



Appendix B.4

Final – Hydrological Modelling Assessment Report,
Golder Associates



REPORT

Fifteen Mile Stream Gold Project
Hydrological Modelling Assessment

Submitted to:

Atlantic Mining NS Corp

409 Billybell Way, Mooseland
Middle Musquodoboit, Nova Scotia
B0N 1X0

Submitted by:

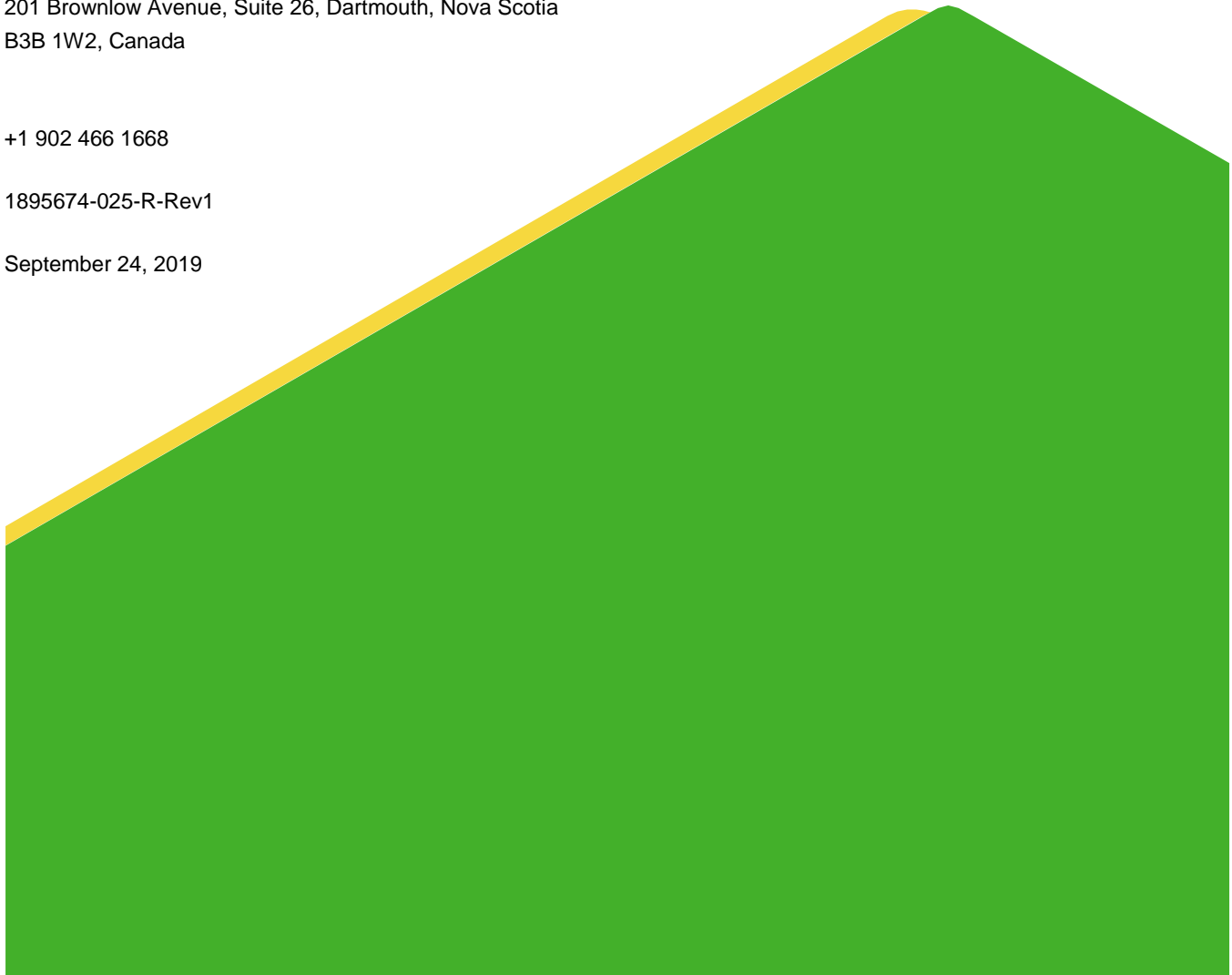
Golder Associates Ltd.

201 Brownlow Avenue, Suite 26, Dartmouth, Nova Scotia
B3B 1W2, Canada

+1 902 466 1668

1895674-025-R-Rev1

September 24, 2019



Distribution List

1 PDF Copy - Atlantic Mining NS Corp

1 PDF Copy - Golder Associates Ltd.

Executive Summary

Atlantic Mining NS Corp (AMNS), a wholly owned subsidiary of St. Barbara Ltd., is planning to develop the Fifteen Mile Stream Gold Project (the Project) located approximately 115 km east of Halifax, in Halifax County, in the province of Nova Scotia. Golder Associates Ltd. (Golder) has prepared hydrological models for the existing site conditions, as well as the operations and closure phases of the Project. The key objective of the hydrological modelling was to estimate the potential for change to surface water discharge in the receiving surface water environment that may occur as a result of the Project.

Hydrological models were developed using GoldSim Version 12.1. The modelling approach is a climate driven, water holding content-based watershed runoff simulation process, with integrated water inputs from process and site water contributions (e.g., effluent discharge, seepage). A stochastic modelling approach using a 56-year climate record provides a framework for the range of probabilistic climate conditions that the site and receiving surface water environment are likely to experience over the period of the Project.

The predicted potential changes for discharge, through the watersheds and receiving waterways, were compared between the existing conditions and those simulated during the operations and closure phases of the project. These potential changes were estimated and compared on a monthly timescale for dry, average, and wet climate conditions.

A discussion of the water quality predictions with respect to Project effects is presented in the EIS.

Table of Contents

1.0 INTRODUCTION	1
1.1 Project Description and Footprint	1
1.2 Baseline Hydrology	1
2.0 HYDROLOGICAL MODELLING METHODOLOGY	1
2.1 Model Framework	1
2.2 Model Phases	2
2.3 Watersheds	2
2.3.1 Watershed Delineations	2
2.3.2 Surficial Geology	3
2.4 Climate	6
2.5 Hydrological Simulation Components	6
2.5.1 Precipitation and Evaporation	7
2.5.2 Groundwater	7
2.5.3 Soil Storage	7
2.5.4 Reservoirs	8
2.5.5 Streamflow	8
2.5.6 Mine Site Water Management	8
2.5.7 Stochastic Modelling	9
3.0 MODEL RESULTS	10
3.1 Model Comparison to Regional Streamflow and Existing Conditions	10
3.2 Operations Phase	10
3.3 Closure Phase – Reclamation Stage	10
3.4 Closure Phase – Post-Closure Stage	10
4.0 SUMMARY	10
5.0 REFERENCES	11

TABLES

Table 1: Watershed Areas2

Table 2: Surficial Geology - Existing Conditions Watersheds4

Table 3: Surficial Geology - Operations and Closure Phase Watersheds5

Table 4: Total Annual Precipitation, Inverse Distance Squared Method6

Table 5: Water Holding Capacity7

Table 6: Effluent Discharge Alternatives9

FIGURES

Figure 1: Regional Watersheds

Figure 2: Model Watersheds

APPENDICES

APPENDIX A

Site Water Management (Knight Pièsold)

APPENDIX B

Climate Data

APPENDIX C

Model Output - Existing Conditions

APPENDIX D

Model Output - Operations Phase

APPENDIX E

Model Output - Closure Phase - Reclamation Stage

APPENDIX F

Model Output - Closure Phase - Post-Closure Stage

1.0 INTRODUCTION

To support the Atlantic Mining NS Corp (AMNS), a wholly owned subsidiary of St. Barbara Ltd., Fifteen Mile Stream project, Golder Associates Ltd. (Golder) has developed a hydrological model that is intended to provide predicted comparisons of change in the surface water flow system over the course of the Fifteen Mile Stream (FMS) project life cycle. This report details the inputs, methods, and results of the hydrological model and is complementary to the hydrological baseline report (Golder 2019a) and the Environmental Impact Study (EIS) for Fifteen Mile Stream.

1.1 Project Description and Footprint

The project consists of the following key components within the mine infrastructure footprint:

- Open pit
- Waste Rock Storage Areas (Potentially Acid Generating, PAG and Non-Acid Generating, NAG, Ore stockpile)
- Topsoil stockpile
- Till stockpile
- Tailings Management Facility (TMF)

These project components will be supported by required transportation and water management infrastructure, such as ditches, collection ponds, and treatment facilities, as required.

1.2 Baseline Hydrology

The Project site (referred to as the FMS Study Area in the EIS) is located in the northeastern portion of the Sheet Harbour watershed, which drains in a generally southerly direction from headwaters north of the Project to the Atlantic Ocean (Figure 1). The East River is the primary drainage feature in this watershed, and Fifteen Mile Stream is a tributary of the East River. Fifteen Mile Stream flows along the southwestern boundary of the Project site. Further details on the watersheds in and around the FMS Study Area are provided in Golder (2019a).

2.0 HYDROLOGICAL MODELLING METHODOLOGY

2.1 Model Framework

The hydrological model was constructed in GoldSim, an object-oriented simulation software (GoldSim Technology Group 2019). The AMNS GoldSim hydrological model (the model) for FMS was constructed to simulate the existing conditions, as well as the planned operational and closure phases, using primarily regional data scaled to the local watersheds. The model was developed to be run as a stochastic simulation, which allowed for the comparison and prediction of a range of potential hydrological conditions.

2.2 Model Phases

Separate hydrological models were developed for existing conditions and to align with the temporal boundaries used for the assessment of potential effects to surface water quantity, specifically:

Operations Phase

This phase will be initiated upon the start of ore extraction and processing and will cease once the economical ore reserves have been depleted and the mining processes have ceased.

Closure Phase

This phase will consist of the reclamation and post-closure stages:

- **Reclamation Stage:** Consists of the construction of the closure works at the site, as presented in the conceptual rehabilitation plan (McCallum Environmental 2019).
- **Post-closure Stage:** Consists of the period after the reclamation and closure works have been completed.

2.3 Watersheds

2.3.1 Watershed Delineations

Watersheds to be simulated were delineated for the key surface water flow paths through and around the FMS Study Area. The outflow of each watershed is aligned with those hydrometric monitoring stations installed in 2018 (Figure 2).

For the Operations and Closure phases, Knight Piésold (KP) developed water management plans and quantified the volumes of water that will be collected, treated (if required), and released to the environment (Appendix A). The facility footprints and associated water management features were provided by KP and the watershed areas removed or redistributed from the existing condition watershed (Figure 2). Watershed areas by phase are presented in Table 1.

Table 1: Watershed Areas

Watershed ID	Watershed Description	Existing Condition Area (m ²)	Operations and Closure Area (m ²)	Change in Watershed Area (%)
SW2	Seloam Lake Outflow	18,788,900	18,788,900	0
SW5	Seloam Brook at Fifteen Mile Stream	9,478,400	6,857,500	-28
SW14	Upper Reaches Fifteen Mile Stream	101,583,000	101,583,000	0

Watershed ID	Watershed Description	Existing Condition Area (m ²)	Operations and Closure Area (m ²)	Change in Watershed Area (%)
SW14A	Abraham Lake outflow at Fifteen Mile Stream	15,264,200	15,264,200	0
SW15	East Lake outflow	2,671,600	1,606,100	-40
SW15A	Eastern Tributary at Anti Dam Flowage	10,487,600	10,487,600	0
SW6	Anti Dam Flowage Outflow	18,694,200	18,592,900	<1
n/a	Mining Facilities Footprint	0	3,378,700	n/a
n/a	Total	176,967,900	176,967,900	0

2.3.2 Surficial Geology

Each delineated watershed was further characterized by the surficial soil properties (KP 2018a; Nova Scotia 2006). The resulting partitioning of the subject watersheds is summarized in Table 2 for existing conditions and in Table 3 for the Operations and Closure phases.

