



Energy, Mines and Resources  
Box 2703, Whitehorse, Yukon Y1A 2C6

September 9<sup>th</sup>, 2011

Mr. Gregg Bush,  
President, Minto Explorations Ltd.  
Suite 900-999 West Hastings Street  
Vancouver, BC  
V6C 2W2

Dear Mr. Bush,

**Re: Approval of Reclamation and Closure Plan and Determination of Financial Security - Minto Mine, Yukon Territory**

**Reclamation and Closure Plan Approval**

Pursuant to paragraph 9.2 of Quartz Mining License QML-0001 (the "License") for the Minto Mine Project, Minto Explorations Ltd ("Minto") submitted a reclamation and closure plan for review and approval. This document, entitled "*Decommissioning and Reclamation Plan, Minto Mine, Yukon Territory, Revision 3.2, June 2011*" (the "2011 DRP"), was received electronically in my office on June 22<sup>nd</sup>, 2011.

Upon review and consideration, I hereby approve the 2011 DRP and it becomes the approved reclamation and closure plan for the Undertaking, as required pursuant to paragraph 9.3 of the License. This approval is granted subject to the following conditions and/or clarifications.

**Conditions of the Approval:**

The 2011 DRP is approved subject to the following understandings and conditions:

1. The Water Storage Pond Dam is to be decommissioned, such that no water remains impounded and the Minto Creek channel is returned as closely as possible to the original alignment and elevation, in accordance with the plans described in section 6.8 of the 2011 DRP;
2. As per section 4.3 of the 2011 DRP, four (4) years of active water treatment, prior to passive or non-treatment, are required;

3. A condition of the approval of the previous DRP (provided in my April 23<sup>rd</sup>, 2010 letter to Stephen Quin of Minto Explorations Ltd.) was for trial plots to be established to examine cover design and re-vegetation of the dry stacked tailings facility. The results of these studies were intended to help finalize a cover design, including determining the need for a capillary break on the dry stack tailings facility. As these studies were not completed in 2010, the establishment of these plots remains a requirement under this approval. Until these studies have been completed and a cover design has been determined a "mitigative contingency" cost for the capillary break will be held;
4. As indicated in the 2011 DRP, a Sludge Management Plan must be developed to identify how sludge generated from the Water Treatment Plan will be disposed of during the closure period;
5. A plan providing for closure designs of all water conveyance structures, including diversion ditches must be included in the next submission of an updated reclamation and closure plan; and
6. Opportunities must be made available for Selkirk First Nation participation in the design and implementation of the reclamation research program as described in the 2011 DRP.

Schedule C of the License has been revised to reflect this new approval and is attached to this letter. This amended Schedule C replaces all earlier versions.

I wish to remind you that pursuant to paragraph 9.2 of the License, an updated reclamation and closure plan must be prepared and submitted by June 1<sup>st</sup>, 2013 for review and approval. This next version must incorporate the recommended mitigative measures pertaining to the reclamation and closure of Phase IV activities as prescribed in the Yukon Government Decision Document 2010-0198 dated March 18<sup>th</sup>, 2011.

For greater certainty, in reviewing and approving the submitted designs, neither I nor the Yukon Government makes any representations or warranties as to the sufficiency or adequacy of the plans or designs. Further, you are reminded that the approval of the Chief pertains only to the Chief's responsibilities under the *Quartz Mining Act* and that for greater certainty, nothing in this approval limits the applicable federal or territorial laws, including the *Occupational Health and Safety Act* and related regulations.

### **Reclamation and Closure Financial Security**

Minto has currently furnished financial security with the Government of Yukon ("Yukon") for the Minto Mine in the amount of \$10,011,544. I have considered the activities required to implement this 2011 DRP, the estimates of reclamation and closure costs provided by the Licensee and the results of the independent third party review of reclamation and closure costs. The results of the third party independent cost review (provided in an August 26<sup>th</sup>, 2011 letter to Arlene Kyle from SteveJan Consultants Inc. entitled "*Review of Minto Explorations Limited's Decommissioning and Reclamation*")

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*Plan Revision 3.2 for the Minto Mine and Preparation of Independent Closure Cost Estimates for Two Milestone Dates*”) have been forwarded to you under separate cover. After considering these matters, I am of the view that financial security needs to be adjusted to provide for all reasonable closure costs including contingencies.

