

# **Bonito Capital Corp.**

A wholly owned subsidiary of Elgin Mining Inc.

## **Interim Closure and Reclamation Plan March 2013**

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## Executive Summary English

This Interim Closure and Reclamation Plan (Plan) has been prepared by Bonito Capital Corporation (BCC), a wholly owned subsidiary of Elgin Mining Inc. (Elgin) for the Ulu Exploration Project (Project) in accordance with its Water Licence 2BM-ULU0914 (Licence). The Project site is located in the Kitikmeot region of Nunavut approximately 12 km north of Hood River and 150 km north of Lupin Mine and has been in a state of care and maintenance since 2006.

No exploration activity is planned for 2013.

The objectives of closure and reclamation activities are as follows:

- Ensure that there is no danger to public health or safety;
- Ensure that the requirement for long term maintenance and monitoring associated with all of the mine facilities is minimized;
- Ensure that contaminant loadings to the environment from the closed facilities which may be related to continued leaching of contaminants from waste rock areas (ore stockpiles), development of acid rock drainage and abandoned areas of chemical/materials storage are minimized or prevented;
- Ensure that the cumulative degradation of abandoned areas affected by the mining activities are prevented and to enhance the natural recovery, where appropriate, of disturbed lands, and;
- Ensure that the affected areas will be returned to a condition that is compatible with the surrounding, original undisturbed area with respect to its future potential/productivity uses.

Planned (short term) shutdown, long term shutdown, and final abandonment scenarios are presented in this Plan. General abandonment and restoration activities considered in this Plan include: progressive reclamation; lock-up or removal of buildings and contents; disconnection or removal of the freshwater intake system and sewage disposal facilities; monitoring and maintenance, or removal of earthworks and ground re-contouring and re-vegetation; lock-up or removal and clean-up of fuel storage facilities; lock-up or removal of explosives magazine; inspection and re-contouring of quarries and borrow pits; sealing underground mine entrances and covering mine ventilation raises; and waste rock management.

Post closure monitoring of the Ulu site will take place in a number of areas, mainly dealing with water quality and soil contamination. The components of concern are the fuel storage areas, the maintenance areas, the ore and waste rock storage pads, and the esker used for construction materials.

## **Executive Summary Inuktitut**

Awaiting translation – to be provided as soon as possible

## **Executive Summary Inuinnaqtun**

Awaiting translation – to be provided as soon as possible

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## 1. Introduction

Bonito Capital Corp. (BCC), a wholly owned subsidiary of Elgin Mining Inc. (Elgin), has prepared this Interim Closure and Reclamation Plan (the Plan) with respect to the requirements within Water Licence Number 2BM-ULU0914 (Water Licence), Part I, Item 2 which states:

*“The Licensee shall submit to the Board for approval in writing, within ninety (90) days of Licence issuance, an updated Interim Closure and Reclamation Plan prepared in accordance with the Mine Site Reclamation Guidelines for the Northwest Territories, 2007 and consistent with the INAC Mine Site Reclamation Policy for Nunavut, 2002. The Plan shall include an executive summary and translations in accordance with Part B, item 11, cover all project-related components and reflect the new ownership of the project.”*

In addition, this Plan takes into consideration comments received from interested parties regarding Elgin’s *Interim Abandonment and Restoration Plan for the Ulu Exploration Project*, dated August 2011.

An annual review of the Plan takes place and revisions are submitted as necessary with the annual report. The current Type B water licence 2BM-ULU0914 for the Ulu Gold Project (Ulu or the Ulu Project) is valid until August 31, 2014 and has been kept in good standing.

### 1.1. Background

Elgin is a Canadian based company focused on the production at the Björkdal Gold Mine located in Sweden, and the exploration and development of the Lupin Mine and Ulu Gold Project, both located in Nunavut, Canada.

Elgin purchased BCC, which owns the Ulu Gold Project, from MMG Resources Ltd. in July 2011. The Ulu site lease was purchased by Echo Bay Mines Ltd. from BHP in 1995 with the intent to develop the property into a satellite mine for additional feed to the Lupin mill. An underground development, diamond drilling and bulk sample program was initiated in 1996 to provide infill geological information. Wolfden Resources Inc. purchased the Ulu Project from Kinross Gold Corporation in February 2004, and Zinifex purchased Wolfden in 2007. In June 2008, Zinifex merged with Oxiana Limited to form OZ Minerals. The assets of OZ Minerals were then purchased by China Minmetals resulting in OZ Minerals becoming MMG Resources Inc. (“MMG”). MMG subsequently sold the Ulu exploration project to Elgin Mining Inc. in July 2011. The project has been in care and maintenance since 2006.

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Effective date: March, 2013

Patrick Downey	Chief Executive Officer
Peter Tam	Chief Financial Officer
Jim Currie	Chief Operating Officer
Michele Jones	Manager, Corporate Affairs
Gordon Clarke	VP Exploration
Wayne Osborne	Project Manager
David Vokey	Sr. Environmental Coordinator
Karyn Lewis	General Administration

Additional copies of this Plan are available from Bonito Capital Corp., General Administration at 604-682-3366 or [kLewis@elginmining.com](mailto:kLewis@elginmining.com).

