# DDMI Traditional Knowledge Panel Session #6

FOCUS ON PROCESSED KIMBERLITE CONTAINMENT

Diavik Diamond Mine October 24 - 28, 2013





### DDMI Traditional Knowledge Panel Interim Report

## Session #6: Focus on Processed Kimberlite Containment

Diavik Diamond Mine October 24-28, 2013

#### **Facilitation**

Joanne Barnaby, Joanne Barnaby Consulting Natasha Thorpe, Thorpe Consulting Services

### **Participants**

Kitikmeot Inuit Association	Bobby Algona and Mark Taletok, Mona Hitkolok (youth), Mona Tiktalek (interpreter), Gwen Angulalik (interpreter)
Łutsel K'e Dene First Nation	August Enzoe, Alfred Lockhart, Chase Loutitt (youth)
North Slave Métis Alliance	Ed Jones, Wayne Langenhan
Tłęcho Nation	Louis Zoe (Gamètì), Jonas Lafferty (interpreter), Janelle Nitsiza (youth)
Yellowknives Dene First Nation	Mike Francis, Alfred Baillargeon, Berna Martin (interpreter), Alex(andra) Crapeau (youth)

### **Observers/Presenters**

Diavik Diamond Mines Inc.	Gord Macdonald, Ken Quackenbush
C&E Consulting	Colleen English
Thorpe Consulting Services	Janet Murray (transcriber)

Interpreting equipment provided by Pido Productions.

## **Background**

The TK Panel is mandated to assist Diavik Diamond Mines Inc. (Diavik) and work with local communities in facilitating appropriate and meaningful accommodation of Traditional Knowledge (TK) in the planning and review of environmental management and monitoring at the Diavik Diamond Mine. In the past, TK Panels were assembled by the Environmental Monitoring Advisory Board (EMAB) to discuss select concerns related to the Diavik Diamond Mine. A TK Panel met in March 2012 and one of their recommendations was to make the TK Panel a "standing body" to strengthen the role of Aboriginal TK Holders in closure planning.

During the spring and summer of 2013, it was decided that Diavik would administer the TK Panel. This decision was based on recommendations from the TK Panel, and in consideration of EMAB's mandate in relation to the goals of the TK Panel. This change allows for direct communication between Diavik and the TK Panel. The work that the TK Panel performed under EMAB's direction will not be lost or forgotten in this transition. All reports and recommendations generated by the TK Panel will be considered by Diavik. The workshop held at the mine site from October 24-28, 2013 was the first meeting where the TK Panel reported directly to Diavik.

### **Session Purpose**

This expanded session was the first in a series of TK Panel sessions now administered under Diavik rather than EMAB, but the sixth in the series of TK Panel sessions which started in 2012. This session included a discussion of the transition of the TK Panel from EMAB to Diavik, an update on Diavik closure planning particularly related to the Process Kimberlite Containment (PKC) area, and the development of the TK Panel's PKC related recommendations. The TK Panel drew upon their knowledge as well as the recommendations offered in earlier TK Panel sessions to develop a well-defined vision and supporting recommendations for the PKC which were presented to Diavik for their review and consideration.

### **Session Goals**

The first goal of the workshop was to provide an opportunity for TK Panel members to talk directly with Diavik about how the Panel operates and collectively develop the purpose, goals and topics for the Panel. The second goal was to respect and build upon work already done and learn more about how recommendations provided to EMAB (and Diavik) in the past are being considered. The third goal was to develop recommendations to provide to Diavik at the end of the workshop, which allows for TK/IQ to be considered in Diavik's closure plans for the PKC area.

### **Agenda**

This four day TK Panel Session was structured into topics, as follows:

- 1. Reviewing the transition of the TK Panel from EMAB to Diavik;
- 2. Reviewing the TK Panel mandate, terms of reference, informed consent process;
- 3. Identifying the format, scheduling and plan for future sessions;
- 4. Reviewing the closure planning history in relation to the PKC closure options;

- 5. Discussing the current Diavik preferred closure option for the PKC, with a focus on four key topics (i.e., acceptability of a pond, planning shoreline design, considering wildlife use and evaluating landscape features to help clean/heal drainage);
- 6. Two Site Tours, the first an overall mine site tour and the second of the PKC area (including drainage areas) and North Country Rock Pile; and
- 7. Evaluating the workshop

Appendix A includes the workshop agenda followed by detailed workshop notes assembled in Appendix B. Appendix C contains a blank copy of the informed consent forms that were signed by all participants.

In response to questions raised during the first two days of the TK Panel session, Diavik delivered a presentation to detail recent caribou movements and wildlife mortalities associated with mine operations over time (Appendix D).

The focus of the workshop had been on Diavik's preferred closure option but, on the final day of the workshop, at the request of the Panel, Diavik presented details on the sixteen original closure options considered for the PKC, and provided additional details for five of these options that were short listed for further consideration

There was also discussion about the need for all TK Panel recommendations from previous sessions to be assembled and brought forward to Diavik before the next Panel session.

## **Proceedings**

The session generally followed the agenda appended to this report. Key topics are elaborated below.

#### 1. Transition from EMAB to Diavik

Diavik gave an overview of the process and rationale from the TK Panel transitioning administration from EMAB to Diavik (Appendix D).

The TK Panel is in support of the transition and proposed changes to the timing, scheduling and location of future TK Panel sessions. It was understood that sessions will occur twice per year, with the option of an additional session, if necessary, be held from Thursdays through Mondays onsite (four days instead of three days) and have transcripts verified daily.

### 2. Review of TK Panel Mandate, Purpose, Goals and Informed Consent

A new informed consent form was signed by all participants and interpreters, recognizing that the TK Panel is now administered under Diavik (Appendix C). Informed consent will continue to be obtained for any new members. The TK Panel agreed that the mandate, purpose and goals defined in earlier TK Panel Sessions would carry forward, as outlined in a presentation given by Diavik (Appendix D).

### 3. Review of Diavik Closure Planning related to the PKC

Diavik gave a presentation outlining initial, current and future closure planning efforts. A lengthy discussion followed with multiple questions being posed to Diavik (presentations and questions and answers are presented in Appendix D). A detailed description of the PKC area was provided.

### 4. Discussion of Diavik's Preferred PKC Closure Option

The TK Panel carefully considered the Diavik preferred option for closure of the PKC area, including all of the specific topics identified by Diavik for discussion, and unanimously agreed that their preference was to remove the slimes (clay-like kimberlite residues mixed with water as a result of processing the rock) in the PKC area to an offsite location. Detailed recommendations are provided below. Following the presentation (Appendix E) and discussion of these recommendations with Diavik, it became clear that the TK Panel would only consider leaving the slimes on site if they were confident that there would not be any harm to the environment from the slimes. Thus, a further recommendation was made to have an independent chemical and toxicological analysis carried out on the PKC slimes.

#### 5. Site Tours

Upon arriving onsite (Thursday, 24 October), the TK Panel was taken on a site tour so that they would have a general sense of the mine site. On the third day (Saturday, 26 October), a lengthier and more focused tour of the PKC area took place. Stops were made along the PKC dam so that participants could observe the pond, dams, beach areas or flatlands, PK and water pipelines, spigots where fine PK is released into the pond, coarse PK deposition areas, seepage collection areas and the reclaim barge in the middle of the pond. TK Panel members were also taken on top of the rock pile to look down on the entire PKC facility. The final stops focused on proposed drainage areas to the south of the PKC.

### 6. Identify the Format, Scheduling and Topics of Future Sessions

There was limited time to discuss topics for future sessions although agreement was reached that there needs to be a TK Panel session to focus on re-vegetation during the summer of 2014. It was recommended that this session be held onsite with participation of women who have first-hand experience with the area and who are considered experts in traditional plant uses. The session should be held after July 15<sup>th</sup> but before the first week of September (ideally in August) so that plants are readily available for observation, study and discussion. There should be representation from youth. A comparison of session preferences discussed when the TK Panel was administered under EMAB was compared with the current session and presented to the group (Appendix F).

#### 7. Evaluate Current Session

A total of eighteen evaluation forms were returned. A copy of the evaluation form and tallied results are included (Appendix G).

#### **Outcomes: Recommendations**

The TK Panel collectively developed the following unanimous recommendations for the closure of the PKC through a process of extensive discussion, thoughtful consideration, consensus and a genuine willingness to work in partnership with Diavik. These recommendations flowed from a common vision to have the mine site returned to the most natural state humanly possible. This vision was based largely on pre-mine conditions, but also considered the current landscape. The Panel members considered the landscape that existed before the mine was built and expressed a desire to demonstrate respect for the original life in this area. The TK Panel has considered the preferred option of a pond to cover the slurry/slime within the PKC area for closure as put forward by Diavik. The TK Panel is prepared to provide advice on this option, assuming the area is healed, cleaned, healthy and safe.

#### Recommendations

Recommendations are numbered to reflect the TK Panel session identification (Session 6 for the PKC) and to subsequently identify each specific recommendation (e.g. 6.1). The TK Panel has established the following recommendations specifically for the:

- PKC Flatland (Beaches);
- Lake and Shoreline;
- Drainage; and
- Dam Design.

#### **PKC Flatland**

- 6.1 Cover PKC area with a combination of natural sand and soil to ensure that the PKC is not over-heating the area (and melting permafrost) and to support natural re-vegetation.
- 6.2 If there were eskers within the PKC area, reclaim these to their original state or as close as possible.
- 6.3 Re-vegetate the PKC area according to baseline traditional knowledge and science.
- 6.4 Create wildlife habitat and stabilize ground with transplanted willow.
- 6.5 Create marshy areas with moss, lichen and berries.

#### Lake and Shoreline

- 6.6 Preference is for the removal of the slime from the mine site upon closure.
- 6.7 Removing the slime offsite remains the preferred option until Diavik can demonstrate through chemical and toxicological analysis that the slime is not harmful to the environment (i.e. plants, wildlife, fish, and humans).
- 6.8 Return the lake and shoreline to their natural states, as much as possible (e.g. gradual slope).
- 6.9 Ensure that the shoreline is stable.
- 6.10 Once the slime is removed, line the lake bottom with granite / gravel and rocks and other natural materials that were there before.
- 6.11 Re-vegetate the lake with water plants of this area.
- 6.12 Re-stock lake with fish and bugs.

### **Drainage**

- 6.13 Recreate small ponds along the drainage route to encourage settling and healing of the water and fish habitat.
- 6.14 Support the drainage streams to encourage fish to migrate from Lac de Gras to the reclaimed lake.
- 6.15 Make the closure lake as similar to the original lake as much as possible.

### **Dam Design**

- 6.16 Provide sufficient travel-ways for caribou and muskox over the dam through re-sloping and topping with smaller material.
- 6.17 Recognizing that caribou may return, provide areas of soft materials that are good for caribou feet so that they may pass over the reclaimed site.
- 6.18 Leave some areas steep to encourage snow accumulation for wolverine and other denning wildlife (e.g. wolf, bear, fox, ground squirrel, etc.).
- 6.19 Open up sections of the dam to recreate natural water flow.

#### **General Recommendations**

- 6.20 The TK Panel requests that DDMI starts to remove any new slime from site, effective immediately.
- 6.21 The TK Panel requests that DDMI provide an overview of the sixteen closure options that have been considered and the preferred five options identified (including costs). Further, the TK Panel requests that DDMI provide an overview and cost estimate to remove the slime from the mine site.
- 6.22 The TK Panel recommends that DDMI explore ways of treating and removing slurry/slime with other diamond mines in the area to make it feasible.

#### Rationale

The removal of slime provides a level of comfort and certainty to northern communities that is not otherwise available. This preference is based on the acknowledged problems created by leaving the slurry/slime onsite, in particular safety concerns for people and wildlife and the uncertainties associated with impacts from environmental change (e.g., a rise in temperature and associated drought, permafrost melting, earthquakes) long into the future. Further, it provides an opportunity to return the landscape to a more natural state which is a key goal expressed by the TK Panel throughout sessions to date.

#### **Other Considerations**

In addition to the formal recommendations presented above, the TK Panel also suggested the following:

A report of previous TK Panel sessions be assembled which clearly articulates the
concerns and recommendations of Panel members. Creating a good understanding of the
context, underlying values and beliefs expressed by the Panel will contribute to building
good communications with Diavik and enable the Panel to be effective in working
through the challenges associated with closure and reclamation planning.

## TK Panel Session #6 Photographs - October 2013

## Site Tour



1: Ken Quackenbush of Diavik describes the PKC area



2: Ed Jones gets ready for the site tour



3: Mike Francis and Alfred Baillargeon



4: View west from PKC area



5: Participants view the PKC barge and pond

## TK Panel Session #6



6: Diavik provided examples of the PK fines, course materials, slurry and water



7: Mark Taletok (holding microphone) shares with the group (L-R: Ed Jones, Mark Taletok, Bobby Algona, Alfred Baillargeon, Alexandra Crapeau, Janelle Nitsiza)



8: Youth and Elders work together (L-R: Natasha Thorpe, Chase Loutitt, Louis Zoe, Joanne Barnaby, Mike Francis, Mona Hitkolok, Alfred Lockhart, Wayne Langenhan)



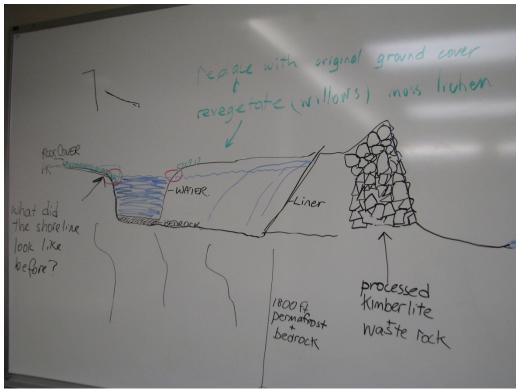
9: Alfred Baillargeon and Janelle Nitsiza listen to a DDMI presentation



10: Louis Zoe listens to words of the TK Panel



11: Key points were recorded on notes throughout the session and verified during plenary sessions



12: Visuals were used to help the TK Panel better understand the complexities of the PKC area



13: Youth delegate Janelle Nitsiza presented the TK Panel recommendations to Diavik



14: Interpreters worked hard to 'get the words right' (Back to front: Mona Titalek, Gwen Angulalik, Berna Martin, Jonas Sangris)

## Appendix A

**Workshop Agenda** 



### Agenda

## Diavik Diamond Mines Inc. Traditional Knowledge Panel

### October 24 – 28, 2013

## Thursday, October 24

3-4 pm	Arrive at Site, Check-In, Orientation& Training, Snack
4:30-6pm	Site tour for Panel Members with Gord/Colleen
6:00 pm	Dinner

### Friday, October 25

9:00 am	Opening Prayer
9:05 am	Welcome and Review of Agenda and Meeting Schedule (NT/JB)
9:15 am	Panel and Workshop Background (ToR), Mandate (DDMI/Colleen)
9:45 am	Group Discussion
10:30 am	Break
10:45 am	Confirm Panel Mandate & ToR (NT/JB)
11:30 am	Recommendations Overview (NT/JB) and Group Discussion
11:45 am	Workshop Priorities/Questions & Group Discussion (Panel)
12:00 pm	Lunch
1:00 pm	Steps to Here: Closure Planning History in relation to the PKC & review of PKC Closure Options (DDMI)
2: 00 pm	Q&A on PKC closure (NT/JB)
3:00 pm	Break
3:15 pm	Round circle – what would be a good thing to see in this area? (Panel)
5:00 pm	Close



#### Saturday, October 26

9:00 am Re-cap Day 1 - NT/JB

9:15 am Group Discussion of PKC Topics

10:30 am Break

10:45 am Group Discussion of PKC Topics (cont'd)

11:45 am Summary of Morning Discussion

12:00 pm Lunch

1:00 pm Group Discussion of PKC Topics (cont'd)

4:15 pm Review of Days Key Messages / Recommendations / Notes

5:00 pm Close

#### Sunday, October 27

9:00 am Recap Day 2/check in - NT/JB

9:30 am Group Discussion of PKC Topics (cont'd)

11:00 am Discuss site tour purpose & objectives (focus on PKC)

12:00 pm Lunch

1:30 pm Site (PKC) Tour& Discussion

4:30 pm Review of Days Key Messages / Recommendations / Notes

#### Monday, October 28

9:00 am Review of Workshop Notes, Compile and Review Panel Recommendations for

DDMI (NT/JB)

10:15 am Break

10:30 am Present recommendations to DDMI

11:15 pm DDMI Preliminary Response to Panel Recommendations

12:00 pm Closing Prayer

1:00-3:00 pm Evaluation forms completed for each organization

3:00-3:45 pm Pack up & check out – bag cut off at 3:45 pm sharp!