**Therefore, pursuant to paragraph 11.4 of Quartz Mining License QML-0001, I am now providing you with written notice that the total security to be furnished and maintained by Minto Explorations Ltd. within 60 calendar days of the date of this letter is \$15,230,211. This security must be in a form as provided under the Security Regulation OIC 2007/77.**

This security amount is reflective of the advice provided in the August 26<sup>th</sup> letter from SteveJan Consultants Inc. As has been the case to date, the financial security to be furnished and maintained must continue to satisfy the requirements in full for security pursuant to both the Quartz Mining License QML-0001 and the Type A Water Use QZ96-006. Therefore, Yukon shall be named as beneficiary of any single form of security, rather than the individual Ministers responsible.

I am also providing notice that, as authorized by paragraph 11.3 of the License, Yukon will review the financial security in one year's time from the date of this letter and further adjustments may be required at that time. For clarification, it is not my intent to undertake a review of the reclamation and closure measures contained in the 2011 DRP, but only to review the financial security requirements in view of site conditions at the time. This review recognizes the significant increase in reclamation and closure costs between Year 0 and Year 2, as shown in the SteveJan Consultants report of August 26<sup>th</sup>. This increase, in my view, warrants a security review prior to the next scheduled reclamation and closure plan submission in June 2013.

Thank you in advance for your attention to this matter. If you have any questions on the requirements or the process to be followed, please do not hesitate to contact me.

Sincerely,



Robert Holmes  
Director, Mineral Resources

cc: Colleen Roche, Manager Sustainability, Environment Affairs  
Chief Kevin McGinty, Selkirk First Nation  
Jon Bowen, Director, Water Resources  
Terry Anderson, Acting Chief Mining Inspector  
Josef Hanrath, Senior Natural Resources Officer

## **SCHEDULE C PLANS AND AUTHORIZED ACTIVITIES**

### **1 Access**

The Licensee may access the undertaking via a gravel road to the mine site. The location of the road is as shown on document "Minto Explorations Water Use License QZ96-006 Annual Report", Figure 1.

### **2 Airstrip**

The Licensee must construct and operate an airstrip as shown in Figure 1 of the September 10, 2007 letter entitled "QML-0001 – Extension of Airstrip".

### **3 Camp**

The Licensee may only operate a trailer camp facility that consist of bunkhouse accommodation, mine dry, cooking facilities, water and sewage facilities, heating, recreational facilities, accommodating a maximum of 200 people. The location and components of the camp is as documented in the document "2010 Annual Quartz Mining License Report", Appendix G, Figure 1 of the Mill and Camp Site 2010 Annual Review. Refer to section 14 Phase IV Mining Plan and related condition 13 for expansion to 300 person camp and office space.

### **4 Ore Stockpiles**

The Licensee may stockpile ore from the mine to supplement mill feed. The stockpile must be located as shown in the document "2010 Annual Quartz Mining License Report", Appendix G, Figure 1 of the Ore Stockpiles 2010 Annual Review.

The ore stockpile must be located on a stable foundation having no less than 1.7 metric tonnes/cubic meter frozen bulk density.

### **5 Fuel Containment Facility**

The Licensee must only store fuel for the operation of the Undertaking in the location shown in the document "2010 Annual Quartz Mining License Report", Appendix G, Figure 1 of the Fuel Containment Facility 2010 Annual Review.

### **6 Explosives Storage Area**

The Licensee must only store explosives for the operation of the Undertaking in the location shown in the letter entitled "Re: QML-0001 Layout of Explosives Storage Area" and the layout drawing entitled "Proposed Explosive Storage Area".

### **7 Milling**

The Licensee may only operate a mill, that consists of equipment for crushing and grinding ore, copper concentrate flotation, concentrate thickening, tailings filtration, temporary tailings storage, load out of concentrate and ancillary services, including a mill water pond. The location of the mill is as documented in the document "2010 Annual Quartz Mining License Report", Appendix G, Figure 1 of the Mill and Camp Site 2010 Annual Review".

The mill may operate 24 hours a day, 365 days per year. The maximum milling rate must not exceed 3,600 tonnes per day, based on a twelve month average.

### **8 Mill Water Treatment Plant**

When appropriate the Licensee must operate a mill water treatment plant. The location of this plant is as shown in the document entitled "Water Use Application QZ09-094, Water Management Plan", Appendix E, Figure MIN-000-GA-01 to MIN-000-GA-03 of the Minto Mine Water Treatment, Assessment of Water Treatment Options and Preliminary Designs of Water Treatment Plant.

### **9 Water Storage Dam**

The Licensee must construct and maintain a Water Storage Dam as shown in the document entitled "Minto Explorations Ltd. Minto Project, Yukon, Design Drawings – Water Dam" Figure WD1 through WD9.