This Plan will be posted in key locations at the site, and all employees and contractors will be made aware of its contents.

## 1.2. **Environmental and Sustainable Development Policy**

Elgin Mining Inc. and its subsidiaries (collectively, “Elgin Mining”) are committed to maintaining a safe, clean, compliant and respectful work environment. Elgin Mining looks to our employees, contractors and managers to adopt and grow a culture of social responsibility and environmental excellence. Together we achieve this by:

- Promoting environmental stewardship in all tasks. Nothing is too important that it cannot be done in a clean and responsible manner. We strive towards maintaining a zero-incident work place.
- Recognizing that we have a shared responsibility as stewards of the environment in which we operate. We will not walk away from a non-compliant act.
- Identifying, managing and mitigating environmental, business and social risks in an open, honest and transparent manner.
- Planning our work so it is done in the cleanest possible manner and executing work according to plan.
- Continually improving environmental and operational performance by setting and reviewing achievable targets.
- Providing appropriate and necessary resources in the form of training, personnel and capital, including that required for closure planning and reclamation.
- Managing our materials and waste streams, maintaining a high degree of emergency response preparedness and minimizing our operational footprint to maintain environmental protection at all stages of project development.

- Procuring goods and services locally, where available, and favouring suppliers with environmentally and socially responsible business practices.
- Seeking to understand, learn from and mitigate the root causes of environmental incidents and near misses when they do occur.
- Employing systems and technology to achieve compliance, increase efficiency and promote industry best practices in development, operations and environmental stewardship.
- Working with stakeholders to identify and pursue opportunities for sustainable social and economic development and capacity building.
- Conducting early and ongoing stakeholder engagement relevant to the stage of project and mine development and operation.
- Recognizing diversity in the workplace and building meaningful relationships with all stakeholders in a timely, collaborative and transparent manner.

Through implementation of this policy, Elgin Mining seeks to earn the public's trust and be recognized as a respectful and conscientious employer, neighbor and environmental steward.

*Approved by the Board of Directors on August 10th, 2012*

### **1.3.Purpose and Scope of Plan**

This Plan is designed to provide a description of the following:

- The Ulu project;
- Potential abandonment scenarios;
- Activities associated with abandonment and restoration; and
- Post closure monitoring.

## **2. Project Information**

### **2.1.Project Location**

The Ulu Project is situated in the Kitikmeot Region, Nunavut, approximately 12 km north of Hood River and 150 km north of Lupin Mine. The geographic center of the property is 66° 54'27" N / 110° 58'24W as shown in Figure 1: Ulu Project Location Map.

Figure 1: Ulu Project Location Map



## 2.2. Project and Site Description

No exploration activity is planned for 2013.

The Ulu Project site is completely self-contained with the exception of the transportation requirements for materials/supplies and workforce mobilization. There are three (3) main location areas as shown in Figure 2: Main Areas Ulu Site.

1. Ulu Camp which houses the residential complex consisting of Weatherhaven accommodations, vehicle repair shop, vehicle parking, power house, emergency generators, office and change rooms, fuel storage tank farm, freshwater system, sewage treatment plant and sewage line, incinerator, ore storage area, waste pad, mine portal, mine sump, and access roads as shown in Figure 3;
2. Camp 3, which is comprised of fuel tank farm, explosives magazine, detonator magazine, quarry and borrow pit eskers; and
3. Airstrip

The site is accessible year round only by aircraft. Bulk items were brought on site via the winter road. During active exploration activity, all supplies are flown in. Figure 3 shows the Ulu Camp Area Site plan.

