MINTO EXPLORATIONS LTD.

General Site Plan

Minto Mine Phase IV Expansion

April 2011

Revision 1

General Site Plan for Minto Mine covering the period commencing April 1, 2011.

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INTRODUCTION

This document (the "General Site Plan" or "GSP") describes the plan for the Minto Mine Phase IV Expansion for the 90 to 180-day period [April 1 to September 30, 2011]. The nature of the somewhat open-ended application arises from the uncertainty around the Minto Application for Amendment to its water license under the Yukon Water Board. For this reason, it is intended to submit this plan that gives detailed plans that entail the first 90 to 180 days commencing April 1, 2011. Should the License not be obtained or imminent approaching the period of the first 90 days, MintoEx will submit an update at that time with revision / confirmation that the next 90 day plan as shown in this plan are still valid and representative.

MintoEx will provide the detailed plans and schedules in three stages, which are:

1. Stage 1: the initial 90-day period of the Phase IV Expansion;

2. Stage 2: Updated Plans for next 90 day period, in advance of obtaining a water use licence amendment; should it not be obtained or imminent at that time, and

3. Stage 3: the remainder of the Phase IV Expansion.

The Phase IV Expansion consists of the following discrete elements:

- Strip Area 2 Pit
- Strip Area 118 Pit
- Strip Portal area
- Underground Development Portal
- Underground Development Decline to Underground portions of Area 2/118
- Mine Area 2 Pit
- Mine Area 118 Pit
- Mine Underground portions of Area 2/118
- Deposit overburden from Area2/118 Pit and Portal area
- Deposit waste rock from Area 2/118 Pit and Underground
- Mill ore from Area 2/118 Pit and Underground
- Deposit tailings from Area 2/118 Pit and Underground
- Construct Mill Valley Fill
- Construct South Wall Buttress in the Main Pit
- Construct water management infrastructure (diversions)
- Construct expanded camp and office space

MintoEx will provide Yukon Government with the following detailed plans for the Phase IV Expansion:

- Development and Operations Plan, entitled "General Site Plan Minto Mine" including:
    - Mine Plan, including Open Pit & Underground
    - Waste Management Plan
        Including Mill Valley Fill Dump Project
        Including Main Pit Dump Buttress Project
    - Water Management Plan

    - Emergency Response Plan

- Environmental Management Plan, including:
    - Solid Waste Management Plan
    - Wildlife Protection Plan
    - Spill Response Plan
    - Heritage Resources Protection Plan
    - Explosives Management Plan

- Detailed Decommissioning and Reclamation Plan

MintoEx will include IFR drawings for the Mill Valley Fill and South Wall Buttress in the Waste Management Plan.

Stage 1 of this General Site Plan includes detailed plans for time sensitive elements of the Phase IV Expansion which must commence immediately following completion of the Minto Mine Main Pit in order to prevent a hiatus in mining.

Activities we propose to undertake in Stage 1 are limited to the following:

- Strip Area 2 Pit
- Strip Portal area, and
- Develop up to 500m of decline in non-mineral bearing waste rock
- Deposit overburden from Area 2 Pit and Portal area
- Deposit waste rock from Area 2 and Underground Workings
- Construct Mill Valley Fill
- Construct South Wall Buttress in the Main Pit
- Construct expanded camp and office space

For Stage 1 we will provide the following detailed plans related to Phase IV mining:

- General Site Plan, including:
    - Mine Plan
    - Waste Management Plan
    - Mill Valley Fill Dump Plan and Layout
    - Main Pit Buttress Plan and Layout
- Environmental Management Plan, including:
    - Sediment and Erosion Control Plan
    - Environmental Monitoring Plan
    - Emergency Response Plan
    - Wildlife Protection Plan
    - Heritage Resources Protection Plan
- Detailed Decommissioning and Reclamation Plan

Stage 2 of this General Site Plan includes detailed plans for elements of the Phase IV Expansion which may commence in advance of receiving a water use licence amendment.

Activities (in addition to Stage 1 activities) which we propose to undertake in Stage 2 are limited to the following:

- Develop Portal
- Continue to Develop Decline to Underground portions of Area 2/118
- Mine Area 2 Pit, continued stipping and ore mining
- Mine Area 118 Pit
- Mine Underground portions of Area 2/118
- Deposit waste rock from Area 2/118 Pit and Underground
- Construct water management infrastructure (diversions)

For Stage 2 we will provide the following detailed plans related to Phase IV mining:

- Development and Operations Plan, including:
    - Mine Plan (revised)
    - Waste Management Plan (revised)
    - Tailings Management Plan (revised)
- Detailed Decommissioning and Reclamation Plan (revised)

Stage 3 of this General Site Plan includes detailed plans for remaining elements of the Phase IV Expansion which may commence upon receiving a water use licence amendment.

Activities (in addition to Stage 1 and Stage 2 activities) which we propose to undertake in Stage 3 are:

- Mill ore from Area 2/118 Pit and Underground
- Deposit tailings from Area 2/118 Pit and Underground

For Stage 3 we will provide the following detailed plans related to Phase IV mining:

- Development and Operations Plan, including:
    - Mine Plan (revised)
    - Waste Management Plan (revised)
    - Tailings Management Plan (revised)
- Detailed Decommissioning and Reclamation Plan (revised)

1. BACKGROUND

1.1. Geology and Mineralization

The Minto Project is located in the Carmacks Copper Belt along the eastern margin of the Yukon-Tanana Composite Terrane, which is comprised of several metamorphic assemblages and batholiths.

Mineralization at Area 2/118 is hosted entirely in foliated granodiorite layers with sulfides occurring as disseminations (primarily associated with mafic minerals), along foliation planes (foliaform stringers), occasional splashy blebs, and very rare 5 to 30cm semi-massive bands. The dominant sulphide species at Area 2/118 include chalcopyrite and bornite in roughly a 3:1 ratio with only trace to sub-trace amounts of pyrite. In almost all cases sulphide mineralization is accompanied by the presence of magnetite.