Table 2: Surficial Geology - Existing Conditions Watersheds

Watershed Description (ID)	Open Water (m ²)	Lodgement Till (m ²)	Silty Drumlin (m ²)	Stony Till Plain (m ²)	Wetland (m ²)	Alluvial Floodplain (m ²)	Kettle Hole (m ²)	Bedrock (m ²)	Alluvial Outwash Plain (m ²)	Organic Deposits (m ²)	Kame Fields and Esker Systems (m ²)	Total (m ²)
Seloam Lake (SW2)	3,371,200	416,100	451,300	13,726,800	823,400	0	0	0	0	0	0	18,788,900
Seloam Brook (SW5)	5,600	500,000	29,400	7,059,500	1,526,900	340,700	16,300	0	0	0	0	9,478,400
Upper Reaches Fifteen Mile Stream (SW14)	5,014,200	2,085,700	3,174,700	83,048,200	3,573,400	949,900	0	2,618,100	384,100	227,500	507,200	101,583,000
Abraham Lake (SW14A)	665,100	0	1,858,800	11,754,000	733,400	19,100	0	0	0	233,800	0	15,264,200
East Lake (SW15)	559,800	237,500	0	3,850,300	790,000	0	0	4,878,800	0	171,100	0	2,671,600
Eastern Tributary (SW15A)	3,150,700	2,089,000	223,800	9,916,800	724,200	80,200	100	2,099,800	409,700	0	0	10,487,600
Anti Dam Flowage (SW6)	68,700	975,600	0	933,200	410,500	0	2,800	0	0	280,700	0	18,694,200

Table 3: Surficial Geology - Operations and Closure Phase Watersheds

Watershed Description (ID)	Open Water (m ²)	Lodgement Till (m ²)	Silty Drumlin (m ²)	Stony Till Plain (m ²)	Wetland (m ²)	Alluvial Floodplain (m ²)	Kettle Hole (m ²)	Bedrock (m ²)	Alluvial Outwash Plain (m ²)	Organic Deposits (m ²)	Kame Fields and Esker Systems (m ²)	Total (m ²)
Seloam Lake (SW2)	3,371,200	416,100	451,300	13,726,800	823,400	0	0	0	0	0	0	18,788,900
Seloam Brook (SW5)	3,600	364,900	16,300	5,036,800	1,119,600	276,500	8,700	0	0	0	0	6,857,500
Upper Reaches Fifteen Mile Stream (SW14)	5,014,200	2,085,700	3,174,700	83,048,200	3,573,400	949,900	0	2,618,100	384,100	227,500	507,200	101,583,000
Abraham Lake (SW14A)	665,100	0	1,858,800	11,754,000	733,400	19,100	0	0	0	233,800	0	15,264,200
East Lake (SW15)	559,800	237,500	0	3,850,300	790,000	0	0	4,878,800	0	171,100	0	1,606,100
Eastern Tributary (SW15A)	3,150,700	2,018,000	219,100	9,895,000	720,400	80,200	100	2,099,800	409,700	0	0	10,487,600
Anti Dam Flowage (SW6)	68,700	598,400	0	452,600	205,600	0	0	0	0	280,700	0	18,592,900

2.4 Climate

To confirm that the recommended site climate dataset was best represented by the long-term record at the Halifax Stanfield International Airport (KP 2018b), a review of regional stations and application of the inverse distance squared method (Dingman 1994) was completed. This method of climate location interpolation assigns a weight to surrounding regional climate stations based on the distance of the regional station from the Project site. Environment and Climate Change Canada (ECCC) regional climate stations selected in this analysis were the Halifax Stanfield International Airport (83 km from the project site; ECCC ID 8202250), Collegetown (53 km from the Project site; ECCC ID 8201000), Upper Stewiacke (39 km from the Project site; ECCC ID 8206200), and Stillwater Sherbrooke (43 km from the Project site; ECCC ID 8205601). Data for these stations were obtained from ECCC (2018). These stations had overlapping periods of record from 1980 to 2012, and the results of this review are summarized in Table 4.

Table 4: Total Annual Precipitation, Inverse Distance Squared Method

Description	Inverse Distance Squared Method predicted (mm)	Halifax Stanfield International Airport (mm)	Difference (mm)	Percent Difference (%)
Average Annual Total Precipitation (mm)	1272	1367	95	7

The predicted total annual precipitation for the Project site using the Inverse Distance Squared method was within 10% of the annual total recorded at the Halifax Stanfield International Airport climate monitoring station. As such, the Halifax Stanfield International Airport was considered an appropriate estimate of the climate at the Project site. This agrees with the conclusion of KP (2018b), where the Halifax station was noted as also having a long-term continuous record and is currently actively monitoring climate.

2.5 Hydrological Simulation Components

The hydrological model was constructed to simulate the potential for changes to streamflow in the studied watersheds. This streamflow was based on a soil moisture water budget approach (Holmes and Robertson 1959) following the form:

$$\Delta S = P + Q_{S_IN} + Q_{G_IN} + Anth_{IN} - ET - Q_{S_OUT} - Q_{G_OUT} - Anth_{OUT}$$

Where:

- ΔS is the change in storage within a soil or across a water cover.
- P is total precipitation; this is considered herein as the sum of rainfall and snowmelt.
- Q_{S_IN} is surface water input from upstream watersheds.
- Q_{G_IN} is groundwater input.
- $Anth_{IN}$ is anthropogenic input (e.g., treated effluent discharge).

- Q_{S_OUT} is surface water outflow.
- Q_{G_OUT} is groundwater loss.
- ET is evapotranspiration, which occurs at its potential rate (PET) when water is freely available at the soil or water surface. Soil moisture conditions can restrict evapotranspiration to an actual rate (AET).
- $Anth_{OUT}$ is anthropogenic output (e.g., freshwater removals).

Common units of the water balance approach are mm, which are then integrated over a watershed area (m^2) and time (e.g., days), to provide a total volume per duration (e.g., m^3/day).

2.5.1 Precipitation and Evaporation

As discussed previously, climate from the Halifax Stanfield International Airport (ECCC ID 8202250) was used as the basis for climate variability in the hydrological model. Monthly total precipitation, rainfall, snowmelt, and evaporation were provided by ECCC for the 54-year period of 1961 to 2015 (Appendix B). Monthly climate was sampled stochastically to provide the P and ET parameters for the water balance equation; stochastic modelling is further described in Section 2.5.7.

2.5.2 Groundwater

Net change to groundwater inflows to (Q_{G_IN}), and outflows from (Q_{G_OUT}) surface water systems, were provided by the concurrently developed FMS hydrogeological model (Golder 2019b).

2.5.3 Soil Storage

As shown in Table 5, a Water Holding Capacity (WHC) was assigned to each land cover/soil previously summarized in Table 2 and Table 3. The WHC acted as a reservoir (i.e., the ΔS in the water balance equation) to hold water available for evaporation or groundwater discharge. Runoff from each of the area-weighted WHCs occurred when no storage capacity remained in the land cover type. As such, a bedrock dominated component of the watershed (13 mm of WHC) was capable of filling with rainfall and snowmelt faster; therefore, capable of providing more runoff than a till-dominated watershed component (300 mm of WHC).

Table 5: Water Holding Capacity

Surficial Geology Type	Water Holding Capacity (WHC; mm)
Lodgement Till	350
Silty Drumlin	250
Stony Till Plain	350
Wetland	80

Surficial Geology Type	Water Holding Capacity (WHC; mm)
Alluvial Floodplain	300
Kettle Hole	200
Bedrock	13
Alluvial Outwash Plain	300
Organic Deposits	100
Kame Fields and Esker Systems	300

2.5.4 Reservoirs

Storage change (ΔS) in Seloam Lake and the Anti Dam Flowage were estimated through the development of a stage-storage relationship estimated from bathymetric mapping. P was added, and PET was withdrawn from the water surface and combined with the net discharge ($Q_{S_IN} - Q_{S_OUT} + Anth_{IN} - Anth_{OUT}$) through the reservoir, to result in the predicted change in storage for each of these elements.

2.5.5 Streamflow

Streamflow (Q_{S_IN}) was added from upstream watersheds to downstream watersheds, where applicable (e.g., from the Upper Fifteen Mile Stream watershed [SW15] to the Anti Dam Reservoir watershed [SW6]). Streamflow from a watershed outlet (Q_{S_OUT}) was the total discharge released by a watershed after ET was removed, soil storage was filled, and in the case of Seloam Lake and Anti Dam Flowage, reservoir operations were considered. Reservoir operations are further described in Golder (2019a).

2.5.6 Mine Site Water Management

Water storage and conveyance for the mine site components and related water management facilities were provided by KP for the Operations and Closure phases (Appendix A). For the hydrological model, the mine site water management schemes were incorporated through:

- Collection of water at and around the contributing catchments contributing to the mine site components and consequently reduction of natural drainage area to the existing hydrological system.
- Freshwater removal from Seloam Lake for process use ($Anth_{OUT}$ at approximately 360 m³/day during the Operations Phase).
- Treated effluent discharge to Anti Dam Flowage ($Anth_{IN}$, variable rate depending on phase; Appendix A).

At the Closure Phase and Post-Closure stage, the rehabilitation of the project footprint will be complete; KP completed a water balance for the site that is based on an annual runoff ratio value, where a proportion of

available water becomes site discharge each month. For environmental effects purposes, an alternative Post-Closure flow distribution was developed to align the closed watershed footprint runoff patterns more closely, with the natural watershed discharge estimates (i.e., the water balance equation above): This change altered the seasonal distribution of runoff from the closed and flooded Open Pit but did not affect the site runoff volume over the course of the year (Table 6).

Table 6: Effluent Discharge Alternatives

Month	Open Pit Discharge (m ³ , per KP, Appendix A)	Open Pit Discharge (m ³ , Alternative Strategy)
January	17,100	431,900
February	15,800	355,000
March	102,000	644,000
April	970,700	577,400
May	802,700	207,900
June	237,600	99,500
July	223,600	63,300
August	234,800	74,300
September	259,600	82,700
October	335,700	190,700
November	387,800	445,000
December	95,100	510,800
Annual	3,682,500	3,682,500

2.5.7 Stochastic Modelling

The hydrological model was run as a stochastic simulation where the 54 available years of climate data (P and ET) were input as monthly statistics. The stochastic sampling routine in GoldSim chronologically selected climate (P and ET) from each monthly distribution (i.e., a random January P and ET, a random February P and ET, etc.). Consequently, the model was capable of producing a variety of climate conditions within and outside of those recorded in the historical climate observations (Appendix B). Importantly, the model was limited to sampling climate parameters within each month; for example, a precipitation sampled for January was not concurrently sampled with an evaporation statistic assigned to July. One thousand iterations of the model were sampled, effectively representing a potential 1,000 alternative years of climate. For hydrology results, monthly model outputs were summarized statistically at the 5th and 95th percentile along with the mean of the 1,000 iterations.

3.0 MODEL RESULTS

3.1 Model Comparison to Regional Streamflow and Existing Conditions

The results of the existing conditions model were compared against the pro-rating of a regional WSC gauge (St. Mary's River) to the modelled watershed area. The general seasonal pattern and magnitude of the model matched with the pro-rated values, as well as the total flow predicted through the year; this indicates that the model was appropriately simulating the monthly changes in the hydrology of the Fifteen Mile Stream watersheds (Figure 3a and Figure 3b).

Results for the existing conditions hydrological model for the mean, 5th percentile, and 95th percentile surface water discharge through the modelled watersheds are presented in Appendix C.

3.2 Operations Phase

Results for the Operations phase hydrological model for the mean, 5th percentile, and 95th percentile surface water discharge through the modelled watersheds are presented in Appendix D.

3.3 Closure Phase – Reclamation Stage

Results for the Closure phase, Reclamation stage hydrological model for the mean, 5th percentile, and 95th percentile surface water discharge through the modelled watersheds are presented in Appendix E.

3.4 Closure Phase – Post-Closure Stage

Results for the Closure phase, Post-closure stage hydrological model for the mean, 5th percentile, and 95th percentile surface water discharge through the modelled watersheds are presented in Appendix F.

4.0 SUMMARY


The hydrological models constructed in GoldSim for the FMS Project site integrated regional climate, surficial geology, and local reservoir properties, along with the planned water management for site infrastructure. Through stochastic simulation, a wide range of climate conditions were simulated, and the results of the hydrological simulations are further interpreted in the accompanying EIS.

5.0 REFERENCES

- Dingman, S.L. 1994. Physical Hydrology, Second Edition. Waveland Press Inc., Long Grove Illinois.
- Environment and Climate Change Canada (ECCC) 2018. Historical Climate Data. Available online at <http://climate.weather.gc.ca>. Accessed November 2018.
- Golder Associates Ltd. (Golder) 2019a. Atlantic Mining NS Corp Fifteen Mile Stream Gold Project, Hydrology Baseline Report. Report 1895674-005, March 29, 2019.
- Golder 2019b. Atlantic Mining NS Corp Fifteen Mile Stream Gold Project, Hydrogeological Modelling Assessment Report. Report 1895674-004, March 29, 2019.
- GoldSim Technology Group 2019. GoldSim 12.1, available online at www.goldsim.com, accessed March 2019.
- Holmes, E.M. and G.W. Robertson, 1959. A modulated soil moisture budget. Monthly Weather Review, March 1959, pp. 101-106.
- Knight Piésold Ltd. (KP) 2018a. Fifteen Mile Stream Project - Desktop Terrain Analysis Study. File No. VA101-00708/02-A.01
- KP 2018b. Moose River Consolidated Phase II, Preliminary Engineering Hydrometeorology Report. Project Number VA101-708/4-1
- Nova Scotia 2006. Digital Version of Nova Scotia Department of Natural Resources Map ME 1992-3, Surficial Geology Map of the Province of Nova Scotia, Scale 1:500,000, by R.R. Stea, H. Conley and Y. Brown, 1992.

Signature Page

Golder Associates Ltd.