Figure 2: Main Areas Ulu Site

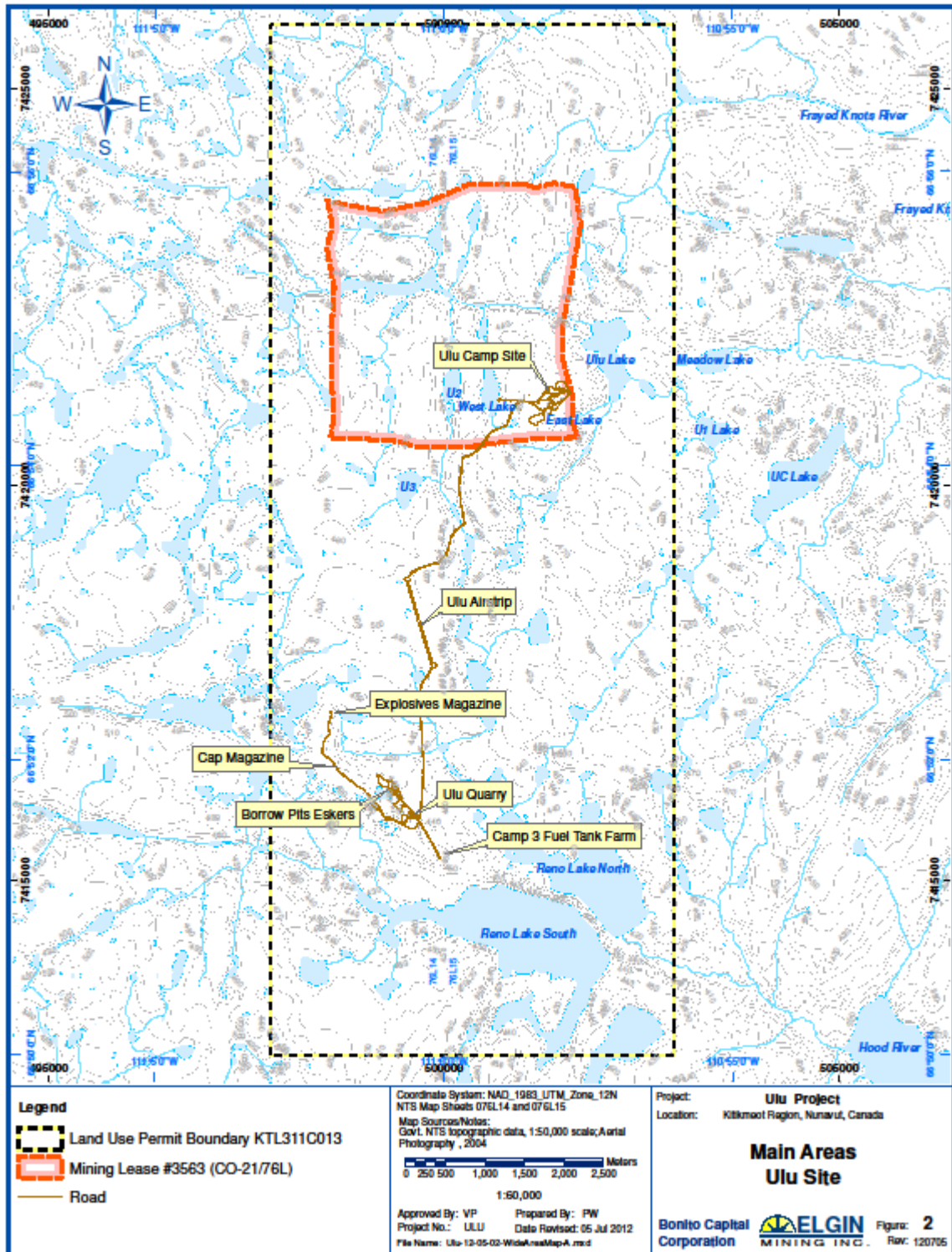
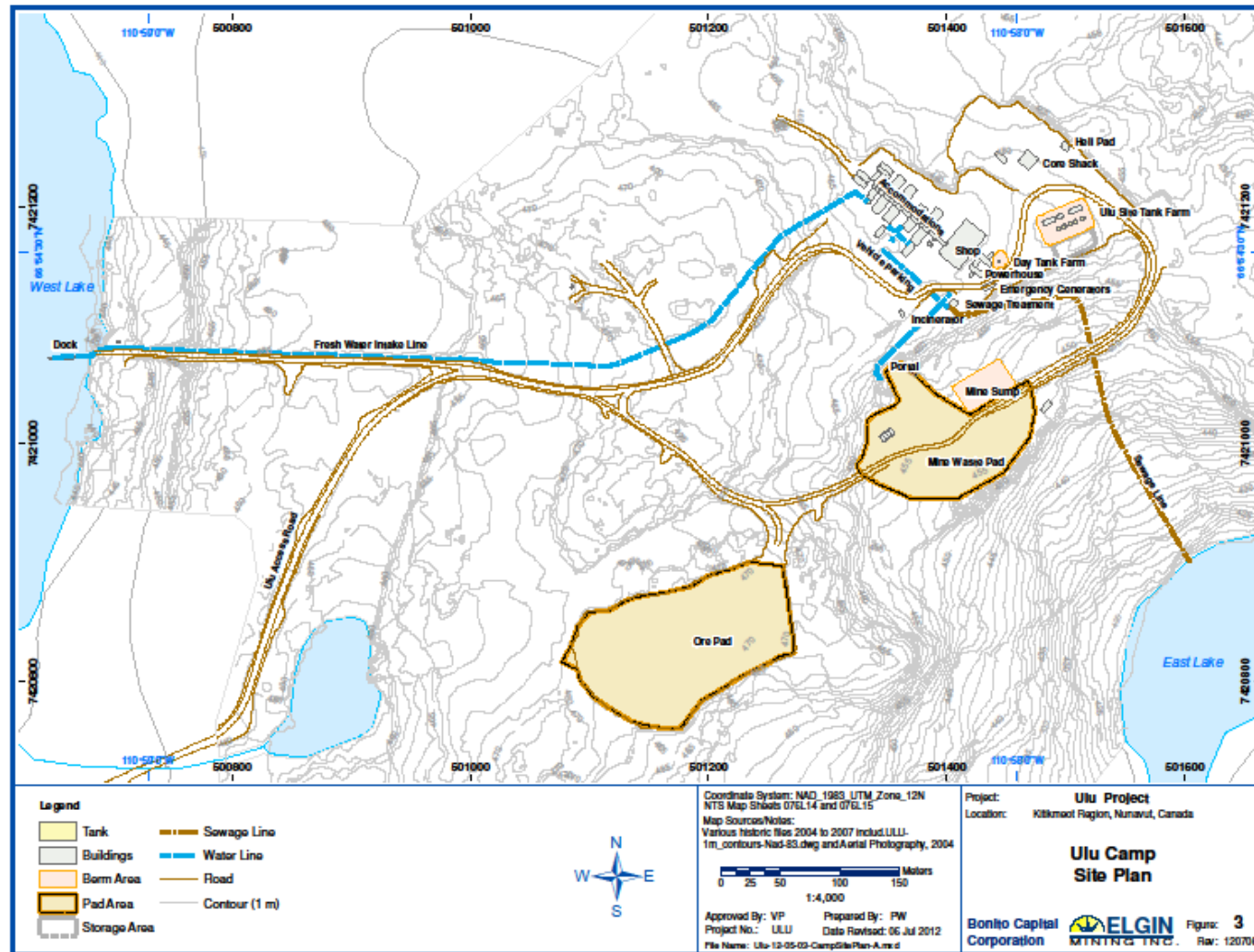