5:00 pm Return flight to Yk

6:00 pm Arrive Yk (G&G Expediting)

## Appendix B

**Workshop Notes** 

1 Alfred Baillargeon: Whenever we have a meeting we usually do an 2 opening prayer. Hopefully we will have a successful 3 meeting and a good meeting and workshop. That is the 4 purpose of the gathering here. 5 Our father in heaven we ask him while we on this 6 mother earth we have no control over anything. Our 7 father in heaven made everything for us on this beautiful land of ours. Whenever we are in a meeting 8 9 we will plea to our father in heaven so let us pray 10 now. 11 In name of the father and son and the Holy Spirit. Colleen English: Directions for lunch, snacks, washrooms. 12 Natasha Thorpe: Welcome everybody to site. It's an honour to be able 13 14 to be meeting with the TK Panel again, this time on 15 I am really grateful everybody made it safely 16 and I hope everybody's got lots of energy for the next 17 few days. Joanne and I are going to be back and forth 18 over the next couple of days helping to support you as 19 a team, as a panel, work through some key questions 20 some issues related to the mine site, 21 particular the process kimberlite containment. Which 22 we'll talk about in a few minutes to help you better 23 understand. 24 I wanted to check in early here and have us walk 25 through the agenda. This is a starting point for 26 discussion. 27 Both Joanne and I really welcome your feedback and insight on whether this agenda is okay for you. 28 29 Just before I start, I also wanted to make a very 30 special welcome to the youth. It's really exciting to 31 have you guys here and I know that it means a lot to 32 the elders. It was their request that there be a 33 really strong youth presence so thank you for being 34 here.

So the way that this is scheduled in general is that we'll start at 9am and we'll have a mid morning break a lunch break, we'll get going again around 1pm and a mid afternoon break and we'll finish up around 5 o'clock. We'll have 2 sessions a day. One suggestion

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was having 3 sessions. My question for you is should
we have 2 or 3 sessions a day?

I think it would be a good plan to go through the whole thing right til 5 o'clock rather than come back in the evening because at the end of the day we will all be tired. I'm sure of that. SoI think we should do as much as we can in the morning and afternoon.

8 August Enzoe: Yeah it's good for us adults were not young boys and girls here so we get really tired evening till 5 o'clock because we're here till Monday night we got Monday all day, Saturday, Sunday, Monday so I appreciate what Ed was saying.

Joanne Barnaby: Thank you for saying your name prior. We ask everyone to do that. As you know the sessions are recorded and we also have somebody transcribing. She is taking notes, and with her help we're hoping we can have a transcript, a summary transcript at the end of each day for you to look at the following morning.

Bobby Algona: Welcome everybody. I'm from Kugluktuk. My name is Bobby Algona. We are all thankful that when we gather we gather together thank you for inviting us here and we will learn from each other whatever you know things we talk about. My name is Bobby Algona from Kugluktuk.

Alfred Baillargeon: I am from Dettah, Alfred Baillargeon from Dettah. My friend and I on my right in 1995 approximately at that time on this Lac de Gras we did the fish study, water sampling for about a month and a half about six weeks with the boat we did the fish study, the water sampling. But when I look at this today at that time the island was not disturbed there were a lot of wildlife a lot of caribou and nothing was disturbed at that time but today when you look, when you look at this island . . . This island is considered dead, it's not alive any more. It's not like it once was; it's not like . . . they contaminated it, this whole land of ours but Dene people we know that this whole island is destroyed. Our ancestors they used to roam back and forth with a dog team and this island. The old man that had raised me when they used to go trap for white fox but today that island will be nothing will be taken from this island in terms of wildlife, just for money. When you look at that island it's considered dead it's not alive no more but I think too I have a mind. I am 76 years old pushing 77 but as an elder we have the youth with us but still I

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personally we should have more youth from each of our community. What we're doing here? We don't know what the future will hold but then there may be some more mines in the future but we should have more of the young people to take part and participate in the meeting. Each of our community to really listen and take part in our meeting especially with TK so this way they can hang on to our knowledge. Like this Inuit guy spoke, talk about how he used to use the dog team in this area I myself use to use a dog team back in the days in the early days when they should really listen to us and listen but I am considered to be a Métis person but then I speak. But actually I can speak a lot. I can even speak Cree. I am a man of a lot of languages. I can even speak Inuktitut as well.

- 15 Alexandra Crapeau: Mahsi cho for having us.
- 16 Janelle Nitsiza: I am with Tłicho government the Department of Culture
  17 and Lands Protection. Mahsi cho.
- Joanne Barnaby: Thank you for your quick consensus on our schedule. 18 19 We will have to ask you to do a little work in the evening. 20 Because we have so much work to do before we leave on 21 Monday it would be really good if you could work with your 22 interpreters in the evening and go over the transcripts 23 summary with them to make sure we got your words down 24 right. It's not going to be written like a report its going 25 to be written like a summary of what you said.S o that would save us time in the morning to just keep doing the 26 27 work. And maybe the youth could help with that.
- Natasha Thorpe: There was a request early on to be able to look at the notes sooner than later. I think before there was some frustration going back 4 or 5 months and trying to remember what you said then. This way, you will just have to look at what you said not what everyone said.
- 33 Diane Dul: I work here at Diavik. I'm a Métis from the Fort Smith
  34 area. I've worked with some of the people in the room and I
  35 look forward to working with you throughout the next 3 to 4
  36 days. I am your Diavik liaison so if you have any requests
  37 that you need filled make sure you go to Colleen or to
  38 Natasha and they'll get me on it right away.
- 39 Colleen English: I used to work for Diavik I think most of you know that I don't work directly for Diavik anymore but I do contract work back to Diavik. Happy to be here again.

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- 1 Gord MacDonald: I am the person at Diavik that is responsible for 2 closure planning. I am the one that needs to receive all 3 of your recommendations and information. I am around all 4 I am happy to be here when you want me here and 5 not when you don't want me here, as you wish. If you have 6 any questions when I am not here ask one of these ladies 7 that can find me and I'm happy to come back and respond to 8 any questions. I would just like to thank you all for 9 coming and giving up your weekend to help us out here.
- Mona Tiktalek: I am from Kugluktuk and an interpreter. I used to work
  for KIA.
- 12 Jonas Lafferty: I am an interpreter/translator for Tłicho and other
  13 various organizations for about 33 years.
- 14 Berna Martin: I'm from Dettah. I'm an interpreter and cultural instructor.
- 16 Gwen Angulalik: I'm from Cambridge Bay and I'm an interpreter/translator since 1999.
- 18 Ryan Dempster: I'm from Pido Productions.
- 19 Janet Murray: I'm from Yellowknife, a transcriptionist.
- 20 **Ed Jones:** Is there anyone here to represent EMAB? Can you give me that information?
- 22 Colleen English: EMAB was invited to come. I'll talk to this a little
  23 bit in a presentation that I am going to give too but they
  24 were invited to come and we do want them to continue to be
  25 able to be a part of the panel. They unfortunately are
  26 going through staffing changes and there was no one able to
  27 come this time from the staff or the board.
- 30 Colleen English: Okay good morning. This presentation is a little
  31 boring not a lot of good photos, a lot of words. My role
  32 right now is really to help Diavik transition this panel
  33 from EMAB to Diavik and helping them with the process and
  34 the content and the topics and working closely with the
  35 facilitators to develop each of the sessions for you guys.
- Early recommendations were that you wanted to have contact directly with Diavik but the way the environmental agreement was written had EMAB sort of being the body that

the TK Panel reported to. And EMAB was struggling with their role in that whole process so they are generally what we would call an oversight body. So they look at the things that Diavik does and they say you know that's good or that's bad and here are some recommendations that would help make it better.

One of the things they are mandated to do is support traditional knowledge. But there was a feeling from some of the board members that having this panel meant that they were doing traditional knowledge instead of supporting.

So Diavik and EMAB inconsideration of both the suggestions that you guys had made around wanting that direct link and EMAB sort of struggling with that role of oversight versus support versus doing. We had that conversation and suggested that maybe it would be better if Diavik administered the panel or sort of managed the panel. And EMAB agreed so the whole board and all the staff were in agreement with that so earlier this summer the panel transferred over to Diavik from EMAB.

So that gives you the direct communication path but obviously like we said we still want EMAB to be involved. So we still want them to see the work that the panel is doing and to hopefully attend and hear the panel for themselves as well. Questions?

Ed Jones: Who's the contact person with Diavik?

Colleen English: I've been contracted with Diavik to do this. have been in contact with your community organizations to participants and linking arrange for in with facilitators to develop the content for each of them but Gord is the primary contact (Diavik employee) for this panel.

32 Ed Jones: I may be a little bit slow but can you go over that again.

Colleen English: Gord is the top person and then I work for Gord helping to coordinate the panel sessions and work with the facilitators to develop the content of each of those sessions. Any other questions on what's happened? How do you feel about it?

39 Ed Jones: As long as Gord doesn't escape, its good.

Natasha Thorpe: I think this way your voices and your words are being 1 2 heard directly by Diavik and not somebody in the middle. 3 Ed Jones: I just want to remind you that we can lose a lot through 4 interpretation and I just want to remind them that they 5 have to listen to what we are saying and carry that 6 connotation and that message and not do any of their own 7 interpretation. Thank you. 8 Colleen English: And we have to be diligent with the microphones as 9 well. 10 One of the things that Natasha had mentioned is that middle person role that EMAB had played and I'm going to go into 11 that in a little bit here but I just wanted to sort of 12 13 outline a couple of the things that have changed with that 14 transfer. (PowerPoint presentation) 15 Diavik didn't see all recommendations due to having a 16 middle man. Wayne Langenhan: I think from what we've been shown here so far EMAB, 17 18 the people that were on the board were doing their job the 19 way they should have been and they need more expertise in 20 that. I think in the future we need more checks and 21 balances so that all the information is going where it's 22 suppose to go. 23 Colleen English: That's the point of some of the changes and what Natasha and Joanne are for. (PowerPoint) 24 25 Some recommendations may not. 26 Wayne Langenhan: I was just wondering how are you going to get in touch 27 with each group, individual group or are you going to save 28 it for a different meeting or how is it that you are you 29 going to get this across to each group so that they 30 understand it? 31 Natasha Thorpe: Do you mean the recommendations? 32 Wayne Langenhan: How are you going to make it so that you're going to 33 say this recommendations is good we're going to push this 34 through but this one here is not good and give the reasons 35 but are you going to give the reasons to everyone or just 36 to the people that put forward the recommendations. How is 37 it going to be arranged?

1 Colleen English: Our hope is that you are comfortable with us sharing 2 that information very broadly. So we would want some 3 specific examples: we would definitely want to be getting it back to you obviously and making sure that you guys have 4 5 that response, we would want to share that with your 6 communities and organizations, closure groups, then the 7 community updates explain to them what you are doing. Show 8 them some examples but have all available to see if they 9 wanted. Because the other thing is we would like to share 10 it in that regulatory world so we would like to be able 11 when we make for example we update our closure plan we 12 provide an update to the closure plan every year to the 13 land and water board who then distributes that to everyone 14 (government organizations, communities, the environment 15 branches of the community organizations) they all receive 16 that report and ideally we would see this attached to that 17 report so it would be a part of that report is that 18 response sheet to the recommendations. And EMAB as well 19 would be included in that.

Ed Jones: I believe that the facilitators are only communicators. Is that correct? They should have no input in the recommendations. Am I correct?

Joanne Barnaby: Basically you're right, what we do at times is to maybe take your words and give it back to you in different words to check with you and see if we've understood you correctly. And we might suggest using language in those recommendations that we know Diavik can understand or we know that a scientist could understand but also that you understand and you agree with. It's helping to facilitate good communication between the traditional knowledge holders, you as panel members, scientists and managers.

speak to Wayne's comment Natasha Thorpe: I want to about recommendations. These reports that you've worked on, over the last couple of years, at the back there's bullet lists of recommendations. To be honest, it wasn't until a couple of weeks ago when Joanne and I started checking in with Diavik seeing how they were going to respond to each one of those recommendations in the next session when Diavik said "Well wait a minute we don't have all the recommendations." They hadn't been given copies of your reports. challenge, to be fair, is that traditional knowledge is unique, special, precious knowledge and facilitators and EMAB I think we're very concerned about making sure that they didn't share too much. And it's

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trying to find that place where you don't share too much but you also share enough so that there can be actions that follows from you recommendations.

I'm hoping that because now we have this direct line with Diavik, it's not being filtered through some other organization. Step one I think that's really going to help us moving forward and step two is checking in with you to make sure that you're okay with us sharing all of those recommendations. If you're not okay with us sharing them then we can't give them to Diavik and they can't respond and they can't act on those.

I am going to speak for a minute after Colleen about the recommendations piece in particular.