Shannon Percival, B.Eng.
Water Resource Specialist



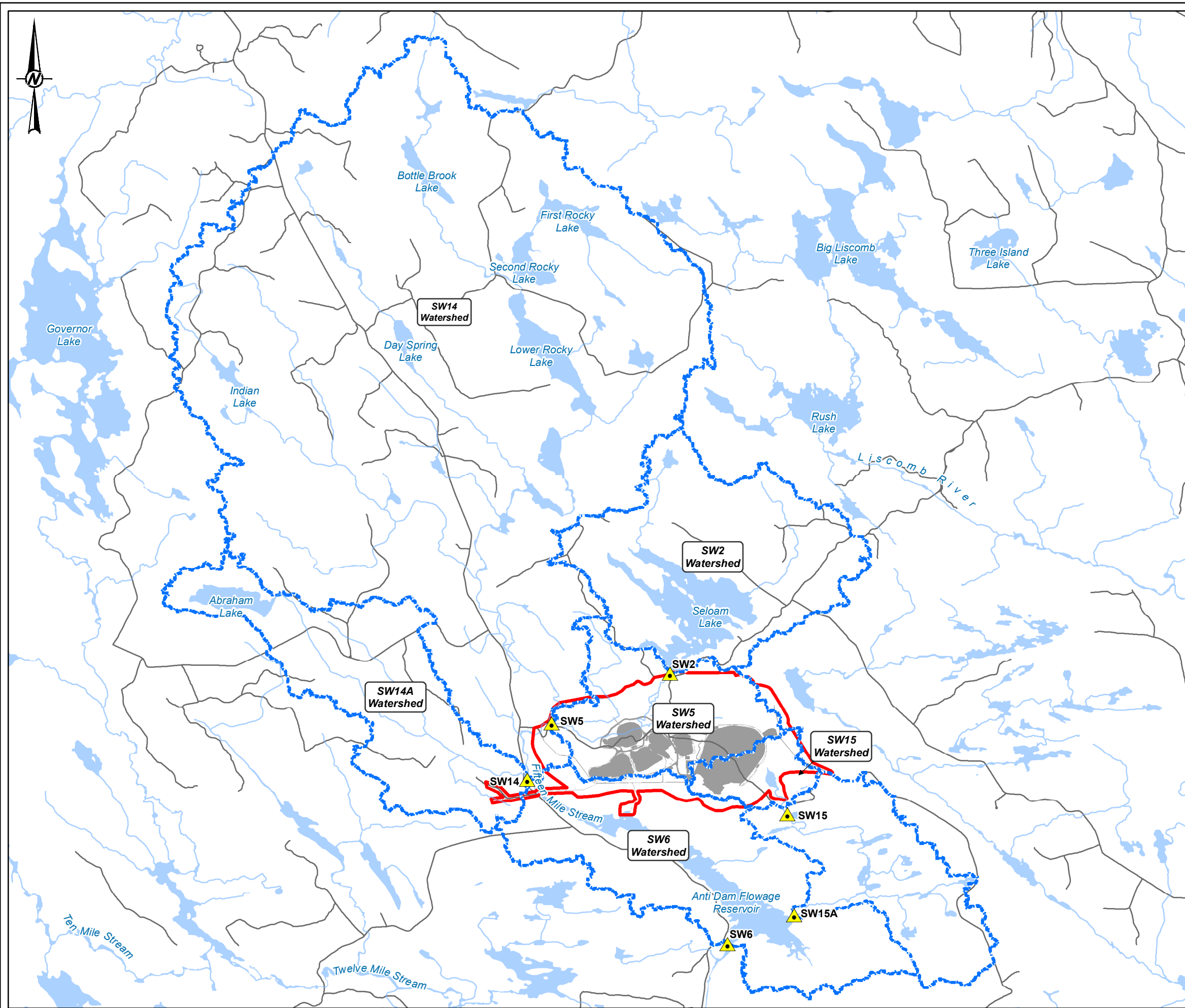
Steve Kaufman, M.Sc., EP
Associate, Hydrologist

KMM/SP/SK/sb/sm

Golder and the G logo are trademarks of Golder Associates Corporation

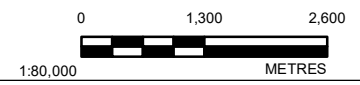
c:\users\smclean\golder associates\1895674, hydrogeology studies atlantic mining ns - 1895674-025-r-hydrology model fms\rev 1\1895674-025-r-1-hydrology model fms-2409_19.docx

P:\1895674\GIS\GOLDER\Atlantic_Gold\FifteenMileStream_Coherence\1895674\1895674_0021_Hydrological_Modelling_Report\1895674_0021_CS_0002.mxd PRINTED ON: 2019-09-19 AT: 10:35:30 AM



LEGEND

- Hydrological Modeling Location
- Roads
- Watercourse
- Waterbody
- Watersheds
- Proposed Infrastructure
- Fifteen Mile Stream Study Area



NOTE(S)
 1. MCCALLUM ENVIRONMENTAL LTD. EIS PROJECT AREA, (VER.190313, RECEIVED 2019-03-18).

REFERENCE(S)
 BASE MAP DATA: ESRI, GARMIN, GEBCO, NOAA NGDC, AND OTHER CONTRIBUTORS
 PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83
 COORDINATE SYSTEM: UTM ZONE 20 VERTICAL DATUM: CGVD28

CLIENT
 ATLANTIC MINING NS CORP

PROJECT
 HYDROLOGICAL MODELLING REPORT
 FIFTEEN MILE STREAM GOLD PROJECT

TITLE
 MODEL WATERSHEDS

CONSULTANT	YYYY-MM-DD	2019-09-19
	DESIGNED	--
	PREPARED	RRD
	REVIEWED	SK
	APPROVED	SK

PROJECT NO. 1895674 CONTROL 0025 REV. 1 FIGURE 2

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI E 28mm

APPENDIX A

**Site Water Management
(Knight Pièsold)**

TABLE 3

**ATLANTIC MINING NS CORP.
FIFTEEN MILE STREAM PROJECT**

MONTHLY WATER BALANCE RESULTS - MEAN (YEAR 7)

Print Sep-05-19 9:41:37

Description	Monthly Volume (m ³ /mon)												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	SUM
TMF													
<i>Inflows</i>													
Beach runoff	57	133	7,468	83,974	67,256	21,025	19,875	20,957	22,273	28,172	32,669	6,493	310,351
Catchment runoff - Undisturbed	47	109	6,121	68,823	55,121	17,231	16,289	17,176	18,254	23,089	26,775	5,322	254,357
Dewater from East Seepage Collection Pond	12,168	10,953	15,704	52,950	46,632	21,985	21,697	22,229	22,624	26,052	28,030	15,775	296,797
Dewater from Non-PAG Waste Rock Stockpile Collection Pond	84	195	10,989	123,489	98,642	30,407	28,542	30,202	32,357	41,231	48,012	9,556	453,706
Dewater from North Seepage Collection Pond	12,200	10,972	16,744	64,681	56,356	24,716	24,165	24,870	25,578	29,947	32,667	16,835	339,732
Dewater from Ore Stockpile Collection Pond	15,650	14,350	35,143	235,262	191,388	69,582	66,852	69,555	72,441	88,119	99,100	32,178	989,620
Dewater from PAG Waste Rock Stockpile Collection Pond	80	186	10,493	117,924	94,227	29,096	27,335	28,911	30,945	39,396	45,852	9,125	433,570
Dewater from Till Stockpile Collection Pond	55	128	7,191	80,812	64,555	19,905	18,686	19,771	21,179	26,984	31,420	6,254	296,939
Embankment runoff	36	84	4,725	53,128	42,550	13,302	12,574	13,259	14,091	17,823	20,669	4,108	196,348
Precipitation	209	487	27,433	308,461	247,050	77,230	73,007	76,980	81,814	103,482	120,004	23,851	1,140,008
Tailings consolidation	0	0	0	0	0	0	0	0	0	0	0	0	0
Water in tailings from Plant Site	197,658	176,022	202,270	273,811	266,541	210,415	215,516	216,546	211,603	223,932	222,326	202,417	2,619,058
<i>Outflows</i>													
Collected seepage to East Seepage Collection Pond	12,053	10,886	12,053	11,664	12,053	11,664	12,053	12,053	11,664	12,053	11,664	12,053	141,912
Collected seepage to North Seepage Collection Pond	12,053	10,886	12,053	11,664	12,053	11,664	12,053	12,053	11,664	12,053	11,664	12,053	141,912
Evaporation	0	0	518	15,098	43,314	64,588	85,228	77,822	50,557	28,962	9,083	227	375,398
Reclaim to Plant Site	180,451	162,988	180,451	174,630	180,451	174,630	180,451	180,451	174,630	180,451	174,630	180,451	2,124,664
Seepage losses	2,678	2,419	2,678	2,592	2,678	2,592	2,678	2,678	2,592	2,678	2,592	2,678	31,536
Surplus to Water Treatment Plant	1,386	0	74,185	1,157,071	929,832	223,518	187,131	205,639	249,808	362,681	450,317	86,709	3,928,276
Trapped water in tailings	49,936	40,739	49,936	46,766	49,936	46,766	49,936	49,936	46,766	49,936	46,766	49,936	577,356
<i>Balance</i>													
Total Inflows	238,243	213,619	344,284	1,463,315	1,230,317	534,894	524,539	540,454	553,159	648,227	707,523	331,913	7,330,486
Total Outflows	258,557	227,919	331,874	1,419,486	1,230,317	535,422	529,530	540,632	547,680	648,815	706,717	344,107	7,321,055
Change in TMF pond volume	-20,314	-14,300	12,409	43,829	0	-528	-4,991	-177	5,478	-588	806	-12,194	9,431
Balance	0	0	0	0	0	0	0	0	0	0	0	0	0
East Seepage Collection Pond													
<i>Inflows</i>													
Collected seepage from TMF	12,053	10,886	12,053	11,664	12,053	11,664	12,053	12,053	11,664	12,053	11,664	12,053	141,912
Embankment runoff	14	34	1,890	21,251	17,020	5,321	5,030	5,303	5,636	7,129	8,268	1,643	78,539
Precipitation	1	2	139	1,558	1,248	390	369	389	413	523	606	120	5,759
Undisturbed runoff	13	31	1,745	19,617	15,712	4,912	4,643	4,896	5,203	6,581	7,632	1,517	72,501
<i>Outflows</i>													
Dewater to TMF	12,082	10,953	15,823	54,014	45,814	21,960	21,664	22,248	22,661	26,140	28,124	15,332	296,815
Evaporation	0	0	3	76	219	326	431	393	255	146	46	1	1,897
<i>Balance</i>													
Total Inflows	12,082	10,953	15,826	54,091	46,033	22,286	22,094	22,641	22,917	26,286	28,170	15,333	298,712
Total Outflows	12,082	10,953	15,826	54,091	46,033	22,286	22,094	22,641	22,917	26,286	28,170	15,333	298,712
Change in East Seepage Collection Pond volume	0	0	0	0	0	0	0	0	0	0	0	0	0
Balance	0	0	0	0	0	0	0	0	0	0	0	0	0

TABLE 3

**ATLANTIC MINING NS CORP.
FIFTEEN MILE STREAM PROJECT**

MONTHLY WATER BALANCE RESULTS - MEAN (YEAR 7)

Print Sep-05-19 9:41:37

Description	Monthly Volume (m ³ /mon)												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	SUM
North Seepage Collection Pond													
<i>Inflows</i>													
Collected seepage from TMF	12,053	10,886	12,053	11,664	12,053	11,664	12,053	12,053	11,664	12,053	11,664	12,053	141,912
Embankment runoff	22	50	2,835	31,877	25,530	7,981	7,545	7,955	8,455	10,694	12,401	2,465	117,809
Precipitation	2	5	270	3,039	2,434	761	719	758	806	1,019	1,182	235	11,231
Undisturbed runoff	13	31	1,745	19,617	15,712	4,912	4,643	4,896	5,203	6,581	7,632	1,517	72,501
<i>Outflows</i>													
Dewater to TMF	12,090	10,973	16,898	66,048	55,302	24,681	24,120	24,895	25,630	30,062	32,790	16,267	339,754
Evaporation	0	0	5	149	427	636	840	767	498	285	89	2	3,698
<i>Balance</i>													
Total Inflows	12,090	10,973	16,903	66,196	55,728	25,317	24,960	25,662	26,128	30,347	32,879	16,269	343,453
Total Outflows	12,090	10,973	16,903	66,197	55,728	25,317	24,960	25,662	26,128	30,347	32,879	16,269	343,453
Change in North Seepage Collection Pond volume	0	0	0	0	0	0	0	0	0	0	0	0	0
Balance	0	0	0	0	0	0	0	0	0	0	0	0	0
Plant Site													
<i>Inflows</i>													
Dewater from Plant Site Pond	59	138	7,788	87,566	70,133	21,924	20,725	21,853	23,225	29,377	34,067	6,771	323,626
Fresh water	11,294	10,201	11,294	10,930	11,294	10,930	11,294	11,294	10,930	11,294	10,930	11,294	132,981
Reclaim from TMF	180,451	162,988	180,451	174,630	180,451	174,630	180,451	180,451	174,630	180,451	174,630	180,451	2,124,664
Water in ore	2,984	2,695	2,984	2,888	2,984	2,888	2,984	2,984	2,888	2,984	2,888	2,984	35,131
<i>Outflows</i>													
Water in tailings	194,788	176,022	202,517	276,013	264,862	210,371	215,454	216,582	211,673	224,106	222,514	201,500	2,616,402
<i>Balance</i>													
Total Inflows	194,788	176,022	202,517	276,013	264,862	210,371	215,454	216,582	211,673	224,106	222,514	201,500	2,616,402
Total Outflows	194,788	176,022	202,517	276,013	264,862	210,371	215,454	216,582	211,673	224,106	222,514	201,500	2,616,402
Balance	0	0	0	0	0	0	0	0	0	0	0	0	0
Plant Site Pond													
<i>Inflows</i>													
Catchment runoff	57	134	7,528	84,644	67,792	21,192	20,034	21,124	22,450	28,396	32,930	6,545	312,827
Precipitation	2	5	260	2,922	2,340	732	692	729	775	980	1,137	226	10,799
<i>Outflows</i>													
Dewater to Plant Site	59	138	7,788	87,566	70,133	21,924	20,725	21,853	23,225	29,377	34,067	6,771	323,626
Evaporation	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Balance</i>													
Total Inflows	59	138	7,788	87,566	70,133	21,924	20,725	21,853	23,225	29,377	34,067	6,771	323,626
Total Outflows	59	138	7,788	87,566	70,133	21,924	20,725	21,853	23,225	29,377	34,067	6,771	323,626
Change in Plant Site Pond volume	0	0	0	0	0	0	0	0	0	0	0	0	0
Balance	0	0	0	0	0	0	0	0	0	0	0	0	0

TABLE 3

ATLANTIC MINING NS CORP.
FIFTEEN MILE STREAM PROJECT

MONTHLY WATER BALANCE RESULTS - MEAN (YEAR 7)