Figure 3: Ulu Mine Site Plan



## 2.3.Climate

Based on regional correlations of proximal weather stations, estimated parameters for the area are summarized below:

- Mean annual air temperature of -11.8 °C
- Extreme annual temperatures values of -53.9 °C and -34.9 °C

Permafrost 50 kilometres north of the site, calculated from temperature measurements in exploration drill holes, is approximately 440 metres deep.

## 2.4.Geology

The Ulu deposit is an Archaean epigenetic lode-gold occurrence located within the High Lake Greenstone Belt of the north-central Slave Province. Gold mineralization is hosted by discordant quartz veins in mafic metavolcanics and, less commonly in metagabbro and metasediments.

The Flood Zone can be traced on surface for 400 metres in a northwest. The two to five metre thick mineralized zone dips steeply at 70° to 80° to the southwest and has been intersected by diamond drilling to depths of about 600 metres. Areas of local thickening up to 10 metres correspond to flexure points along the roughly tabular body. Mineralization is comprised of an intensely silicified zone with arsenopyrite contained in fractures and dilatancies within basalts.

## 3. Abandonment and Restoration Objectives

The objectives of abandonment and restoration activities are as follows:

- Ensure that there is no danger to public health or safety;
- Ensure that the requirement for long term maintenance and monitoring associated with all of the mine facilities is minimized;
- Ensure that contaminant loadings to the environment from the closed facilities which may be related to continued leaching of contaminants from waste rock areas (ore stockpiles), development of acid rock drainage and abandoned areas of chemical/materials storage are minimized or prevented;
- Ensure that the cumulative degradation of abandoned areas affected by the mining activities are prevented and to enhance the natural recovery, where appropriate, of disturbed lands, and;
- Ensure that the affected areas will be returned to a condition that is compatible with the surrounding, original undisturbed area with respect to its future potential/productivity uses.

Although the previous owners of the Ulu project intended to mine and transport the ore to either the Lupin mill or a potential mill at High Lake, BCC have no such plans at this stage. BCC plans to continue

exploration such as ground geophysics, mapping, sampling and drilling prior to any decision to develop the project.

## **4. Abandonment Scenarios**

The decision for closure or abandonment of the Project area is influenced by several factors, most of which are out of the operators control. These may include, but are not limited to 1) the presence (or of lack) of economic ore reserves; 2) the market value of the final product (gold); 3) the costs of producing the product (changing with costs of operation ie: fuel/supplies), and 4) the success of any ongoing exploration programs of both the owner/operator as well as that of other organizations working within a reasonable range of the current operation.

The closure, abandonment and restoration of a site is the final stage in the life cycle of a viable mining operation and the decision for final closure comes after careful consideration of all other options available. The costs associated with the removal of equipment and materials and restoration of the area is most often considerably greater than that for initial construction.

Three scenarios are presented contingent on the circumstances of the shutdown. They range from short term/temporary abandonment to final abandonment of the site and are described below.

### **4.1.Planned Shutdown**

A planned shutdown is considered a short term event and the result of economic, operational or regulatory requirements. It is expected that in this type of situation the time frame is temporary and there is every intention to resume the operations in the near future. In this situation, all facilities would be maintained through a planned care and maintenance program whereby equipment and materials are stored appropriately.

Monitoring and administrative activities would continue with regard to maintenance of all leases, licences and permits where applicable.

