MOTOR GRADER 16H CAT
CATERPILLAR	61GRA02	160H	MOTOR GRADER 160H CAT
CATERPILLAR	61GRA03	16M	MOTOR GRADER 16M CAT
CATERPILLAR	61GRA04	16M	MOTOR GRADER 16M CAT
CATERPILLAR	61GRA05	16M	CATERPILLAR GRADER 16M
CATERPILLAR	61HTR01	777F	HAUL TRUCK 100T CATERPILLAR
CATERPILLAR	61HTR02	777F	HAUL TRUCK 100T CATERPILLAR
CATERPILLAR	61HTR03	777F	HAUL TRUCK 100T CATERPILLAR
CATERPILLAR	61HTR04	777F	HAUL TRUCK 100T CATERPILLAR
CATERPILLAR	61HTR05	777F	HAUL TRUCK 100T CATERPILLAR
CATERPILLAR	61HTR06	777F	HAUL TRUCK 100T CATERPILLAR
CATERPILLAR	61HTR07	777F	HAUL TRUCK 100T CATERPILLAR

CATERPILLAR	61HTR08	777F	HAUL TRUCK 100T CATERPILLAR
CATERPILLAR	61HTR09	773E	HAUL TRUCK 50T CATERPILLAR
CATERPILLAR	61HTR10	777B	TOW HAUL 120T
CATERPILLAR	61HTR11	777F	HAUL TRUCK 777F CATERPILLAR
CATERPILLAR	61HTR12	777F	HAUL TRUCK 777F CATERPILLAR
CATERPILLAR	61HTR13	777F	HAUL TRUCK 777F CATERPILLAR
CATERPILLAR	61HTR14	777F	HAUL TRUCK 777F CATERPILLAR
CATERPILLAR	61HTR15	773D	WATER TRUCK 773D CATERPILLAR
CATERPILLAR	61HTR20	785B	HAUL TRUCK 150T CATERPILLAR
CATERPILLAR	61HTR21	785B	HAUL TRUCK 150T CATERPILLAR
CATERPILLAR	61HTR22	785B	HAUL TRUCK 150T CATERPILLAR
CATERPILLAR	61HTR23	785D	HAUL TRUCK 150T CAT 785D
CATERPILLAR	61HTR24	785D	HAUL TRUCK 150T CAT 785D
CATERPILLAR	61HTR25	785D	HAUL TRUCK 150T CAT 785D
CATERPILLAR	61HTR26	785C	HAUL TRUCK 150T CAT 785C
CATERPILLAR	61HTR27	785C	HAUL TRUCK 150T CAT 785C
CATERPILLAR	61HTR28	785C	HAUL TRUCK 150T CAT 785C
CATERPILLAR	61HTR29	785D	HAUL TRUCK 150T CAT 785D 2011
CATERPILLAR	61HTR30	785D	HAUL TRUCK 150T CAT 785D 2011
CATERPILLAR	61LOA01	IT14G	LOADER IT14G CAT
CATERPILLAR	61LOA02	IT14G	LOADER IT14G CAT
CATERPILLAR	61LOA03	992G	LOADER 992G CATERPILLAR
CATERPILLAR	61LOA04	992G	LOADER 992G CATERPILLAR
CATERPILLAR	61LOA05	420EIT	LOADER 420E IT CAT (PEPINE)
CATERPILLAR	61LOA06	966H	LOADER 966H CATERPILLAR
JOHN DEERE	61LOA08	TC44H	LOADER TC44H JOHN DEERE
CATERPILLAR	61LOA09	966H	LOADER 966H CATERPILLAR
CATERPILLAR	61LOA10	980H	LOADER 980H CATERPILLAR
CATERPILLAR	61LOA11	420E	LOADER 420E CATERPILLAR
CATERPILLAR	61LOA12	980H	LOADER 980H CATERPILLAR
CATERPILLAR	61LOA13	992K	WHEEL LOADER 992K CATERPILLAR
CATERPILLAR	61LOA15	980K	LOADER 980K CATERPILLAR
CATERPILLAR	61LOA16	IT14G	LOADER IT14G CATERPILLAR
ATLAS COPCO	61RBD01	DM45	ROTARY BLAST DRILL 6" ATLAS
ATLAS COPCO	61RBD02	DM45	ROTARY BLAST DRILL 6" ATLAS
ATLAS COPCO	61RBD03	DM45	ROTARY BLAST DRILL 6" ATLAS
ATLAS COPCO	61RBD04	DM45	ROTARY BLAST DRILL 6" ATLAS
ATLAS COPCO	61RBD05	CM785	LONG HOLE DRILL CM785
ATLAS COPCO	61RBD06	DML	DML DRILL 6" ATLAS