Print Sep-05-19 9:41:37

Description	Monthly Volume (m ³ /mon)												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	SUM
Egerton-MacLean Open Pit													
<i>Inflows</i>													
Groundwater inflow	15,500	14,000	15,500	15,000	15,500	15,000	15,500	15,500	15,000	15,500	15,000	15,500	182,500
Pitwall runoff	65	151	8,488	95,439	76,438	23,895	22,589	23,818	25,313	32,018	37,130	7,380	352,722
Undisturbed runoff	49	114	6,415	72,134	57,773	18,060	17,073	18,002	19,132	24,199	28,063	5,578	266,592
<i>Outflows</i>													
Dewater to Ore Stockpile Collection Pond	15,613	14,265	30,403	182,573	149,711	56,955	55,161	57,320	59,446	71,717	80,193	28,457	801,814
<i>Balance</i>													
Total Inflows	15,613	14,265	30,403	182,573	149,711	56,955	55,161	57,320	59,446	71,717	80,193	28,457	801,814
Total Outflows	15,613	14,265	30,403	182,573	149,711	56,955	55,161	57,320	59,446	71,717	80,193	28,457	801,814
Change in Egerton-MacLean Open Pit volume	0	0	0	0	0	0	0	0	0	0	0	0	0
Balance	0	0	0	0	0	0	0	0	0	0	0	0	0
Ore Stockpile													
<i>Inflows</i>													
Contact runoff	25	54	2,761	27,831	20,129	5,321	4,257	3,660	3,024	2,730	1,895	124	71,811
Undisturbed runoff	11	29	1,857	23,534	20,628	7,249	7,489	8,578	9,830	13,336	16,511	3,490	112,543
<i>Outflows</i>													
Runoff to Ore Stockpile Collection Pond	36	83	4,619	51,364	40,757	12,569	11,746	12,239	12,854	16,066	18,407	3,614	184,353
<i>Balance</i>													
Total Inflows	36	83	4,619	51,364	40,757	12,569	11,746	12,239	12,854	16,066	18,407	3,614	184,353
Total Outflows	36	83	4,619	51,364	40,757	12,569	11,746	12,239	12,854	16,066	18,407	3,614	184,353
Balance	0	0	0	0	0	0	0	0	0	0	0	0	0
Ore Stockpile Collection Pond													
<i>Inflows</i>													
Dewater from Egerton-MacLean Open Pit	15,613	14,265	30,403	182,573	149,711	56,955	55,161	57,320	59,446	71,717	80,193	28,457	801,814
Precipitation	1	2	124	1,393	1,116	349	330	348	369	467	542	108	5,148
Runoff from Ore Stockpile	36	83	4,619	51,364	40,757	12,569	11,746	12,239	12,854	16,066	18,407	3,614	184,353
<i>Outflows</i>													
Dewater to TMF	15,650	14,350	35,143	235,262	191,388	69,582	66,852	69,555	72,441	88,119	99,100	32,178	989,620
Evaporation	0	0	2	68	196	292	385	351	228	131	41	1	1,695
<i>Balance</i>													
Total Inflows	15,650	14,350	35,146	235,330	191,583	69,874	67,237	69,906	72,669	88,250	99,141	32,179	991,315
Total Outflows	15,650	14,350	35,146	235,330	191,583	69,874	67,237	69,906	72,669	88,250	99,141	32,179	991,315
Change in Ore Stockpile Collection Pond volume	0	0	0	0	0	0	0	0	0	0	0	0	0
Balance	0	0	0	0	0	0	0	0	0	0	0	0	0
Till Stockpile													
<i>Inflows</i>													
Contact runoff	30	70	3,917	44,044	35,275	11,027	10,424	10,992	11,682	14,776	17,135	3,406	162,777
Undisturbed runoff	24	56	3,129	35,184	28,179	8,809	8,327	8,781	9,332	11,804	13,688	2,721	130,033
<i>Outflows</i>													
Runoff to Till Stockpile Collection Pond	54	125	7,046	79,228	63,455	19,836	18,752	19,772	21,014	26,579	30,823	6,126	292,810
<i>Balance</i>													
Total Inflows	54	125	7,046	79,228	63,455	19,836	18,752	19,772	21,014	26,579	30,823	6,126	292,810
Total Outflows	54	125	7,046	79,228	63,455	19,836	18,752	19,772	21,014	26,579	30,823	6,126	292,810
Balance	0	0	0	0	0	0	0	0	0	0	0	0	0

TABLE 3

**ATLANTIC MINING NS CORP.
FIFTEEN MILE STREAM PROJECT**

MONTHLY WATER BALANCE RESULTS - MEAN (YEAR 7)

Print Sep-05-19 9:41:37

Description	Monthly Volume (m ³ /mon)												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	SUM
Till Stockpile Collection Pond													
<i>Inflows</i>													
Precipitation	1	3	148	1,666	1,334	417	394	416	442	559	648	129	6,155
Runoff from Till Stockpile	54	125	7,046	79,228	63,455	19,836	18,752	19,772	21,014	26,579	30,823	6,126	292,810
<i>Outflows</i>													
Dewater to TMF	55	128	7,191	80,812	64,555	19,905	18,686	19,771	21,179	26,984	31,420	6,254	296,939
Evaporation	0	0	3	82	234	349	460	420	273	156	49	1	2,027
<i>Balance</i>													
Total Inflows	55	128	7,194	80,894	64,789	20,253	19,146	20,188	21,456	27,138	31,471	6,255	298,966
Total Outflows	55	128	7,194	80,894	64,789	20,253	19,146	20,191	21,452	27,140	31,469	6,255	298,966
Change in Till Stockpile Collection Pond volume	0	0	0	0	0	0	0	-4	4	-2	2	0	0
Balance	0	0	0	0	0	0	0	0	0	0	0	0	0
PAG Waste Rock Stockpile													
<i>Inflows</i>													
Contact runoff	55	128	7,186	80,802	64,715	20,231	19,124	20,165	21,431	27,108	31,435	6,248	298,629
Undisturbed runoff	24	55	3,118	35,054	28,075	8,777	8,297	8,748	9,297	11,760	13,637	2,710	129,552
<i>Outflows</i>													
Runoff to PAG Waste Rock Stockpile Collection Pond	78	183	10,304	115,856	92,791	29,007	27,421	28,913	30,729	38,867	45,073	8,958	428,181
<i>Balance</i>													
Total Inflows	78	183	10,304	115,856	92,791	29,007	27,421	28,913	30,729	38,867	45,073	8,958	428,181
Total Outflows	78	183	10,304	115,856	92,791	29,007	27,421	28,913	30,729	38,867	45,073	8,958	428,181
Balance	0	0	0	0	0	0	0	0	0	0	0	0	0
PAG Waste Rock Stockpile Collection Pond													
<i>Inflows</i>													
Precipitation	1	3	193	2,174	1,741	544	515	543	577	729	846	168	8,034
Runoff from PAG Waste Rock Stockpile	78	183	10,304	115,856	92,791	29,007	27,421	28,913	30,729	38,867	45,073	8,958	428,181
<i>Outflows</i>													
Dewater to TMF	80	186	10,493	117,924	94,227	29,096	27,335	28,911	30,945	39,396	45,852	9,125	433,570
Evaporation	0	0	4	106	305	455	601	548	356	204	64	2	2,646
<i>Balance</i>													
Total Inflows	80	186	10,497	118,030	94,532	29,551	27,936	29,456	31,305	39,597	45,919	9,126	436,216
Total Outflows	80	186	10,497	118,030	94,532	29,551	27,936	29,460	31,301	39,600	45,916	9,126	436,216
Change in PAG Waste Rock Stockpile Collection Pond volume	0	0	0	0	0	0	0	-4	4	-3	3	0	0
Balance	0	0	0	0	0	0	0	0	0	0	0	0	0
Non-PAG Waste Rock Stockpile													
<i>Inflows</i>													
Contact runoff	69	161	9,042	101,665	81,425	25,454	24,062	25,372	26,965	34,107	39,552	7,861	375,734
Undisturbed runoff	13	31	1,722	19,360	15,506	4,847	4,582	4,831	5,135	6,495	7,532	1,497	71,550
<i>Outflows</i>													
Runoff to Non-PAG Waste Rock Stockpile Collection Pond	82	191	10,763	121,025	96,930	30,301	28,644	30,203	32,100	40,601	47,084	9,358	447,284
<i>Balance</i>													
Total Inflows	82	191	10,763	121,025	96,930	30,301	28,644	30,203	32,100	40,601	47,084	9,358	447,284
Total Outflows	82	191	10,763	121,025	96,930	30,301	28,644	30,203	32,100	40,601	47,084	9,358	447,284
Balance	0	0	0	0	0	0	0	0	0	0	0	0	0

TABLE 3

ATLANTIC MINING NS CORP.
FIFTEEN MILE STREAM PROJECT

MONTHLY WATER BALANCE RESULTS - MEAN (YEAR 7)

Print Sep-05-19 9:41:37

Description	Monthly Volume (m ³ /mon)												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	SUM
Non-PAG Waste Rock Stockpile Collection Pond													
<i>Inflows</i>													
Precipitation	2	4	230	2,591	2,075	649	613	647	687	869	1,008	200	9,575
Runoff from Non-PAG Waste Rock Stockpile	82	191	10,763	121,025	96,930	30,301	28,644	30,203	32,100	40,601	47,084	9,358	447,284
<i>Outflows</i>													
Dewater to TMF	84	195	10,989	123,489	98,642	30,407	28,542	30,202	32,357	41,231	48,012	9,556	453,706
Evaporation	0	0	4	127	364	542	716	654	425	243	76	2	3,153
<i>Balance</i>													
Total Inflows	84	195	10,994	123,616	99,005	30,950	29,258	30,850	32,787	41,471	48,092	9,558	456,859
Total Outflows	84	195	10,994	123,616	99,005	30,950	29,258	30,855	32,781	41,474	48,088	9,558	456,859
Change in Non-PAG Waste Rock Stockpile Collection Pond volume	0	0	0	0	0	0	0	-6	6	-4	4	0	0
Balance	0	0	0	0	0	0	0	0	0	0	0	0	0

M:\1\01\00708\04\Correspondence\Outgoing\2019_09_05 - Water Balance Tables to Golder\Appendix D3 - Water Balance Results Operations_r0.xlsx]Table 3

0	07SEP19	ISSUED WITH REPORT VA101-00708/04-2	HW	CKJ
REV	DATE	DESCRIPTION	PREP'D	RVV'D

TABLE 4

**ATLANTIC MINING NS CORP.
FIFTEEN MILE STREAM PROJECT**

**MEAN MONTHLY OPEN PIT SURPLUS RESULTS
CLOSURE AND POST-CLOSURE (YEAR 14)**

Print Sep-05-19 9:46:00

Month	Volume (m ³ /mon)
Jan	17,115
Feb	15,773
Mar	102,017
Apr	973,273
May	814,186
Jun	256,128
Jul	248,172
Aug	257,090
Sep	274,168
Oct	343,861
Nov	390,229
Dec	95,109
Annual	3,787,121

NOTES:

1. OPEN PIT REACHES MAX VOLUME IN 41 MONTHS FOR 50th PERCENTILE CONDITIONS.
2. ALL RUNOFF COEFFICIENTS ARE 0.7 FOR CLOSURE PERIOD (EXCEPT OPEN PIT, WHICH IS 0.90)

M:\1\01\00708\04A\Correspondence\Transmittal\VA19-01021 - Rev C Updated WBM Results\Attachments\[Water Balance Annual and Monthly Flow Results Rev C.xlsx]Table 4

0	05SEP'19	ISSUED FOR INFORMATION	HW	CKJ
REV	DATE	DESCRIPTION	PREPD	RVW'D

APPENDIX B

Climate Data

Atlantic Mining NS Corp
Fifteen Mile Stream
Halifax Stanfield International Airport
Monthly Climate

month-year	Total Precipitation (mm)	Rainfall (mm)	Snow Melt (mm)	PET (mm)
Jan-61	122.1	34.8	2.3	0.0
Feb-61	90.8	21.1	11.5	0.4
Mar-61	71.1	12.9	35.8	1.4
Apr-61	127.9	127.9	165.6	14.5
May-61	135.7	135.7	0.0	59.7
Jun-61	77.5	77.5	0.0	99.9
Jul-61	37.7	37.7	0.0	115.9
Aug-61	91.7	91.7	0.0	115.0
Sep-61	53.8	53.8	0.0	88.9
Oct-61	164.7	164.7	0.0	51.0
Nov-61	148.6	148.6	0.0	21.7
Dec-61	186.9	133.9	39.6	3.5
Jan-62	158.9	78.8	51.6	1.6
Feb-62	146.5	12.4	5.2	0.2
Mar-62	75.5	25.7	117.0	5.4
Apr-62	189.6	189.6	103.6	22.8
May-62	47.0	47.0	0.0	57.8
Jun-62	98.4	98.4	0.0	92.3
Jul-62	146.3	146.3	0.0	100.9
Aug-62	157.9	157.9	0.0	105.0
Sep-62	155.2	155.2	0.0	70.7
Oct-62	181.0	181.0	0.0	41.8
Nov-62	242.9	242.9	0.0	14.3
Dec-62	179.6	64.8	0.0	5.6
Jan-63	208.3	67.0	41.7	1.2
Feb-63	178.9	24.1	18.0	0.6
Mar-63	90.4	18.1	82.8	3.8
Apr-63	128.8	122.1	220.1	11.1
May-63	121.9	121.9	127.4	59.5
Jun-63	60.1	60.1	0.0	94.6
Jul-63	48.8	48.8	0.0	126.4
Aug-63	151.8	151.8	0.0	101.5
Sep-63	149.7	149.7	0.0	63.8
Oct-63	71.0	71.0	0.0	47.9
Nov-63	180.3	179.0	1.3	21.5
Dec-63	168.5	66.1	15.5	1.2
Jan-64	183.6	131.6	47.5	1.4
Feb-64	160.4	83.6	8.2	0.2
Mar-64	153.2	20.5	75.1	3.0
Apr-64	127.8	126.0	219.4	19.8
May-64	69.1	69.1	0.0	64.2
Jun-64	78.0	78.0	0.0	86.0
Jul-64	190.4	190.4	0.0	113.3
Aug-64	120.0	120.0	0.0	98.5
Sep-64	100.9	100.9	0.0	67.7
Oct-64	121.5	121.5	0.0	40.8
Nov-64	120.3	113.4	6.9	9.9
Dec-64	279.5	188.1	91.4	5.4
Jan-65	136.7	13.7	9.1	0.3
Feb-65	172.7	71.2	19.3	0.7
Mar-65	48.9	33.0	58.4	2.2
Apr-65	70.0	65.5	158.2	14.0
May-65	25.7	25.7	0.0	53.5
Jun-65	94.9	94.9	0.0	95.2