### **4.2.Long Term Shutdown**

A long term shutdown would take place when, for a number of reasons, the mining of the Ulu deposit is not considered economic or even possible. Lower ore grades than expected or temporary shutdown of the supporting mine are two circumstances which would result in a long term shut down of the project. Moving into the final abandonment stage is not considered due to the possibility of utilizing the infrastructure/camp facilities for third party use or possible sale.

The facilities would be placed in a state of suspended operation whereby all potential hazards are removed. Most supplies (explosives and petroleum products) inventories would be brought to a minimum through scheduled use, reducing the risk of long term storage at the site.

A salvage program may be initiated, where appropriate, to begin the process of restoration that would normally occur during the final abandonment stage.

A modified monitoring program would be recommended for maintenance of the Water Licence as discharges from the facility would cease. Due to the relatively small footprint of the Ulu Project, very little progressive reclamation is possible. Minor reclamation work would commence in any area not previously restored and not in use. Administrative duties would continue with regard to applicable leases, licences and permits.

The Ulu Project is currently considered to be in a state of “long term shutdown” due to lack of exploration and development by previous owners and no suitable development plan by these owners. As the Project was “temporarily” shut down in 1998, prior to the actual issuance of a water licence, there were no defined monitoring processes in place. Monitoring for background data purposes had taken place and was completed prior to the shutdown of exploration activities.

### **4.3.Final Abandonment**

Final abandonment would proceed in the event that the project has been completed, economic ore reserves have been exhausted or a decision has been made to abandon the project. A formal notice of abandonment would be filed during the final stages of mining, or in the event of a long term shut down, once a decision for final abandonment had been made.

Decommissioning of the site would take place during the next available construction season with removal of camp components and equipment during the following winter’s ice and snow road. The entire Ulu complex (with the exception of constructed pads, roads and runway) is considered a component type system whereby removal from site for sale or re-use is practical.

Post closure monitoring during the reclamation activities would be followed by approximately three years of specific monitoring with regard to the ore storage pad and the potential for acid rock drainage from the materials.

The detailed specific abandonment and restoration activities for the Ulu Project are discussed in the following section which describes the facility, areas of concern and the appropriate action that would be undertaken in the event of final closure.

## **5. Abandonment and Restoration Activities**

### **5.1.Progressive Reclamation**

Conducting reclamation activities concurrent with exploration operations is not practical (or possible) in most areas at Ulu due to the limited amount of disturbance at the site and the continued use of all areas (camp, roads, airstrip, ore storage) during the exploration period. An area that is addressed on a continual basis is the quarry site where road fill materials are obtained. This area is continually re-

contoured after quarry operations are complete to minimize erosion and further disturbance of the esker.

In addition, upon the completion of drilling, Elgin will immediately seal and permanently cap drill holes to prevent induced contamination of groundwater or salinization of surface waters.

## **5.2. Buildings and Contents**

All buildings at the permanent Ulu Project camp are considered collapsible and are designed to be dismantled at closure and removed for use at another site or sale. These structures include the main Ulu camp and vehicle repair shop. All other buildings, if not salvaged or sold, will be removed from site for proper disposal.

## **5.3. Freshwater Intake System**

West Lake is the fresh water source for the camp and exploration operations. A seven horsepower submersible electric pump, installed on a floating dock supplies water to the camp via an insulated two inch pipeline approximately 680 metres in length. Two storage tanks are present at the site; a 27,000 litre tank for general water use and a 63,000 litre tank for fire water storage.

During a temporary or short term shut down scenario, all water lines supplying the camp and underground will be disconnected, drained and flushed with air to prevent freezing and then left in place. The electric pump at the lake is to be removed for storage until needed and the floating dock system will remain.

Upon closure, the floating dock, all pumps, piping and associated support structures will be removed for shipment for use or salvage/disposal. Any non-salvageable, burnable material will be disposed of at site through the use of an approved incinerator.

## **5.4. Sewage Disposal Facilities**

Sanitary sewage and camp greywater is treated prior to release to the environment. Treatment is carried out with a package facility employing a rotating biological contactor (RBC). Once treated, the effluent is released to East Lake via a 550 metre, insulated two inch pipeline. During the start-up phase, the final effluent will be directed to the mine sump containment pond until the results of water quality monitoring indicates that it meets discharge criteria and approval obtained from AANDC to re-direct the sewage treatment plant discharge to East Lake. The effluent contained within the mine sump containment pond will be decanted to the sewage treatment plant primary clarifier for processing. Sludge is removed from the treatment plant as required, placed in drums and back-hauled to an approved off-site waste disposal facility.

During a temporary or short term shut down scenario, all associated piping to the treatment plant and through to the discharge point will be drained and disconnected to prevent freezing. The treatment plant will have the solids removed for disposal and the tank drained and flushed clean.

Upon closure, the treatment plant, piping and all associated support structures will be removed for shipment from site. Any non-salvageable, burnable material will be disposed of at site through the use of an approved incinerator.