### **10 Production**

The Licensee may only carry out production using conventional open pit truck, shovel and loader operations, including rotary drills, blasting, and ancillary services. The location of the mine as authorized herein is described in the document "2010 Annual Quartz Mining License Report", Appendix C, Pit Development as-built drawing December 2010 Status.

The maximum mining rate must not exceed 2 million tonnes of material for processing through the mill per year. Only open pit mining within the perimeter of the as-built drawing is authorized.

### **11 Concentrate**

The Licensee may produce, store and transport copper concentrate off the site.

### **12 Waste Rock and Overburden Facilities**

The Licensee must construct all waste rock and overburden facilities on stable foundations having no less than 1.7 metric tonnes/cubic meter frozen bulk density. Waste rock and overburden must be stored separately and be deposited or stored in the dumps designed for each of these materials.

#### **1. Main Waste Dump**

The Licensee may place waste rock produced by the Undertaking in the Main Waste Dump in accordance with the document entitled "Geotechnical Evaluation Proposed Main Waste Dump Minto Mine, Minto, YT", dated April 1998 and prepared by EBA Engineering Consultants Ltd.

In addition to the annual physical inspection of the dump that must be conducted in accordance with paragraph 12.1 of the License, the dump must be inspected by an engineer during spring thaw and following any event with greater than 25 mm precipitation in a 24 hour-period. Should any performance issues be identified, the Licensee must undertake the appropriate remedial action immediately.

The inspector must be advised of any performance or instability issues, and be advised, as soon as possible, should any remedial action be required to be undertaken.

2. Southwest Dump:

The Licensee must place waste rock produced by the Undertaking in the Southwest Dump in accordance with the document entitled "**Geotechnical Design Proposed Southwest Waste Dump Minto Mine, Yukon**", dated September 2008 and prepared by EBA Engineering Consultants Ltd.

In addition to the annual physical inspection of the SWD that must be conducted in accordance with paragraph 12.1 of the License, the SWD must be inspected by an engineer during spring thaw and following any events with greater than 25 mm precipitation in a 24 hour period. Should any performance issues be identified, the Licensee must undertake the appropriate remedial action immediately;

The inspector must be advised of any performance or instability issues and be advised, as soon as possible, should any remedial action be required to be undertaken;

3. Reclamation Overburden Dump("ROD"):

The Licensee may only place overburden material sourced from the undertaking in the Reclamation Overburden Dump in accordance with the documents entitled:

- a. "**Geotechnical Design Proposed Reclamation Overburden Dump, Minto Mine**", dated February 2008 and prepared by EBA Engineering Consultants Ltd.; and
- b. A letter dated June 29, 2010 from EBA Engineering Consultants Ltd to Randall Thompson entitled "**Reclamation Overburden Dump Expansion Geotechnical Design**".

Material deposited in the ROD shall consist only of non ice-rich overburden material;

The Licensee must follow a sampling protocol to ensure that placement of ice-rich overburden is not occurring in the ROD;

The ROD dump location is restricted to the area shown in Figure "ROD-E2" of the letter from EBA Engineering Consultants Ltd. to Randall Thompson, dated June 29, 2010 entitled "Reclamation Overburden Dump Expansion Geotechnical Design";

Drainage control measures to reduce surface run-on water, ponding, and erosion must be implemented at all times during ROD construction and maintenance;

4. Ice-rich Overburden Dump ("IROD"):

The Licensee may only stockpile ice-rich materials in the Ice-Rich Overburden Dump in accordance with the document entitled "**Geotechnical Technical Design Ice-Rich Overburden Dump Minto Mine, Minto, YT**", dated January 2006 and prepared by EBA Engineering Consultants Ltd.

### 13 Dry Stack Tailings Facility

If required, the Licensee may temporarily store tailings on the bench south of Minto Creek prior to stacking and deposit tailings using the dry stack method by mechanically spreading and compacting in controlled lifts to form the stacked tailings deposit subject to the following plans:

1. **"Minto Mine, Tailings Management Plan, January 2007"** prepared by Access Consulting Group;
2. the letter entitled **"QML-0001 – Minto Mine Tailings Management Plan, Additional Information"** from William Dunn to Robert Holmes, dated March 15, 2007.; and
3. **"Revision 2011-1 Operation, Maintenance and Surveillance Manual, Dry Stack Tailings Storage Facility, Minto Mine Y.T."**

This authorization is subject to the following conditions:

1. Information contained in the letter , "QML – 0001 – Minto Mine Tailings Management Plan, Additional Information", from William Dunn to Robert Holmes, dated March 15, 2007 will replace information contained in the report "Minto Mine, Tailings Management Plan, January 2007 "to the extent that there is any contradiction in the information contained in these two documents"; and
2. The total volume of tailings placed in the approved tailings storage facility shall not exceed 5.9 million tonnes.