**Atlantic Mining NS Corp
Fifteen Mile Stream
Halifax Stanfield International Airport
Monthly Climate**

month-year	Total Precipitation (mm)	Rainfall (mm)	Snow Melt (mm)	PET (mm)
Jul-65	55.5	55.5	0.0	117.7
Aug-65	117.5	117.5	0.0	107.6
Sep-65	17.8	17.8	0.0	69.4
Oct-65	83.3	83.3	0.0	37.3
Nov-65	140.8	140.2	0.6	8.2
Dec-65	84.4	49.0	29.5	2.1
Jan-66	88.0	39.6	11.6	0.5
Feb-66	65.9	26.7	38.3	1.4
Mar-66	159.7	155.6	47.8	6.7
Apr-66	30.3	30.3	0.0	16.4
May-66	116.9	116.9	0.0	60.6
Jun-66	55.3	55.3	0.0	93.0
Jul-66	50.6	50.6	0.0	118.1
Aug-66	81.8	81.8	0.0	112.3
Sep-66	128.3	128.3	0.0	68.6
Oct-66	128.8	128.8	0.0	41.0
Nov-66	89.7	89.7	0.0	24.2
Dec-66	127.9	115.9	12.0	6.1
Jan-67	112.5	29.7	28.6	0.9
Feb-67	118.8	22.8	4.3	0.1
Mar-67	135.3	24.4	24.1	1.0
Apr-67	94.0	88.2	187.1	9.2
May-67	197.1	197.1	51.4	44.2
Jun-67	63.5	63.5	0.0	100.6
Jul-67	94.6	94.6	0.0	130.5
Aug-67	163.2	163.2	0.0	114.6
Sep-67	143.2	143.2	0.0	74.5
Oct-67	185.1	185.1	0.0	45.0
Nov-67	192.1	189.3	2.0	17.5
Dec-67	222.6	191.3	26.2	2.6
Jan-68	134.2	34.9	14.8	0.4
Feb-68	73.2	10.9	14.5	0.5
Mar-68	121.2	99.4	160.0	11.1
Apr-68	69.7	69.7	0.0	31.1
May-68	102.0	102.0	0.0	55.0
Jun-68	120.2	120.2	0.0	88.4
Jul-68	8.1	8.1	0.0	127.9
Aug-68	48.3	48.3	0.0	104.1
Sep-68	66.1	66.1	0.0	83.5
Oct-68	92.8	92.8	0.0	50.7
Nov-68	214.3	200.4	12.4	9.8
Dec-68	185.7	132.0	50.6	6.2
Jan-69	197.7	102.6	38.7	1.2
Feb-69	147.5	90.5	46.5	1.6
Mar-69	101.8	80.1	77.0	4.7
Apr-69	144.5	144.5	16.3	23.7
May-69	58.3	58.3	0.0	52.7
Jun-69	46.0	46.0	0.0	104.5
Jul-69	101.9	101.9	0.0	114.8
Aug-69	50.2	50.2	0.0	114.0
Sep-69	90.2	90.2	0.0	76.7
Oct-69	65.8	63.8	2.0	38.2
Nov-69	245.1	224.8	2.3	23.7
Dec-69	198.3	147.7	68.6	7.0

**Atlantic Mining NS Corp
Fifteen Mile Stream
Halifax Stanfield International Airport
Monthly Climate**

month-year	Total Precipitation (mm)	Rainfall (mm)	Snow Melt (mm)	PET (mm)
Jan-70	27.8	9.1	0.0	0.0
Feb-70	93.9	67.4	18.7	1.9
Mar-70	108.8	67.8	65.5	3.6
Apr-70	98.3	98.3	2.0	18.3
May-70	111.6	111.6	0.0	63.7
Jun-70	96.2	96.2	0.0	94.8
Jul-70	82.8	82.8	0.0	123.4
Aug-70	178.3	178.3	0.0	113.2
Sep-70	79.2	79.2	0.0	69.4
Oct-70	120.9	120.9	0.0	47.6
Nov-70	128.6	128.6	0.0	17.0
Dec-70	208.8	34.8	6.5	1.1
Jan-71	112.0	33.6	15.2	0.5
Feb-71	189.2	119.7	74.0	2.7
Mar-71	181.7	85.9	88.7	3.7
Apr-71	101.9	101.9	233.4	20.8
May-71	230.2	230.2	0.0	65.0
Jun-71	41.3	41.3	0.0	90.5
Jul-71	65.9	65.9	0.0	122.3
Aug-71	387.1	387.1	0.0	110.3
Sep-71	68.1	68.1	0.0	77.8
Oct-71	95.2	95.2	0.0	45.6
Nov-71	190.8	186.2	4.6	13.7
Dec-71	114.3	42.1	8.4	1.6
Jan-72	152.7	86.1	78.9	2.6
Feb-72	181.1	102.6	54.6	2.0
Mar-72	245.5	70.1	76.7	3.2
Apr-72	144.5	86.7	200.8	10.0
May-72	174.2	144.7	60.7	62.1
Jun-72	131.8	131.8	0.0	97.7
Jul-72	127.8	127.8	0.0	120.6
Aug-72	83.7	83.7	0.0	104.9
Sep-72	49.8	49.8	0.0	75.7
Oct-72	194.9	194.9	0.0	32.7
Nov-72	268.2	249.7	18.5	8.6
Dec-72	176.9	63.8	12.9	2.5
Jan-73	111.9	62.5	63.2	2.1
Feb-73	161.2	53.4	44.3	1.5
Mar-73	106.4	98.0	158.3	8.0
Apr-73	155.5	155.2	0.3	23.1
May-73	104.7	104.7	0.0	55.4
Jun-73	157.8	157.8	0.0	103.5
Jul-73	152.4	152.4	0.0	129.5
Aug-73	169.7	169.7	0.0	112.9
Sep-73	33.8	33.8	0.0	70.2
Oct-73	131.4	131.4	0.0	40.0
Nov-73	73.7	72.6	1.1	10.0
Dec-73	170.9	163.5	6.6	10.1
Jan-74	84.6	47.7	37.7	2.2
Feb-74	205.5	106.6	28.0	0.9
Mar-74	136.2	117.8	89.3	6.0
Apr-74	98.6	98.6	0.0	23.6
May-74	119.5	119.5	0.0	42.1
Jun-74	110.2	110.2	0.0	98.1

**Atlantic Mining NS Corp
Fifteen Mile Stream
Halifax Stanfield International Airport
Monthly Climate**

month-year	Total Precipitation (mm)	Rainfall (mm)	Snow Melt (mm)	PET (mm)
Jul-74	56.6	56.6	0.0	107.0
Aug-74	75.8	75.8	0.0	116.8
Sep-74	160.9	160.9	0.0	73.2
Oct-74	113.4	113.4	0.0	28.1
Nov-74	142.7	139.9	0.0	14.4
Dec-74	129.2	104.2	12.4	4.4
Jan-75	209.4	66.6	60.9	2.0
Feb-75	60.1	11.5	27.9	1.0
Mar-75	175.0	124.5	51.9	2.0
Apr-75	108.8	101.2	124.2	16.2
May-75	60.5	60.5	0.0	59.9
Jun-75	68.3	68.3	0.0	95.5
Jul-75	70.8	70.8	0.0	129.4
Aug-75	35.0	35.0	0.0	109.1
Sep-75	92.7	92.7	0.0	75.6
Oct-75	141.0	141.0	0.0	39.9
Nov-75	155.0	146.6	8.4	20.6
Dec-75	295.0	234.7	50.5	3.9
Jan-76	164.1	119.4	48.7	1.9
Feb-76	120.2	64.7	55.4	2.0
Mar-76	91.2	11.0	86.1	9.0
Apr-76	67.0	66.7	0.3	25.9
May-76	142.2	142.2	0.0	65.5
Jun-76	59.1	59.1	0.0	112.3
Jul-76	131.8	131.8	0.0	118.4
Aug-76	76.8	76.8	0.0	113.7
Sep-76	122.1	122.1	0.0	73.7
Oct-76	178.6	178.6	0.0	38.7
Nov-76	100.0	96.9	3.1	10.4
Dec-76	239.9	162.8	40.7	1.6
Jan-77	133.7	60.2	20.4	0.7
Feb-77	106.6	52.6	18.9	0.6
Mar-77	96.0	75.4	145.3	8.3
Apr-77	82.5	76.2	6.3	22.7
May-77	70.3	70.3	0.0	62.6
Jun-77	181.1	181.1	0.0	89.5
Jul-77	163.5	163.5	0.0	121.5
Aug-77	96.6	96.6	0.0	113.8
Sep-77	130.1	130.1	0.0	70.1
Oct-77	197.4	197.4	0.0	43.1
Nov-77	94.9	93.0	0.0	20.1
Dec-77	196.5	135.1	51.9	3.4
Jan-78	312.9	256.7	61.6	3.0
Feb-78	60.9	0.0	0.0	0.0
Mar-78	103.4	52.1	90.2	4.1
Apr-78	130.9	130.5	28.4	14.4
May-78	56.2	56.2	0.0	67.2
Jun-78	92.6	92.6	0.0	93.5
Jul-78	60.6	60.6	0.0	118.4
Aug-78	16.9	16.9	0.0	118.1
Sep-78	80.3	80.3	0.0	62.5
Oct-78	140.3	137.8	2.5	36.5
Nov-78	49.9	40.7	3.8	11.7
Dec-78	120.9	56.0	34.7	1.9

**Atlantic Mining NS Corp
Fifteen Mile Stream
Halifax Stanfield International Airport
Monthly Climate**

month-year	Total Precipitation (mm)	Rainfall (mm)	Snow Melt (mm)	PET (mm)
Jan-79	233.7	187.9	81.4	5.4
Feb-79	131.1	50.1	23.4	0.9
Mar-79	197.4	153.5	101.5	11.8
Apr-79	137.9	137.9	0.0	22.7
May-79	133.9	133.9	0.0	71.0
Jun-79	65.7	65.7	0.0	100.9
Jul-79	171.3	171.3	0.0	123.8
Aug-79	162.1	162.1	0.0	105.3
Sep-79	82.0	82.0	0.0	73.3
Oct-79	169.4	169.4	0.0	42.3
Nov-79	216.0	216.0	0.0	23.6
Dec-79	182.3	150.5	10.6	5.3
Jan-80	101.0	41.5	22.8	0.6
Feb-80	31.0	0.7	4.0	0.1
Mar-80	174.1	115.3	60.8	2.5
Apr-80	198.6	198.6	82.3	28.7
May-80	76.5	76.5	0.0	59.1
Jun-80	106.5	106.5	0.0	90.5
Jul-80	70.2	70.2	0.0	114.6
Aug-80	30.9	30.9	0.0	114.5
Sep-80	110.3	110.3	0.0	70.0
Oct-80	118.3	118.3	0.0	39.0
Nov-80	153.4	147.9	5.5	8.9
Dec-80	161.8	55.5	11.0	2.2
Jan-81	182.0	0.0	8.0	0.3
Feb-81	90.1	80.9	177.3	6.8
Mar-81	112.6	101.2	112.5	4.8
Apr-81	80.9	80.9	0.0	26.9
May-81	179.8	179.8	0.0	67.2
Jun-81	136.8	136.8	0.0	98.4
Jul-81	148.3	148.3	0.0	120.5
Aug-81	100.3	100.3	0.0	107.7
Sep-81	109.9	109.9	0.0	74.5
Oct-81	143.6	143.6	0.0	39.7
Nov-81	186.9	186.9	0.0	16.3
Dec-81	277.7	243.1	6.3	8.1
Jan-82	205.0	116.0	27.7	0.8
Feb-82	81.0	46.6	23.6	0.8
Mar-82	104.9	71.0	120.5	5.1
Apr-82	182.7	171.8	24.6	22.2
May-82	56.8	56.8	0.0	59.1
Jun-82	92.2	92.2	0.0	89.1
Jul-82	134.8	134.8	0.0	125.4
Aug-82	103.9	103.9	0.0	101.5
Sep-82	105.7	105.7	0.0	78.4
Oct-82	28.3	28.3	0.0	39.4
Nov-82	121.5	120.1	1.4	21.8
Dec-82	118.5	68.6	49.9	7.7
Jan-83	134.5	121.0	1.8	3.3
Feb-83	109.7	33.3	15.3	1.4
Mar-83	185.4	179.8	78.0	9.0
Apr-83	158.6	158.6	0.4	31.7
May-83	132.4	132.4	0.0	63.7
Jun-83	53.4	53.4	0.0	104.4