### **5.5.Mine Sump**

The Mine Sump Pit is located directly outside the mine portal, uphill from a local access road and the portal laydown pad that provides containment for settling and sediment retention of mine water pumped from the mine decline ramp and the mine portal entrance. This sump will also be used during seasonal camp operations during the sewage treatment plant start-up phase as a temporary containment pond for final effluent from the sewage treatment plant until it meets discharge criteria and approval from AANDC is obtained to re-direct STP effluent to East Lake. The effluent contained within the mine sump containment pond will then be decanted to the sewage treatment plant primary clarifier for processing.

During a temporary or short term shut down scenario, the mine sump will remain in place. Regular sampling will ensure that any effluent discharged from the sump meets water quality criteria required by the water licence and regular inspections will ensure that the geotechnical integrity of the structure is maintained. See the *Ulu Gold Project Care and Maintenance Plan* for more information.

Upon closure, the geomembrane liner material used in the sump will be packaged up and removed from the site for disposal. The area will be graded to conform to the natural contours of the land and revegetated in accordance with Section 5.13.

### **5.6.Access Roads and Airstrip**

There is approximately 14 kilometres of roads (including the airstrip) at the Ulu Project. These connect the Ulu Camp with other ancillary locations in the area including the Camp 3 fuel tank farm, the explosives magazine, the detonator magazine, esker quarry, the fresh water pump dock, the camp accesses including shops, seacan storage, Ulu fuel tank farm and the underground access ramp.

The roadways and the combined airstrip make up the most prominent land disturbance feature aside from the pad for the camp and the ore storage pad (incomplete). The roads utilize culverts to provide unrestricted flow to the drainage courses during spring melt and precipitation events. Site runoff is also collected between areas of the camp pad. Controlled drainage is provided via overflow culverts from the site.

During a temporary or short term shut down scenario, the roads, airstrip along with associated culvert installations would be left in place and monitored for erosion or ponding after spring melt has subsided. Inspections would take place again prior to freeze up to ensure free flow through the culverts.

Upon closure, all roads (and the airstrip) would be regraded with the shoulder slopes flattened to reduce erosion. All culverts would be removed and the drainage opened up to allow natural flow through the crossing. In order to promote natural ingrowth of vegetation, the road and airstrip surfaces would be ripped/graded/scarified to conform to the natural topography in order to provide the needed microclimate sites for seed deposition.

## 5.7. Fuel Storage

Fuel storage for the Ulu Project is operated through two individual tank farms. The tank farm at Camp 3 or main staging area consists of two 1,324,895 litre tanks and six 52,995 litre tanks. At the Ulu site, fuel is stored in five 52,995 litre tanks. Both tank farms store P40 and P50 grade diesel. Historically, fuel was stored in the remote tank farm at Camp 3 until it was transferred to the Ulu camp as required. The Camp 3 fuel facility does not contain fuel, and will not be utilized in 2012. Both tank farms are constructed within dyked areas and are designed to hold 110% of the largest tank. A high density polyethylene liner is installed within each tank farm to prevent release of any spilled material through exfiltration. There is also liner material placed alongside the tank farm at the loading/unloading aprons to prevent any spillage from entering the ground and potentially contaminating the water supplies.

During a temporary or short term shut down scenario, fuel tanks would remain in place and all piping/valves locked out. Regular inspections would ensure that the components were all in good condition and there was no risk of fuel spillage.

Upon closure, it is expected that the fuel inventory would be depleted during normal operations with a single 52,995 litre tank remaining in service to provide fuel for completion of all necessary decommissioning and reclamation work. Any remaining fuel will be transferred to smaller 2,250 litre tanks for use in the hauling of remaining materials off site. Fuel tanks would be removed from service as they are emptied and prepared for removal off site. Fuel sludge from storage tanks will be placed in drums or oil cubes and shipped to an approved off-site facility for disposal.

The bermed containment area of each tank farm is expected to contain some fuel contaminated ground (esker sand) from normal transfer procedures. If timing permits, this material will be subjected to in-situ land farming to facilitate the removal of residual hydrocarbons. If an on-site land farm is required, BCC will develop engineering drawings and an operations and maintenance manual for submission to the NWB to obtain the necessary approvals.

The final disposal of the soils from the tank farms will be in the form of back fill within the mine or ramp/portal area. Upon approval from the Government of Nunavut Department of Environment and the Inspector, soils that have been treated in the land farm to appropriate standards will be used for general

site grading. The HDPE liner material used in the tank farm and loading apron areas will be packaged up and removed from the site for disposal.

Hydrocarbons, glycols, and other hazardous materials contained in drums will be placed secondary containment berms or other suitable means to prevent accidental release to the environment.

### **5.8. Explosives Magazine**

The explosive and detonator magazines are located to the southwest of the Ulu camp, west of the Reno Lake esker. These magazines consist of seacan storage containers enclosed by a chain link fence. During a short term suspension of operations the explosives will remain on site securely locked. For an indefinite temporary shut down or permanent closure the remaining inventory will be shipped off site either by winter road or via air depending on the timing of closure. Currently; there are no explosives stored on site.

Upon closure, fencing will be removed and the sea containers utilized for shipment of materials off site.