Alfred Baillargeon: When we say Diavik when we say talking about are we referring to people or which people? So when we say talk about Diavik, just say Diavik. So when we're talking about things that you should mention some names of each nation or each person. Before the mine opened, my friend on my right here we did so we look at the land, we look at the water, we did the fish study we did the gill net and the water sampling and so forth. In the past our elders they always made a good recommendation to make sure that none of our land is destroyed through any contaminants. All these elders that came up with a lot of good words had passed on. Us Dene people our people were very concerned about the containments and that will come up even Behchokō, Dettah, Łutsel K'e you name it all those elders that came up with a lot of good words had passed on to make sure that our environment will not be destroyed in anyway. But today as we sit here when we talk about the mine. . . When we here were here my friend and I with an outboard motor now that you look at the open pit, the underground now that you look at the open pit when I look at it today compared to what it was, to me it is not right to see that. But in the past when we were here in the early days we use to set a gill They used to be really good fish, they open it. Today we may not get that kind of a fish that we once did. that our whole land will be destroyed the fish will never be the same. But this what our elders had said at one point in time. Today when you look around here in this area around, there used to be just a simple little tower now that you see all those ore. How will this Diavik ever be re-claimed in any way? But now that I know that there will be once the mine is done you see all those rocks all those

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waste rocks that came from the open pit will they look at that hill? Will they put that back in the open pit is the questions?? You see all these building will be demolished? Look at this whole area. They spend over a billion dollars prior during the construction time look at this big building now it will be torn down. With all that money how come they are not really helping the Dene people in our area in any way possible? I'm not talking about myself personally, I'm talking about my kid and my kids' kids. Look at these young people here. You know we always talk about the future . . . if we do not look at all these mines that are coming up in our area. Today we are not even benefiting. Look at Yellowknife, not personally benefiting. Now look at Giant Mine. A big area that's been destroyed. But our ancestors have trapped in this area none of them the Métis they never seen the Métis people up here in the past.

This is how we worked in the past. I used to work with my uncles with the dog team back in early days up here, but today I look around and you know this area you will never see one caribou roaming this island like they once did. This is why our ancestors and our forefathers and our fathers were very concerned about our area being contaminated and destroyed in any way.

When will the closure of the mine take place here? When will this mine close? How many years before this mine will be closed? When the BHP first started boy they use to talk about a lot of good things. The BHP people used to say we're going to hire a lot of your people, there will be a lot of training, there will be a lot of jobs for our own people a lot of training. Even Diavik promised that your people will be trained your people will be employed from the mine from the day it closed. You look today and it's not like that. You look around now they seem to sometimes these two mines have broken their words. There don't seem to be a lot of our people working at the mine. But if we the Dene people the native people ever said that we're going to do this, we will.

So regardless of what people do on their time off, it's up to them whether they do drink or not they can still continue to work as long as they are here. After the closure of the mine with all that waste rock that came from the open pit, will that go back in the open pit? We do not know how many years of life this mine has yet. How much

money has been put aside for the closure of the mine? I heard at one time there was supposed to be money set aside for the closure of the mine. But this I know that what this place re-claimed will it be put back to how it once was. This land when we look at this land of how this area was destroyed it's like a piece of your flesh. It's just like we seem to want to cry. If the government wants money, the company wants money but then our land provides a lot of good wild life. There is no more caribou in our area. the winter road the haul trucks go back and forth for a number of years. That's one of the reasons why we do not It is because of the mine up here we do see any caribou. When we think about all these things you know not see any. you I kind of feel that. What will our kids eat? Are they going to eat rocks? I don't think so. We used to eat very good and very well when the caribou use to go to our area so we should they should but now you are saying that some of these words some of these things that some of the recommendations that was made before did not go directly to Diavik so hopefully this will not occur again.

Colleen English: Diavik is planning for closure in 2023 in 10 years from now. The rock pile as you see it now is not going back in the pit. There were a lot of talk about it in the past with the panel and what to do with it. There were a lot of recommendations and discussion about that. Closure cost I am not sure but we can ask Gord.

We want to make sure that our view is that you are not representative of your communities so we are not asking you to come and speak and say the Yellowknives Dene feel that you know this is the recommendation. This is your opinions, these are your ideas that you guys are contributing and it's our job then, it's Diaviks job to go and go back to your communities and feed that information back more to other people within your organizations as well so it's not just your word that we'll take it and go okay yeah we heard that from the Inuit. We want to make that you don't think that that's the case.

38 **Ed Jones:** I just want to mention that before the mine was developed had we insisted that waste rock be put back in the pits that would be created this mine would not have been profitable or minable. We have to realize that this is our new reality and I don't see anything wrong with it because if you were to put it back in the pit it wouldn't make it any cleaner. So what's all this talk about back filling

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the pits it doesn't make sense. This mine would never have been here. We are getting some benefits not as much as we should I admit but this mine has produce more than was predicted so I think that a new impact benefits should be drawn up or the present one amended.

Question: SENES International are the employers of the facilitators is that correct?

- Colleen English: No. Thorpe Consulting Services is Natasha and then Joanne is an independent. Both of the facilitators are contracted directly by Diavik. This time yes.
- Natasha Thorpe: Ed's question was whether I was with SENES anymore? I never was with them, I am on my own.
- 13 Colleen English: (Presentation)

Joanne Barnaby: We wanted to follow Colleen's presentation on roles and future work from Diavik's perspective of the panel with your ideas for that future work and how you feel about the change from EMAB to working directly with Diavik. What we should be doing to go back over the past work that you've done to ensure Diavik gets all recommendations because we now know that they didn't get them at the time. So should we go back as facilitators bring them all together walk through them with you again so that it's refreshed in your mind what all your recommendations have been. And to talk about the purpose of from your perspective of the panel and whether you need anything more or different from Diavik to support you in your work. And then of course whole the question of your priorities for topics that need to be addressed and then the scheduling.

Mark Taletok: I just want to say a few words too. It seems like that umm since the the umm it's been mined the land is being destroyed and as I was growing up I knew the land and we had food from the land and we would eat together and we would play outside and we ate very well and lived very And we would play together and dance to gather and the Inuit and Dene would get together and we would be fishing by spear and the place was called Pigaknaktok Concession Lake and we would be spearing fish from the lake and we don't do that anymore because of all the mines coming around. Jericho mine and this is where I learned to spear fish and I would like to go and hunt there again but there are a lot of houses there and I grew up around that area. In 1967 I worked there. There was a lot of caribou

trails there too but they said that they cleaned the mine but I don't believe they did I have to see it myself. There are a lot of barrels around and rusted but I don't believe it but if I see it I will but I don't. And people hunt around there from Kugluktuk and it hurts your heart that the land is destroyed and when we hear that the mines are closing it feels so much better that it kind of surprises me that you know the lives of the mines and I would like to be thankful that I am here and am part of this panel talking about and part of this. And hunting I don't have dog teams anymore and I think about the land that lived here thank you.

Ed Jones: I think it's a good idea to hold the meetings on the Diavik property because the landscape is forever changing and looking over the mine operations personally is better than reading a newsletter. DeBeers puts out a paper called Snapshot about their Snap Lake operations so I believe that holding meetings on the property, keeps us up to date on what's happening on the property and as I said the landscape is forever changing its better than a newsletter.

Joanne Barnaby: Any other comments regarding Colleen's presentation and the role of the panel, the changes from EMAB to Diavik.

Bobby Algona: From KIA I would like to say a few things. I am sorry I didn't bring my minutes from the last sessions that we've been having the last few years. I was feeling a little bit leery about how EMAB and our panel directing ourselves to Diavik I was a little bit leery when I made that comment about directly dealing with Diavik in the first place instead of going through a third party such as EMAB already we are hearing that EMAB is not doing their job to direct things to Diavik and I feel know that some of our very credible recommendations didn't go to Diavik and feel kind of sorry in that way already and that maybe we should have worked directly with Diavik in the first place maybe that way if we were directly dealing with Diavik maybe our recommendations would be heard as we say it as a panel here. And that all our recommendations have been said and are very credible and we're kind of feeling that there should be more something more that we should do and look a little more closely so that we can all agree on something here that maybe it might be better if we directly have all our recommendations and everything passed down to Diavik instead of going through another third party such as EMAB That way we don't have to hear that some of our party.

recommendations aren't getting to Diavik maybe we should think about some things in that way.

Natasha Thorpe: Thank you Bobby for sharing that. I certainly can empathize with the frustration that you are probably all feeling but I want to say that the recommendations have not been lost but we just need perhaps as facilitators working some direction vou to receive pulling recommendations together and making sure that they are delivered with a bow on top to Diavik very clearly and when we realized a couple weeks ago that not everything had been communicated we were really scrambling to try to pull it together and we just didn't have enough time so Joanne and I thought we didn't want to rush this, we wanted to do things right. SO it's really just going through the reports you've already approved, verified, and reviewed pulling out all of those recommendations and making sure that they are heard by Diavik. What we did come up with is at least a partial list and I think people need a break so we'll take a break and I can talk about this afterwards.

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> Wayne Langenhan: With NSMA; This is sort of going back to what Alfred mentioned earlier about the number of native people how we're not. The mines aren't following they're word as to the percentage of aboriginal people that are hired. last night and this morning while we're sitting around in the kitchen, it's not much time I know. I've been trying to pick out people that I know from Yellowknife from the city of Yellowknife and the Dettah area and some of the other communities that I've been to and trying to find people in that kitchen that are of aboriginal decent. And didn't actually find one person that I knew throughout that time that I was sitting there. So I think that it would be nice know exactly what percentage of native people are employed by Diavik and which communities they are from. And I don't know what is in past recommendations but I would like to make one now because I think it's 2015 before other recommendations are being made. I think that on the closure of the mine I know that there's going to be lots of operators to move things around I think that 90% of that workforce since they've already been trained at other mines and you only need about 10% of that for management and the rest of all the operators should be aboriginal. I think we are getting skinned here a bit on this percentage.

1 One more thing I don't believe that in management positions 2 that there are a lot of aboriginal people. I think that 3 Diavik should be able to train people into management 4 positions and not have them all come up from the south. 5 Because I know there are more people from down south. They get their friends or their relatives when an opening comes 7 up and everything is a nice little package things are getting shifted around so that the there's more people from 9 down south where there could be aboriginal people filling 10 these positions. These are not just my thoughts on this. 11 I've talked to many people in Yellowknife and they're a bit 12 ticked off too because they know it's the buddy system. 13 There a lot of people in the north aboriginal and non 14 aboriginal that could fill these positions.

15 Joanne Barnaby: It's a good plan.

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17 BREAK

- 19 Natasha Thorpe: Main themes from past 5 sessions.
- 20 \*Important to put TK and science together.
- 21 \*Frustration with having to repeat.
- 22 \*Must understand the whole picture.
- 23 \*What we're looking at here now is different than anything we've ever
- 24 seen.
- 25 \*Working across cultures, ages, disciplines.
- \*Success depends on good communication and relationships. 26
- 27 \*Nature is the boss.
- 28 \*Learn by doing and seeing.
- 29 \*Visits to site are key.
- \*Youth must be included. 30
- 31 \*Respect for all and for everything.
- 32 \*Responding in writing.

- 1 \*When were speaking about Inuit language we are speaking about the current knowledge but we have to remember the knowledge from past elders.
- 4 \*Interpreters very important.

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5 \*More checks and balances in place for tracking recommendations.

Bobby Algona: KIA No feeling of discomfort and science together because I've learned quite a bit from science and put quite a bit of TK and science together. I feel that science has it's a good recommendations that we can all learn even though some of us have really strong TK and would like to keep and sometimes elders in our group and sometimes science can be different because they don't understand a little bit about science especially the elders. I've learned a lot through science putting my TK and what I've learned in the past my TK has really no different from science way of dealing with nature. And I'm sure that science can't really answer all our Tk. When we put ourselves that way I think maybe we can all put a little more recommendation will be a whole lot easier for science to understand.

Although we've been taught for many thousands of years with our TK and our grandmothers and grandfathers have always have taught us a lot while were growing up and I've and every one of those are recommendations from our elders and I've never questioned any of their TK what so ever because my grandmother is one of my great TK teachers and she's been one of my mentors for the longest time. Not to say that my dad hasn't done a lot for me but I respect my elders all of them my mom and everyone the Dene people even But we get frustrated once in a while when the English. they start to say something a little differently or science is a little different from TK and to get the whole picture. And what I'm trying to say is I'm for one who had a little bit of schooling for 8 years in a residential school in Fort Simpson and the way my dad and I said this before my dad just when I was 7 or 8 years old he told me I've taught you everything how to do on the land, you grandmother taught you through all these stories and your mother has collected all the flowers and medicines and what we need to ourselves from getting sick over the especially in the olden days the women collected their medicines for the winter and they know that sickness comes anytime so our ladies it's because they worked at lot with

the plants. They were the ones who worked a lot with the medicines. And when those plants are just right for the picking and even the bugs they have medicines too. And the growing season is very very short in the summer.

Mark has said in the past the way his auntie was putting medication on his eye because he had a sty on his eye that would go away but with their medicines it got healed. That's one of the reasons when we put TK and science together I enjoy learning a lot about science which helps me in my TK and hey I can use that in my TK and that way we always have a good working relationship with our elders. I am sorry to say that some of our communities are losing that and some of the young people are just not getting out whether to be because of sickness. They aren't getting to see the habitat and wildlife and all the communities are losing that the youth are not learning.

What I tried to do is tried to keep them out on the land as long as I can to collect my knowledge the way that my elders have taught me. I've lived in Pellet Lake for the past 57 years and I'm not it's been 10 years I have not been gone back to camp because of my health problems which is really unfortunate and that's what I mean about collecting medicines. That's why I'm not really sure I tend to forget how to apply these things the way I use to. my knowledge is not the best that it could be and that that way TK and science I'm really enjoying it doing it that way. The new age is here now and science in my view when looked very closely and can work together in my thinking. When elders start to tell stories you can't help but listen very closely and put it in your mind and can be lost and because I can speak English I think when you put those together you can really put in our good recommendations to mining companies and working cross culturally they have their ways of keeping their health and sometimes we talk medications and we learn from each other which helps to put our recommendations together.

Natasha Thorpe: Thank you for sharing Bobby I remember you saying last time you were 99% TK and 1% science maybe it's more these days.

Remember that even if we look at the same thing sometimes we see things differently and that we can learn from one another.

1 Reviewing TK Panel Workshop Overview sheet.

So what we'd like to do with this workshop is build upon those teaching that you've already shared about the North Country Rock Pile build upon these principals shared with us already about how we should go about things and focus on that specific area (PKC).

Joanne Barnaby: As we do that there is certain things that you said when we were talking about the Rock Pile so we need to check and see if the same guidelines that you gave us for the rock pile would apply to the PKC area, it might be different because there are other issues. So we don't want to assume for example that you want a pathway for caribou into this area.

How we can make it rectify whatever problems we have Mark Taletok: here even though we can't rectify everything. We can watch the we can look at the caribou trails and we probably see them again once it's rectified even though we have caribou at other place. I've been a hunter for a long time in my home community and we've talked about the caribou trail and if its rectified then it would be much better and then we'd be able to see once the mine are cleaned up and it's like we hardly see the wildlife anymore. And in Jericho that's where I use to hunt a long time ago. I haven't gone to a meeting there again I use to go there by helicopter and this was quite a while ago. We haven't gone there again. The rock piles there if we can rectify there then it will be much easier look at out there.