**Atlantic Mining NS Corp
Fifteen Mile Stream
Halifax Stanfield International Airport
Monthly Climate**

month-year	Total Precipitation (mm)	Rainfall (mm)	Snow Melt (mm)	PET (mm)
Jul-83	121.2	121.2	0.0	121.0
Aug-83	160.8	160.8	0.0	108.4
Sep-83	82.7	82.7	0.0	84.1
Oct-83	82.6	82.6	0.0	43.9
Nov-83	195.6	195.4	0.2	19.0
Dec-83	157.0	109.6	20.1	6.5
Jan-84	195.0	58.1	47.5	1.7
Feb-84	131.7	96.8	139.2	5.8
Mar-84	193.9	128.8	77.5	8.0
Apr-84	165.4	148.2	17.2	23.9
May-84	142.3	142.3	0.0	63.1
Jun-84	79.7	79.7	0.0	95.7
Jul-84	50.5	50.5	0.0	132.3
Aug-84	96.7	96.7	0.0	125.7
Sep-84	64.6	64.6	0.0	70.4
Oct-84	50.1	50.1	0.0	40.4
Nov-84	36.7	36.3	0.4	16.4
Dec-84	137.2	119.6	17.6	5.6
Jan-85	64.7	0.0	0.0	0.0
Feb-85	105.6	57.6	44.2	1.6
Mar-85	122.4	86.5	104.4	5.3
Apr-85	80.7	64.9	15.8	19.7
May-85	110.7	110.7	0.0	59.9
Jun-85	306.9	306.9	0.0	91.7
Jul-85	67.0	67.0	0.0	125.3
Aug-85	140.5	140.5	0.0	108.3
Sep-85	30.5	30.5	0.0	78.0
Oct-85	64.9	64.9	0.0	39.5
Nov-85	113.2	107.6	3.4	14.7
Dec-85	89.2	36.5	31.4	1.6
Jan-86	178.0	119.4	68.3	5.0
Feb-86	88.6	0.0	0.0	0.0
Mar-86	129.6	42.6	138.7	6.7
Apr-86	138.7	138.7	50.7	35.4
May-86	99.2	99.2	0.0	61.4
Jun-86	91.4	91.4	0.0	86.2
Jul-86	138.4	138.4	0.0	110.0
Aug-86	126.8	126.8	0.0	104.6
Sep-86	131.3	131.3	0.0	64.8
Oct-86	75.3	75.3	0.0	35.0
Nov-86	160.1	134.9	25.2	8.4
Dec-86	113.1	94.8	9.9	1.9
Jan-87	165.8	62.0	19.2	0.5
Feb-87	42.2	0.0	1.9	0.0
Mar-87	81.0	33.3	171.5	8.0
Apr-87	130.3	130.3	9.4	31.9
May-87	74.7	74.7	0.0	61.1
Jun-87	97.4	97.4	0.0	93.9
Jul-87	61.3	61.3	0.0	123.5
Aug-87	64.6	64.6	0.0	108.4
Sep-87	136.3	136.3	0.0	75.1
Oct-87	147.3	147.3	0.0	43.9
Nov-87	157.1	121.8	24.8	10.0
Dec-87	178.4	101.5	21.9	1.7

**Atlantic Mining NS Corp
Fifteen Mile Stream
Halifax Stanfield International Airport
Monthly Climate**

month-year	Total Precipitation (mm)	Rainfall (mm)	Snow Melt (mm)	PET (mm)
Jan-88	109.8	68.0	81.1	2.7
Feb-88	165.5	61.4	44.5	1.7
Mar-88	83.1	25.7	143.4	6.9
Apr-88	227.5	227.5	0.0	19.4
May-88	52.7	52.7	0.0	69.9
Jun-88	87.9	87.9	0.0	87.3
Jul-88	190.4	190.4	0.0	125.5
Aug-88	68.1	68.1	0.0	118.2
Sep-88	73.2	73.2	0.0	66.3
Oct-88	235.1	235.1	0.0	35.7
Nov-88	197.4	197.0	0.4	18.2
Dec-88	62.7	32.2	27.0	2.6
Jan-89	85.2	18.8	32.2	1.1
Feb-89	109.0	45.3	43.6	1.6
Mar-89	80.9	55.5	67.9	5.2
Apr-89	64.4	64.4	15.3	22.1
May-89	136.2	136.2	0.0	82.1
Jun-89	104.4	104.4	0.0	100.5
Jul-89	54.4	54.4	0.0	116.1
Aug-89	60.4	60.4	0.0	112.7
Sep-89	113.4	113.4	0.0	77.1
Oct-89	130.6	130.6	0.0	37.3
Nov-89	169.3	124.2	7.3	16.0
Dec-89	44.0	4.7	0.0	0.0
Jan-90	102.7	72.6	73.2	2.4
Feb-90	108.4	43.8	53.3	2.4
Mar-90	55.1	27.9	64.5	5.9
Apr-90	195.1	194.7	8.4	24.5
May-90	177.4	177.4	0.0	53.7
Jun-90	88.7	88.7	0.0	104.0
Jul-90	50.0	50.0	0.0	129.5
Aug-90	69.5	69.5	0.0	121.2
Sep-90	85.3	85.3	0.0	73.4
Oct-90	214.5	214.5	0.0	50.8
Nov-90	146.1	143.8	2.1	15.0
Dec-90	203.5	187.0	11.0	7.6
Jan-91	107.3	22.2	12.3	0.4
Feb-91	52.8	10.4	47.6	1.8
Mar-91	150.1	130.4	93.1	5.9
Apr-91	84.6	80.7	3.9	25.1
May-91	131.7	131.7	0.0	66.7
Jun-91	18.3	18.3	0.0	99.9
Jul-91	64.0	64.0	0.0	128.9
Aug-91	131.1	131.1	0.0	116.8
Sep-91	180.2	180.2	0.0	72.5
Oct-91	136.5	136.5	0.0	48.4
Nov-91	167.9	167.7	0.2	20.3
Dec-91	85.7	29.4	18.2	2.8
Jan-92	141.2	120.1	50.7	2.5
Feb-92	143.2	32.0	12.8	0.4
Mar-92	129.3	93.3	104.9	4.5
Apr-92	39.9	34.2	43.7	14.3
May-92	53.5	53.5	0.0	61.6
Jun-92	34.4	34.4	0.0	102.4

**Atlantic Mining NS Corp
Fifteen Mile Stream
Halifax Stanfield International Airport
Monthly Climate**

month-year	Total Precipitation (mm)	Rainfall (mm)	Snow Melt (mm)	PET (mm)
Jul-92	63.8	63.8	0.0	108.0
Aug-92	63.9	63.9	0.0	113.9
Sep-92	78.6	78.6	0.0	78.9
Oct-92	78.8	78.8	0.0	37.7
Nov-92	108.4	91.4	17.0	9.5
Dec-92	136.0	76.3	25.7	2.7
Jan-93	91.2	36.6	43.5	1.6
Feb-93	166.4	50.7	8.5	0.3
Mar-93	153.1	52.6	172.2	8.2
Apr-93	84.5	60.1	105.0	26.5
May-93	73.1	73.1	0.0	64.3
Jun-93	98.1	98.1	0.0	90.9
Jul-93	129.4	129.4	0.0	115.7
Aug-93	44.8	44.8	0.0	112.6
Sep-93	78.5	78.5	0.0	77.4
Oct-93	226.4	226.4	0.0	31.7
Nov-93	134.1	132.1	2.0	13.8
Dec-93	261.6	205.1	2.0	7.5
Jan-94	130.3	40.3	12.5	0.4
Feb-94	56.9	0.0	64.5	2.7
Mar-94	263.3	195.3	168.3	7.0
Apr-94	144.7	144.7	24.2	33.0
May-94	146.1	146.1	0.0	58.1
Jun-94	105.8	105.8	0.0	107.0
Jul-94	21.5	21.5	0.0	136.0
Aug-94	61.5	61.5	0.0	112.4
Sep-94	83.2	83.2	0.0	71.5
Oct-94	33.9	33.9	0.0	42.4
Nov-94	195.0	191.2	3.8	20.8
Dec-94	155.4	105.3	21.8	4.2
Jan-95	133.1	92.7	64.1	5.3
Feb-95	113.8	45.9	24.7	0.9
Mar-95	52.8	46.5	54.1	5.5
Apr-95	76.7	75.6	1.1	20.8
May-95	77.0	77.0	0.0	56.1
Jun-95	150.7	150.7	0.0	103.3
Jul-95	181.5	181.5	0.0	127.0
Aug-95	65.2	65.2	0.0	108.6
Sep-95	71.0	71.0	0.0	68.8
Oct-95	127.3	127.3	0.0	53.7
Nov-95	213.8	209.8	0.0	13.4
Dec-95	148.8	90.7	9.0	0.2
Jan-96	109.1	75.4	81.5	2.7
Feb-96	208.8	155.8	58.3	5.0
Mar-96	64.1	28.7	35.4	5.2
Apr-96	134.5	123.8	10.7	24.5
May-96	114.7	114.7	0.0	53.6
Jun-96	39.6	39.6	0.0	98.1
Jul-96	181.2	181.2	0.0	117.0
Aug-96	20.0	20.0	0.0	115.0
Sep-96	308.7	308.7	0.0	76.5
Oct-96	84.9	84.9	0.0	35.8
Nov-96	72.6	66.7	5.0	13.9
Dec-96	169.8	163.1	6.9	8.4

**Atlantic Mining NS Corp
Fifteen Mile Stream
Halifax Stanfield International Airport
Monthly Climate**

month-year	Total Precipitation (mm)	Rainfall (mm)	Snow Melt (mm)	PET (mm)
Jan-97	156.1	82.4	29.2	0.9
Feb-97	76.9	15.4	51.1	2.0
Mar-97	131.5	93.8	58.3	2.4
Apr-97	80.4	46.5	68.9	17.0
May-97	145.7	145.7	0.0	56.3
Jun-97	86.4	86.4	0.0	91.9
Jul-97	11.7	11.7	0.0	127.4
Aug-97	46.1	46.1	0.0	110.9
Sep-97	91.1	91.1	0.0	77.3
Oct-97	32.3	32.3	0.0	34.0
Nov-97	150.9	129.4	21.5	13.7
Dec-97	108.1	97.0	10.7	2.4
Jan-98	204.5	118.6	22.5	0.5
Feb-98	129.9	129.3	64.4	4.1
Mar-98	117.4	94.0	23.4	12.0
Apr-98	85.5	85.5	0.0	30.6
May-98	72.5	72.5	0.0	79.6
Jun-98	142.4	142.4	0.0	92.7
Jul-98	77.5	77.5	0.0	126.8
Aug-98	66.6	66.6	0.0	117.7
Sep-98	128.9	128.9	0.0	77.5
Oct-98	161.0	161.0	0.0	40.1
Nov-98	132.8	132.8	0.0	11.4
Dec-98	67.3	22.1	24.2	4.4
Jan-99	159.5	105.5	74.4	4.8
Feb-99	109.6	91.2	17.5	2.6
Mar-99	237.4	233.0	5.9	16.1
Apr-99	59.3	59.3	0.0	23.9
May-99	58.6	58.6	0.0	83.6
Jun-99	44.7	44.7	0.0	113.3
Jul-99	56.9	56.9	0.0	133.9
Aug-99	89.1	89.1	0.0	115.4
Sep-99	121.3	121.3	0.0	98.1
Oct-99	161.9	161.9	0.0	37.6
Nov-99	88.3	84.4	3.9	20.7
Dec-99	143.1	125.0	0.6	8.1
Jan-00	204.6	152.8	54.4	3.6
Feb-00	57.5	26.2	46.2	3.5
Mar-00	117.0	75.0	42.0	13.3
Apr-00	109.7	109.7	0.0	29.6
May-00	88.3	88.3	0.0	59.1
Jun-00	64.7	64.7	0.0	102.5
Jul-00	99.3	99.3	0.0	118.4
Aug-00	66.7	66.7	0.0	115.2
Sep-00	102.3	102.3	0.0	75.7
Oct-00	165.8	165.8	0.0	47.3
Nov-00	113.6	108.0	5.6	20.2
Dec-00	197.8	153.7	26.0	3.0
Jan-01	109.2	0.0	0.0	0.0
Feb-01	85.0	21.6	9.1	0.3
Mar-01	84.8	72.6	109.8	4.5
Apr-01	109.8	96.1	97.8	19.8
May-01	191.9	191.9	0.0	73.3
Jun-01	65.7	65.7	0.0	108.2