Mineralized horizons occur immediately beneath the base of overburden; however, the bulk of the Area 2/118 ore body is found approximately 75 m below the base of overburden.

Further detail about the geology at Minto was previously submitted as part of the Phase IV Expansion Application.

1.2. Relevant Deposits

Mineralization at Area 2/118 is distinct in that mineralisation is predominantly disseminated (plus occasional foliaform stringers) and that semi-massive to massive sulphide mineralization is absent; as a whole, the mineralization is more homogenous and consistent as compared to Minto Main.

1.2.1. Area 2

A relatively deep soil overburden deposit exists under the northeast portion of the proposed Area 2 pit that consists primarily of transported silt and fine sand with occasional lenses of clay and coarse sand to gravel. The soil is high in organic content and is known to contain permafrost. The majority of this deep soil deposit is located to the northeast, outside of the Area 2 pit; however, a significant portion of the north and east Area 2 pit walls will be comprised of the frozen overburden soil. Based on available information from resource and geotechnical drilling, Area 2 is covered with soil overburden ranging from about 5 to 15m in depth in the southwest portion with up 20 to 45m along much of the north and east walls reaching a maximum depth of 70m at the far north.

1.2.2. Area 118

The majority of the proposed Area 118 open pit footprint is covered with up to approximately 5m of overburden soil except the southwest portion where the soil locally deepens to approximately16m. The depth of bedrock weathering at Area 118 is generally to about 30 to 60m below ground surface.

1.3. Reserve Estimates

Mineral reserves estimates have only been published for open pit mining at Minto. The Area 2/118 open pit reserves summarised below have been adjusted from the Minto Phase IV Technical Report of December 2009, as a portion of the higher strip ratio lower zones was proposed to be mined via underground methods, for which no underground reserves estimate has been published at this time.

Table 1-1 Mineral Reserve Estimates

Deposit	Kt	Cut-off Grade (%Cu equiv.)	Diluted grade			Contained Metal		
			(%Cu)	(g/t Au)	(g/t Ag)	Cu (Mlb)	Au (koz)	Ag (koz)
Area2/118	3,280	0.56	1.35	0.48	4.61	98	51	486

2. OPEN PIT MINE PLAN

2.1. Open Pit Design

The open pit designs are based on an optimal Whittle™ pit shell, onto which geotechnical criteria, minimum mining widths, access ramps and detailed bench configurations were applied. These design criteria are summarised in Table 2-1 below.

Table 2-1 Detailed Pit Design Parameters

Design Parameter	Unit	Area2/118 Pits
Overburden angle	°	30
Inter-ramp angle	°	47 west, 53 east
Ramp width	m	25
Ramp grade	%	10
Bench height	m	9
Bench face angle	°	64 west, 73 east
Bench configuration	single/double	Double
Berm width	m	8

Sub-out maximum depth 6.0 m
Single lane ramp width 15 m @10%

2.2. Long-Term Open Pit Mine Plan

Mine planning for the Phase IV open pit deposits was conducted using a combination of Mintec Inc. MineSight® software, Gemcom GEMS™ and Whittle™ software. The detailed pit design and production scheduling was undertaken with the use of MineSight®.

Phase IV open pit mine designs were produced for Area 2 and Area 118. Table 2-2 summarizes the detailed long-term open pit design tonnages and grades.

Table 2-2 Open Pit Design

Pits	Diluted Ore (Kt)	Waste (Kt)	Total Material (Kt)	Strip Ratio (tW:tO)	Ore Grade			Contained Metal		
					Cu (%)	Au (g/t)	Ag (g/t)	Cu (Mlbs)	Au (Koz)	Ag (Koz)
Area 2	3,192	25,980	29,172	8.1	1.35	0.49	4.63	95	50	475
118	88	639	727	7.3	1.32	0.27	3.93	3	1	11
Total	**3,280**	**26,619**	**29,899**	**15.4**	**1.34**	**0.38**	**4.28**	**98**	**51**	**486**

The following figures and tables summarise the long term open pit mine plan for Area 2.

Figure 2-1: Phase IV Area 2 Pits – Stages 1 & 2

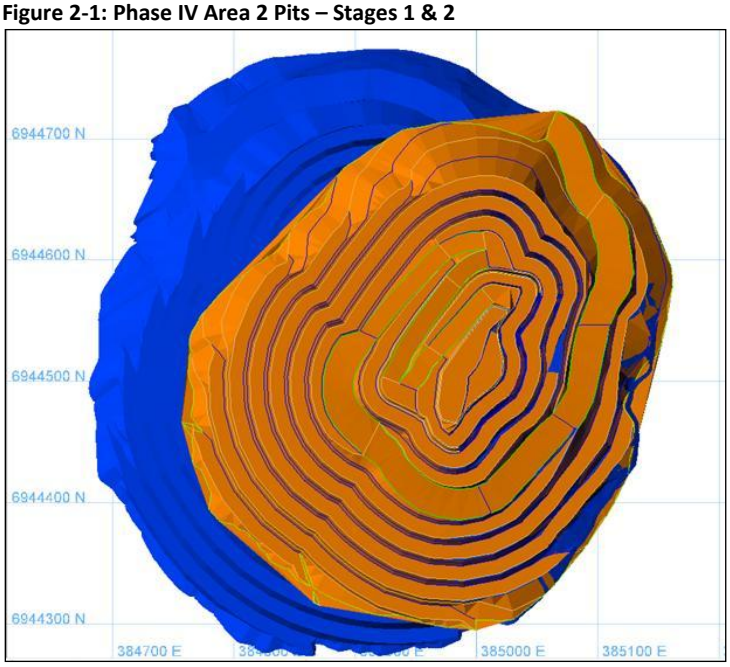


Figure 2-2: Phase IV Area 2 Pits – Stages 1 & 2 – Cross Section (Looking North)