ATLAS COPCO	61RBD07	DML	DML DRILL 6" ATLAS
ATLAS COPCO	61RBD08	DML	DML DRILL 6" ATLAS

#### SECTION 5 • MONITORING

#### 5.1 WILDLIFE MONITORING

#### 5.1.1 Harvest Study (Condition of Project Certificate)

The hunter harvest study is becoming increasingly successful each year. The increased success is due to regular visits and building of strong relationships with local harvesters, the HTO and GN DOE. The purpose of the hunter harvest study is to monitor and document the spatial distribution, seasonal patterns, and harvest rates of hunter kills and angler catches within the Meadowbank LSA. The hunter harvest study monitoring program will continue on an annual basis.

#### 5.1.2 Raptor Nest Surveys (Condition of Project Certificate)

The raptor nest survey monitoring program has been designed to confirm that mine-related activities do not result in inadvertent negative effects on nesting raptors. AEM will survey historical sites along the AWR and periodically visit the nests to determine site occupancy in conjunction with AWPAR road survey. AEM is working closely with Alastair Franke (Arctic Raptors Inc.) to assist in managing and mitigating any potential disturbance to raptors and possible nest sites.

#### 5.1.3 Caribou Satellite-Collaring Program

Agnico Eagle is assisting the GN in a Caribou satellite-collaring program within the Meadowbank Regional Study Area (RSA). Information on the status and location of various herds that use the RSA at different times of the year is an important component of on-going monitoring and management efforts at the mine site and along the AWPAR. The collaring program was initiated in May 2008 with subsequent deployments in November 2009, April 2011, and in May of 2013.

The satellite-collaring program was initially designed to continue for five (5) consecutive years in accordance with the TEMP. The total number of collars supported by Agnico-Eagle in the study to date is 25 (in addition to 18 collars supported by other companies). In collaboration with the GN DOE Wildlife branch, AEM finalized a 3- year Memorandum of Understanding to contribute to the regional ungulate monitoring program. The majority of the contribution will go towards continued caribou collaring but will also assist in a detailed Qaminariaq herd survey planned for 2014. These collaring data will be used to assist AEM in anticipating large herds passing near mine development and informing management decisions.

#### 5.1.4 Checklist Surveys and Wildlife Logs

At the mine site, noteworthy wildlife sightings are recorded in an on-site wildlife log, which is tabulated at the end of each year and included in the annual wildlife monitoring summary report. Meadowbank employees are also encouraged to record wildlife sightings on a daily basis.

#### 5.1.5 AWPAR Road Surveys

The AWPAR survey monitoring program has been designed to evaluate sensory disturbance to wildlife, particularly Caribou and Muskox, utilizing habitats adjacent to the road. Road kill information and large Caribou herds are also documented to facilitate the implementation of adaptive management strategies. The terrain on both sides of the road (to a maximum horizontal distance of 1 km) is surveyed as the vehicle progresses at a maximum speed of 30 km/hr. For each sighting, the vehicle is safely parked in a road pullout and UTM coordinates are recorded along with estimated distance of animals from the road, habitat type and direction of movement.

The AWPAR survey monitoring program duration will continue on an annual basis.

#### 5.1.6 Screening Level Risk Assessment

As a requirement for the Meadowbank Gold site's Environmental Health Monitoring Plan (NIRB - Condition 67), AEM will be collecting field data in 2014 in support of a Screening Level Risk Assessment (SLRA) that will be reported in the 2014 annual report. This report follows the baseline SLRA completed by Azimuth Consulting Group Inc. in 2006, and the 2011 report completed by Baxter Consulting and will provide an updated evaluation of soil and vegetation tissue chemistry and will provide an assessment of risk to resident birds, mammals and local harvestors during operation of the mine.

