TECHNICAL MEMORANDUM

DATE March 22, 2017 **PROJECT No.** 1658927_106_TM_MAAOption2_R0

TO Ryan Vanengen
Agnico Eagle Mines Limited

CC Julien Lacrampe, Dionne Filiatrault, Lasha Young

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WHALE TAIL LAKE CHANNEL – OPTION 2

In December 2015, SNC Lavalin produced a multiple account analysis (MAA) report in the form of a Technical Note titled Water management trade-off study according to sustainability (document number 627215-1000-40ER-0003). This document was provided as part of the Licence A application for the selection of the best alternative to manage the water in Whale Tail Lake when operating the planned Whale Tail Pit. Agnico Eagle refers the reviewer to this MAA which selected Option 5, channel and rerouting water towards Mammoth Lake.

As part of the MAA exercise, Option 2, which is building a channel from Whale Tail Lake to Mammoth Lake without increasing the level of Whale Tail Lake, was analysed and rejected as it ranked the lowest of the combined four evaluated alternatives in consideration of Community, Environmental, Economical, and Viability indicators. While it was acknowledged that it ranked the highest amongst the Environmental indicators, potential adverse impacts to migratory birds were considered and lumped into the Biodiversity indicator, where Option 2 scored the highest. The following memo is provided as a supplemental document to provide reviewers with greater detail on the field assessment and engineering planning that supported the evaluation of Option 2.

During the fall 2015, the proposed path of the channels (Option 2 and Option 5) was visited (walked) by two professional engineers, one from SNC Lavalin and one from Agnico Eagle. The information gathered during this visit fed the MAA exercise. The reasons for rejection of Option 2 are presented in the MAA, showing that Option 2 ranked the lowest amongst the Community, Economy, and Viability indicators. More context and details are provided below:

1) Option 2 would require a complex infrastructure requiring a large and deep trench into thick and frozen ground (overburden and rock):

    a) Based on Photosat (2015), the highest difference of elevation between the two lakes along the path of the channel is 12.5 m (Figure 1).

    b) To avoid the change in elevation of Whale Tail Lake, the channel would need to be designed with a width similar to the passage between Whale Tail Lake and Mammoth Lake which is approximately 50 m. This width is not accounting for the slope of the walls (resulting in a larger footprint in surface) that would have to be developed and maintained to ensure stability in the rock and in the overburden that will thaw.

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c) The channel would be approximately 1,200 m long and would have to maintain a difference of elevation of 0.5 m (or 0.04% slope) from its entry (Whale Tail Lake) to its end (Mammoth Lake).

2) Option 2 raises uncertainties related to channelling into frozen ground (and further instability):

a) Considering the depth of the channel, this option would have an impact on the permafrost and particularly the thaw of the permafrost that could in turn destabilise the slope of the walls and generate blockage or unexpected pooling within the channel.

b) To maintain the water flow, this structure would require maintenance during the operation and the closure therefore a permanent operational maintenance in the event of blockage or slump into the channel; this could extend into closure and post closure.

3) Option 2 is not adapted to an expansion of the project to the West:

a) Future development may include expansion of the deposit to the west of Whale Tail Pit. Although not presently economic, the Option 2 channel would have to be moved, and an alternative solution would be required, such as Option 1 (Pumping towards mammoth lake) or Option 5 (Channel and rerouting water towards Mammoth Lake).

4) Option 2 presents high risk because of the long, large and deep excavation into thick frozen ground through the land between Whale Tail Lake and Mammoth Lake:

a) For workers during the construction because of potential instability.

b) For locals during operation and closure/post-closure because of potential falls in the channel.

c) For wildlife during operation and closure/post-closure because of potential falls in the channel.

Following the MAA process, the higher score of Option 2 amongst Environmental indicators was not sufficient to carry the alternative forward into the project, and the alternative was permanently discarded. A sensitivity analysis of the Biodiversity indicator (i.e., which considers potential adverse impacts on migratory birds), with a maximum possible rating of “very good performance” assuming that this alternative performs much better than others, can further show that Option 2 did not rank ahead of Option 5, and conclusions of the MAA process remain applicable.

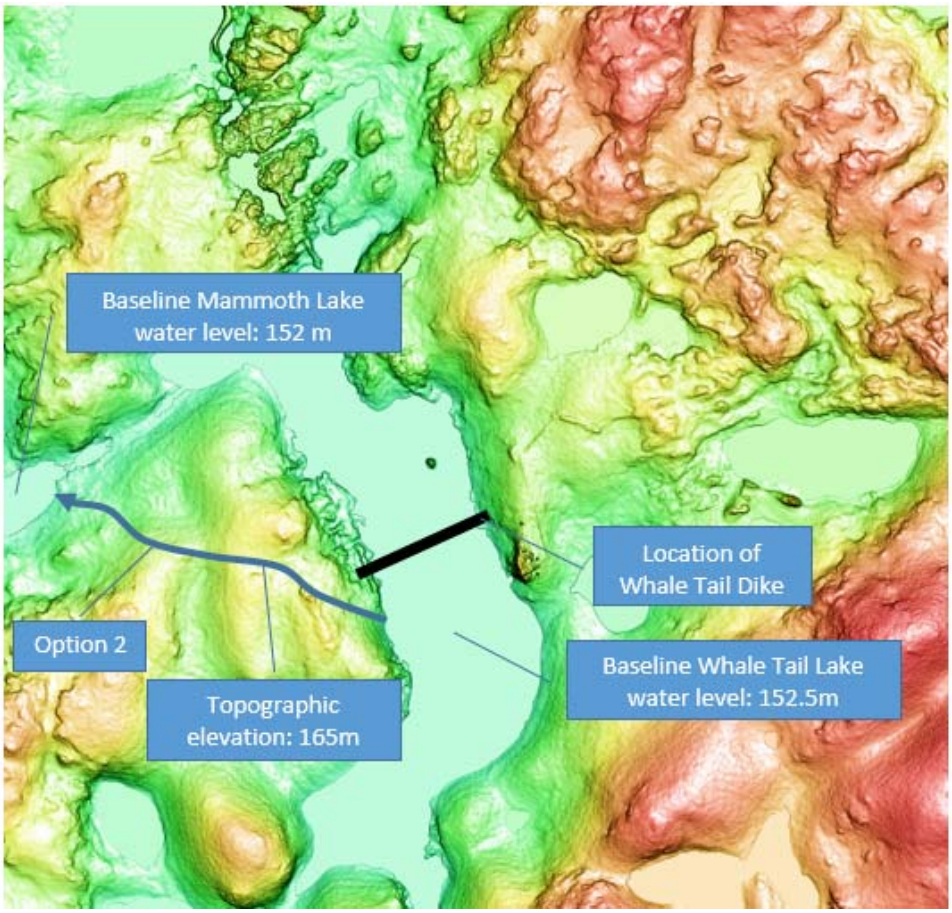

Figure 1: Photosat colour elevation image (Photosat 2015)

CLOSURE

If you have any questions or require additional details, please do not hesitate to contact the undersigned.

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