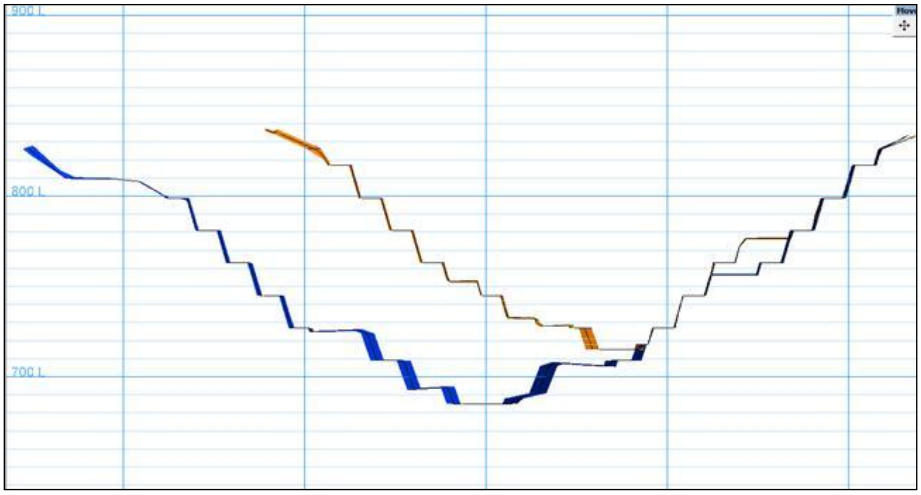


Figure 2-3: Planned Mining Rate for Phase IV

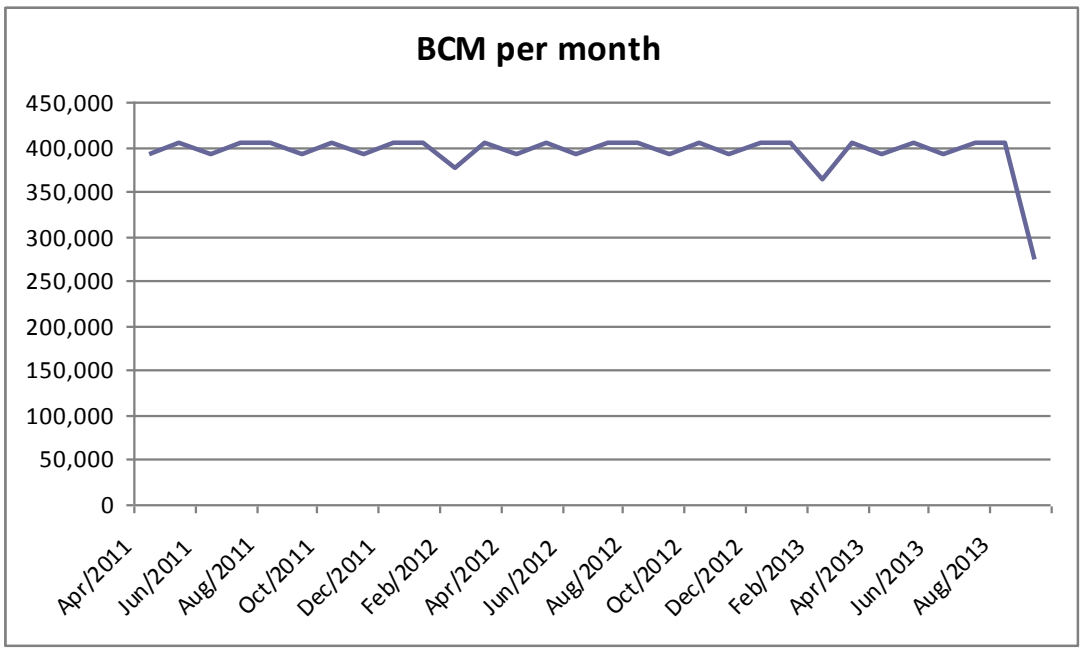


Table 2-3: Material Summary by Bench – Area 2 Stage 1

BCM (Bank Cubic Meters) & Tonnage by Bench

A2 Pit Stage 1	Waste		Overburden		Ore	
Bench (ELEV)	BCM	Tonnes	BCM	Tonnes	BCM	Tonnes
871 m Elev	10,544	23,577	792	1,600	182	481
862 m Elev	80,574	181,428	587	1,198	3,664	9,627
853 m Elev	230,225	517,020	6,337	12,917	8,553	22,484
844 m Elev	346,415	832,260	14,612	30,306	5,389	14,325
835 m Elev	447,717	1,110,748	5,400	11,154	17,100	45,501
826 m Elev	513,412	1,288,129	5,688	11,743	3,300	8,760
817 m Elev	620,257	1,560,276	10,060	20,813	4,900	13,116
808 m Elev	675,307	1,669,533	3,157	6,452	9,399	24,964
799 m Elev	709,099	1,756,484	5,400	11,217	7,322	19,522
790 m Elev	525,227	1,349,688	3,901	7,996	32,188	86,509
781 m Elev	396,188	1,044,779	560	1,122	100,103	269,981
772 m Elev	219,673	585,350	0	0	162,238	440,490
763 m Elev	178,190	473,942	0	0	159,864	434,703
754 m Elev	140,752	373,968	0	0	92,461	251,576
745 m Elev	151,469	402,503	0	0	49,233	133,571
736 m Elev	71,495	189,479	0	0	47,235	128,242
727 m Elev	17,910	47,462	0	0	74,495	203,390
718 m Elev	592	1,611	0	0	35,684	97,795
709 m Elev	841	2,228	0	0	4,809	13,092

2.3. Open Pit Mine Operation

Mining will be conducted, for the balance of 2011, by Pelly Construction. This includes the Area 2 pit overburden and waste stripping scheduled for the balance of 2011.