### **5.9. Borrow Pits and Quarry**

The quarry used for the road, airstrip and final grade on the camp pad is located near Camp 3 at Reno Lake. A number of conditions and clauses were contained within the quarry permit which restricted the area and the use of the esker borrow pit. However, Elgin does not plan to use this pit or esker burrow.

There should not be any additional work to be carried out at this site upon short term shut down or long term closure. Prior to final closure and abandonment, it is expected that a final inspection by regulatory authorities followed by recommendations for additional work, if any, would be completed at that time.

### **5.10. Underground Development**

The Ulu Project underground exploration program was developed via a portal and ramp to a depth of 155 metres over a distance of approximately 1,762 metres. Ore accesses are currently developed on the 25, 50, 75, 95, 115 and 135 metre levels. A fresh air vent raise is present for ventilation of the underground workings. No permanent equipment or facilities are present underground.

BCC does not plan to utilize this portal or ramp system for exploration. All exploration, including drilling will be from surface.

Should BCC determine that final abandonment of the project proceed in the event that the project has been completed or a decision has been made to abandon the project, the portal, fresh air raise and any other entrances to the underground mine will be sealed using engineered concrete plugs and caps to prevent future access. The area immediately in front of the portal will be re-contoured to approximate grade and covered with esker material. The mine ventilation raises will be covered with esker material to meet the adjacent topography.

### 5.11. Waste Rock

Waste rock was produced during the initial development of the decline at the portal and ramp access and during the decline advance. The rock produced from the initial portal excavation ramping was used to prepare a level pad area for construction of the camp facilities at the site. From there, waste rock produced was then placed in the location of the proposed ore storage pad for grading. Once completed, these pads were capped with a thin layer of esker material to provide final base for construction/laydown.

Acid rock drainage (ARD) potential of all rock types from the Ulu site had been investigated previously. In 1996, additional investigation work was completed to specifically address the ARD characteristics of the ore and waste rock. Findings indicated that the samples as a group have a relatively uniform paste pH and Neutralization Potential (NP), very low sulphate-S and low to very low carbonate-NP contents. The acid generation potential (AP) of a sample was calculated as attributable to the sulphide present (total sulphur minus the sulphate-sulphur) or SAP.

Most of the NP in these samples is due to non-carbonate minerals. Because of the low carbonate in the samples, the sulphide content becomes the most important parameter determining the outcome of the NNP (net neutralizing potential) and the Neutralizing Potential Ratio, or NPR (NP/AP ratio) of a sample. Variable results were obtained with the 1996 study and indicated that a threshold of 0.9 weight percent sulphur should be used as a discriminator (any rock containing more than approximately 2.5% pyrrhotite or 2.0% pyrite or 4.5% arsenopyrite by volume or their combined equivalents) when defining potentially acid generating (PAG ) or non PAG material.

Samples collected during the more recent testwork indicate that some PAG material was present at the north ramp. In volume however, this PAG rock constituted only a small proportion of the total material present as a composite sample gave a NPR of 10.6. The overall paucity of PAG-material along with the slow weathering process associated with the region suggest that, with well mixed materials, acid drainage is not expected to be generated from the waste stockpile and waste rock used as construction materials. Kinetic testwork began during the initial exploration work in 1996-97 has been put on hold and will continue at a later date to further define the extent of PAG of the waste rock and ore generated at the Ulu Project.

Ongoing exploration does not produce acid rock generating or metal leaching material. For any planned final closure Bonito plan to complete additional sampling and testwork, followed by a comprehensive report for formal review.

### 5.12. Ore Stockpile

An ore storage pad, constructed of development waste rock, is located adjacent to the Ulu portal. The construction has not been completed.

The ore pad has been designed in such a way that, upon completion, collection ponds will be located at the low points around the perimeter to facilitate accumulation of any precipitation/ spring melt water prior to being released to the local environment. At these locations, water will be tested for parameters outlined in the water licence including pH and TSS prior to being released. If the pH is unexpectedly low, then a provision to add lime for pH adjustment is available prior to release.

BCC does not plan to use this ore pad during the exploration program.

### **5.13. Re-vegetation**

The Ulu Project is situated in the arctic tundra where rock and glacial features dominate the landscape. The site is located on glacially modified outcrop. The surrounding terrain is rugged, consisting of exposed bedrock, with some modification by frost action into blocky, angular boulders, relocated boulders and occasional glacial erratics.

This upland, rocky tundra is dominated by vegetation adapted to the harsh habitat which includes Dwarf Birch, Labrador tea and Heather. In vegetation surveys undertaken in 1996, these species occurred with a frequency of about 5-6.5 %, whereas bare ground occurred with a frequency of 6.5 % and rock 51.5%. Willow, crowberry, blueberry, sedge and cranberry were other notable plant species, occurring with frequencies of less than 5% each.

Re-vegetation of disturbed areas at the Ulu Project will focus on the enhancement of the ground surfaces to promote natural re-introduction of native species while reducing the opportunity for erosion.

