

1. Introduction

The Government of Yukon has concluded its assessment of the closure-related risks and liabilities at the Eagle Gold Mine site (the “Mine”) and finalized the financial security determination. The Government of Yukon has determined that \$103,741,940 is required in security, inclusive of the \$68,662,300 currently held by the Government of Yukon. This document presents the process and rationale for the security determination.

2. Legislative and Policy Context

The security determination is based on the closure-related risks and liabilities of the Mine, and ultimately, the costs that would be incurred by the Government of Yukon if it was required to reclaim the site. The determination is made pursuant to the *Quartz Mining Act* (paragraph 139) and *Security Regulation* (sections 3 and 4), and in accordance with the Quartz Mining License (QML-0011) issued to Victoria Gold (Yukon) Corporation (“VGC”). Additionally, relevant policy and guidance material is applied, including the Yukon Mine Site Reclamation and Closure Policy (2006), “Reclamation and Closure Planning for Quartz Mining Projects” (2013) and “Financial Guidelines” (2014).

The authority to determine the amount of security to be furnished, as set out in the *Quartz Mining Act*, is delegated to the Director of Mineral Resources Branch (“MRB”), Department of Energy, Mines and Resources.

3. Overview of Security Determination Process

In accordance with the provisions of QML-0011 (clause 7.2), VGC submitted an updated Reclamation and Closure Plan (“RCP”) and proposed security estimate in October 2022 to MRB. As part of MRB’s consultation process, as outlined in Section 4 below, MRB sent VGC’s updated RCP and proposed security estimate to First Nation of Na-Cho Nyak Dun (“FNNND”) on December 08, 2022. MRB retained an independent technical consultant, GRIT Engineering Inc. (“GRIT”), to support the review of the RCP and VGC’s proposed security estimate, and development of MRB’s security determination. This security determination process was partially conducted under a pilot project with the Yukon Water Board (“YWB”). Security determinations are based on 2-year peak liability.

Key milestones in the RCP review and security determination process were:

- October 03, 2022: VGC submitted RCP and associated security estimate in the amount of \$84,950,927.
- June 05, 2023: Information Request 1 is issued to VGC from MRB and YWB through the pilot project.

- June 30, 2023: Information Request 2 is issued to VGC from MRB and YWB through the pilot project.
- August 31, 2023: VGC provides a final formal response to Information Requests 1 and 2.
- October 13, 2023: MRB meets with VGC and FNNND to discuss the RCP and security estimate.
- November 19, 2023: MRB receives issue-for-review report from GRIT Engineering Inc. on the 2022 Reclamation and Closure Plan and cost estimate.
- November 30, 2023: MRB issues a draft security estimate in the amount of \$113 million to both VGC and FNNND for input.
- December 13, 2023: MRB receives input from VGC with additional evidence and rationale in response to the draft security estimate.
- December 20, 2023: MRB receives final report from GRIT on the 2022 Reclamation and Closure Plan and cost estimate.

4. Consultation with First Nation of Nacho Nyak Dun

The Government of Yukon consults affected First Nations on security determinations for all mining projects in the Yukon. MRB consulted with the First Nation of Nacho Nyak Dun (FNNND) on the existing site liabilities, the planned reclamation and closure measures, and the amount of financial security. Representatives for FNNND were in communication with MRB during this review. The comments and viewpoints received from FNNND during the review period are included throughout this document.

5. Cost Estimate Advancement during Review

In October 2022, VGC submitted an initial security cost estimate in the amount of \$84,950,927. In response to the Information Requests issued by Yukon Water Board and the Government of Yukon VGC identified a number of areas where additional costs were required and where existing costs required adjustment. A revised cost estimate was not submitted in response to the Information Requests.

In November 2023, MRB provided VGC with a draft security determination based on VGC's responses to Information Requests. MRB provided an opportunity to VGC to provide additional evidence or rationale that would support a revision to the draft security determination. In response to MRB's draft security determination, VGC provided an information package that included a memo with additional evidence and rationale to support the 2022 cost estimate, as well as commentary and revisions to the November 2023 GRIT cost estimate.



The cost estimate provided by VGC on December 13, 2023, with a 2-year peak liability estimate of \$91,187,615, is the estimate that MRB has used for comparison purposes throughout the remainder of this document.

6. Key Security Costing Components

This section outlines the key security costing components that represent the most significant differences between the final security determination and VGC's most recent estimate. These components are:

- 6.1. Contingency Costs
- 6.2. Forecasted Inflation Rates
- 6.3. Project Management and Engineering
- 6.4. Unit Cost Updates
- 6.5. Closure Water Treatment Direct Costs

6.1. Contingency Costs

GRIT has proposed contingencies be applied based upon the level of design and the confidence in the proposed closure measures. VGC does not oppose GRIT's approach. Contingencies based upon the level of design is consistent with the 2013 guidance "Reclamation and Closure Planning for Quartz Mining Projects" issued by the Government of Yukon and Yukon Water Board. The security estimate presented by VGC proposed adjusted contingency factors for General & Administration, Closure Planning, and Waste Dumps and Surface Facilities.