2.3.1. Mine Equipment

Major mining equipment requirements are indicated in Table 2-4; these are based on similar-sized operations, as well as current practices at the Minto Mine. The proposed plant processing rate of 1.4-million tonnes per year was used to estimate the mining equipment fleet required. The fleet has an estimated maximum capacity of 40,000 tpd total material, which will be sufficient for the proposed life-of-mine plan.

Table 2-4 Mine Equipment (Current Contractor Fleet)

No. of units	Equipment Type
1	Hitachi EX1200 Shovel
1	Hitachi EX1100 Shovel
8	Cat 777F Haul Truck
1	Cat 992G Loader
2	Cat 385CL Excavator
3	Cat D9T Dozer
2	Cat 16 m Grader
2	Atlas Copco PV235 Drill
1	Atlas Copco D9-11 Drill
1	Cat 777C Water Truck
1	Cat 777B w/trailer

2.3.2. Unit Operations

The Atlas Copco PV235 drills will perform the majority of the production drilling in the mine, with the smaller Atlas Copco D9 drill used for secondary blasting requirements and may be used on the tighter-spaced patterns required for pit development blasts.

The main loading and haulage fleet consists of Cat 777F-100 ton haul trucks, which are loaded primarily with the diesel Hitachi shovels or the Cat 992G wheel loader, depending on pit conditions. As pit conditions dictate, the Cat D9 dozers are used to rip and push material to the excavators, as well as maintaining the waste dumps.

The remainder of the equipment listed in Table 2-4 will be used to maintain and build access roads and to meet various site facility requirements (including coarse mill feed stockpile maintenance and further exploration development).

The work schedule is based on two 11-hour shifts, seven days a week, 365 days per year.

2.3.3. Grade Control

In order to minimize ore dilution, maximize ore recovery, and thereby improve the operation's overall economics, grade control will play an important role throughout the mining process.

Grade control begins with the proper identification of the ore/waste zones and contacts in the field through:

- Information obtained from up-to-date 3-D resource model;
- Blast hole sampling;
- Driller reports;
- Face sampling (includes mapping, visual inspections, sampling); and
- Trenching (as required, to provide better definition of ore/waste contacts, sampling).

Once the above information has been gathered and compiled, it will be communicated to operational personnel through:

- Daily/weekly production meetings;
- Detailed "dig" maps – outlining ore zones, waste contacts, faults; and
- Field surveying and layout of dig limits, ore contacts, trenching required.

In order to maintain the effectiveness of the grade control process; regular field inspections will be undertaken by engineering/geology personnel. Clear lines of communication will be maintained with operational personnel, including equipment operators and front line supervisors.

As part of the grade control process, variable bench heights may be necessary in order to maximize the ore recovery. These include: variable bench heights in waste in order to target the top of the ore zone, and a varying bench height within the ore zones (reduce height at the periphery of the zone). Drill and blast control will also play an important role in order to minimize dilution of the ore zones during the blasting process (e.g. minimize heave in the ore zone).

2.4. Pre-Stripping Schedule

The mine plan anticipated for April 1st to September 30th, 2011 and for the balance of the year consists primarily of waste stripping. Similar to the current production rate, roughly 400,000 BCM of waste per month are planned, with roughly one-quarter of the ma terial by volume being overburden soil, more than half being waste rock with no grade, and the remaining 13% being primarily waste rock with some grade.

Approximately 3% of the total material in the first three months of stripping is expected to be ore-grade oxide material. This oxide ore will be stockpiled for future milling and processing. This is the same procedure that has been applied to oxide ore material mined from the Main Pit as the mill is not currently configured to handle oxides.

The initial three months of pre-stripping for the Area 2 pit are summarised in Table 2-5.

Table 2-5: Area 2 Initial Pre-stripping

Month (2011)	*April*	*May*	*June*	*July*	*August*	*September*
Activity	Overburden & waste stripping.	Overburden & waste stripping.	Overburden & waste stripping.	Overburden & waste stripping.	Overburden & waste stripping.	Overburden & waste stripping.
Overburden (BCM)	193,354	113,833	76,141	70,183	71,640	89,277
Waste Rock - No Grade (BCM)	174,034	245,893	262,668	273,322	267,419	227,927
Waste Rock - Grade < 0.64% (BCM)	16,573	32,325	37,901	44,432	44,038	56,474
Ore Material - Low-Grade Oxide (BCM)	6,037	10,951	13,290	15,063	19,902	16,324
TOTAL MATERIAL (BCM)	389,997	403,002	390,000	402,999	403,000	390,002

For more details on waste material handling, please see Section 4 of this document.

3. UNDERGROUND MINE PLAN

Exploration at Minto Mine has historically been focused on finding near-surface deposits conducive to open pit mining. In the course of exploration, several deeper deposits and mineralized areas were discovered that may provide an opportunity to add mill feed material using underground mining methods and thereby extending the mine life.

There are several known deposits in the Area 2/118 complex that may have the grade, continuity and volume to be considered potentially mineable from underground. These deposits have been scheduled into the Phase IV LOM Schedule submitted as part of the Phase IV Expansion Application.

It should be noted that underground mining can generally be accomplished with a significantly reduced surficial footprint as compared to open pit mining resulting in potentially reduced environmental impacts. Closure and reclamation of an underground mine is not as extensive as that required for open pit mines.

3.1. Mineral Resources

Mineral resources that were considered as part of the underground component of the Phase IV LOM plan are limited to Area 118 and Area 2. However, there is a potential for future underground exploitation of Minto East, Wildfire and Copper Keel.

3.1.1. Area 2/118

A number of deposits with underground mining potential are located south and west of, as well as beneath, the proposed Area 2 Pit at depths of roughly 100 m to 300 m below surface.

3.1.2. Exploration

Additional development beyond these existing underground resources was included in the Phase IV LOM plan to the Minto East and Wildfire/Copper Keel exploration targets. These exploration declines were included in order to provide an underground platform for further resource delineation in these areas.

