

## **Rationale for Issuance of Amendment to QML-0001 for the Area 2 Stage 3 Open Pit**

---

### 1. Background to QML-0001 Amendment Application

On October 7<sup>th</sup>, 2016, Minto Explorations Ltd. (Minto) applied for a Quartz Mining License ("QML") amendment to QML-0001 (Mine Mine) to authorize mining of the Area 2 Stage 3 open pit at the Minto Mine.

The activities associated with the QML-0001 amendment were assessed by the Mayo Designated Office of the Yukon Environmental and Socio-economic Assessment Board in 2013-14 with recommendations issued in April 2014. This assessment reviewed the environmental and socio-economic effects of the Phase V/VI expansion, which includes mining of the Area 2 Stage 3 open pit. A Decision Document was issued by the Yukon Government on June 4<sup>th</sup>, 2014, determining that the project could proceed subject to mitigation. Minto currently holds a Type A water licence QZ14-031 which authorizes mining of the Area 2 Stage 3 open pit.

### 2. Review of QML Amendment Application

In support of their application, Minto submitted the "*Area 2 Stage 3 Pit – Mine Development and Operations Plan 2016-01*" describing the updated reserves, schedules and designs for the Area 2 Stage 3 pit. Invitations to participate in the review were sent to Selkirk First Nation ("SFN"), Yukon Departments of Environment, Compliance Monitoring and Inspections, Yukon Workers Compensation, Health and Safety Board ("YWCHSB"), Health and Social Services, Community Services, Tourism and Culture, Economic Development, and Heritage Resources. Comments were received from WHCB and SFN only.

#### a. YWCHSB Comments

Comments on the application were received from YWCHSB on November 9<sup>th</sup>, 2016. The comments consisted of questions seeking clarification on the Area 2 Stage 3 pit and diamond drill hole locations in relation to active underground workings; pit wall design parameters; and runaway lanes and retardation barriers for haul roads. EMR provided these comments to Minto who responded in a letter dated November 22<sup>nd</sup>, 2016 that provided additional information on these topics. At a November 24<sup>th</sup> meeting between Minto, EMR, YWCHSB, and SFN, YWCHSB confirmed that their concerns were addressed and they had no further comment.

#### b. SFN Comments

Comments by SFN were also received on November 10<sup>th</sup>, 2016 in a Technical Memorandum prepared by Northland Earth and Water Consulting Inc. Four topics were discussed in the memorandum:

1. Potential for impairment or condemnation of unmined A2S3 [Area 2 Stage 3] resources;
2. Concerns regarding the suitability of A2S3 overburden materials for use as soil covers, the design of cover systems, and the timing of placement of these materials;
3. Concerns about the placement of bulk waste rock on the Main Pit Dump without resolution in advance of the existing issue of NP:AP<3 materials that are presently stored at that dump above the long-term water level of the Main Pit lake; and
4. A lack of clarity as to how the revised proposal affects (either positively or negatively) both water management and tailings management at the site. Specifically, how the changed volume of A2S3 affects required volumes for operational and long term storage of water, tailings, and waste rock requires confirmation.

Minto responded to the comments with additional information and clarifications on November 21<sup>st</sup>, 2016. The previously mentioned November 24<sup>th</sup> meeting provided opportunity for the parties to further discuss the topics raised by SFN and to inform EMR's decision. Minto submitted additional information on December 6<sup>th</sup> to address outcomes of the November 24<sup>th</sup> meeting.

On the matter of impairment/condemnation, Minto's letter response confirmed that the remaining resource will not be sterilized by the redesigned Area 2 Stage 3 pit. Tailings will not reach the spill elevation from Area 2 Stage 2 into Area 2 Stage 3 until Q3 of 2018 and there will always remain the option of accessing via underground. EMR is satisfied with this response and SFN indicated no further concerns on this issue at the November 24<sup>th</sup> meeting.

With respect to SFN's concerns regarding Area 2 Stage 3 overburden management issues, EMR agrees with Minto that these matters are most appropriately addressed as part of the review of the Reclamation and Closure Plan and furthermore, that Minto will be required to comply with conditions of both the QML and the WL. As described in Minto's response, where Minto's currently proposed approach in sloping, cover design, and overburden placement differs from the approved Reclamation and Closure Plan, it will be the company's responsibility to make any required modifications. SFN was satisfied with this approach at the November 24<sup>th</sup> meeting since all parties now share this common understanding.

SFN's technical memo and the November 24<sup>th</sup> meeting included discussion over waste rock management in the Main pit dump including consideration of the NP:AP<3 waste rock presently sitting above the final pit lake elevation in the area referred to as the "SAT" dump. At the November 24<sup>th</sup> meeting, Minto agreed to provide a map showing the location of the SAT dump to provide reviewers, regulators and inspectors with a

clearer understanding of its location; Minto provided this map to EMR and SFN on December 6<sup>th</sup>. No further comments were received from SFN. EMR agrees with SFN that stability analysis of the Main Pit Dump is required to take into consideration the proposed changes to the configuration of the dump as well as changes to the loading schedule given the current location of the SAT dump, and the final position of this material at closure. The provision of a stability analysis of the Main Pit dump is included as a condition of the license.

Finally, SFN recommended that Minto update relevant operational plans with a principle aim of ensuring sufficient water, waste rock, and tailings storage capacity for operations and closure. Minto's letter in response demonstrated sufficient water storage capacity in Main pit and Area 2 pit tailings management facilities. Minto also provided an updated water balance on December 6<sup>th</sup>. EMR has included a condition of the approval that an updated Tailings Management Plan is required to reflect quantities of mine waste from the Area 2 Stage 3 open pit and to confirm that there is sufficient storage capacity in the Tailings Management Facilities such that tailings and waste rock with NP:AP<3 will be below water at closure. SFN was satisfied with this approach at the November 24<sup>th</sup> meeting.

3. Conclusion

This License amendment, issued on December 13<sup>th</sup>, authorizes mining of the Area 2 Stage 3 open pit. The details of this amendment, including conditions of this approval are described in Schedule C of the License.

Dated: Dec. 13, 2016

Signed: 

Robert Holmes  
Director, Mineral Resources