Final Decision

MRB has determined that the contingencies proposed by VGC are appropriate for the mine site given the level of design and closure planning stage. Table 1The contingency factors applied to the final cost estimate are presented in Table 1.

Table 1: Contingency Factors

Component	Contingency
General & Administration	25.7%
Closure Planning	25%
Pit	15%
Heap Leach Pad	30.0%
Waste Dumps	25%
Surface Facilities	30%

Infrastructure	22.5%
Waste Disposal and Remediation	30%
Landfills	30%
Roads & Trails	30%
Water Management	30%
Interim Care and Maintenance	22.5%

6.2. Forecasted Inflation Rates

GRIT has proposed the use of inflation rates consistent with the 2023 Whitehorse Consumer Price Index (CPI) from September 2022 to September 2023, and Bank of Canada inflation forecasts thereafter. The security estimate presented by VGC proposed lower inflation rates for Year 1 and Year 2.

Final Decision

MRB has determined that the inflation rates recommended by GRIT are accurate and appropriate. The proposed inflation rate for year 1 is consistent with observed conditions and the rates predicted for Year 2 and 3+ are the most current available projections from Bank of Canada. As presented in **Error! Reference source not found.**, MRB has accepted GRIT’s recommended Inflation rates of 3.8%, 3.5%, and 2.0% for Year 1, Year 2, and Years 3+, respectively.

Table 2: Inflation Rates

Year	Source	Inflation
1	Whitehorse CPI	3.8%
2	Bank of Canada	3.5%
3+	Bank of Canada	2.0%

6.3. Project Management and Engineering

Project Management and Engineering (PME) costs are added to project or program areas that need this type of support and oversight. It is an integral part of ensuring successful outcomes for any project. The 2013 Reclamation and Closure Planning for Quartz Mining Projects guidance recommends 12-15% for project management costs and 6-10% for Engineering costs. A 15% factor was applied to the Government of Yukon’s security determination for the 2020 RCP.

In their report, GRIT recommended a total PME contingency of 18% to reflect the Yukon guidance material, design level contained in the RCP and the responses to information requests. Throughout the review process, VGC has maintained that PME costs at 10% are appropriate for this project. MRB

believes this is a low estimate and not reflective of actual PME costs that would be incurred by the Government of Yukon in relation to this project.

Final Decision

Uncertainty regarding the Mine's proposed cyanide destruction methodology and closure cover designs introduces potential for increased project complexity and necessitates PME costs which are reflective of the level of planning and design. MRB has determined that a 15% factor is appropriate for this project,

6.4. Unit Cost Updates

Costs of goods and services are spatially and temporally sensitive. It is important to keep geographically accurate and current unit costs when determining security. The security estimate presented by VGC includes unit rates carried forward from previous determinations for many items. GRIT has proposed project-wide unit rate updates to reflect 2022 values. VGC acknowledged the need to update these costs in the responses to the Information Requests.

Additionally, GRIT has recommended a change in reference source from the Yukon 3rd Party Equipment Rental System to the British Columbia Road Builders & Heavy Construction Association – Equipment Rental Rate Guide (2022-2023). The rationale for this recommendation is that rates produced from the proposed source are more consistent, and that the proposed source is more established than the current source. Where applicable, a conversion factor is applied to represent fundamental differences between costs in British Columbia and the Yukon.

The response memo prepared by VGC indicated support for changing the reference source to the BC Blue Book though did not comment on the actual unit rates applied.

Final Decision

Stagnant unit costs carried forward from prior security determinations, and regional inconsistencies in source material contribute to underestimation in VGC's 2022 security estimate. MRB accepts the updated unit costs recommended by GRIT and has included these costs in the final determination.

6.5. Closure Water Treatment Direct Costs

The ability to treat mine impacted water is a critical component of mine site closure. The closure water treatment for this is costed in two components: Phase 2-5 for the operational water treatment plant and Phase 6 for cyanide destruction.

The Phase 2-5 water treatment plant was constructed and commissioned following the submission of the 2022 Reclamation and Closure Plan. The capital costs for the construction of the water treatment plant were included in the submitted cost estimate. In response to Information Requests 1 and 2, VGC identified that the water treatment plant was complete aside from the infrastructure required for the

biological denitrification system. In December 2023, VGC confirmed that the denitrification infrastructure had not been installed and commissioned, as such MRB has accepted the costs proposed in response to Information Requests 1 and 2 and has included these costs in the final cost estimate for the project. The water treatment plant has been commissioned and is demonstrating that water quality objectives can be met for the project, as such the capital costs for the commissioned portions of the plant have been removed from the cost estimate. However, as the plant has been in operation for less than one year, and aspects of the plant are not fully constructed or complete, the contingency value on the full build-out has been applied.