### 14 Phase IV Mining Plan

The Licensee must carry out Phase IV Stage 1 mining activities in a manner as described in the following plans and memorandum:

1. **"Stage 1 Waste Management Plan, Area 2 Open Pit Development, Minto Mine, YT"** (the "Stage 1 WMP"), dated April 18<sup>th</sup>, 2011 and prepared by EBA, A Tetra Tech Company;
2. **"General Site Plan, Minto Mine Phase IV Expansion, April 2011, Revision 1"** (the "GSP"); and
3. A memorandum from Jason Nickel to Bob Holmes, dated June 17<sup>th</sup>, 2011 and entitled **"Requested Amendments to Operational Plans, QML-0001"**.

These authorized activities are limited to stripping of Area 2 pit and portal area, developing up to 500m of decline in non-mineral waste rock, depositing overburden from Area 2 pit and portal area, depositing waste rock from Area 2 and underground workings, constructing Mill Valley Fill ("MVF") and South Wall Buttress in the Main pit, constructing an expanded 300 person camp and office space and necessary related roads and infrastructure, as described in these documents. This authorization is subject to the following conditions:

#### Mill Valley Fill

1. Only Grade Bin 0 Material may be used to construct and maintain the MVF;
2. Construction of the MVF must be in accordance with the design specifications and Figures WMP-02 to WMP-05 of the "Stage 1 WMP";
3. As per section 17e. of Water Use Licence QZ09-094, diverted surface waters must not be impacted by the construction of the MVF;
4. As-built drawings of the MVF must be submitted in the next annual report;

5. The MVF shall form a part of the annual physical inspection required pursuant to paragraph 12.1 of the License;

Southwest Waste Dump ("SWD") Expansion

6. At least 30 days prior to placing waste rock in areas of the SWD other than the western portion, the Licensee must submit the results of SWD stability monitoring to the Chief;
7. Rock with a copper content greater than 0.1% must not be deposited in the SWD;

South Wall Buttress

8. All waste rock with a copper content greater than 0.1% must be placed within the final flood limits of the Area 1 pit;
9. A safety berm must be constructed that provides for adequate traffic and human protection when dumping waste into the pit;

General Conditions

10. All organic material, overburden and bedrock must be stored separately and in a manner as described in the "Stage 1 WMP";
11. All waste rock must be characterized in accordance with the methods identified in the "Stage 1 WMP";
12. Fine grained materials must be stored separately to ensure there is adequate material for cover design; and
13. Camp expansion and office space designs must be submitted by October 15<sup>th</sup>, 2011. (Extension from July 15<sup>th</sup>, 2011 granted on July 18<sup>th</sup>, 2011)

**15 Reclamation and Closure of the Undertaking**


The Licensee must carry out reclamation and closure at the site in accordance with the document entitled "**Decommissioning and Reclamation Plan, Minto Mine, Yukon Territory, Revision 3.2, June 2011**" and prepared by Minto Explorations Ltd.

This authorization is subject to the following conditions:

1. The Water Storage Pond Dam is to be decommissioned, such that no water remains impounded and the Minto Creek channel is returned as closely as possible to the original alignment and elevation, in accordance with the plans described in section 6.8 of the 2011 DRP;
2. As per section 4.3 of the 2011 DRP, four (4) years of active water treatment, prior to passive or non-treatment, are required;
3. A condition of the approval of the previous DRP (provided in my April 23rd, 2010 letter to Stephen Quin of Minto Explorations Ltd.) was for trial plots to be established to examine cover design and re-vegetation of the dry stacked tailings facility. The results of these studies were intended to help finalize a cover design, including determining the need for a capillary break on the dry stack tailings facility. As these studies were not completed in 2010, the establishment of these plots remains a requirement under this approval. Until these studies have been completed and a cover design has been determined a "mitigative contingency" cost for the capillary break will be held;
4. As indicated in the 2011 DRP, a Sludge Management Plan must be developed to identify how sludge generated from the Water Treatment Plan will be disposed of during the closure period;

5. A plan providing for closure designs of all water conveyance structures, including diversion ditches must be included in the next submission of an updated reclamation and closure plan; and
6. Opportunities must be made available for Selkirk First Nation participation in the design and implementation of the reclamation research program as described in the 2011 DRP.

Dated this 9<sup>th</sup> day of September, 2011



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Director, Mineral Resources  
Energy, Mines and Resources