Atlantic Mining NS Corp
Fifteen Mile Stream
Halifax Stanfield International Airport
Monthly Climate

month-year	Total Precipitation (mm)	Rainfall (mm)	Snow Melt (mm)	PET (mm)
Jul-01	68.8	68.8	0.0	118.4
Aug-01	42.9	42.9	0.0	123.4
Sep-01	59.7	59.7	0.0	84.3
Oct-01	92.8	92.8	0.0	51.7
Nov-01	84.1	82.9	1.2	18.4
Dec-01	75.5	26.2	9.4	6.6
Jan-02	155.0	71.5	33.9	1.0
Feb-02	139.1	63.5	71.1	2.7
Mar-02	140.4	116.6	117.8	7.4
Apr-02	147.7	147.7	0.0	22.3
May-02	84.1	84.1	0.0	64.4
Jun-02	79.9	79.9	0.0	87.9
Jul-02	51.9	51.9	0.0	118.2
Aug-02	60.8	60.8	0.0	120.1
Sep-02	149.9	149.9	0.0	82.4
Oct-02	162.4	162.4	0.0	35.6
Nov-02	266.2	244.0	22.2	14.6
Dec-02	123.8	86.8	21.4	3.1
Jan-03	155.0	71.5	33.9	1.0
Feb-03	139.1	63.5	71.1	2.7
Mar-03	140.4	116.6	93.5	7.4
Apr-03	147.7	147.7	0.0	22.3
May-03	84.1	84.1	0.0	64.4
Jun-03	79.9	79.9	0.0	87.9
Jul-03	51.9	51.9	0.0	118.2
Aug-03	60.8	60.8	0.0	120.1
Sep-03	149.9	149.9	0.0	82.4
Oct-03	162.4	162.4	0.0	35.6
Nov-03	266.2	244.0	22.2	14.6
Dec-03	123.8	86.8	21.4	3.1
Jan-04	32.0	0.0	9.1	0.3
Feb-04	108.5	10.5	10.7	0.3
Mar-04	59.5	34.6	54.7	2.3
Apr-04	125.5	125.5	96.1	26.6
May-04	87.5	87.5	0.0	57.7
Jun-04	53.9	53.9	0.0	91.3
Jul-04	82.2	82.2	0.0	122.8
Aug-04	127.6	127.6	0.0	119.0
Sep-04	69.2	69.2	0.0	73.8
Oct-04	112.5	112.5	0.0	47.9
Nov-04	233.6	233.6	0.0	11.7
Dec-04	155.1	119.1	2.1	5.1
Jan-05	107.6	13.0	34.8	1.1
Feb-05	68.8	56.1	57.9	2.1
Mar-05	148.2	132.6	63.2	2.5
Apr-05	122.5	122.5	0.9	28.4
May-05	318.7	318.7	0.0	53.8
Jun-05	28.2	28.2	0.0	101.0
Jul-05	40.4	40.4	0.0	125.2
Aug-05	24.7	24.7	0.0	118.6
Sep-05	111.3	111.3	0.0	86.1
Oct-05	251.2	251.2	0.0	52.6
Nov-05	178.9	178.9	0.0	21.2
Dec-05	150.0	87.8	61.0	3.7

**Atlantic Mining NS Corp
Fifteen Mile Stream
Halifax Stanfield International Airport
Monthly Climate**

month-year	Total Precipitation (mm)	Rainfall (mm)	Snow Melt (mm)	PET (mm)
Jan-06	109.4	73.3	9.5	4.3
Feb-06	91.9	51.8	57.9	2.3
Mar-06	36.9	32.7	14.2	10.3
Apr-06	122.9	122.9	0.0	30.3
May-06	98.5	98.5	0.0	76.5
Jun-06	242.5	242.5	0.0	106.7
Jul-06	126.1	126.1	0.0	131.7
Aug-06	68.0	68.0	0.0	106.5
Sep-06	37.0	37.0	0.0	78.4
Oct-06	177.5	177.5	0.0	44.6
Nov-06	118.3	118.3	0.0	24.5
Dec-06	129.2	85.5	41.1	7.1
Jan-07	150.4	118.9	18.3	4.6
Feb-07	30.3	1.1	0.0	0.0
Mar-07	56.7	38.4	63.3	7.0
Apr-07	109.5	109.5	0.0	19.7
May-07	92.3	92.3	0.0	58.5
Jun-07	123.5	123.5	0.0	96.3
Jul-07	137.7	137.7	0.0	124.7
Aug-07	195.5	195.5	0.0	113.6
Sep-07	94.8	94.8	0.0	80.3
Oct-07	77.7	77.7	0.0	49.5
Nov-07	176.8	176.3	0.5	14.7
Dec-07	112.3	10.2	17.4	0.6
Jan-08	151.2	41.6	109.8	4.1
Feb-08	198.3	119.9	75.1	2.7
Mar-08	175.6	117.4	85.2	3.2
Apr-08	60.2	60.2	60.8	31.4
May-08	107.7	107.7	0.0	61.6
Jun-08	69.1	69.1	0.0	101.6
Jul-08	79.5	79.5	0.0	135.5
Aug-08	299.4	299.4	0.0	111.2
Sep-08	118.0	118.0	0.0	76.2
Oct-08	84.7	84.7	0.0	42.8
Nov-08	149.3	112.3	37.0	19.4
Dec-08	213.5	156.9	49.1	6.7
Jan-09	128.1	36.3	25.9	0.8
Feb-09	92.1	18.5	25.7	0.9
Mar-09	156.2	106.6	102.9	4.4
Apr-09	158.8	158.8	68.1	31.1
May-09	88.6	88.6	0.0	69.6
Jun-09	149.3	149.3	0.0	101.7
Jul-09	71.0	71.0	0.0	115.9
Aug-09	179.6	179.6	0.0	121.3
Sep-09	73.0	73.0	0.0	72.5
Oct-09	166.9	166.9	0.0	33.3
Nov-09	95.1	95.1	0.0	22.8
Dec-09	149.6	98.8	45.9	4.0
Jan-10	92.4	63.4	23.0	1.3
Feb-10	72.0	36.5	46.4	1.9
Mar-10	93.0	80.0	13.0	14.9
Apr-10	39.9	39.9	0.0	41.1
May-10	48.0	48.0	0.0	71.5
Jun-10	99.6	99.6	0.0	99.2

**Atlantic Mining NS Corp
Fifteen Mile Stream
Halifax Stanfield International Airport
Monthly Climate**

month-year	Total Precipitation (mm)	Rainfall (mm)	Snow Melt (mm)	PET (mm)
Jul-10	125.2	125.2	0.0	130.7
Aug-10	65.3	65.3	0.0	118.4
Sep-10	117.5	117.5	0.0	86.6
Oct-10	153.6	153.6	0.0	44.4
Nov-10	226.3	222.1	4.2	18.6
Dec-10	191.0	176.7	8.2	8.2
Jan-11	112.4	19.1	14.3	0.4
Feb-11	166.2	92.7	13.4	0.4
Mar-11	67.8	54.4	158.6	7.2
Apr-11	124.2	124.2	0.0	28.3
May-11	124.2	124.2	0.0	68.7
Jun-11	144.3	144.3	0.0	89.1
Jul-11	94.3	94.3	0.0	123.6
Aug-11	135.6	135.6	0.0	112.9
Sep-11	43.1	43.1	0.0	84.7
Oct-11	334.8	334.8	0.0	49.7
Nov-11	191.9	157.9	34.0	22.0
Dec-11	183.9	158.3	25.6	8.3
Jan-12	120.7	66.7	38.0	3.0
Feb-12	106.9	86.3	28.4	1.7
Mar-12	64.5	54.2	18.5	16.4
Apr-12	91.4	91.4	0.0	34.2
May-12	101.8	101.8	0.0	75.9
Jun-12	75.1	75.1	0.0	95.0
Jul-12	58.5	58.5	0.0	131.8
Aug-12	54.1	54.1	0.0	126.5
Sep-12	382.6	382.6	0.0	84.7
Oct-12	109.2	109.2	0.0	50.8
Nov-12	80.6	67.7	8.4	16.7
Dec-12	194.4	171.0	4.7	6.5
Jan-13	56.4	14.2	63.1	2.2
Feb-13	124.6	44.8	23.4	0.8
Mar-13	92.7	66.8	84.7	5.5
Apr-13	76.6	76.6	0.0	25.6
May-13	99.8	99.8	0.0	66.6
Jun-13	213.0	213.0	0.0	103.9
Jul-13	121.1	121.1	0.0	136.5
Aug-13	67.3	67.3	0.0	115.1
Sep-13	164.7	164.7	0.0	79.1
Oct-13	131.2	131.2	0.0	45.9
Nov-13	184.5	178.6	5.7	14.9
Dec-13	197.9	96.5	17.8	2.5
Jan-14	241.1	152.6	112.3	5.1
Feb-14	131.6	61.2	51.0	1.9
Mar-14	165.4	136.7	61.8	2.4
Apr-14	142.7	128.2	60.8	25.1
May-14	31.9	31.9	0.0	59.8
Jun-14	111.7	111.7	0.0	100.4
Jul-14	87.9	87.9	0.0	133.0
Aug-14	57.4	57.4	0.0	112.4
Sep-14	182.6	182.6	0.0	78.6
Oct-14	131.5	131.5	0.0	54.3
Nov-14	211.9	211.5	0.4	17.6
Dec-14	278.0	273.8	4.2	9.0

**Atlantic Mining NS Corp
Fifteen Mile Stream
Halifax Stanfield International Airport
Monthly Climate**

month-year	Total Precipitation (mm)	Rainfall (mm)	Snow Melt (mm)	PET (mm)
Jan-15	161.9	70.6	30.8	1.0
Feb-15	161.3	27.4	5.0	0.2
Mar-15	178.1	34.2	29.6	1.2
Apr-15	104.5	96.3	290.6	14.7
May-15	57.0	57.0	21.3	73.6
Jun-15	154.3	154.3	0.0	86.5
Jul-15	117.6	117.6	0.0	122.6
Aug-15	76.1	76.1	0.0	126.2
Sep-15	75.6	75.6	0.0	90.7
Oct-15	190.4	190.4	0.0	41.7
Nov-15	126.5	126.5	0.0	20.9
Dec-15	156.9	108.8	6.4	10.1

APPENDIX C

Model Output - Existing Conditions

Atlantic Mining NS Corp
Appendix C
Existing Conditions
Fifteen Mile Stream
Hydrological Model Output

Existing Conditions - Hydrological Model Results - Mean							
Month	SW2 Seloam Lake Outlet (m ³ /day)	SW5 Seloam Brook at Fifteen Mile Stream (m ³ /day)	SW14 Upper Reaches Fifteen Mile Stream (m ³ /day)	SW14A Abraham Lake outlet at Fifteen Mile Stream (m ³ /day)	SW15 East Lake Outlet (m ³ /day)	SW15A Eastern Tributary at Anti Dam Flowage (m ³ /day)	SW6 Anti Dam Flowage Outlet (m ³ /day)
January	61900	93500	433200	51000	8900	43800	595200
February	57500	86200	394300	46300	8100	39800	563600
March	89200	136700	645800	76500	13400	65900	788700
April	87800	131400	598700	70200	12300	60500	814300
May	38500	53200	209100	23700	4100	20500	424200
June	24100	31200	103400	11500	1900	9800	215700
July	19300	23400	63700	6900	1100	5900	98400
August	19200	24000	74600	8200	1300	8100	95200
September	19000	24600	85800	9500	1600	11300	115500
October	23300	37000	191500	22300	4000	26300	227600
November	47000	81500	461000	55000	10000	51100	502700
December	65500	103400	512300	60700	10700	52100	648400
Average Annual	46000	68800	314500	36800	6500	32900	424100
Annual Monthly Maximum	89200	136700	645800	76500	13400	65900	814300
Annual Monthly Minimum	19000	23400	63700	6900	1100	5900	95200

Existing Conditions - Hydrological Model Results - 5th Percentile							
Month	SW2 Seloam Lake Outlet (m ³ /day)	SW5 Seloam Brook at Fifteen Mile Stream (m ³ /day)	SW14 Upper Reaches Fifteen Mile Stream (m ³ /day)	SW14A Abraham Lake outlet at Fifteen Mile Stream (m ³ /day)	SW15 East Lake Outlet (m ³ /day)	SW15A Eastern Tributary at Anti Dam Flowage (m ³ /day)	SW6 Anti Dam Flowage Outlet (m ³ /day)
January	18800	33300	145800	16200	2900	14300	341600
February	22600	33800	135000	14900	2700	13100	331500
March	44100	68200	322500	37500	6600	32400	389000
April	33000	47400	204800	23500	4100	20300	405300
May	20600	23900	48400	4500	700	3500	278400
June	18700	21500	45700	4700	700	3600	58400
July	17200	19800	43300	4500	700	3500	55400
August	16300	19000	42400	4500	700	3500	54500
September	16000	18800	43300	4700	700	3600	55900
October	15100	17900	47100	5000	700	6100	64500
November	15800	22600	81500	9900	2300	20500	133200
December	16100	31100	181700	19300	3700	19600	268300
Average Annual	21200	29800	111800	12400	2200	12000	203000
Annual Monthly Maximum	44100	68200	322500	37500	6600	32400	405300
Annual Monthly Minimum	15100	17900	42400	4500	700	3500	54500

Existing Conditions - Hydrological Model Results - 95th Percentile							
Month	SW2 Seloam Lake Outlet (m ³ /day)	SW5 Seloam Brook at Fifteen Mile Stream (m ³ /day)	SW14 Upper Reaches Fifteen Mile Stream (m ³ /day)	SW14A Abraham Lake outlet at Fifteen Mile Stream (m ³ /day)	SW15 East Lake Outlet (m ³ /day)	SW15A Eastern Tributary at Anti Dam Flowage (m ³ /day)	SW6 Anti Dam Flowage Outlet (m ³ /day)
January	132400	201400	947400	111900	18900	96400	1250300
February	120500	181400	835000	98800	16600	84700	1096800
March	152800	233000	1088100	129000	21900	111200	1424800
April	179300	270400	1249300	147100	25100	126800	1682700
May	93500	139200	633200	74200	12300	63900	843900
June	51700	80000	386700	45500	7300	39200	403000
July	21100	31700	164200	18900	2600	17400	298600
August	21900	35800	237500	27900	4300	29400	294900
September	26400	45000	301800	36200	5900	38900	374300
October	64300	112500	623500	74700	12600	65800	647400
November	118400	184300	926300	111700	19100	95300	1076300
December	140700	213800	1013900	119600	20400	102800	1339700
Average Annual	93600	144000	700600	83000	13900	72700	894400
Annual Monthly Maximum	179300	270400	1249300	147100	25100	126800	1682700
Annual Monthly Minimum	21100	31700	164200	18900	2600	17400	294900

APPENDIX D

Model Output - Operations Phase

Atlantic Mining NS Corp
Appendix D
Operations Phase
Fifteen Mile Stream
Hydrological Model Output