Alfred Baillargeon: I forgot what I was going to say. We as a Dene people with our for father's grandpas what they had said and contour lake and even travel from some people even travel from Weledeh Suzie Drygeese the Chief at that time and they use to travel through Mackay Lake to the barren lands. And this is the trail of the old-timers as a trail of our old times they take a month to a month in a half. Sometimes they go trapping for things they going to use for the winter. At those times we don't have no stores and they have to do clothing for the young ones and they make clothing, mittens for the young ones and what bobby and people had said my grandpa had live to 100 years and then just 2 months before 100 years old he died. And he raised me. And we go out there for fur and for clothing and this is the migration route for the caribou. We didn't have stores. This was our store. He talked to me about many

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things. Moose we use for tents that that's hardship and today the mines and we talk to young people like this it seems we are telling lies to them and we telling them how far they traveled they didn't have shoes like this, no rubber. They had good days, they were happy, they were really strong minded and this harsh harsh day but they were happy.

And some day the young people, I was never in school but I was raised out in the land and the scientist aren't going to understand our TK but we just don't understand each other and even those people in Kugluktuk and they use the things and the plants are used for medicines there were no doctors but we had to use plants. Ladies, elders, if a ladies pregnant and little baby is born they had midwifes that's how they helped babies being born. They took them out on the land and around Mackay Lake and John Drygeese was born out there. And today your born in a hospital. I was born on the land with a midwife and our elders did a lot of work. And these stories are what we told each other.

And the mines but Mackay lake is a long lake and those other mines there's two mines and Snap lake and Gahcho Kué and we see a lot of development on our land and there's no mention and without consulting us they take over our land. And how Giant mine how they treated us. In 1965 those kinds of things without consulting the community without consulting us right on our door step. We don't have no tractors even to remove the snow. This is our land we should be treated well. Those are the kinds of things that benefit and the government should be compensating us just like in Back Bay you can't go fishing anymore. Now they consulting us those are the kind of things they should have done before but it didn't happen. It does really bother me for the young people to go out on the land money for them to go. No consultation they just went and ruined our land without consulting us. We should have been consulted back then. And today people are getting a little bit of not for us but the future of our kids. That big rock pile maybe we should level it will break the caribou legs.

About this time people use to go out trapping now we can't. We go for wood. We burn word it was a healthy lifestyle today we use oil and gas that's the reason for climate change. So we have discussion like this we all have to discuss out this issue like this. We need some young people.

1 Joanne Barnaby: People are already starting to share more traditional 2 knowledge and one of the things that we thought should be 3 done and given that we're changing the relationship with Diavik we have a direct relationship with Diavik it would 4 be a good chance to get clear on what the rules will be 5 around your sharing of knowledge and your consent to do 6 7 that. Natasha has prepared a draft agreement and she's 8 going to go over it now. What we would like to suggest, we 9 take an extra half hour during lunch so that the 10 interpreters would have time to go over it more thoroughly 11 with those elders who don't read in English and for those 12 elders who can read it give them a chance to think about it 13 and review it themselves and we'd ask you to consider 14 signing that agreement so that the issues around how the knowledge that you share can be used. 15

16 Natasha Thorpe: Discussion about informed consent.

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18 LUNCH

- 20 Gord MacDonald: Presentation on closure planning.
- Question from before from Alfred Baillargeon was how much for closure costs. The answer is \$160 million dollars.
- 23 Wayne Langenhan: What happens if it costs more?
- 24 Gord MacDonald: The tax payers pay but our estimate is lower than
  25 that, this is the governments numbers.
- 26 Wayne Langenhan: These windmills or wind generators they cost \$33
  27 million for 4. Approximately how much fuel do you
  28 save using those? Should you have more of them?
- 29 Gord MacDonald: It's about 10% savings in our power. If we were here for longer than yes we would do more but not for the time we are going to be here. I can get you an estimate on liters of fuel.
- 33 Colleen English: This last year was 4 million liters of diesel.
- 34 Gord MacDonald: Presentation on closure planning and PKC.
- 35 Joanne Barnaby: How long does it take for the material to settle away
- from the water?

1 2 3 4 5 6 7 8 9 10 11 12	Gord MacDonald:	Pipeline comes out on the shore and the liquid slowly flows towards the center towards the pond and along the way it creates a big beach of that settled material. In the summer it would be a day maybe, in the winter its a little harder because it'll freeze along the way and sort of forms blocks of frozen kimberlite that then might get stuck on the beach that won't thaw again until next summer. So we keep moving our way around because we don't want to make those blocks of ice to thick or they won't thaw back each and what we'll be storing is a lot of frozen ice instead of solid material.
13 14 15	Natasha Thorpe:	One of the questions from the last session was could whether processed kimberlite could be used for animal paths or would it create dust or harm wildlife?
16 17 18 19 20 21 22 23 24	Gord MacDonald:	It's a good construction material particularly the course. It could be used for something like wildlife. We would want to think about that one before we went and did something like that. Right now the only place kimberlite goes on the island is in the PKC.  At the bottom it's the consistency of tooth paste and it'll stay that way for like a hundred years. It's a very soft, fine material mixed with water that won't separate. Its the physical properties of it.
25	Wayne Langenhan:	: How do you know it will take 100 years, 200 years?
26 27 28 29 30	Gord MacDonald:	It's an engineering estimate so they do tests where they actually put loads on it to try and force it to settle that would simulate what time would do. It's a long time, it may not be 100 years, it may not be 50 years it's a long time before it would settle.
31 32	Wayne Langenhan:	Are there chances that caribou will get bogged down in it?
33 34 35 36 37 38 39 40	Gord MacDonald:	That's the main reason for the question about shoreline design so I'll come to that. Our concerns with that material it's not a problem where it is right now underneath the pond. It will be a problem at closure for two reasons, one just like you said we don't want it to be an exposed material that caribou could get into or any animal. Because yeah I think they could very easily get stuck.

1 Natasha Thorpe: Possible uptake of metals in plants if used? What are 2 the other concerns that Diavik has about the PKC? 3 Gord MacDonald: Our concerns for the closure of the PKC are the 4 stability of the slimes, how the slimes will react 5 down the road and also the water in the PKC because it 6 will always be in contact with water? 7 Ed Jones: closure couldn't you put a layer of courser 8 material on top for example you could use crushed 9 granite to cover the whole PKC on closure. 10 Gord MacDonald: Yeah Ed that works very well for the beaches and it works well for the course kimberlite but is doesn't 11 work for the slime because it doesn't have 12 13 strength to have rock on it. 14 Bobby Algona: As time goes by the PKC is not going to harden for 15 another 100 years but what is a natural disaster 16 happens that whole thing could be broken up. 17 feel tremors what about fracturing in this pond and leaching into the water. Because of that my thinking 18 19 that anything could have in 100 years what if that 20 whole piece had a fracture in it a natural fracture in 21 it and starts to leak out into the lake and out into 22 the surrounding areas and it still has bits of 23 chemical in it can that chemical still be there for 24 100 of years or maybe longer. And another one is the 25 water is that water drinkable for caribou or the people. If it leaks it could come all the way down to 26 27 Kugluktuk and I'm wondering there are still come 28 chemicals in there would that be safe for us. On the 29 east end it goes out to Pellet Lake areas and Back 30 River areas and flowing into the east and that 31 Coppermine River flows all the way down to Kugluktuk. 32 I am having a hard time dealing with the possibility 33 of chemicals in our water in the future. Can those 34 chemicals be harmful to fish that are not in this area or on the river? Would it still be harmful in 100 35 36 years or 200 years once it settles down? 37 A few years ago along the ocean some people were out 38 hunting on the ocean and they were feeling tremors on 39 the land and what that tremor did was break up a lot 40 of the thick ice out in the ocean as well.

Gord MacDonald: We share your questions about water and the concerns.

As far as we know now the water is safe for the caribou to drink from the science perspective and people. We are unsure as far as the fish and the bugs they are the most sensitive to the differences.

Wayne Langenhan: What I am wondering about is this is not the first diamond mine. I am pretty sure there have been other ponds like this and maybe other mines might have an idea already on how to deal with this.

10 Gord MacDonald: There has not been a diamond mine closure successful 11 that we could use they are either abandoned or still 12 operating.

13 Natasha Thorpe: I want to check in with the youth.

14 Gord MacDonald: Presentation

15 Bobby Algona: We have to remember that now a days we have lots of 16 global warming and our permafrost is giving away very fast and we can't depend on that permafrost to keep 17 all our chemicals and alternatives to or solutions for 18 19 something like that we got to think about the 20 permafrost receding all over the north now some of our 21 hunters in our local areas are telling young people to 22 be very very careful about these natural sink holes 23 that are caused by the permafrost that were not there 24 and we have been using this land for thousands of 25 years with permafrost under it and it's been very 26 stable since then but now a days that global warming 27 is here our elders or some of our hunters 28 experiencing deep sink holes all around some areas. 29 Some areas not so much so slowly but for some reason 30 permafrost is receding faster than some areas so we 31 got to think about what we put on these parts of the 32 land because we can't depend on the permafrost to be 33 there for very long now so that's something to think 34 about.

Gord MacDonald: Presentation.

Before that water is it drinkable is it? How big of a runway are you going to be putting? Maybe in the future is it going to go down to the bottom? Is it going to be stable?

40 Gord MacDonald: The spillway would be about half way down.

- 1 Wayne Langenhan: How deep is the water from the slime?
- 2 Gord MacDonald: We don't know yet but deep enough that wind won't move

3 it.

4 Wayne Langenhan: Couldn't you ring that whole pond to keep it frozen

5 all the time.

- 6 Gord MacDonald: Presentation.
- 7 Talk about the landscape of the mine were looking Alfred Baillargeon: 8 at the drainage it seems like this one I don't think that 9 those lakes or the pond would be as it is as you mentioned 10 maybe go to the treatment plant they have some treatment plants at the mines sites. We know that it's all kinds, 11 12 you don't bring it to the treatment plants and it just goes 13 down the streams I don't think that's good. 14 those drainage I would like it to go to the treatment plant 15 first I'm saying. Talk about some things under the water I 16 don't think nothing can be done like we wanted because this 17 is already big damage done to the island. SO this is going 18 to be the last. Where's the waste rock really piled up and 19 discussed it.
  - That's why we're here to support each other so we should really take a good look at this before we discuss. The only way we're going to be able to discuss is by seeing first
  - Should be treated first before it puts back in the lake and those the kinds of things that we see like the tailings pond at Giant Mine we don't get to see it there's lots of birds dying and even Bobby said it can come up to Coppermine and the people from the other communities have concerns.
- I don't think we should have drainage to one lake then another little lake things that we discuss should be worked on.
- 32 Gord MacDonald: Any water that seeps out of the PKC we collect and we 33 send it to the treatment plant but when it's closed we 34 don't plan to have the treatment plant there any more, what 35 we want is that the water is good enough that it can go to 36 the lake so that we don't have to keep a treatment plant 37 there. If we have to keep a treatment plant there we have 38 to keep diesel, we have to keep power generation, we have 39 to keep people and so we won't be able to close the mine 40 and get rid of everything. We can leave the treatment plant

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there if we need to but from our view we'd be failing if we
have to have that treatment plant.

Joanne Barnaby: Just to be clear you explained the condition of that water when it's not treated is not harmful to people or animals but is not good for fish, water plants and bugs.

Gord MacDonald: Right so it's not Lac de Gras but the PKC. Water treatment will happen until the water is good for all until we can get rid of the plant however if the water is not good we will have to keep the treatment plant.

Planning on 5 years of testing.

Alfred Baillargeon: It seems like everything is fine in the next 50 or 100 years maybe we won't be the next 50 years before we really need to discuss this and all the waste water. We can't really just leave it really needs to be discussed and they're no longer with us on this earth. We are aging and the island that the dike is on I know there is two of the pike mines maybe longer and how long going to take for the closure of the mine at those times those young women will be in their 50's and saying that in 100 years everything will be fine. It should be fenced or for the animals I don't think the animals will get into those places but a lot of elders spoke so strongly and no we see with our own eyes. It no longer can be use in the future and all the dikes and me and Mike use to go through all those islands and know that the island is dead it can't be used again. And my friends here maybe they have some concerns that they want to talk about. Me I can speak a lot of important big meetings even in Ottawa we cannot just here to speak even if we could out with 3 recommendations that's good. Time for a break.

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34 BREAK

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Natasha Thorpe: So we are thinking after this presentation we should do a round table and over the next couple of days we're going to spend a lot of time really trying to look at these four areas and to make recommendations but we have the chance right now following Gord's

presentation. If you have any questions or any comments or anything you'd like to say that follows from the presentation, we'll do a round table.

#### Bobby Algona:

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The discussions we had earlier we have to take it in heart as the weather is having we're having our climate change and the permafrost is melting rapidly. The discussions that Gord had earlier were to keep it in heart and know it and for those that in talking with the people from Kugluktuk and we've discussed the climate change as well and we're to listen to our elders what they are saying and the other people that we meet and we're to work together and to listen to each other.

Alfred Lockhart: I have to go back to a few years back to before the mine opened there was a lot of talk in our community about how the closure would be. That everything would look the same as it was in the being back into its normal not the way he described it. Like all the islands would be there everything would be there the dike would be gone everything would be natural looking as the way it was. But right now it's totally different. People were talking that time and they said that then how could that happen when they destroy land it'll never be the same. I see now that it's you notice it's totally different from when they were negotiating when they were saying before he mine opened. They said everything would look the same at closing time. Our elders some of them are gone now and they did I'm sure they did a closing thing before it even began. So it isn't what I heard in my community.

Wayne Langenhan: I'd just like to say that I know like Alfred said it was suppose to be back like it was before they started digging these big holes but it seems like throughout years here we've lot of valuable lost a information in some ways it's been packed off to one side and it's never really turned up again you just seemed to get lost in the shuffle. So I think what we got to do now is not dwell too much on the past I think what we got to do is to handle what we have here at hand and make sure that the next move that we make won't be repeated at some other mine in the future. It has to be, we have to take control of what we've got now to deal with. I mean it's here it's not going to

go away and it's never going to be the same as it was before the mine started so people got to realize that and they have to deal with it and keep going and try and get some good solutions.

#### Ed Jones:

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I think I would have to study that PKC or that pond or whatever you want to call it in more detail. Perhaps they could build one or two cells below that between that and the lake. I haven't given it much thought so I have to pass on that one.

#### Mark Taletok:

In discussing the closure and you know the buildings they should be brought somewhere that you know they can be used again. The island here it's a big island here even though it seems small. I don't what to bury the waste here in this island at all even though the island is big the caribou comes around we don't want any metal or any chemicals because its the path of the caribou a long time ago. And the caribou trail use to be there and there is caribou in Kugluktuk even though it changes sometimes a long time ago we would eat caribou for our diet and you can see the caribou there and across to the island you can see the trail there near Kugluktuk. It's not freezing there so I don't know what's going to happen with the caribou trails there. In Cambridge bay they are starting to catch And for the waste I don't want the caribou there. waste to be buried here in this island.