#### 5.2 AQUATIC EFFECTS MONITORING PROGRAM

#### 5.2.1 Core Receiving Environment Monitoring (CREMP)

The CREMP (formerly called the AEMP) has been implemented every year since 2006, with some modifications (e.g., station additions, parameter deletions/additions, sampling frequency and intensity), to improve the program or to comply with regulatory requirements (e.g., the NWB Type A water license). This monitoring program will continue throughout the operations and closure phases of the mine project. Monitoring in 2014 will continue to be conducted at 12 sampling stations (6 near field; 2 far-fields; 4 references) for limnology, water and sediment chemistry, phytoplankton and benthic invertebrate community. See Figure 1 to Figure 3 for the CREMP sampling location in 2014.

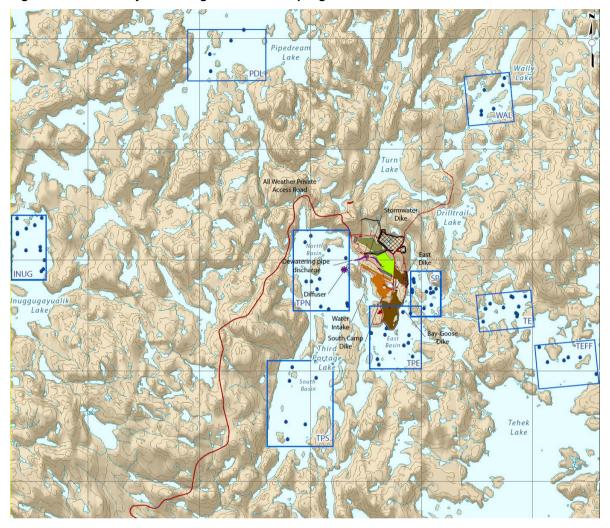


Figure 1: Water Quality Monitoring Areas and Sampling Location

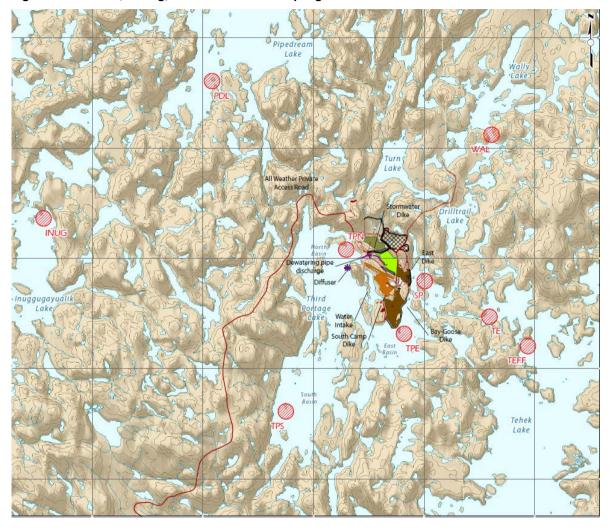


Figure 2: Sediment, Coring, and Invertebrate Sampling Areas

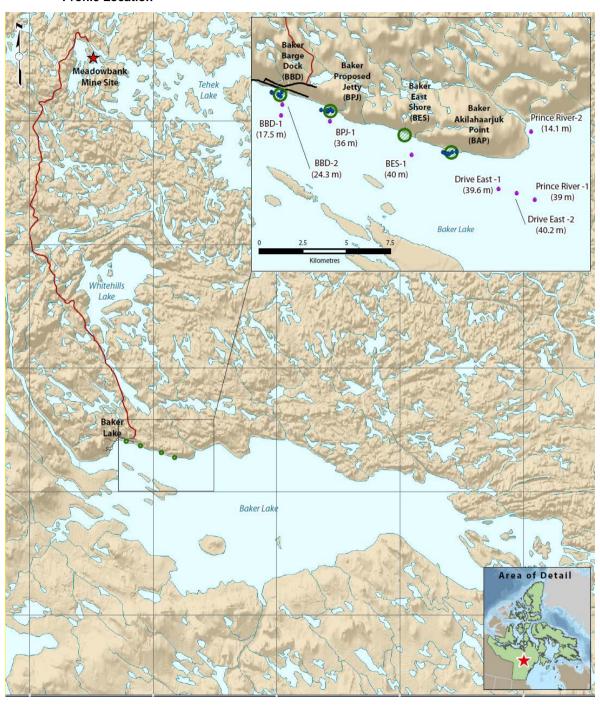


Figure 3: Baker Lake Water, Sediment, Coring and Benthic invertebrate Sampling Area and Limnology Profile Location

#### 5.2.2 Metal Mining Effluent Regulations (MMER) Monitoring

As of January 1, 2010, the Meadowbank mine became subject to the MMER regulations at the discharge of the dewatering process. In 2014, AEM will have three (3) discharge points subject to MMER regulations: Portage Attenuation Pond, Vault Attenuation Pond and East Dike Seepage. Consequently, AEM is monitoring this discharge in accordance with the MMER requirements. This included weekly sampling for metals, monthly toxicity testing, and monitoring water quality in the release and control areas of Third Portage Lake, Wally Lake and Second Portage Lake. Furthermore, in 2014, AEM will complete a study design and collect the field data as part of the Cycle 2 environment effects monitoring program. This program is regulated by Environment Canada, under MMER, and is designed specifically to evaluate the effects of effluent discharge on the receiving environment.

#### 5.2.3 Water Quality and Flow Monitoring

All water sampling conducted at the mine site and along the AWPAR designed to monitor the performance of the waste and water management systems for the project fall into this category. In 2014, AEM will continue to monitor the performance at the sewage treatment plant, tailings reclaim pond, Portage attenuation pond, Vault attenuation pond, pit sumps, seeps, bulk fuel storage facilities, freshwater usage volumes, water quality along the AWPAR, and all other monitoring requirements stipulated in NWB Type A water license 2AM-MEA0815. See Figure 4 and Figure 5 for all the 2014 water monitoring stations at Meadowbank Mine Site and Vault.