Operations Phase - Hydrological Model Results - Mean							
Month	SW2 Seloam Lake Outlet (m ³ /day)	SW5 Seloam Brook at Fifteen Mile Stream (m ³ /day)	SW14 Upper Reaches Fifteen Mile Stream (m ³ /day)	SW14A Abraham Lake outlet at Fifteen Mile Stream (m ³ /day)	SW15 East Lake Outlet (m ³ /day)	SW15A Eastern Tributary at Anti Dam Flowage (m ³ /day)	SW6 Anti Dam Flowage Outlet (m ³ /day)
January	61400	84400	424200	51000	5400	40200	592300
February	57000	77900	386100	46300	4900	36600	560700
March	88700	123200	632300	76500	8100	60500	784200
April	87400	119000	586300	70200	7400	55600	841700
May	38300	49000	204800	23700	2500	18900	446100
June	24000	29100	101300	11500	1100	9000	232800
July	19300	22200	62500	6900	600	5500	105000
August	19000	22600	73200	8200	800	7500	101100
September	18900	22900	84100	9500	1000	10700	122900
October	23000	33000	187500	22300	2500	24800	236800
November	46100	71400	451000	55000	6100	47200	512000
December	64800	92300	501000	60700	6500	47800	648100
Average Annual	45700	62300	307900	36800	3900	30400	432000
Annual Monthly Maximum	88700	123200	632300	76500	8100	60500	841700
Annual Monthly Minimum	18900	22200	62500	6900	600	5500	101100

Operations Phase - Hydrological Model Results - 5th Percentile							
Month	SW2 Seloam Lake Outlet (m ³ /day)	SW5 Seloam Brook at Fifteen Mile Stream (m ³ /day)	SW14 Upper Reaches Fifteen Mile Stream (m ³ /day)	SW14A Abraham Lake outlet at Fifteen Mile Stream (m ³ /day)	SW15 East Lake Outlet (m ³ /day)	SW15A Eastern Tributary at Anti Dam Flowage (m ³ /day)	SW6 Anti Dam Flowage Outlet (m ³ /day)
January	18400	29600	142800	16200	1800	13100	342900
February	22400	31000	132500	14900	1600	12000	329300
March	43400	61300	315700	37500	4000	29800	389000
April	32500	43400	200500	23500	2500	18700	406300
May	20500	23100	47500	4500	400	3200	335800
June	18600	20600	44900	4700	400	3300	65700
July	17100	19000	42500	4500	400	3200	60900
August	16200	18100	41500	4500	400	3200	60600
September	15900	17900	42400	4700	400	3300	63600
October	14900	17000	46300	5000	400	5800	75600
November	15600	20800	79700	9900	1600	19700	147900
December	15900	27400	178200	19300	2300	18100	270900
Average Annual	21000	27400	109500	12400	1400	11100	212400
Annual Monthly Maximum	43400	61300	315700	37500	4000	29800	406300
Annual Monthly Minimum	14900	17000	41500	4500	400	3200	60600

Operations Phase - Hydrological Model Results - 95th Percentile							
Month	SW2 Seloam Lake Outlet (m ³ /day)	SW5 Seloam Brook at Fifteen Mile Stream (m ³ /day)	SW14 Upper Reaches Fifteen Mile Stream (m ³ /day)	SW14A Abraham Lake outlet at Fifteen Mile Stream (m ³ /day)	SW15 East Lake Outlet (m ³ /day)	SW15A Eastern Tributary at Anti Dam Flowage (m ³ /day)	SW6 Anti Dam Flowage Outlet (m ³ /day)
January	132100	182000	928100	111900	11800	88400	1241900
February	120100	164300	817900	98800	10400	77800	1088200
March	152400	210500	1065800	129000	13600	102200	1414200
April	178900	245000	1223700	147100	15500	116600	1708700
May	93100	126100	620000	74200	7800	58700	893200
June	51300	71400	378700	45500	4800	36000	404700
July	21000	28200	160800	18900	2000	16300	302900
August	21300	30900	232900	27900	3100	28100	300100
September	26300	38000	295100	36200	4100	36300	376700
October	62600	97000	609700	74700	8100	60600	652900
November	118000	165100	905000	111700	12000	87700	1083300
December	140400	192300	992600	119600	12700	94500	1333900
Average Annual	93100	129200	685900	83000	8800	66900	900100
Annual Monthly Maximum	178900	245000	1223700	147100	15500	116600	1708700
Annual Monthly Minimum	21000	28200	160800	18900	2000	16300	300100

APPENDIX E

**Model Output - Closure Phase -
Reclamation Stage**

**Atlantic Mining NS Corp
Appendix E
Closure Phase - Reclamation Stage
Fifteen Mile Stream
Hydrological Model Output**

Closure Phase -Reclamation Stage - Hydrological Model Results - Mean							
Month	SW2 Seloam Lake Outlet (m ³ /day)	SW5 Seloam Brook at Fifteen Mile Stream (m ³ /day)	SW14 Upper Reaches Fifteen Mile Stream (m ³ /day)	SW14A Abraham Lake outlet at Fifteen Mile Stream (m ³ /day)	SW15 East Lake Outlet (m ³ /day)	SW15A Eastern Tributary at Anti Dam Flowage (m ³ /day)	SW6 Anti Dam Flowage Outlet (m ³ /day)
January	61900	84900	424800	51000	5400	40200	591600
February	57500	78300	386400	46300	4900	36600	560700
March	89200	123600	632600	76500	8100	60500	782300
April	87800	119400	586700	70200	7400	55600	809300
May	38500	49200	205100	23700	2500	18900	422600
June	24100	29300	101500	11500	1100	9000	214400
July	19300	22300	62600	6900	600	5500	97700
August	19200	22700	73300	8200	800	7500	94600
September	19000	23100	84300	9500	1000	10700	115000
October	23300	33400	187900	22300	2500	24800	226600
November	47000	72200	451700	55000	6100	47200	499700
December	65500	93100	501600	60700	6500	47800	644200
Average Annual	46000	62600	308200	36800	3900	30400	421600
Annual Monthly Maximum	89200	123600	632600	76500	8100	60500	809300
Annual Monthly Minimum	19000	22300	62600	6900	600	5500	94600

Closure Phase -Reclamation Stage - Hydrological Model Results - 5th Percentile							
Month	SW2 Seloam Lake Outlet (m ³ /day)	SW5 Seloam Brook at Fifteen Mile Stream (m ³ /day)	SW14 Upper Reaches Fifteen Mile Stream (m ³ /day)	SW14A Abraham Lake outlet at Fifteen Mile Stream (m ³ /day)	SW15 East Lake Outlet (m ³ /day)	SW15A Eastern Tributary at Anti Dam Flowage (m ³ /day)	SW6 Anti Dam Flowage Outlet (m ³ /day)
January	18800	29800	143100	16200	1800	13100	337100
February	22600	31200	132600	14900	1600	12000	328500
March	44100	61700	316100	37500	4000	29800	389000
April	33000	43700	200800	23500	2500	18700	405300
May	20600	23100	47600	4500	400	3200	274300
June	18700	20700	44900	4700	400	3300	57900
July	17200	19100	42500	4500	400	3200	54900
August	16300	18200	41600	4500	400	3200	54100
September	16000	18000	42500	4700	400	3300	55400
October	15100	17200	46400	5000	400	5800	64100
November	15800	20900	79900	9900	1600	19700	133100
December	16100	27600	178500	19300	2300	18100	267800
Average Annual	21200	27600	109700	12400	1400	11100	201800
Annual Monthly Maximum	44100	61700	316100	37500	4000	29800	405300
Annual Monthly Minimum	15100	17200	41600	4500	400	3200	54100

Closure Phase -Reclamation Stage - Hydrological Model Results - 95th Percentile							
Month	SW2 Seloam Lake Outlet (m ³ /day)	SW5 Seloam Brook at Fifteen Mile Stream (m ³ /day)	SW14 Upper Reaches Fifteen Mile Stream (m ³ /day)	SW14A Abraham Lake outlet at Fifteen Mile Stream (m ³ /day)	SW15 East Lake Outlet (m ³ /day)	SW15A Eastern Tributary at Anti Dam Flowage (m ³ /day)	SW6 Anti Dam Flowage Outlet (m ³ /day)
January	132400	182400	928400	111900	11800	88400	1242300
February	120500	164600	818200	98800	10400	77800	1088600
March	152800	210900	1066100	129000	13600	102200	1413500
April	179300	245400	1224000	147100	15500	116600	1672000
May	93500	126500	620300	74200	7800	58700	837100
June	51700	71900	379000	45500	4800	36000	402700
July	21100	28200	161000	18900	2000	16300	296600
August	21900	31000	233000	27900	3100	28100	293300
September	26400	38300	295600	36200	4100	36300	372700
October	64300	98700	610600	74700	8100	60600	641600
November	118400	166200	907300	111700	12000	87700	1067700
December	140700	192900	993200	119600	12700	94500	1329700
Average Annual	93600	129800	686400	83000	8800	66900	888200
Annual Monthly Maximum	179300	245400	1224000	147100	15500	116600	1672000
Annual Monthly Minimum	21100	28200	161000	18900	2000	16300	293300

APPENDIX F

**Model Output - Closure Phase -
Post-Closure Stage**

Atlantic Mining NS Corp
Appendix F
Closure Phase - Post Closure Stage
Fifteen Mile Stream
Hydrological Model Output

Closure Phase - Post-Closure Stage - Hydrological Model Results - Mean							
Month	SW2 Seloam Lake Outlet (m ³ /day)	SW5 Seloam Brook at Fifteen Mile Stream (m ³ /day)	SW14 Upper Reaches Fifteen Mile Stream (m ³ /day)	SW14A Abraham Lake outlet at Fifteen Mile Stream (m ³ /day)	SW15 East Lake Outlet (m ³ /day)	SW15A Eastern Tributary at Anti Dam Flowage (m ³ /day)	SW6 Anti Dam Flowage Outlet (m ³ /day)
January	61900	84800	424500	51000	5400	40230	603900
February	57500	78300	386400	46300	4900	36570	571800
March	89200	123600	632600	76500	8100	60550	808100
April	87800	119400	586700	70200	7400	55630	827700
May	38500	49300	205200	23700	2500	18860	429700
June	24100	29500	101700	11500	1100	9040	220800
July	19300	22600	62900	6900	600	5460	100500
August	19200	23000	73500	8200	800	7510	97300
September	19000	23300	84500	9500	1000	10710	117900
October	23300	33200	187700	22300	2500	24760	232000
November	47000	71600	451300	55000	6100	47230	511300
December	65500	92800	501600	60700	6500	47840	659400
Average Annual	46000	62600	308200	36800	3900	30400	431700
Annual Monthly Maximum	89200	123600	632600	76500	8100	60600	827700
Annual Monthly Minimum	19000	22600	62900	6900	600	5460	97300

Closure Phase - Post-Closure Stage - Hydrological Model Results - 5th Percentile							
Month	SW2 Seloam Lake Outlet (m ³ /day)	SW5 Seloam Brook at Fifteen Mile Stream (m ³ /day)	SW14 Upper Reaches Fifteen Mile Stream (m ³ /day)	SW14A Abraham Lake outlet at Fifteen Mile Stream (m ³ /day)	SW15 East Lake Outlet (m ³ /day)	SW15A Eastern Tributary at Anti Dam Flowage (m ³ /day)	SW6 Anti Dam Flowage Outlet (m ³ /day)
January	18800	29700	143100	16200	1800	13100	368700
February	22600	31100	132600	14900	1600	12000	359600
March	44100	61700	316100	37500	4000	29800	389000
April	33000	43700	200800	23500	2500	18700	406700
May	20600	23500	47900	4500	400	3200	303400
June	18700	21000	45200	4700	400	3300	61600
July	17200	19400	42800	4500	400	3200	57300
August	16300	18500	42000	4500	400	3200	56800
September	16000	18400	42800	4700	400	3300	58500
October	15100	17500	46700	5000	400	5800	70500
November	15800	21200	80200	9900	1600	19700	148100
December	16100	26200	178000	19300	2300	18100	281000
Average Annual	21200	27700	109900	12400	1400	11100	213400
Annual Monthly Maximum	44100	61700	316100	37500	4000	29800	406700
Annual Monthly Minimum	15100	17500	42000	4500	400	3200	56800

Closure Phase - Post-Closure Stage - Hydrological Model Results - 95th Percentile							
Month	SW2 Seloam Lake Outlet (m ³ /day)	SW5 Seloam Brook at Fifteen Mile Stream (m ³ /day)	SW14 Upper Reaches Fifteen Mile Stream (m ³ /day)	SW14A Abraham Lake outlet at Fifteen Mile Stream (m ³ /day)	SW15 East Lake Outlet (m ³ /day)	SW15A Eastern Tributary at Anti Dam Flowage (m ³ /day)	SW6 Anti Dam Flowage Outlet (m ³ /day)
January	132400	182400	928400	111900	12400	89100	1245800
February	120500	164600	818200	98800	11000	78400	1092500
March	152800	210900	1066100	129000	14300	103000	1421600
April	179300	245400	1224000	147100	16300	117400	1706300
May	93500	126500	620300	74200	8200	59200	890000
June	51700	71700	379000	45500	5100	36300	405000
July	21100	28100	160800	18900	2100	16300	304600
August	21900	30200	232200	27900	3200	28200	301400
September	26400	38200	294900	36200	4100	36400	377700
October	64300	97200	610000	74700	8400	61000	654500
November	118400	165800	906300	111700	12400	88000	1083700
December	140700	192900	993200	119600	13300	95200	1337400
Average Annual	93600	129500	686100	83000	9200	67400	901700
Annual Monthly Maximum	179300	245400	1224000	147100	16300	117400	1706300
Annual Monthly Minimum	21100	28100	160800	18900	2100	16300	301400



golder.com