VGC’s proposed Phase 6 closure water treatment strategy includes use of Caro’s acid method for cyanide destruction. GRIT and FNNND (Slater Environmental) have expressed concerns that the use of Caro’s acid method does not currently demonstrate proof-of-concept. In previous revisions of the Reclamation and Closure Plan, VGC has proposed construction of a Phase 6 Mine Water Treatment Plant (MWTP) to treat cyanide impacted water. The Phase 6 MWTP demonstrates greater proven ability to destroy cyanide in the conditions present at the site than the proposed Caro’s acid method. To address the uncertainties associated with VGC’s current proposed closure water treatment strategy, GRIT recommends the inclusion of capital and operational costs for the implementation of the Phase 6 MWTP in the security determination.

Final Decision

Consistent and reliable water treatment facilities including the destruction of cyanide are critical to the successful closure of the Mine. MRB has determined that contingency costs for amendments to the Phase 2-5 water treatment plant, and capital and operational costs for the implementation of the Phase 6 MWTP should be included until further information demonstrating the reliability of the water treatment plant in all scenarios and the sufficiency of Caro’s acid method is provided.

7. Breakdown of Security Costs

Table 3 provides a detailed breakdown of MRB’s security determination in relation to the cost estimates presented by VGC on December 13, 2023.

Table 3: Government of Yukon Final Security Determination (in \$CDN)

Description of Cost	VGC Cost Estimate	YG Determination
T3 General & Administration	2,596,057.18	2,640,913.12
T4 Exploration Disturbances		
T5 Closure Planning	2,525,815.84	2,525,815.84



Reasons for Decision:
Financial Security Determination for the Eagle Gold Mine Site
Quartz Mining License QML-0011

Description of Cost	VGC Cost Estimate	YG Determination
T6 Pit	156,640.77	171,431.31
T7 Heap Leach Pad	6,726,995.69	6,832,153.14
T8 Waste Dumps	9,327,268.89	9,935,372.30
T9 Surface Facilities	6,531,704.00	10,224,160.32
T10 Infrastructure	468,478.45	490,390.48
T11 Waste Disposal and Remediation	206,768.06	211,474.92
T12 Landfills	200,853.89	209,983.61
T13 Roads & Trails	633,031.42	661,805.57
T14 Water Management	296,841.09	310,333.87
T16 Interim Care & Maintenance	15,749,846.71	15,749,846.71
Sub-total	45,420,301.99	58,370,474.18
Indirect Costs	6,813,045.30	8,755,571.13
Contingency Costs	11,682,476.00	15,530,791.10
Cost Inflation Year 1	2,428,801.28	3,140,959.78
Cost Inflation Year 2	2,322,061.86	3,002,922.87
Cost Inflation Year 3+	2,774,134.13	3,587,549.05
Total Closure Implementation Costs	59,758,344.56	68,450,684.01
Onsite Management	959,218.59	959,218.59
Transport Costs	55,498.53	55,498.53
Water Treatment Costs (Phase 6)	-	-
Active Treatment (Phase 6)	-	-
Capital Costs (included in T9, above)		
Capital Replacement Costs	975,844.58	975,844.58
Operating Costs	5,341,369.01	5,341,369.01
Draindown Pumping (Phase 6)	3,710,055.03	3,710,055.03
Passive Treatment (Phase 7-8)	-	-
Capital Costs	145,602.57	145,204.04
Operating Costs	83,589.47	83,589.47

Description of Cost	VGC Cost Estimate	YG Determination
Reclamation & Closure Research Phase 6	38,629.17	38,629.17
Monitoring & Reporting	2,068,576.14	2,068,576.14
Post Closure Maintenance (Phase 7/8)	982,922.27	993,262.70
Sub-Total	14,361,305.36	14,371,247.27
Indirect Costs	2,154,195.80	2,155,687.09
Contingency Costs	3,231,293.71	3,233,530.64
Total Care, Maintenance and Monitoring Costs	16,515,501.17	16,526,934.36
Total Closure Costs	76,273,845.73	84,977,618.37
Contingency Amount	14,913,769.71	18,764,321.73
Total Closure Costs (including Contingency)	91,187,615.44	103,741,940.10

8. Closing

Having completed the assessment of security required for the Eagle Gold Mine, MRB, on behalf of the Government of Yukon, has determined that \$103,741,940 is required to be furnished to cover the costs that would be incurred by the Government of Yukon if it was required to reclaim the site. MRB has relied on the information provided by the licensee, the independent technical consultant(s), FNNND, and the information gathered throughout the pilot program to inform the security determination.



Todd Powell, Director
Mineral Resources Branch
Energy, Mines and Resources



Date