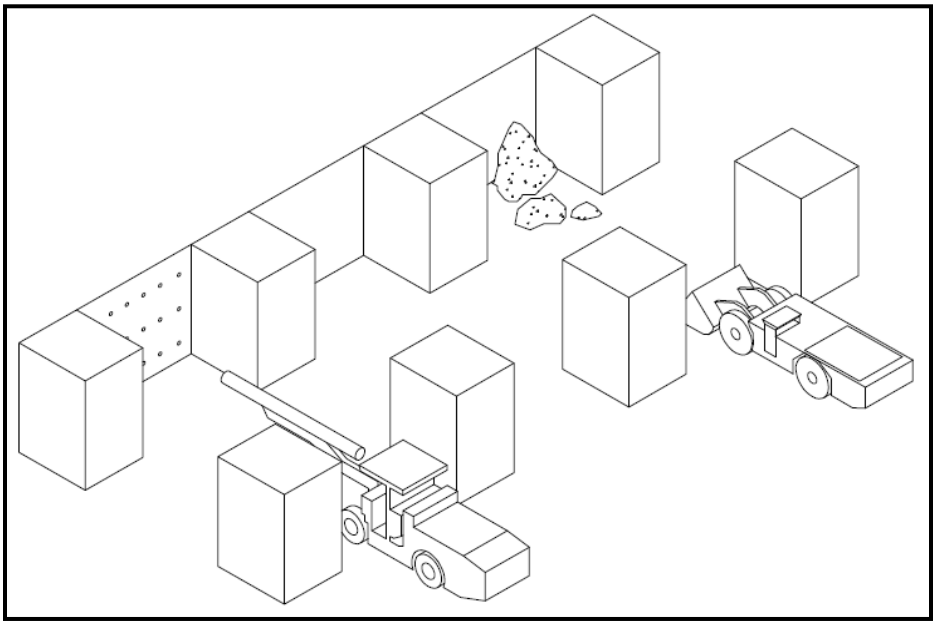
3.2. Mining Method Description

At this stage, two potential underground mining methods have been proposed for the Area 2/118 underground mining:

- Room and Pillar ("RAP")
- Post-Pillar Cut and Fill ("PPCF")

RAP mining is an open stoping method that utilizes un-mined rock as pillars to support a series of rooms or small stopes around the pillars. The method allows for excellent production capacity potential and relatively low cost while still providing mining flexibility and low dilution. The strong, massive nature of the Minto rock and shallow depth of the deposits mean that extraction ratios of at least 70% to 85% could reasonably be expected without the use of backfill or artificial support such as concrete posts.

Figure 3-1: Schematic of RAP mining method



PPCF mining is a variation of cut and fill and room and pillar and has the advantage of being able to be used in thicker (> 10 m), irregular-shaped deposits while keeping dilution and pillar sizes to a minimum.

Figure 3-2: Schematic of PPCF mining method

3.3. Conceptual Mine Design and Operation

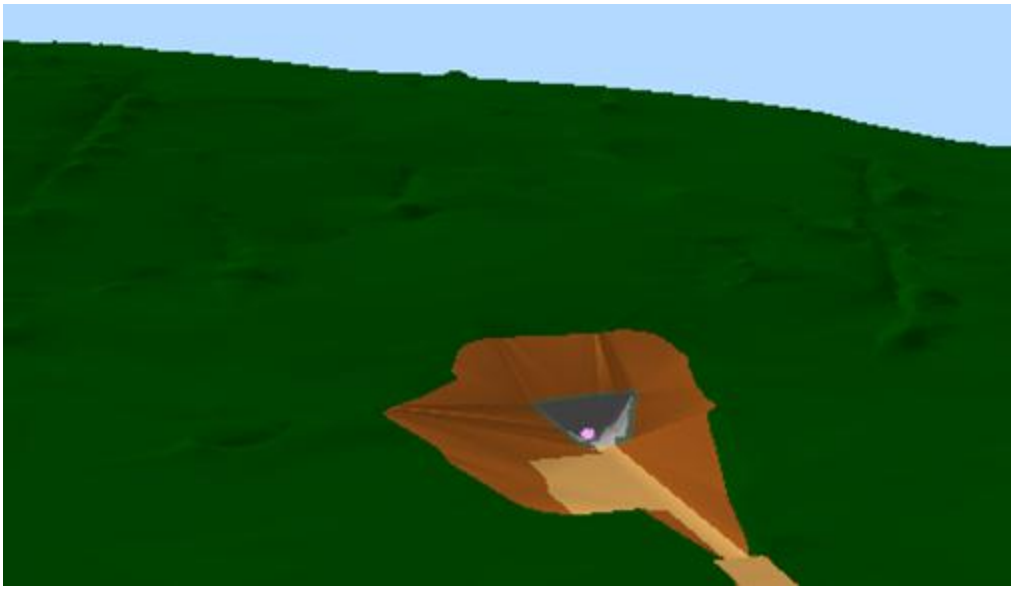
3.3.1. Portal

The underground will be accessed via a portal from surface and a decline. The proposed portal location is in an area of minimal overburden approximately 40 metres south of the proposed Area 2 pit and near the pit access road.

The portal will be established by removing overburden from the area and then blasting a trench into the surface bedrock to establish a face of sufficient height to accommodate the portal opening and still have 7-10 metres of good rock in the brow above. The gradient of the rock trench will be -15% toward the portal, the same as the decline, and will be about 20 metres in length. The portal face of the rock trench will be inclined at 80° from the horizontal. The sides of the rock trench will each consist of two 55° wall segments separated by a 3 metre bench located at an elevation 10 metres above the bottom of the trench.

The overburden will be removed to 2 metres beyond the rock trench and graded to a maximum slope of 2.5:1. The road approaching the rock trench shall be graded at +2%, which is possible since the topography has a slope of 12-15%; this will promote drainage down the road and away from the rock trench. A laydown area will also be excavated into the overburden alongside the road. A perimeter ditch around the outside of the overburden cut will be established to direct rain water flowing down the hillside away from the portal.