#### Louis Zoe:

Yes even my friend there what has been said there absolutely right. Even some of that water that's coming from the PKC that will go to Lac de Gras maybe it should go through some sort of a screen or some sort of a water treatment plant so the water should be treated before it will get back into the big lack of Lac de Gras. And also this area it's call the island E'kati it means the fat island. Years ago there was a name for this island was caribou fat island but today because in the early days there were a lot of caribou but today it does not look like the caribou will ever come around this area. And also when we reclaim this area try to get this back to the way it once was they may not be the proper vegetation and also with all this waste rock that's going on this island and also the water that has come. Anyways in the open pit once you put the water back into the open pit the water level in this area may drop because it was so deep.

And also what about the water the level has ever dropped the aquatic the fish that is in the water may not be the same in this Lac de Gras. So hopefully we'll have a really good discussion before we leave.

#### Mike Francis:

The water, the wildlife also relies on the water so if we do take care of the water and treat it the best way that we can and also one of the others so some of these batteries from the vehicles from all the heavy equipment so what do they do how do they dispose of the batteries from all these heavy equipment where is it being disposed of?

Alfred Baillargeon:

So umm whenever we talk about this island we seem to be talking about this island a lot. Before the mine ever started I have said in that past I have come here and I did come here in the past as well I have been at BHP as well as Diavik. SO this island but now the caribou have changed their migration route and it's because of the mine and the caribou are sensitive to noise but today there are no caribou here. Now there are some mines around Mackay Lake and also the end of Mackay Lake is 93 miles and a lot of land has been destroyed and we may not be about to get the land back to the way it was after the closure after we will try to reclamation. When BHP had started mining that the young people, your own people each and everyone will be employed there were a lot of good words said and they seem to hire more people from down south. My son Paul still works at the mine. They have broken their words. Some of them use to be employed a lot of them have been hired from down south now.

We will hire, we will train your Dene people in how to operate but today when you look around there not there. But today they seem to be people from down south. They are hiring their friends and relatives from down south. But once you put a word in place you know once they say something now they've broken their words, they have a family of their own and now with a mortgage and vehicles be there is no employment like myself I use to have 3 house yeah I gave one of my house to my daughter for \$1. One of the house in I gave to Morris and Margaret and now I am an elder I didn't break my word but today the look at the economy to me it's like they were lying to us and I am 76

1 2		years old but take our words as we speak. Prior to this mine they had said a lot of words.
3 4 5 6 7 8 9 10 11 12 13	Janelle Nitsiza	session for youth like get everyone up to date on what the TK Panel has done so far just maybe we'd have more questions if we had back ground on everything. Also I'd like to share that I'm very honoured to be around all these amazing elders just to hear all the stories I feel like it's my responsibility as a youth to gather these stories and to listen so I can pass down to generations to come because realistically mining isn't going to end for a long time and it is part of our history now. And so I'm glad to be here.
14 15 16 17	Colleen English:	Just to respond to your question Mike about the batteries all of the batteries on site small to large they are all shipped off site. They stay here until winter road and are packed and shipped then.
18 19 20 21 22 23 24 25	Gord MacDonald:	I am not sure how to answer the questions about broken promises related to closure. I was around in those days, I did go to the communities and this is the picture that we showed in 1999 which is not, other than the pond on the PKC is not very different what I described to you earlier. Talking about broken promises about closure. The picture is not that different from what I am saying now.
26	Joanne Barnaby:	Talking about changing the tour to PKC.
27 28 29	Ed Jones:	Could you show us the overflow route or creek wherever the over flow route in the morning. We might be able to come up with more solutions.
30	Gord MacDonald:	We will try to get to these two places.
31 32 33 34	Ed Jones:	Just to ensure that clean water gets down to the lake would it possible to build one or two cells before the lake to clean the water on the way to the lake. Between the PKC somewhere along the route.
35	Gord MacDonald:	We do have three right now.
36	Ed Jones:	Then you shouldn't have any concerns.
37 38 39	Alfred Baillarge	eon: We're going to tour out there we would like to tour that place where how are we going to go with skidoo. About this time the snow gets really wet Gord

pointed that it takes a little ways to get there. I

would really like to get to the site and talk about

it. Without looking at it we really can't say without

looking at it. I know it's hard to get around.

- 5 Colleen English: Explaining where we are going.
- Wayne Langenhan: I have a question for Gord. Right now as it stands is that sludge on the bottom of the pond and the water is on top. Can the caribou or if the ducks land is that water going to kill them.
- 10 Gord MacDonald: Not if it drinks it but if it were to get in there I could see it getting killed by getting stuck.
- 12 Wayne Langenhan: Would it die later on would it die from the water?
- 13 Gord MacDonald: No.
- 14 Colleen English: No water fowl in the pond now.
- 15 Joanne Barnaby: If there is no more... Alfred.
- 16 Alfred Lockhart: I just want to share an incident that happened in the Ekati Mine when I worked there I worked there as a 17 security I was allowed to handle guns, all wild 18 19 animals and get rid of them or something like that if 20 they need to be and there was caribou there around 21 that area around that camp and we spotted it and it 22 was staggering around all over and the people there 23 that worked there kind of like yourself they were 24 saying it just had heat stroke in the summer time so. 25 But caribou where in the islands animal in the north you're never going to get heat stroke there is a lot 26 27 of water around for that not to happen. So that animal 28 I had to put it down and then we took samples from it 29 and they asked for the samples back and they said it 30 got lost so we don't know what happened. So animals 31 like that the birds, caribou anything that drink water 32 they'll go somewhere else, they'll die but you both you don't know about it because you don't monitor it 33 34 after it leaves there and the birds it's the same 35 thing so who's to say that water's good and you can't 36 say it's good because it's not good.
- 37 Colleen English: We do have birds all summer in there and we do check
  38 regularly for any animals but as of now we haven't
  39 seen any indications of issues.

Alfred Baillargeon: The caribou will die we know it will die even down at Mackay Lake we went for the community freezer hunt and there was two caribou on the island and it couldn't get up. They couldn't get up. We shot them and the fur was soft and the liver and everything was just brown and maybe they ate of drank something that they got to the island. Ιf thev contaminated water then we don't watch the animal after they drink from a contaminated site. Sometimes they say the pack of ptarmigan maybe they get killed from drinking contaminated water. People all say its fine we know those things is going to happen and Christian how are people going to live what are they going to eat. 500 birds all the ducks died the oil sands they destroying everything.

Natasha Thorpe: Sorry I have been so busy here trying to write down everybody's words. Just like we have in the past meetings I've been trying to write down some of the key points that you've made throughout the course of the day and I would also encourage you either tonight or at anytime throughout the next few days there's lots of this paper around and there's even some of the little paper in each one of your folders. If you have any questions or any insights or anything that you want to make sure is written down please don't be shy to put it up on the wall or hand it to one of us.

So I may have got some of these wrong, in fact I probably have but I've just started to throw things up and just as we close today I'm going to read through them and I encourage you if have a questions or if I have it wrong please put your hand up.

Wayne Langenhan: I was just looking at Features to help clean, heal drainage. I was thinking about the sewage thing that I drive by every day going in Yellowknife.

Alfred Baillargeon: Things that we talk about like caribou I heard about I just had said they were just staggering and maybe they had died so those are kind of recommendations things I see with my own eyes and I butcher it and all inside the body it was just smelly and it must have drank contaminated water somewhere on the site and the hoof and leg was just broken so this I see how I dream tonight and I talk about it.

Colleen English: Talking about going out to the PKC in the morning 9am.

1 2 3	Wayne Lange	enhan: Could Diavik come up with the number of animal deaths when, where, how, what since the mine started for us to see.
4	Colleen Eng	glish: Yeah so we do have all that information right now just
5		by year so we would just have to pull it together in one
6		place but yeah we record it every year in the wildlife
7		monitoring report and we can pull that together.
8	Louis Zoe:	Yes let me do the opening prayer thank you thank you for
9		letting me do the closing prayer it is a very big issue
10		that we are dealing with. With the help of our creator and
11		our lord, hopefully we will also have a safe journey home.
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1 2	Ken Quackenbush:	(Question and answer regarding PKC) The rock fill is type one material that came out of the pit.
3 4		Geomembrane, Jaw run, 2" mtl, liner, CPK cover. (see diagram)
5 6	Alfred Lockhart:	You have boulders, will there be gravel going on top before the geomembrane?
7 8 9	Ken Quackenbush:	No the geomembrane goes right on the rock fill; it's the finer material. The liners all tie together in a trench (anchor trench).
10 11	Alfred Lockhart:	That's what I wanted to know because it'll be a lot smaller then the rock fill at the beginning.
12 13	Ken Quackenbush:	The sequence of building. The first piece of dam was in natural valley on the north spigot road.
14 15 16 17	Bobby Algona:	Your membrane the geomembrane your liner that's the only ones for the dam. It doesn't go down all around the bottom with those two layers in the bottom of the PKC.
18 19 20 21	Ken Quackenbush:	At the bottom it's tied into the permafrost. The goal is to not defrost that which has a good seal between the base and the membrane. The membrane does not go all through the base.
22 23	Bobby Algona:	What do we have on the bottom? Is it just the liner itself, not the geomembrane?
24	Ken Quackenbush:	Neither.
25	Mona Himiak:	What is the "Mtl"?
26 27 28	Ken Quackenbush:	2 inch material. 2 inch material is 2 inch minus gravel so it goes through our crushing operation and it's basically road gravel.
29	Alfred Lockhart:	So it's just crushed rock then.
30	Ken Quackenbush:	Exactly.
31 32	Colleen English:	Can we ask the questions that the panel had [during the tour].
33	Janelle Nitsiza:	Do you think that the diamond market will collapse?

- 1 Ken Quackenbush: No I don't think it will collapse. It's projected to grow. How fast it grows is a good question. I don't know if anyone can really answer that. From what I hear the market especially in India and overseas is still strong and growing.
- 6 Alexandra Crapeau: How do you monitor the plastic liner or barrier?
  - Ken Quackenbush: On the rock fill side we have both wells that if there is water in it, then its leaking. And the other thing is there are thermistors under the liner at various spots. They are right down. They have been installed right from the start of construction so we know that if the dam is frozen, then there likely isn't not leaking but if the temperature is trending up or is above zero then you probably have some water action thawing things out. Then that's a good indication that there's a leak fairly close.
- 17 Janelle Nitsiza: Have there been any leaks into the lake?
- 18 Ken Quackenbush: No because even if things get through our liner there
  19 are collection ponds all the way around the outside
  20 and those ponds are pumped out every spring right back
  21 into the PKC facility.
- 22 Colleen English: There is an area that we drove by there is a little 23 road in here some of you have been down in here before 24 we took the TK panel down to the re-vegetation plots 25 in here and there was a road here and there was road 26 there that I had talked about that has a number of 27 seepage wells there are some collection wells because 28 we did find some seepage that came down for a very 29 short time into Lac de Gras so the wells were 30 installed.
- 31 Alexandra Crapeau: What is the liner made of?
- 32 Ken Quackenbush: HDPE High densitypolypropylene, Bituminous liner.
- 33 Janelle Nitsiza: Does the liner break down over time?
- 34 **Ken Quackenbush:** No. I don't know how long you could say but plastic lasts a very long time.
- 36 Alexandra Crapeau: Are they black or do they break down over the summer?

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1 2 3 4 5	Ken Quackenbush:	The liner material? The plastic liner would be susceptible to sunlight if it was exposed and that would break it down. The bituminous liner, I suspect not so much, but I don't really know. So we do have a liner and it is buried from the elements.
6	Janelle Nitsiza:	Has the liner been tested for elasticity?
7 8	Ken Quackenbush:	There are a whole bunch of tests they put it through. Tear resistance as well.
9	Alexandra Crapea	How is the water in the PKC reused?
10 11 12	Ken Quackenbush:	The water is really used as a conveyer so it's just going around and around the same loop. Back to the process plant and back out to the PKC.
13 14	Janelle Nitsiza:	When you talk about seepage how much per day? (Gallons/day)
15 16 17	Ken Quackenbush:	Gord was supposed to get you that number. 10 liters a second from the west end there. I will figure it out after Q&A.
18 19	Alexandra Crapea	au: Will the size of the dam stay the same or will it be covered in rock?
20 21	Ken Quackenbush:	It's dumped and falls on its slope but there is a plan to deal with it.
22 23 24	Colleen English:	For the PKC right now it's the slopes that are there are very much envisioned what it is going to be already. Do you want it re-sloped?
25 26 27	August Enzo:	Does anybody here know about monitoring caribou from 2011-2013. Every summer, I would like to know how caribou act around here.
28 29	Colleen English:	We have a quick visual presentation for a bit later on.
30 31	Ken Quackenbush:	As we are working up there, the grizzly bears have no problem climbing up, they come visit us.
32 33	Wayne Langenhan:	We were all wondering about that to here if this is being used in here somewhere?

- 1 Ken Quackenbush: We haven't used it for the last 2 lifts. We switched
  2 to that bituminous liner but we still use the HDPE for
  3 things like containment for fuel pads and for the
  4 ponds where we are collecting water.
- 5 Alfred Lockhart: When you said you weld these together, you use the torch, tiger torch for this one? Or which one?
- 7 Ken Quackenbush: The tiger torch.
- 8 Alfred Lockhart: With a rod, like weld together with a plastic rod?
- 9 Ken Quackenbush It's a plastic rod that's right.
- 10 Janelle Nitsiza: What is the issue after closure, will the liners be 11 monitored?
- 12 Ken Quackenbush: Another good question for Gord. The fill inside here 13 is stable. Once we stop adding water to it, it should 14 all freeze back and then all that's left is really 15 rainwater that lands on it that will be shed off.
- 16 Alexandra Crapeau: When the liners breach, is there a sensor that detects it?
- 18 **Ken Quackenbush:** No there in no sensor in the liner. The thermistors and the wells do that.
- 20 Ed Jones: 3:1 is a 30degree slope.
- 21 We went down to tour those places and we talked Alfred Baillargeon: 22 about it and today its cold and its freezing up and 23 snowing right now that it's going to freeze up and 24 there's going to be some run off and some drainage and 25 I'm sure some of the drainage is freezing up now. 26 Maybe around the September it's still kind of warm at 27 those [areas] and the weather is still good. That's a 28 time we should come for a site visit if we really want 29 to go close up to things that you can really see 30 clearly. Even the PKC is covered in snow how are we 31 going to see things really good? Here we discuss 32 things, we see things with our own eyes. If we don't 33 like how things are done, we talk about it. And we see 34 all the slope that is getting high. Where's the other 35 slope, the slope that was there before it has been 36 blasted? Where's the hill? There was a hill there that 37 we used to stand on top of. What happened to that? 38 It's been blasted and we've been using the rocks.

