

# DE BEERS GROUP

October 17, 2018

Angela Love, EP  
Regulatory Specialist  
Mackenzie Valley Land and Water Board  
P.O. Box 2130  
Yellowknife, NT X1A 2P6

Via Email: [angela.love@mvlwb.com](mailto:angela.love@mvlwb.com)

Dear Ms. Love:

**RE: Response to GNWT 2018 RECLAIM Financial Security Estimate Report - Additional Information;**

As requested by the Mackenzie Valley Land and Water Board (MVLWB), De Beers Canada Inc. (De Beers) is pleased to provide a response to additional comments received from the Government of the Northwest Territories (GNWT) – Environment and Natural Resources (ENR), dated October 5, 2018, regarding the Gahcho Kué Mine's (Mine) 2018 RECLAIM Financial Security Estimate Report.

## **1. RELATED TO GWNT-ENR COMMENT – 1**

De Beers understands that air and wildlife aspects may not be within the MVLWB's jurisdiction (MVLWB 2014); however, the MVLWB may consider these elements further in their decision regarding reclamation security. Site specific air and wildlife monitoring details for the Mine operations are presented in monitoring plans that have been subject to GNWT approvals.

De Beers provides the following estimate of costs associated with air and wildlife monitoring. Consistent with the approach for monitoring costing as presented in the 2018 reclamation security estimate (ARKTIS 2018), air and wildlife monitoring costs for the interim care and maintenance, active reclamation, and the post-reclamation phases is presented in the following tables for the two closure scenarios. The costs as presented are informed by operational monitoring costs incurred by De Beers and the anticipated level of resource requirements for the post-closure phases. With regards to air monitoring, it is anticipated the program will decrease in size and magnitude after active reclamation. With regards to the wildlife monitoring, a higher annual fee applied for the years when a winter road is to be constructed to facilitate reclamation (3 events) compared to years with no winter road constructed and only on-site opportunistic monitoring is anticipated.

### **De Beers Canada inc.**

1601 Airport Road NE Suite 300 Calgary Alberta T2E 6Z8  
Tel + 1 403 930 0991 | [www.debeersgroup.com/canada](http://www.debeersgroup.com/canada) | [info.canada@debeersgroup.com](mailto:info.canada@debeersgroup.com)  
Incorporated in Canada | Registration number 889569596

A member of the Anglo American plc group

# DE BEERS GROUP

## Closure Scenario 1

Activity	Year	Closure Year	Air Quality, Emissions and Meteorological Monitoring	Wildlife Monitoring
Interim C&M	-1	2028	\$ 50,000	\$ 8,000
Interim C&M	-2	2029	\$ 50,000	\$ 8,000
Active Reclamation	1	2030	\$ 50,000	\$ 50,000
Active Reclamation	2	2031	\$ 50,000	\$ 50,000
Post-Closure	3	2032	\$ 10,000	\$ 8,000
Post-Closure	4	2033	\$ 10,000	\$ 8,000
Post-Closure	5	2034	\$ 10,000	\$ 8,000
Post-Closure	6	2035		
Post-Closure	7	2036	\$ 10,000	\$ 8,000
Post-Closure	8	2037		
Post-Closure	9	2038		
Post-Closure	10	2039		
Post-Closure	11	2040	\$ 10,000	\$ 8,000
Post-Closure	12	2041		
Post-Closure	13	2042		
Post-Closure	14	2043		
Post-Closure	15	2044		
Post-Closure	16	2045		
Post-Closure	17	2046		
Post-Closure	18	2047	\$ 10,000	\$ 8,000
Post-Closure	19	2048	\$ 10,000	\$ 8,000
Post-Closure	20	2049	\$ 10,000	\$ 8,000
Post-Closure	21	2050		
Post-Closure	22	2051	\$ 10,000	\$ 50,000
<b>Interim Care and Maintenance - Totals</b>			<b>\$ 100,000</b>	<b>\$ 16,000</b>
<b>Active Reclamation and Post-Closure - Totals</b>			<b>\$ 190,000</b>	<b>\$ 214,000</b>