Figure 3-3: Conceptual drawing of portal cut excavation



The rock trench will be supported as required and will at a minimum have 2.4 metre long #6 resin grouted rebar installed on a 1 metre by 1 metre spacing with welded wire mesh on the portal face.

It is anticipated that it will take approximately one month to excavate and prepare the portal cut.

The portal cut excavation is conceptualised in Figure 3-3 and a drawing showing the excavation is included as Appendix A.

3.3.2. Future Underground Developments

Further detail regarding the decline, ventilation and underground power supply will be submitted in future revisions of the General Site Plan.

4. WASTE MANAGEMENT PLAN - SUMMARY

A complete Waste Management Plan (WMP) for Phase IV waste rock and overburden was produced by EBA Engineering Consultants Ltd. Portions of the WMP relevant to this Stage 1 application are summarised in this section.

4.1. Types of Waste

Mining operations at the Minto Mine generate three general types of waste materials: overburden, waste rock and tailings. Overburden includes all unconsolidated soil above the bedrock. Waste rock consists of rock that is mined, but is below ore cut-off grade, which for Minto's Phase IV development is 0.64% copper. Tailings consist of material left from processed ore and are outside of the scope of this WMP.

Overburden and waste rock may be further categorised as follows:

- Overburden
  - Ice-rich
  - Non ice-rich
- Waste Rock
  - Potentially acid generating (PAG)
  - Non potentially acid generating (NPAG)

Waste rock is further classified by grade bin as illustrated in Table 4-1.

Table 4-1: Summary of Waste Rock volumes by Grade bin

Grade Bin (% Copper)	Total Expected Volume (M m^3)	ARD Classification
0.00	8.77	NPAG
0.01 – 0.05	0.18	NPAG
0.05 – 0.10	0.18	NPAG
0.10 – 0.20	0.44	PAG
0.20 – 0.64	2.11	PAG
Total	**11.68**	

4.2. Waste Disposal Schedule

All of the Phase IV waste will be disposed in the following five dump sites:

- The South Wall Buttress of the Main Pit;
- The Mill Valley Fill Expansion – Stages 1 and 2;
- The Grade Bin 0.10 – 0.64 Disposal Area;
- The Southwest Waste Dump Expansion; and
- The Area 118 Open Pit.

A summary of dump design volumes, material sources and schedule are presented in Table 4-2.

Table 4-2: Waste Dump Schedule and Volumes

Dump	Design Volume (M m^3)	Grade Bin (%Cu)	Waste Type	Material Source	Schedule
Main Pit South Wall Buttress	1.30	0.00 – 0.64	Waste Rock	Area 2 Open Pit	April to July 2011
Simultaneous Disposal with Tailings in Main Pit	1.38 (minimum)	0.10 – 0.64	Waste Rock	Area 2 and Area 118 Open Pits and Underground	July 2011 to September 2013
Mill Valley Fill Expansion	1.30	0.00	Waste Rock	Area 2 Open Pit	April to October 2011
Grade Bin 0.10 – 0.64 Disposal Area	0.93 (maximum)	0.10 – 0.64	Waste Rock	Area 2 and Area 118 Open Pits and Underground	July 2011 to September 2013
Southwest Expansion Stages 1 & 2 (Waste Rock)	6.44	0.00 – 0.10	Waste Rock	Area 2 and Area 118 Open Pits	July 2011 to October 2013
Southwest Waste Dump Expansion Stage 1 (Overburden Area)	2.78	N/A	Non ice-rich Overburden	Area 2 and Area 118 Open Pits	February 2011 to April 2013
Area 118 Open Pit	0.30	0.00 – 0.10	Waste Rock	Area 2 Open Pit , Area 2 and Area 118 Underground	July 2012
TOTAL	**14.47 M m^3**				

Note that any ice-rich material will report to the current Ice Rich Overburden Dump (IROD). The volume of ice-rich material expected is minimal.

The waste dump and structure footprints are shown on the EBA drawing WMP-01 in Appendix B.

Planned waste production for Phase IV is summarised in the chart in Figure 4-1. In this chart, “Int-Grade Waste” and “High-Grade Waste” are PAG material, whereas “Low-Grade Waste” and “Zero-Grade Waste” are NPAG.

Figure 4-1: Waste Material Schedule – Summary by Type (Weekly for 3 months, then monthly for Duration of Area 2 pit)