Those are the kinds of information we don't know and those are the kinds of things they are doing to the land. We are supposed to be notified. Maybe those rocks, maybe they made a road out of it. Those are the kinds of things the information never get back to us and we should be told. The way I see things I don't think caribou will ever come around again, the way it looks. Even you people eat the things that you want to eat and those lands will never come to this area again.

Just one question. Yesterday, Gord said the windmill is really expensive. They said once the closure they are going to bury the windmills. Why do you want to leave anything behind and cover it? We don't want to see nothing left behind once it's closure. This island is dead. I don't think it would be the way it was before and here people come from down south and come and destroy the land and water. We as a Dene people we wouldn't go other places and destroy other places. We would probably get locked up and go to prison for that. That's how I feel.

And I have a big highway from a community is going to solve it. There's a lot of good in my land. There is a lot of good lakes and ponds. Since 1958, up to Mackay Lake not that they had a winter road and it goes up to Lupin mine it goes all the way up here... I don't think that's good - the winter road - either. Now we don't visit all those- we don't check the land, we don't check the water. It's going to be 10 years. Maybe it's about 300 trucks a year and they burn diesel, big trucks. I wonder if the water's good, the land is good, because they do stop on the land the big trucks, the cement trucks. We used to travel by dog team all the way to Brown Lake. Nobody go out there and monitor the water and fish and all those lakes. I know there's a lot fish there. Good fishing area. They stop those big cement trucks and it stops right on the land and other animals have a big impact on those trucks. This should be a big conversation about the big road built in the winter.

As an adult, we survive on the land and we think things that's going to be destroyed. Now for the

		DDMI Day 2 – Session Notes
1 2 3 4 5 6		young people, they still like to go out hunting as far as Mackay Lake and sometimes they go out hunting. Our people young people they still go out today and hunt for caribou and moose. We heard at one time this place was a good place for caribou hunting and the way we see this land.
7 8 9 10 11 12 13 14 15 16 17		They used to have arctic rabbit in this area and we talk about slopes and now the drainage and plastic and this land is dead. I can speak well and I can express my concern. White people are the ones with money: we as a Dene people, we live and survive on the land. We go hunting on the land, we survive on the fishes and right beside us the mining is destroying the environment It's all the water that leaks up to Kugluktuk. So the way we did the mines we went to mine visit and today we can see everything so that's a good time to see everything is during the warm weather.
18 19 20 21 22		We have elders here. Some of the people have a cold so next time for the site visit it be a good time when it's warm weather. It's nice and warm in this building. I don't think we should be here this time, the weather is really bad it gets foggy.
23 24 25 26	Natasha Thorpe:	Thank you for your comments. One of your questions is coming up "Can we come back when there is no snow on the ground?" On Monday we will discuss how we can work out the site visits.
27	Janelle Nitsiza:	What time of the year does the PKC start to freeze?
28 29	Ken Quackenbush:	The water at the barge doesn't freeze. We have bubbles that help that.
30	Alexandra Crapea	How much higher will the PKC dam go?
31 32	Ken Quackenbush:	The plan is to have one more 5 meter lift so it would be 470m, but are looking at other options.
33	Janelle Nitsiza:	:Why are the wind turbines green at the base?
34 35	Ken Quackenbush:	:Got them from Europe and people from Europe like them to blend in.

On that question of the wind turbines, you would think

that you wouldn't want them to blend in because of the

Ed Jones:

airplanes.

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1	Ken Quackenbush:	They all have beacons on the top.
2 3 4	Janelle Nitsiza:	How deep is the slurry PKC on top of the original valley floor of the tundra? How deep will it be at closure and how heavy?
5 6 7	Ken Quackenbush:	Deepest point is through that valley. Finished elevation will be at 435. Depth of the water is quite deep.
8	Gord MacDonald:	20 meters
9 10	Alexandra Crapea	How will the bottom of PKC protect the water from seeping out?
11 12	Ken Quackenbush:	By being frozen - and we see it freeze - when there is no water movement.
13	Janelle Nitsiza:	Were there caribou around this summer?
14 15	Ken Quackenbush:	I don't remember seeing any reports, but when they were monitoring, they were close.
16 17	Alexandra Crapea	cu: Can we see pictures of the island before the development?
18	Ken Quackenbush:	5 ½ km perimeter
19	Janelle Nitsiza:	How would the PKC be impacted by a new pit?
20 21 22 23	Ken Quackenbush:	Helpful. In one sense we would have that rock for another level. Otherwise, it would really be business as usual up there. There would be no change to what we are doing now. It would just be some more volume.
24	Janelle Nitsiza:	Do you ever catch birds with the wind turbines?
25 26	Ken Quackenbush:	Not as far as I know. Concerns were noise and birds, but seems okay so far.
27 28	Colleen English:	Beacons help for bigger birds and we are monitoring for dead birds for 2 years.
29 30	Ken Quackenbush:	Ice throw off of the turbines. But no pattern this year.

1 Ed Jones: Can you tell me when you will decide what slope to use? Are they going to wait? When do you think they will settle the question on the slope of the rock pile?

Gord MacDonald: Probably in the next year or 2 to make that decision.

We need to make decisions so we can start planning. We
are going to be making submissions at the end of this
year to the regulators. It's going under the
assumption that we have to re-slope it.

10 **Ed Jones:** When Gord mentioned the regulator. Are they going to have new regulators due to devolution? How long until they will be regulating.

13 Ken Quackenbush: The board and function stays the same - just maybe a 14 different person to report to.

Yes like this month in the middle of this month Alfred Baillargeon: this time of year it usually freezes, but now with the climate change and global warming, the weather is not like it once was. What is going to happen if the possibility 10 years from now if the ice isn't as thick like it once was? How are you guys going to haul things on the winter road? It's something for you to think about, to haul materials. You may not only depend on the air, but someday if the mine is going to be in closure, what's going to happen if you have to haul everything out and not being able to leave anything behind? But now that it usually approximately 40 below - it used to be about 50-60 That's how cold it was, but then with the climate change, the global warming, but now with the winter road or how they use to haul things on the winter road? That's one of the things that from Tibbitt Lake to here, so I heard they might have an all weather road. I used to use a dog team. I know what I am talking about. I used to trap in a lot of these areas where the winter road exists today . . . You think this winter road that someday it will be warmer; the season will be shortened and shortened every year. But I know for the fact that it's no use to talk about this mine, but the winter road of how you use to haul things. Now that the ice is not as thick as it used to be, a truck might go through the ice. I did see that with all that fuel that may go

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into the water. I did see that about 20 years . . . Ice used to be thick but today the ice is not as thick as it once was, compared to what it was years ago.

But today look out there you see the open water. It was never like that before, but people used to trap in this area with a dog team at that time. It was very very cold today, it's not like it once was. You look outside and you still see the open water so the next month it will be the November very soon. Now that the month of December is coming, the lake is still open but 10-15 years from now do you think the ice will be safe to use or will it be thick like it once was? That's what I've been wanting to share with you.

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41 42 Gord MacDonald: I think you are right that there are risks that the winter road will get shorter and shorter. Certainly 2006 was a wakeup call for all of us, that that's very possible. From a closure and whether we have to haul material off site or not we're still expecting that in 10 years time there will still be a winter road but it may be short. There would be enough of a winter road that could be used for that type of thing. I know the winter road is getting better and better, how they make the road every year. The technology is getting better, the tools they use to measure the thickness and the safety is getting better so they can make the road longer and longer each year to try to help or mitigate or compensate for changes in climate, but it for sure changes and when you rely on freezing, this is a risk.

Ken Quackenbush: The other thing is we cut it off every year when we are done because it's very costly, but there are times when we can probably go another month.

Natasha Thorpe: I wanted to follow up on what Alfred said because I know this has come up with Bobby several times too, this larger issue around climate change. It's come up in quite a few sessions in the past so I am wondering from a science perspective, how all of the engineering designs - how everything from the small little things to the big things that are involved in planning for closure - are taking climate change models into consideration and looking at worst case versus best case scenarios? As Alfred is saying, what happens

1 with an X degree increase in temperature versus and 2 X+5 degree increase? 3 Gord MacDonald: For all the closure plans and designs, the engineers 4 will be modeling it doing their evaluations of the 5 performance of it using today's information and also using the climate change information. They perform the 6 7 same or sufficiently in each situation right now. Joanne Barnaby: It is hard to develop those scenarios when the climate 8 9 change scientists change their own forecasts all the time. They see things changing faster than expected, 10 11 they can't keep up and have to modify their forecasts. I know traditional knowledge holders/elders don't feel 12 13 comfortable with trying to predict the future, however 14 they see change happening really fast and they hear 15 scientists talking about change happening really fast 16 and so how do we reach a level of confidence in planning for closure with all of this uncertainty 17 18 around us? 19 Natasha Thorpe: It's the same for the elders that I have been dealing 20 with in Nunavut because they can't predict the ice 21 like they used to. It's an area where both worlds are 22 struggling. 23 Wayne Langenhan: I don't think that whether the winter road comes in or the length of time it's safe to travel is a big issue 24 25 for getting things out of this area because they flew 26 in a lot of stuff with the huge helicopter that the 27 Russians had. It was parked out at the airport there 28 a couple of years ago and I mean for a mere something 29 like \$50,000 a day they could move a lot of stuff. And 30 compared with what's being pulled out of the mine and 31 the reclamation fees and stuff they're being held 32 aside I can't really see where this is going to be a 33 real major problem. 34 Joanne Barnaby: If there are no further questions for Ken then perhaps 35 we can take a short break. 36 BREAK 37

1 2	Joanne Barnaby:	Moving people around. We are hoping that we can move on. We know there are lots of strong feelings about
3		what has happened, what has happened in the past to
4		get to the state where we are now. Some people are not
5		very happy with what they see on the island and there
6		is not a lot we can do about the things that have
7		happened in the past but there is hopefully things we
8		can do to make a difference in the future so that it
9		is better for the future. What's here is here and what
10		we want to talk about is what can be done about what
11		is here now so that it is better for the future. In
12		order to do that we have to get down to the detail and
13		we don't have to decide everything today but we can
14		start discussing things today and over time as you
15		think more about it and you talk to more people at
16		home about it and as Diavik does more research and as
17		people's thinking becomes clearer about this hopefully
18		we can come to a consensus.
19		Focus on the question of a pond and if you like the
20		idea of leaving a pond there. Diavik thinks it is a
21		better option after exploring other options for the
22		PKC area.
23		Does it create a problem and if so what are they?
24	Mona Himiak:	I was thinking maybe they should take the water back
25		with them in the plane, all the contaminated water.
26		Because you know they came on to our land and did
27		this. You know, they did this and all that maybe they
28		should take something back.
		2110 4124 04110 201110 0111111
29	Joanne Barnaby:	Do you mean the slime?
30	Mona Himiak:	Yes. That's what I am thinking.
31	Ed Jones:	On leaving a pond, I see nothing wrong with it. I
32		believe nature will look after it. Nature can heal
33		itself. Leaving a water treatment plant wouldn't be
34		practical, just think about it. It may take forever
35		and it's not practical. Think about it.
36	Joanne Barnaby:	Any other thoughts on the pond and using the pond

water to bury the slime?

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1 Bobby Algona: Since there is going to be a bit of chemicals in that pond, can that pond be run through the water purifier before anything can be done with it? Can that water be run through the purifier water...

Joanne Barnaby: Treatment center?

6 **Bobby Algona:** Yeah and then brought back to the holding area or somewhere for the time being?

If you do take that pond water out of the that holding area, that slurry is going to be there forever and animals are probably going to be, especially caribou, they are being heavy animals. Even muskox, as heavy as they are, they can sink very fast down in that slurry and because the slurry is not going to solidify any time soon, maybe there should be some thoughts to those sorts of things that maybe keep the animals out. Or is there something else that can be done like put in a rock or something so that the rock can settle down into the bottom of that PKC area. And because it's not going to solidify soon, that's been one of my big concerns too. Because the caribou are very hot in July, they just dive into any type of water to cool What I'm thinking is if they tend to jump in, maybe because of that slurry and that mud they're just going to have a hard time getting out or maybe sinking in the pond.

26 Gord MacDonald: So Bobby, at closure, we would take all the water 27 that's in the pond now and send it to the treatment 28 plant to be treated, but that pond will grow again 29 just from the snow and rain so it would be . . . The first water we would get rid of through the treatment 30 31 plant, but then it will just continually grow and so 32 it's that continuing water that is what the pond would 33 be in the future.

Joanne Barnaby: Can you respond to Mona's question about the slime being shipped out?

36 Gord MacDonald: No we have not looked at taking the water out.

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1 2 3 4 5	Wayne Langenhan:	It seems to me like the slurry is not going to be a problem unless it's left wide open. If the water is deep enough, they won't reach the bottom to get stuck. So the thing would be to keep the water at the certain height off that slurry so that there's no danger of animals getting caught as they swim across it.
7 8 9 10 11 12 13 14	Louis Zoe:	We're talking about the pond that maybe the water is being retreated again and all the rocks that being piled up into the slope once it rains and snows and it all goes back down and in the spring time it melts and it just like a wash, maybe even that water being treated, and all the drainage from the slope and it goes back in the water. How would the water be from those country rocks?
15 16 17 18 19 20 21 22 23		And the young ladies here, they had some questions about how the island was before the mine began, and how was the island before and what kind of animals that roamed this place and berries, blueberries and cranberries. I'm sure there was a lot of stuff on this island and they had squirrels and arctic fox and maybe it's being covered with the country rocks. Those are the kind of questions the young girls they had, but didn't respond.
24 25 26	Joanne Barnaby:	How much of an understanding do you have of what was there before? Maybe we should be using that as a guide as to what should be put back.
27 28 29	Gord MacDonald:	I can't speak to what there was before as far as berries however where the pond is now there was a pond there before.
30 31 32 33 34 35 36 37	August Enzoe:	I've been listening two days to this. So I was wondering, the company can't do anything about it. They can't take anything out. Everything. They want to leave it, the way it is, after it closes so they don't want no animals to go in there. So I'm thinking they can't do nothing about it. They should tryout a fence around it before closure. They should do that and then figure out something else I think.
38 39	Mona Himiak:	Or even a dome so that animals or birds can't get in, like metal or something.

1 Joanne Barnaby: August, just to be clear on what you are suggesting,
2 to use a fence before closing to see if it works to
3 keep animals away from the pond?

4 August Enzoe: This island is dead. It's really dead. The way we 5 look at it today, it'll never be the same as before; 6 so probably not too many animals would be on this 7 island, especially caribou. They changed their route 8 already. I don't think we'll see too many. The last 9 time I was there, there was a lot; that's 5 years I 10 think, I've been studying caribou around this island 11 and then after going on 10 years slowing down till 12 today. That's why I ask - the last three years - how 13 the caribou was around this island.