Scarifying of hard packed surfaces (roads and airstrip) to open up the ground provides the required microclimate for natural plant growth enhancing seed entrapment, moisture retention and wind protection. This will be carried out on all roads, pads and the airstrip. The roads, currently raised above the natural topography, will be reduced in height and contoured prior to scarifying.

In general, the Ulu Project site has been graded with waste rock to provide a level pad for camp construction, materials laydown and ore storage. This grading is only minimally above the fractured rock outcropping and boulders leaving very little flexibility in the final topography. The areas near the natural slopes will be contoured to conform more aesthetically to the natural angle present.

## **6. Post Closure Monitoring**

Post closure monitoring of the Ulu site will take place in a number of areas, mainly dealing with water quality and soil contamination. The components of concern are the fuel storage areas (Ulu and Camp 3 tank farms), the maintenance areas, the ore and waste rock storage pads and the esker used for construction materials.

## 6.1. Water Quality

Post closure would result in the continued exposure of the camp pad, ore/waste rock storage pad and the laydown area to the harsh environmental elements. Although kinetic acid rock drainage testing has indicated that the waste rock is non-acid generating, it is expected that monitoring of the runoff from these areas would be continued on a seasonal basis for three to five years based on previous data and results of the on-going program.

All run off from the ore storage pad, portal laydown area and main camp pad is naturally directed to a collection point known as East Lake. Effluent from the package sewage treatment plant will also be directed to the small lake during exploration/development activities. This location serves as an ideal sampling point prior to water from the camp entering a major water system, starting with Ulu Lake.

Monitoring of the stability of closed roads, airstrip and the used esker area is to be included in the annual monitoring, checking for areas requiring proper grade control and stability. As very little material will be required from the esker, it is expected that upon closure, all areas of concern with regard to erosion would have been corrected.

Post closure monitoring of the sewage effluent receiving stream should not be required as the only component of the waste that was released is camp grey water. This same water body however, would be monitored under the above planned ore storage pad monitoring as they both are within the same drainage basin.

## 6.2. Soil Contamination

All areas of hydrocarbon storage will be tested prior to final closure. If land farming is chosen as an option for treatment and disposal then ongoing monitoring will take place to determine the effectiveness of the practice. Monitoring would continue until acceptable levels of hydrocarbons have been achieved in consultation with the Government of Nunavut Department of Environment and the Inspector.

## 7. List of Studies Undertaken

Ulu Project: Preliminary Assessment of Acid Rock Drainage Potential, Klohn-Crippen Consultants Ltd., October 1996.

Fisheries Assessment of Streams and Lakes in the Ulu Project Area, RL&L Environmental Services Ltd., November 1996.

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Ulu Mine Project Archaeological Impact Assessment: Phase II, Quaternary Consultants Ltd., September 1996.

Land-Cover and Vegetation of the Ulu Site and Ulu/Lupin Winter Road, Nunavut, Canada, Institute for Advanced Field Education Ltd., January 1998.

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Kenetic Testing of Sulfide-Rich Material From Ulu, Klohn-Crippen Consult. Ltd., April 1998.

Baseline Aquatic Studies Program in the Ulu Project Area, Nunavut, RL&L Environmental Services Ltd., May 1998.

## 8. References

Echo Bay Mines Ltd., *Lupin Operations: Interim Abandonment and Restoration Plan*, January 1996.

Elgin Mining Inc., *Interim Abandonment and Restoration Plan Ulu Exploration Project*, dated August 2011

Indian and Northern Affairs Canada Yellowknife, NWT, *Mine Site Reclamation Guidelines for the Northwest Territories*, January 2007

Letter and Technical Review Memorandum from J. Allen, Aboriginal Affairs and Northern Development Canada, to P. Beaulieu, Nunavut Water Board, Re: *2BM-ULU0914 – Ulu Gold Project – Elgin Mining Ltd. – Kitikmeot Region – Interim Abandonment and Restoration Plan*, dated September 30, 2011

Letter from P. Smith, Environment Canada, to P. Beaulieu, Nunavut Water Board, Re: *2BM-ULU0914 I,2, Interim and Abandonment and Restoration Plan*, dated September 23, 2011

Letter from L. Torretti, Kitikmeot Inuit Association, to P. Beaulieu, Nunavut Water Board, Re: *2BM-ULU0914 Interim and Abandonment and Restoration Plan*, dated September 30, 2011

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Klohn-Crippen Consultants Ltd., *Ulu Project: Preliminary Assessment of Acid Rock Drainage Potential*, October 1996.

Klohn-Crippen Consultants Ltd., *Kinetic Testing of Sulfide-Rich Material From Ulu*, April 1998.

SRK Consulting (Canada) Inc., *2012 Annual Geotechnical Inspection of Selected Structures – Ulu Gold Project, Nunavut*, November 2012.

TBT Engineering and Consulting Group, *2011 Annual Geotechnical Inspection Various Earth Structures Ulu, Nunavut*, dated November 24, 2011