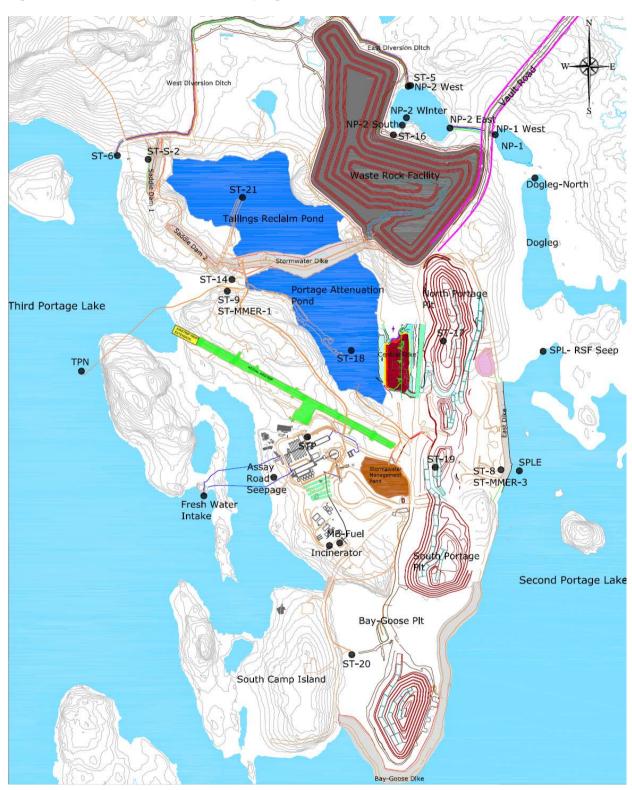


Figure 4: Meadowbank Mine Site 2014 Sampling Location

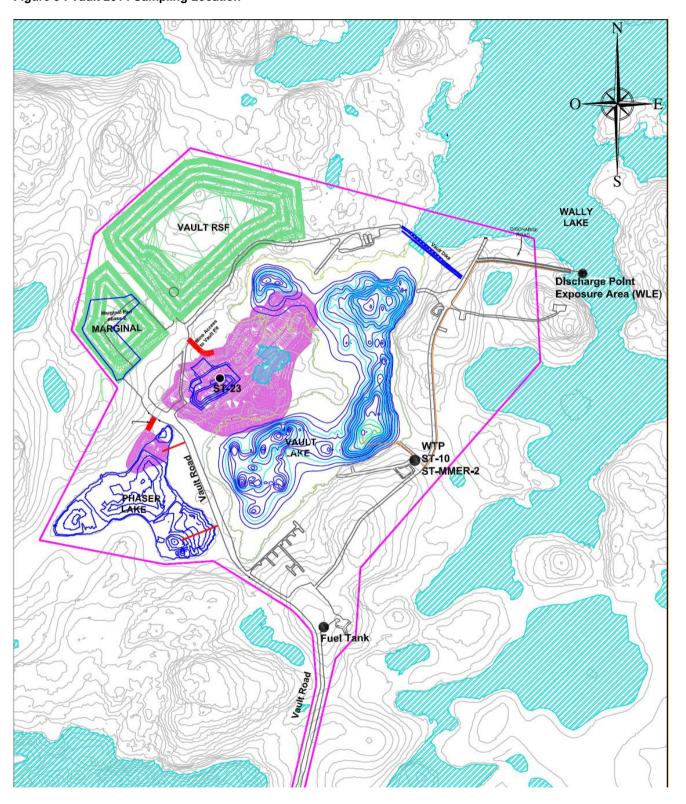


Figure 5 : Vault 2014 Sampling Location

#### 5.2.4 Seepage Water from Waste Rock Storage Facility

Monitoring of the seepage at Portage waste rock storage facility will continue in 2014 and particularly at freshet. AEM plans to continue our monitoring program at NP-2 Lake and will add sample locations in NP-1, Dogleg and Second Portage Lake (see Figure 4 above, approximate location for Dogleg-North and SPL-RSF Seep) and analyse for the following parameters as requested by KIA: pH, conductivity. turbidity, TDS, colour, anion scan, hardness, alkalinity, DOC, TOC, TSS, TP, TKN, total ammonia, NO<sub>3</sub>, NO<sub>2</sub>, ChI A (lake sites only), cyanide (WAD), total cyanide, total metals, dissolved metals, total cadmium, dissolved cadmium, total mercury, methyl mercury, temperature, and dissolved oxygen (% and mg/L).

AEM's work plan in 2014 will closely follow the Golder recommendations that can be found in the report "Rock Storage Facility Seepage - Meadowbank Gold Mine, Nunavut". The six recommendations are as follow:

- 1) AEM should continue to develop and maintain tailings beaches adjacent to RF1 and RF2 and to operate the Reclaim Pond towards the centre of the TSF. These are the key recommendations.
- 2) AEM should consider the installation of additional water management infrastructure which could take the form of a permanent collection and pumping system at the sampling station ST-16 current sump. Also, consideration should be given for contact water ditches and sumps in the surrounding areas of the RSF if additional seepages of contaminated water are observed in the future.
- 3) The seepage at station ST-16 should continue to be collected and redirected to the TSF and monitored (location, quantity, quality). Continued monitoring is strongly recommended during the winter for seepage water quantity monitoring and possible development of an ice plug in the RSF. The area at ST-16 should be kept clean of snow to allow visual observation and to ensure that water at ST-16 does not overflow over the till plug into Lake NP-2.
- 4) Regular inspections all around the RSF should be performed, particularly during freshet, to ensure that runoff or any observed seepage is controlled and monitored prior to being released into the environment if the analyses results meet the requirement.
- 5) AEM should continue to monitor the tailings and waste rock freeze back following the Thermistor Monitoring Plan in accordance with Part 1, Item 11 of the Type-A water license.
- 6) AEM should provide the results of the 2014 monitoring to Golder for review and comment.