I am getting tired and my throat is sore but what Alfred Baillargeon: August said, it's good to talk about. Fencing is good and the road that goes up the slope, maybe they should block some rocks so that no animals can get through. Otherwise the animals will go through and try to get to the pond. Maybe the pond may disappear, but we are just afraid for the animals. Once an animal goes and falls. I'm sure there's no use to make a fence and we have to have airstrips, maybe they should keep the airstrips as it is for the future use. Maybe some other plane breaks down and they know that there is an airstrip, it can land if there is an emergency . . . It happened in Discovery Mine and the pilot they were in trouble and they knew that was an airstrip at Discovery so it landed there. They knew there was an airstrip and so there were four people in the airplane. Wherever there is airstrip, they an shouldn't disturb it. Leave it as it is. The airplane, they go pretty far, and if they are in trouble they know there is an airstrip, it can land. So those airstrips in the mines being built today, they shouldn't close once it's closed. We know that. Even us, we got out in the boat. If there is a big storm out there on the lake, we know where we can go to the shore. So we know those things are happening today, that we know . . . we should just have the airstrip as it is for emergency. Is that okay with you guys?

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And talking about winter road and all the ponds along the winter roads, nobody respond to my questions. sound like everything is going to fall back in place as it was. The way we see things, I don't feel too comfortable with the way I see the land today and the mine site. I will get back to our home town and elders and our members and community members, the young people, we sit and discuss with members and we kind of know what's happening on our land. We - as an elder were there to discuss things and kind of the leader to speak on behalf of members because we are elders. Advisors were like the teacher of TK and I witness lots of things with my land. We know that is a big corruption on our land . . . but sometimes the company didn't give out enough information. Your land is going to be impacted and there's lots of resources coming out. Our land, they should be taking care of the community well, for the future of our kids, for their education. Once the resources come out of the land, what they leave behind is disaster. To think about those things.. . We, as a Dene people, we don't work with the rocks, so we don't know what's in the underground, but when they used to do drilling, I used to work with them. Even Mike here, he was a miner one time and those kinds of people, they kind of understand what is happening. But people never work with mining company . . . but I know what the surface and I used to work with the drillers so I kind of understand a little bit with what's happening. We have been sitting here two days, we went to the mine site we check out what's happening. I would have been more comfortable in the warm weather. Even some of the drainage and for the water pump and we can't see clearing because it's getting cold. So next time, for the mine visit, maybe we have it the time of year it's And this time, it's kind of scary on the plane this time of year, because it gets foggy and the weather can turn bad. So we have the young people along with us, so look for the future visits we should have when the weather is nice out. We should come out and visit the mine site.

Joanne Barnaby: Louis, could you clarify about the berries and the different plants that used to be in this area? Do you think it would be a good idea to try to bring those

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back or try and discourage the animals from coming back here?

#### Louis Zoe:

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In the past, this was a beautiful land, but there used to be some people . . . This used to be very beautiful scenery, but today you look at this land, it is not the same: the land will never be the same. The amount of life that was on this island in terms of berries and plants will never be the same. This island 'E'kati' means caribou fat island. That is what it is called, when the caribou use to migrate here. used to migrate through here by the thousands and even if we try to restore the berries and plants, it will never be the same. All these diesel fumes and all the contaminants from the exhaust that goes atmosphere from the explosives and so forth that goes up to the atmosphere will get back to the land. The plants, the lichen and the food for wildlife it all comes back to the land when it rains. You know this land will never be the same here. Even the food of the wildlife will never be the same here.

Joanne Barnaby: Alfred raised a question that I think we have missed and it's something that is bigger than Diavik - but we should make note of it - and that is the ice road system and reclamation of that system once all these mines are finished in this area. So maybe what you speak to is what Diavik sees responsibilities in relation to that in the longer term.

Gord MacDonald: As you may or may not know, the winter road runs as a joint venture with all of the mines and it operates that way. It does have a closure plan for the winter road and the reclamation is mostly around vegetating the portages and decommissioning the camps along the way and just like the airport, there is a lot of discussion that even if the diamond mines are all finished and everybody is all done with the winter road, that the Government of the Northwest Territories probably wouldn't want us to close those sites or decommission those camps, that it's infrastructure for the north that would be desirable to keep into the future. So it's still very much a big question as to

whether we would want to have that closed. But there is money set aside, there is a plan for that.

Wayne Langenhan: On that trip this morning . . . the vegetation will come back because even now on the rocky slopes there were patches of vegetation growing. It's just going to take a lot of time to grow back.

Joanne Barnaby: So I think there's general agreement that we want to discourage wildlife from accessing the pond, is that correct? Yeah? So there are different ideas as to how to do that. There's the dome, fence, blocking off the road into it and creating obstructions with large rocks and steep inclines that make it a place that caribou and muskox would not want to go any further. Any thoughts on that?

Well definitely the slime. People I think their major concern was the slime. And if you're going to take it out of there, then I guess we don't have to worry about that.

I think most people feel that it's probably best to keep the pond there, that's it's going to build there anyway because there was a natural pond there in the past so the water is going to go there. So whether you drain it, I guess the only way to discourage water from building there is if you removed the dam all the way around it and made it so it wasn't a valley. I don't know how realistic that is. But if you remove the water completely, then you would have to do something about the slime, you would have to take it out. And if you did that, then I think people might be more open to making other changes to allow wildlife to get in there. I think that's what I am hearing.

Bobby Algona: As time goes by and there's no construction around and construction is all finished no matter how much of a brim or a fence or a something there's always going to be snow. Snow is one of those things that will . . .and some slopes tend to go all the way up to the top. The snow will go right up to the top of any ... maybe a fence or animals will have that snow to go over and into that pond itself again. I am thinking that even that slurry isn't ever going to be frozen and maybe that pond too. I don't know and the stuff can, I am

Unknown:

thinking stuff can get stuck in there as maybe in the spring time and when the water's starting to thaw, ground start to thaw, and I'm thinking maybe it the slurry or something that is still in there, it will never get frozen, never get hard. It's not going to get hard anytime soon is what I am hearing maybe even winter time maybe even the snow the animal would get their feet on that slurry of snow or water got dry somehow over the season. I don't know, maybe I see there's a large seepage somewhere in that pond. That pond is not there anymore, that slurry is going to be there, as mud or as when that it will - I think in my mind - it's going because it's not on settled ground That water and that pond may not be or anything. there in the future. I don't know because of the activity that it had on it or the impact it had on that pond. I'm thinking maybe in the winter time once all that pond is gone even though it might freeze. I don't know, will that slurry freeze during the winter?

And also, even though you put how high a fence or a brim or something, wolverines have a tendency to dig through any type of material or as far down as to get at something. Wolverines do tend to dig through boulder fields like that. What I see in there and they can actually go very deep into this rock pile. They will find a way to get in there. It's not only wolverines, wolf also, squirrels and bears even probably want to find a place to make a den for the winter is what I am really worried about. Once these animals start to dig through the ground itself and make their homes and maybe if somehow they got into that slurry and it started to leak out in to the lake, maybe the slurry still going to have that chemical content even if you leave that pond in there and treat that slurry.

Wayne Langenhan: This is just a bit of a response to Bob, Gord. Ed and myself were talking about this problem of the pond yesterday and to date there has been no way to harden up the slurry and the people in Fort Mac[Murray] have the same problem and they spend millions and millions of dollars trying to figure out a way to control the stuff, the slurry. So right now they don't have a way to deal with it, but if a person was to say keep the

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water up high enough it would be okay run a pipeline to pump water into the pond. Take a trip in once every summer to make sure that pond stayed at a certain level by pumping water out of Lac de Gras. It would be the cheapest most reliable way you can do it and possibly down 10 years or 20 years down the line seeing as all this money is being spent, to try and find a way to control the substance, they might come up with something and then after that, it could be taken care of.

Joanne Barnaby: So that's kind of an interesting new idea, short to medium term solution until a more permanent solution is found.

This is not going to be the first discussion Alfred Baillargeon: about the closure. We are going to be talking about it until really the last stage of the closure. is not going to be the only time that we are going to keep discussing this and how things are going to be done. That's why we are working together with Diavik. This is not going to be the only meeting, maybe in the next 10-20 years we might still be discussing phase How are things going to be down and we're going to be the watchdog; that's why we are here. We would like to get things done neatly. We know that the land will never get back in place but in only one discussion, nothing will get done. There's going to be a lot of meetings like this before the closure. we are talking about the pond. Maybe once the mine gets to closing time, maybe get some kind of pump in there and get it back to Lac do Gras. I don't think it sits there be healthy the water be good.

Joanne Barnaby: Any comments? Mark?

33 Mark Taletok:

I just want to say a few words as we've seen what's

happening . . . once the water is purified and can be

brought back to the lake and you can't see foam in the

water purifier as well and as long as it's cleaned up

it can be used up. Even though we aren't supposed to

be using the water purifier and we know the wildlife

needs somewhere to drink.

Joanne Barnaby: Thank you Mark. Any of the youth have comments or questions?

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1 Alfred Lockhart: My understanding is that the slurry will never be 2 purified with all the chemicals in it so even if you 3 purify the water then put it back then won't the water 4 be contaminated again with the chemicals in the slurry 5 again. 6 Gord MacDonald: So that's a number I need to get you. I think it's 7 about 20 meters/60 feet deep and from what I've been 8 told you can't push a bunch of rocks in there because 9 they will take a very long time to sink. 10 Wayne Langenhan: The water right now that's sitting on top I assume is 11 contaminated water, if you pumped it out, cleaned it, 12 pumped water back in after it was purified would that 13 water also become contaminated on top. Gord MacDonald: When you call the water contaminated I don't know what 14 15 you mean. There are things in that water, natural 16 things like metals that are in that water. You could 17 see it when you walked on the barge, it's not 18 perfectly clear water. When we send it to 19 treatment plant and remove all that particulate 20 material, it can be discharged into the lakes safely. 21 So there are things in the water - there's things in 22 all water - but it is safe water for fish or wildlife 23 or for humans. It's a hard question about what that 24 water is going to be from the rain and snow fall, how 25 good or bad that water's going to be. We think it's going to be good in terms of being safe to wildlife 26 27 and to people and to fish but it would still have more 28 things in it then Lac de Gras has in it. The water in 29 Lac de Gras has almost nothing in it. 30 Wayne Langenhan: What I meant by contamination is would stuff from the 31 slurry come up into the water and contaminate it. 32 Gord MacDonald: Things will still get into that water but it will be 33 less from the slimes coming up it would be more from what runs off from on top of the rock. 34 Wayne Langenhan: Would that water in the pond once it leached down off 35 36 the land and I suppose you could pump water right from 37 Lac de Gras and fill it up once you take the water in there now take it out so it would be clearer water to 38 39 start off with but would the water be safe for animal

consumption or birds to land on say without them dying

1 2		off from what the contents from the sludge would leach into that new water?
3 4	Gord MacDonald:	That's the hope. We still have to do work on that but that is our hope.
5 6 7 8 9	Mike Francis:	Talk about the water around the mine here but the water, anyway the water change everyday, just like a drain the water everyday. Water is strong to Anyway it's good to look after the water for animals. Good water, lots of animals. All people, they say where's the good water, lets go there.
11 12	Joanne Barnaby:	So animals know where there is good water and go there.
13 14	August Enzoe:	As long as it's in the water where did the slurry come from?
15 16 17 18 19 20	Gord MacDonald:	When we mine the kimberlite out - that has the diamonds in it - that rock and we take it through the process plant and crush it and wash it with water, it's the really fine material that when you crush the kimberlite that's when it gets mixed with the water it becomes that slime/slurry.
21	August Enzoe:	Right now it's sitting in that pond.
22	Joanne Barnaby:	They keep adding to it.
23 24	August Enzoe:	I do understand now. In the future we talk more about that.
25 26 27 28 29 30 31 32	Louis Zoe:	Just a little concern that I have of the closure of the mine the water being treated. They should still have a monitoring program in place like check the water, even the slime that we are talking about, and even the Lac de Gras and how deep is it and maybe to take the water out of that pond and that clean water that goes in there, they should always be monitoring the water around here.
33 34 35 36 37 38	Gord MacDonald:	You were talking about monitoring and you were talking about water contamination and I think you probably talked about this more at the AEMP Camp, but if you wanted to know more about the water that's in the PKC at closure or even now, we measure it with chemistry that we get from the lab. We sometimes measure it by

putting little fish and bugs in the water to see how they react to it against standard. Are there better ways that we should be testing the water to help you understand? We compare the numbers that we get for the chemistry against standards that say yes it's good to drink or yes it's okay for livestock. They say if it's okay for cows it's okay for caribou. Are there better ways, are there different ways of monitoring this water to give you more information about what's in that water or what's not in that water?

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Joanne Barnaby: So that's part of what Louis was saying and that certain animals have a way of knowing healthy water, have the ability to find the good water.

#### Bobby Algona:

I don't know about caribou if it has that ability to find that really good quality water to drink because in the summer time when they are really really hot, they can run just about anywhere at all. through boulder fields and ponds and lakes and just sit there in the middle of a pond. I've seen this happen to the Lupin's tailings pond which is the worst kind of a pond that the caribou could jump right into it. Being around Lupin we know these things and when they do and they are dead within a few hours after getting in that pond and for that reason caribou can get in this really bad type of water, but no one has done anything to deal with it and I don't know how long it needs to be drinkable again for people and animals. Caribou, especially when they are really hot, can jump into all kinds of water.

Natasha Thorpe: I pulled out some comments from the past. At the end of the day - or next few days - we have to give some recommendations to Diavik regarding that PKC. Is there general agreement that we should discourage the animals, even though we know that they will go their migration route regardless?

#### Bobby Algona:

As elders, we've come to know the animals very well. Sometimes muskox and caribou don't mix very well. What we always think is that smell from the muskox is what the caribou tend to stay away from. Maybe somehow get that muskox air around there close by around that tailings pond for a couple of years and maybe that way the caribou will tend to stay away.