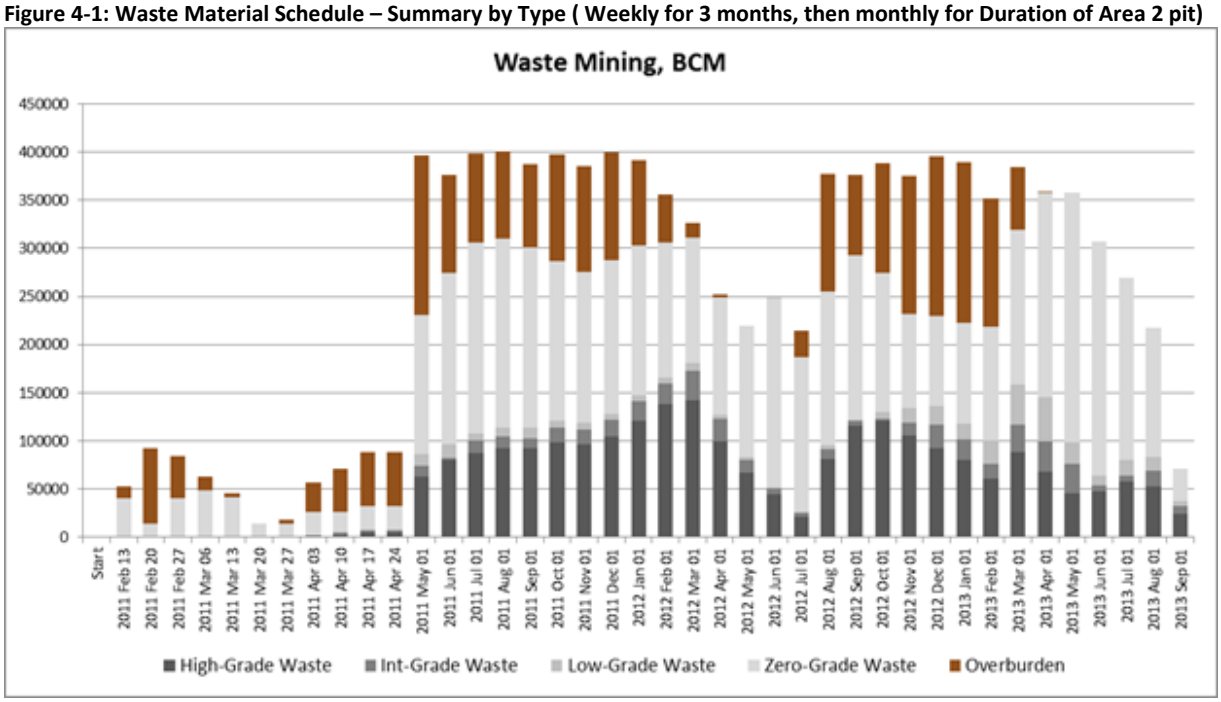
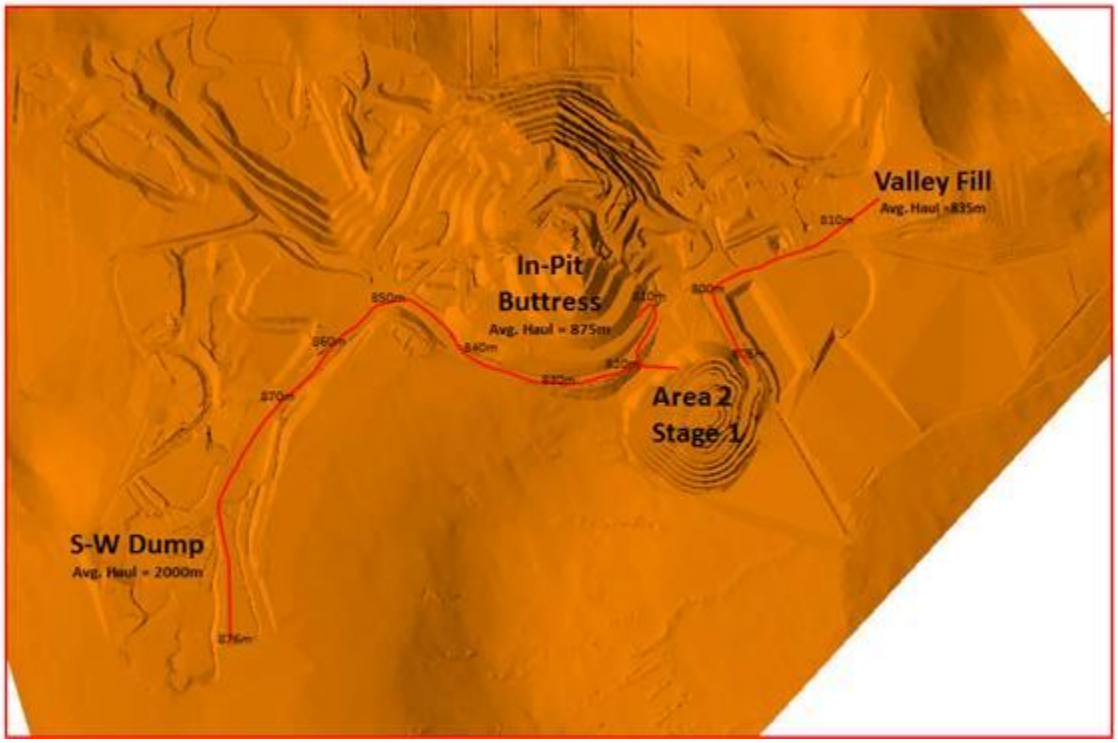


Table 4-3: Waste Dump Locations planned for 180 day period and beyond



4.3. Waste Dumps Pertaining to Stage 1

The waste dumps that are planned for this Stage 1 application period (April 2011 through June 2011) are:

- Main Pit South Wall Buttress
- Mill Valley Fill Expansion
- Southwest Waste Dump Expansion Stage 1 (Overburden Area)

The design considerations for these dumps are summarised in the following sections.

Table 4-3: Waste Dump Volume Capacities planned for 180 day period

Seq.	Dump	BCM's	Elev (m) avg	Proportion	Notes
1	Valley Fill	1,200,000	757.5	28%	Clean Waste
2	In-Pit Buttress	1,500,400	810	34%	Clean,LG & HG Waste
3	S-W Dump	1,673,487	885	38%	Clean Waste & OB
	TOTAL	**4,373,887**		**100%**	

4.3.1. Main Pit South Wall Buttress

The construction of a new South wall buttress for the Main Pit is to stabilize the South wall of the pit that is currently in an unstable condition. Waste rock of Grade Bins 0.00 to 0.64% Cu generated from Area 2 Open Pit is to be used for construction of the south wall buttress. The waste management plan for this site is focused on short-term slope stability. Slope stability analyses were performed for cases of surface slope and deep-seated slope failures in a short-term (mine operation) period and long-term period (after closure) and in the design seismic event of an annual probability of 1 in 475 years (1/475).

The waste will be sub-aqueous at closure. Thus, metal leaching/transportation is not an issue. Surface water management for the south wall buttress is not required as the waste rock is confined by the pit. Surface water management will be addressed in Subsection 4.5 “Grade Bin 0.10 to 0.64 Disposal Area”.

The Main Pit South Wall Buttress will be covered by tailings and water at closure. The top portion of the wall buttress material (above the design pond water level Elevation 786.0 m) will be pushed into the pit at closure, if required.