#### 5.2.5 Assay Road Seepage

Monitoring of the Assay Road Seepage will continue in 2014. Currently the seepage area is frozen as are groundwater wells 201, 202 and 203. Samples are taken in TPL monthly and to date no contaminants have been detected. AEM has engaged EBA to perform an assessment and provide recommendations for 2014. The report is due January 31<sup>st</sup>, 2014. AEM will continue to monitor any seepage detected in the containment area (see Figure 6) in addition to the groundwater wells. EBA will provide recommendations for additional boreholes to delineate the plume, assist in the design and construction of an appropriate containment system before freshet and provide suggestions for the location of groundwater wells downstream of the seepage area. It is AEM's intent to follow the recommendations of EBA. Repairs of the containment systems in the mill have commenced and the intent is to have this completed prior to freshet. Once the Phase 2 work plan, based on EBA's recommendations, is prepared a copy will be provided to KIA (expect mid-February). The primary goal is to prevent any contamination from reaching TPL.

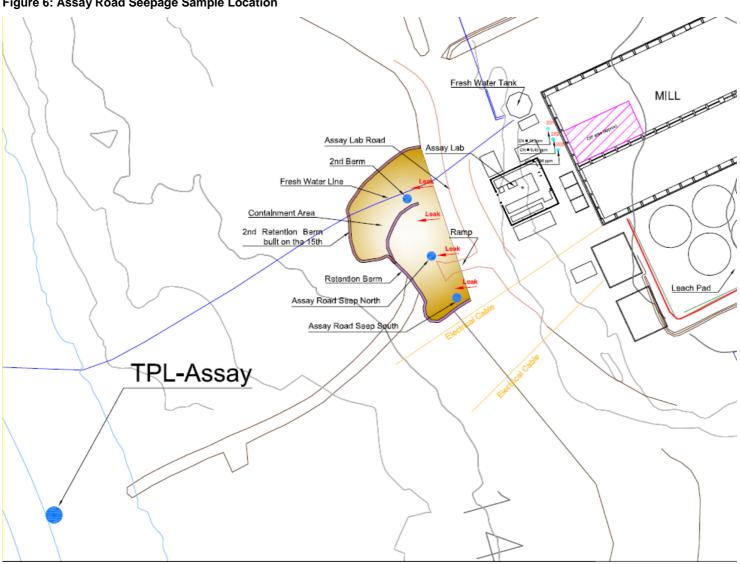


Figure 6: Assay Road Seepage Sample Location

#### 5.2.6 Blast Monitoring

The blast monitoring program will continue during 2014 in Second and Third Portage Lakes. The program will monitor blasting peak particle velocity and overpressure in the receiving environment and ensure that AEM uses the specific charge weight/delay/set back necessary to meet DFO requirements and ensure the stability of the dikes and mines site infrastructure.

#### 5.3 GROUNDWATER MONITORING PROGRAM

The groundwater monitoring program was conducted in August and September 2013. Monitoring well MW08-02 and MW08-03 was successfully sampled. AEM also obtained a sample of groundwater seepage from the Goose pit wall. Monitoring well MW11-01 was damaged in spring 2012 and was deemed inoperable, therefore no groundwater samples were collected and the well was subsequently decommissioned in July 2012. Monitoring well MW11-02 located east of the tailings storage facility could not be sampled due to a blockage comprised of well development tubing which prevented access to the formation groundwater. This well will be replaced in 2014.

#### 5.4 NOISE MONITORING PROGRAM

The Noise monitoring will continue in 2014 with sampling twice a year at the five monitoring locations established at the mine site.

#### 5.5 AIR MONITORING PROGRAM

AEM has conducted annual dustfall and air quality monitoring around the Meadowbank site since 2011. Two (2) passive  $NO_2$  sampler and four (4) dustfall collectors were installed on site in November 2011, with the first result received in December 2011. This air monitoring will continue on a monthly base in 2014.

## **SECTION 6** • LOGISTICS

Fuel, bulk goods and construction materials will be transported to site overland via the All Weather Private Access Road. Charter flights carrying cargo and personnel will be routed directly to the mine site via the Meadowbank airstrip.