## Closure Scenario 2

Activity	Year	Closure Year	Air Quality, Emissions and Meteorological Monitoring	Wildlife Monitoring
ICM	-1	2028	\$ 50,000	\$ 8,000
ICM	-2	2029	\$ 50,000	\$ 8,000
Active Reclamation	1	2030	\$ 50,000	\$ 50,000
Active Reclamation	2	2031	\$ 50,000	\$ 50,000
Post-Closure	3	2032	\$ 10,000	\$ 8,000
Post-Closure	4	2033	\$ 10,000	\$ 8,000
Post-Closure	5	2034	\$ 10,000	\$ 8,000
Post-Closure	6	2035		
Post-Closure	7	2036	\$ 10,000	\$ 8,000
Post-Closure	8	2037		
Post-Closure	9	2038		

# DE BEERS GROUP

## Closure Scenario 2

Activity	Year	Closure Year	Air Quality, Emissions and Meteorological Monitoring	Wildlife Monitoring
Post-Closure	10	2039		
Post-Closure	11	2040	\$ 10,000	\$ 8,000
Post-Closure	12	2041		
Post-Closure	13	2042		
Post-Closure	14	2043		
Post-Closure	15	2044		
Post-Closure	16	2045		
Post-Closure	17	2046		
Post-Closure	18	2047		
Post-Closure	19	2048		
Post-Closure	20	2042		
Post-Closure	21	2043		
Post-Closure	22	2044		
Post-Closure	23	2045		
Post-Closure	24	2046		
Post-Closure	25	2047	\$ 10,000	\$ 8,000
Post-Closure	26	2048	\$ 10,000	\$ 8,000
Post-Closure	27	2049	\$ 10,000	\$ 8,000
Post-Closure	28	2050		
Post-Closure	29	2051	\$ 10,000	\$ 50,000
<b>Interim Care and Maintenance - Totals</b>			<b>\$ 100,000</b>	<b>\$ 16,000</b>
<b>Active Reclamation and Post-Closure - Totals</b>			<b>\$ 190,000</b>	<b>\$ 214,000</b>

## 2. RELATED TO GNWT-ENR COMMENT – 3

The GNWT-ENR notes that for the Ekati site, drilling and blasting, as well as, dozing and excavation was required to remove mine rock from the Panda/Koala waste rock storage area. It is noted that mine rock was removed to depths of 13 and 8 m, and the rock material was well-bonded together with fine grain materials or frozen water. As discussed below, these conditions differ than that expected at the Mine.

De Beers had previously presented a volume balance calculation to demonstrate that sufficient mine rock was available in the rock piles, within the active layer, for use in reclamation purposes (e.g., covering the processed kimberlite facilities) (De Beers 2018). The mine rock was available in the active layer, and therefore it is anticipated that drilling and blasting is not required, since the material will not be frozen together. Based on further discussions with the Mine’s operation team, should the top layer of the mine rock at the mine rock pile be needed for the reclamation purpose, a combination of dozing and excavation can be implemented to recover the mine rock.

In an effort to align unit costs with the GNWT, the GNWT unit costs as presented for Ekati are applied in the following proposed change to estimate the cost to construct a rock cover with Mine rock.

# DE BEERS GROUP

Activity	Description	Cost
Cover construction on PK facilities	ARKTIS RECLAIM v5 estimate.	Spread/Haul/Load/Dump – Specific High Unit cost from RECLAIM Total Cost = \$6.30 / m <sup>3</sup> * Quantity of Rock
	Proposed adjustment to costing	Rip/Load/Haul/Spread- Specific Unit cost for GNWT Ekati experience - \$7.09 / m <sup>3</sup> Load/Haul/Spread – Specific Unit cost from GNWT Ekati experience - \$6.04 / m <sup>3</sup> Total Cost = \$7.09 / m <sup>3</sup> * 50% (Quantity of Rock) + \$6.04 / m <sup>3</sup> * 50% (Quantity of Rock)

**REFERENCE:**

**ARKTIS Solutions Inc. (2018).** De Beers Canada Inc. Gahcho Kue Mine 2018 Financial Security Estimate – DRAFT for Discussion – R5

**De Beers (2018).** July 30, 2018 response to Mackenzie Valley Land and Water Board comments on the 2018 RECLAIM Report.

**Mackenzie Valley Land and Water Board (2014).** MV2005C0032, MV2005L2-0015 Reasons for Decision. August 11, 2014

**CLOSURE**

We trust the above meets your requirements at this time. Should you have any concerns or comments, please do not hesitate to contact me at (867) 445-1485, or email [william.liu@debeersgroup.com](mailto:william.liu@debeersgroup.com).

Sincerely,



William Liu  
Regulatory Specialist  
De Beers Canada Inc.

cc: Sarah McLean, DBCI