A plan showing the Main Pit South Wall Buttress is included in Appendix B - MINTO MINESITE WMP WASTE DUMPS PLAN VIEW INCL. SW BUTTRESS as EBA drawing WMP-06.

4.3.2. Mill Valley Fill Expansion

The Mill Valley Fill (MVF) Expansion consists of two fills: an extension of the existing MVF (referred to as MVF Extension) and an expansion of the existing camp fill pad. The MVF Expansion will be constructed of Grade Bin 0.00 material to reduce the potential for transportation of metals. The design volume of the MVF Expansion is approximately 1.5 Mm^3 based on the slope crest elevation of 770 m. The construction of the MVF Expansion is also intended to provide a toe berm to reduce the ground movement occurring in the adjacent Dry Stack Tailings Storage Facility area located to the south. The design of the expansion involves the construction of drainage systems, excavation and backfill of a toe key with waste rock, construction of water conveyance structures, placement of a drainage blanket and placement of general waste rock.

Drainage systems for the MVF Expansion will consist of a drainage blanket placed directly beneath the general rock fill to prevent the build-up of porewater pressures within the fill and to allow water to continue to flow down the Minto Creek valley. The drainage blanket will be 10 m thick and constructed using select waste rock with D10 > 6 mm to allow free drainage. Although most of the waste rock is generally considered to be free draining and suitable for use as drain blanket material, this material should meet the specifications provided by EBA and will be approved by an engineer prior to placement on site.

The toe key will extend a minimum of 10 m below the existing ground or to bedrock, whichever is shallowest. The purpose of the toe key is to provide stability against deep seated failure by forcing a failure deeper into the foundation soils. The toe key will be backfilled with general rock fill.

Water conveyance structures will be constructed at the toe, which consist of a dyke with low permeable clay, an impacted water return line, and an inverted culvert collection point. The toe key will be used to collect water from the existing collect point W-8A.

Waste rock will be placed by the end dump method and nominally packed with the spreading equipment. The general fill will not meet the specifications for engineered fill; thus, only temporary structures can be constructed on the completed surface of the MVF Expansion.

The MVF Expansion will be graded to drain water from west to east. A grade of 5 percent should be maintained from the crest of the MVF Expansion to the crest of the existing Mill Valley Fill. This grade follows the grade of the existing access road.

At closure, any buildings on the MVF Expansion will be removed. All of the terrace slopes in the MVF Extension will be re-graded to 3H:1V.

Surface of the fill will be covered with overburden soil. The overburden will be vegetated with local vegetation to reduce the potential for erosion. The finished ground surface will be graded at 5% percent to allow surface water to drain to the east at closure.

The surface drainage system will be upgraded at closure. A west-east trunk drainage ditch will be installed to allow water flowing through the valley.

A plan of the Mill Valley Fill Expansion is included in Appendix B as EBA drawing WMP-08.

4.3.1. Southwest Waste Dump Expansion

The Southwest Waste Dump Expansion is located immediately to the west of the existing Southwest Waste Dump. The purpose of the Southwest Waste Dump (SWD) Expansion is to provide additional storage area for overburden and waste rock mined from the Area 2 and Area 118 Open Pits.

The SWD Expansion consists of two stages:

- Stage 1 includes an overburden area near the existing Reclamation Overburden Dump and a waste rock area to the east.
- Stage 2 consists of a waste rock area on the south side of Stage 1 and west of the existing waste placement.

The overburden placed in the SWD Expansion Overburden Area will be non ice-rich overburden. Ice-rich overburden will be disposed of in the Ice-Rich Overburden Dump.

Surface water management will include drainage structures for the overburden area. Surface ditches or swales will be constructed to promote positive drainage of precipitation and run-on water off the SWD Expansion. A grade of 2% for the dump surface will be maintained to allow surface water to drain to the east during the operational life of the mine.

Prior to closure, it is expected that some of the overburden material will be transported to the other waste disposal areas for use as surface cover material (growth media). Therefore, the final geometry of the overburden dump area will be subject to change.

At closure, all of the terrace slopes in the SWD Expansion will be re-graded to 2H:1V. The overburden will be vegetated with local vegetation to reduce the potential for erosion. The dump surface will be graded to 2% to allow surface water to drain to the east at closure.

The drainage ditches may be kept in place or re-routed pending actual surface conditions at closure.

4.4. General Site Preparation and Monitoring

It is expected that all of waste materials will be trucked into the dump sites and unloaded by using the end dump method. Bulldozers may be utilized to spread out the materials for a rough grading purpose. The dump sites are to be built up in lifts. The thickness of each lift is approximately 10 m. Rough grading is required for each lift in order to facilitate surface runoffs and traffic during construction. A diversion ditch will be created if a natural drainage path is intercepted by the dump sites.

The current site monitoring program includes both slope stability and water quality monitoring. The slope stability monitoring is focused on the south wall of the Main Pit, Dry Stack Tailings Storage Facility and Southwest Waste Dump. The water quality monitoring is performed through water sampling points. The current monitoring program is expected to continue through the operational life of the mine.

Additional visual monitoring of stability of the side slopes on all dump sites should be incorporated in the above mentioned monitoring program, and should be performed on a regular basis. Maintenance or termination of the monitoring program in post-closure will be decided at the closure stage.

5. TAILINGS

A Preliminary Tailings Management Plan for Phase IV was prepared by EBA Engineering Consultants Ltd. and was previously submitted as part of the Phase IV Expansion Application.

6. HEALTH, SAFETY AND EMERGENCY PLANNING

As an operational mine, MintoEx has comprehensive health and safety and emergency response plans in place. These have been revisited and revised as required to address any additional expected risks associated with Phase IV – primarily the move to include underground mining activities.

These protocols and plans are presented in the Emergency Response Plan: see attached documentation, Minto Mine ERP (Emergency Response Plan).