1 2 3	Alfred Lockhart:	This may not be the first diamond mine shut down. How did the other diamond mines shut and deal with the slurry?
4 5 6	Gord MacDonald:	I am not aware of another diamond mine that has shut down and closed a tailings facility. They're either operating or they haven't closed properly.
7	Wayne Langenhan:	This slurry that is in there, it was pumped in right?
8	Gord MacDonald:	Yes it was piped in.
9 10	Wayne Langenhan:	Is this the only place that is filled with this slurry?
11	Gord MacDonald:	Yes.
12	Wayne Langenhan:	So this pile of slurry will get larger and larger?
13	Gord MacDonald:	Deep yes, wider no.
14 15	Alfred Lockhart:	What would happen if you made the pond bigger then you would have the shallow slurry?
16 17 18 19	Gord MacDonald:	I think we would have a bigger problem because it would be in more places. I think we want a smaller area as oppose to a larger area would be my first answer but nobody actually asked that question before.
20 21 22 23 24 25	Wayne Langenhan:	Along the road sides you see these tall tube type things (thermosyphons) and they don't need anyone to operate them so why can't you ring that pond with these things, freeze it right tight and cap it with the water that's already there and then it would stay hard all year round?
26 27 28 29 30 31 32	Gord MacDonald:	Freezing that material is one option, but you can't freeze it and put water on top because if you put water on top it'll keep it thawed. So it would be very difficult to keep it frozen with water on top. You could keep it frozen without water on top, you might be able to keep it frozen without water on top but not with water on top.
33 34 35	Wayne Langenhan:	Keeping it frozen with water on top is not viable but if you freeze the sludge without the water then it will never have time to change composition and dry out go that it hardons up in go many young but what I/m

1 2 3		trying to say is if you just freeze the water on top and let the sludge go its own way just to freeze the water keep the water frozen year round not the sludge.
4	Gord MacDonald:	Don't know.
5 6 7 8 9 10 11	Natasha Thorpe:	Gord, I wanted to clarify something with the PKC area that we drove around the perimeter today. You were saying something yesterday about trying to concentrate or focus the slimes towards the center. In the closure plan, would the pond be in the center - with the slimes concentrated in the center - and you'd have this perimeter that wouldn't be slimy?
12 13 14	Gord MacDonald:	Yes so that's exactly right. (Picture on board) The slimes will stay where they are in the middle and the beaches would get longer and thicker.
15 16 17 18 19	Natasha Thorpe:	So at the end of the day, if you were to imagine a caribou or a person or something walking in from the shoreline to the point at which the slime is going to be a problem, is it right at the shoreline or is it going to be concentrated at the center?
20 21 22 23 24	Gord MacDonald:	So a caribou first they would have to get up, then he'd have to want to walk all the way down to the middle and then this is about how you design the shoreline. The water would have to be there and be deep enough.
25 26 27 28 29 30	Joanne Barnaby:	How much space? If we don't want caribou or other animals there and we do things to try and keep them away do we also want to make sure that between the edge of the water and where they would actually step into slurry it's going to be too deep for them to get struck in it. Do we want to ensure that?
31	Gord MacDonald:	How deep does that need to be?
32	Joanne Barnaby:	Probably 6 feet. Because muskox and
33 34 35 36 37 38	Bobby Algona:	Even though how deep you put that pond right now sometimes ponds do tend to evaporate at times because it's not going to be a settled bottom maybe. What I am thinking is probably going to always be a way for water to either seep out or evaporate into the air and the water level's going to be very low again and if

1 2 3		for some reason it gets low enough the animals will be going in there maybe they will get stuck because it's a slurry and mud and they won't be able to get out.
4 5	Gord MacDonald:	Yes I think your boot would come out, but it is very reasonable that a caribou could get stuck.
6 7 8 9 10 11 12 13	Bobby Algona:	And when it is warm out, that water will evaporate and then they can get stuck in there and maybe that water will not come back and when that water gets out of that pond and it's going to be gone. What I am worried about is, no matter how deep you put it, what if it evaporates because that ground is not settled? The ground, may drain and then maybe the animals will get stuck.
14 15	Gord MacDonald:	If the pond won't stay, yes that will be a problem, but we are working on if it will stay.
16 17 18 19 20	Alfred Lockhart:	You said all that slurry will go to the middle. Once you take the water out and then like Wayne was saying something about freezing it and capping it then there will be no water there so I don't think animals will ever get in there.
21 22 23	Gord MacDonald:	If there is just a hole there the water will go back in there so rain and the snow will fill it up with water. Fill the whole hole up with rocks??
24 25	Alfred Lockhart:	Just fill that whole hole there with rocks then there would be water.
26 27 28	Gord MacDonald:	I mean you have think of it like a bowl and you make the bowl fill to the top so I don't think the pingos would come up to the surface of that.
29 30 31	Alfred Lockhart:	You've got a lot of rock in that pile. Put the rock in there then there will be no water and the slurry will be under the rock.
32 33 34 35 36 37 38	Alfred Baillarge	eon: Yes there for two days now and we seem to be talking about one item for two days and we seem to keep repeating ourselves. Underground, how deep or how far how long the life of the mine underground? How long will it be there, we want to know as well. Also, how about the tunnels? There's two underground I think that you got and how they going to deal with how they

going to deal with it after the closure of the mine? Tomorrow is Sunday and us - we the aboriginal people - we are spiritual people and there are all kinds of different religions. Tomorrow - as a Catholic - we will do the rosaries according to our Dene people. Sunday we do not do away with Sunday regardless of where we are meeting. We always do our rosaries prior to our meeting.

We are talking about the rock pile and so forth. There are other two issues and I just want you to be aware that we are going to be talking about the underground as well. What's under there as well as how they are going to deal with it after the closure. And tomorrow we will do the rosaries prior to our meeting.

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Natasha Thorpe: We have several TK Panel sessions planned and it's something that we've set aside time to talk about on Monday - what are the other topics that need to be discussed? Diavik has a list of topics and, as you remember last time, we really focused on the North Country Rock Pile. The main purpose of this workshop has been to really focus on the PKC and I guess for people not to feel too rushed because there is a lot to talk about, there's a lot to think about.

> We need to talk about how the elders feel about what to do tomorrow. I just want to make sure that Joanne and I heard things right today. So what we will be doing is providing you with notes from today.

> I think we heard a general openness to having a pond, but there are concerns with the slime and planning for the depth of the water, evaporation and whether you can ensure that there will always be water in the There are certainly some good ideas that came out of today.

> In terms of where we will start tomorrow morning, our focus will be on what the shoreline should look like.

Joanne Barnaby: This in not what they were told, this is not what they expected so I think it's worth the time to make sure we are clear on what is expected. We don't want that to happen again. This is the time to participate in the discussion.

1 2		I know sometimes you feel frustrated about talking about the same things over and over again.
3	Natasha Thorpe:	We need to hear from you over and over again.
4 5	Ed Jones:	How many times do we have to repeat ourselves for you to get it?
6 7 8 9 10 11 12 13 14 15 16 17		My question to the facilitators about this meeting and all previous meetings in the last few years, are our suggestions and recommendations going to be put on file or record somewhere so nothing gets supposedly lost or stolen or something else and we don't have to go over and over? Well not us, we won't be going over because we will probably all be dead, but the thing is the next generation coming into these positions will have something to work with and I know the previous records have already been lost and the elders that came before us their suggestions are no longer around so I'd like to make sure that this all being recorded and kept.
19 20 21	Joanne Barnaby:	Your other recommendations were not lost, it was just not passed on to Diavik and we are going ensure that is done.
22 23 24 25 26		One thing that we would like to ensure that you are comfortable with is that we started with the terms of reference and we want to confirm that everyone is comfortable with the terms of reference and the mandate.
27 28 29 30 31 32 33	Natasha Thorpe:	We recognize that you have spent a lot of time with your terms of reference and your mandate qhich is why we have gone through the previous reports to pull out what you have already said so that you don't feel like you are repeating yourselves. We've got a starting point and we've already taken several steps along that path.
34 35 36	Joanne Barnaby:	We just want to confirm, make sure everybody is okay with the terms of reference, the mandate that we reviewed yesterday.
37 38 39	Natasha Thorpe:	We recognize that you've spent a lot of time discussing your terms of reference and your mandate and how reports should be reviewed when the panel was

1 2 3 4 5 6 7		under EMAB so we're continuing those onwards - or are hoping to continue those on - and it's just a matter of getting your official okay that you don't have any problems with the existing approach that you have worked so hard on pulling together, that was in that checking nets report and in the working together report.
8 9 10 11 12 13 14	August Enzoe:	The last three years having this workshop we did a lot of talking about closure for the future and we put lots of words in there so knowing those words never went to Diavik yet, that's a problem we got, so sounds like for me we are starting over. And some, what did we mention 2 or 3 years ago. They are saying it that's why I mean.
15	Joanne Barnaby:	Yes they are going to get it.
16 17 18 19 20	Natasha Thorpe:	And same thing with all the questions you asked today on the site tour and all the questions that you've asked throughout the course of the last couple of days. Diavik has been able to respond to all your questions because they are here this time.
21	Wayne Langenhan	: So what time is start time tomorrow morning?
22 23 24	Joanne Barnaby:	Make it a shorter day and to respect their spiritual and religious beliefs and so how about we start at 10 instead and have time for your prayers in the morning.
25 26 27 28 29	Alfred Lockhart	What would happen if you start filling up the rocks like you did with those cloth and all the perimeter stuff there around the pond and keep filling it with rocks and then at closing time you will have quite a big mound.
30 31 32	Unknown:	Why can't you just take the rock in the rock pile and keep pushing it in the slurry until you've eventually filled it all in?
33 34 35 36 37	Alfred Lockhart	Yeah because you are going to have slurry coming in from the process plant that you keep dumping in there put a little bit of rocks with it and keep on doing it not filling it right up right now.

- 1 Gord MacDonald: And then at closure fill it right up. We can do that 2 and that is sort of what the original plan was the hard part is still the middle. How do you get the rock 3 4 over top of the slurry. 5 Alfred Lockhart: But there is a bed rock underneath it. 6 Gord MacDonald: Yeah. 7 Alfred Lockhart: Eventually all those rocks will hit the bed rock. 8 Gord MacDonald: Eventually and the whole dome will start sinking 9 though as you do that and you will have to keep making the dome bigger. 10 Alfred Lockhart: Well you better set some money aside for that there. 11 12 Bobby Algona: If you are thinking that way, I have it in my own mind 13 that you put a bowl fill it up with water and you put 14 rock or anything in that bowl everything else is going 15 to come back out and spill out into the surrounding area, once you fill that up. Another reason maybe you 16 17 have that bowl full of water and you put rock on top 18 of it the rock is going to push it out into the 19 surrounding areas is what I am worried about in that 20 area, all that slurry and all that chemicals coming 21 out. 22 Gord MacDonald: That's a really good description Bobby about a bowl 23 full and if you put something in it that stuff has to 24 go somewhere and if it gets higher than the edge of 25 the bowl which would be the same as the edge of the 26 PKC it'll go over the top. 27 Wayne Langenhan: Seeing as this area here, around here, is hard you 28 said you could drive a truck on it so could you not 29 how far is it across from here to here or here to here 30 is it a circle or oblong or what is it.
- 31 Gord MacDonald: More or less a circle.
- 32 Wayne Langenhan: Would it be possible to put down steel pilings to
  33 bedrock and then weld a grid over it and then over it
  34 up with rock?
- 35 Gord MacDonald: Sounds possible to me.

1	Alfred Lockhart:	The ste	eel sound	ls okay	but th	e rusting,	· I	think
2		concrete	would w	ork better	r a dom	e concrete	will	have
3		all the	iron mesh	n in there	e and to	le it up to	gethe	r and
4		then you	ı'll have	a good dor	me there	€.		

5 Mark Taletok: Closing Prayer

1	August Enzoe:	Opening prayer
2	Natasha Thorpe:	Welcome back everyone. Review of housekeeping items.
3 4	Gord MacDonald:	Spent last night working with the metric system. Seepage from the PKC is about ~ means about.
5 6		~0.5 Mgal/day (million gallons per day) seepage collection from north inlet/PKC
7 8	Alfred Lockhart:	How many gallons? Was it 500,000 gallons? Is that water from Lac de Gras?
9 10 11	Gord MacDonald:	Water coming out of PKC that we collect and put back in again. Standing on the barge yesterday and you saw the big pipeline going back to the process plant:
12		$\sim 1.0$ Mgal/day PKC to process plant (reused per day).
13		~10.0 Mgal/day treatment plant to Lac de Gras.
14		7 day to fill up one of the big fuel tanks
15		Trucking slimes how much is there right now?
16 17		$-800\ \mathrm{million}$ gallons (3 million cubic meters) of slime in the PKC
18		-90 feet deep (2012)
19		-120 feet deep (2023)
20 21	Natasha Thorpe:	I am going to mess you up by asking what that is in terms of cubic metres?
22 23	Joanne Barnaby:	If we use the fuel tanks, again how many would that fill up?
24 25	Gord MacDonald:	800 million gallons = 226 fuel tanks to fill with slime
26 27	Colleen English:	Fresh water do we use every year to both run the camp and in the process plant.
28		Drinking water 20 million gallons per year
29		Processing 140 million gallons per year
30 31		Maximum is 338 million gallons per year with water license.

1 Ed Jones: Instead of throwing all these figures at us, Gord, I 2 think what is more important is what are we going to 3 do with it at closure. I think that's more important 4 and what we are going to do with it or how are we 5 going to deal with what is sitting there. I think that 6 is more important because these figures are not going 7 to help us accomplish anything right now. I just want 8 to correct you on that.

9 Gord MacDonald: Found pictures of the island before mining started.

Wayne Langenhan: We're not going to get away from the seepage for awhile. Before you said you had something like 16 other recommendations on how to handle this stuff. Could we have a look at those to see what your people came up with?

15 Gord MacDonald: Yes.

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Shows pictures of island from 2000.

17 Jonas Lafferty: We have an interpreter here. Even though I am an interpreter, I was here in 1994 when I was here with 18 19 the elder Eddie Camille with an archaeologist. Before 20 anything was ever done when they did the feasibility study and it's on 1994 (Aboriginal Language) at camp. 21 22 At that time, nothing been disturbed. Back in 1994 23 with the elder Eddie Camille, at that time there used 24 to be a plane and they had a tent frame camp at that 25 We just look all around that site and see if 26 any people that used to stay there. It seems like 27 there was a camp there at one time and there were 28 eskers along that and there are lots of fox dens there 29 and we walk around this area and around that shore Lots of cloud berries and lots around that 30 31 shore and we just walk around this area. We went 32 around with a chopper and we went around almost all 33 the island. Bobby Drybones, the younger person, and 34 some other people there were along with us. At that 35 time there was never . . . There's always been 36 caribou. Go around the island, just like that island 37 was moving. That's a sound that the caribou and it 38 goes in the water and it cross the lake/. That was 39 back in 94. And Mike Francis and my uncle Albert here 40 . . . here the lake at those times they take the water 41 and they take about 6 weeks up here testing water and 42 they check the nets and they do the fish studies and

later on in the future how the fish they were doing those things for the future. Today I don't think the fish and the lake are the same as back in 94. E'kati that's what the island was called in our language. Every year the caribou goes through the island and then it goes back migrates this way spring and fall. And today I don't think no caribou will come on this island again. Nothing will be the same once the closure. Maybe they don't leave nothing behind. Maybe someday the caribou will come around this area again and that's what we come here back in 94. I just thought I'd bring that up.

Alfred Baillargeon:

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At those times when we were here - Mike Francis there was a tent frame here. At those times, all this area, we go through the island with the boat. This is a little island and we went through those islands. That's what me and Mike did. This how you get through these islands. And that time there was a big hill there and there was no road or airstrip at this time. And my nephew Jonas had just mentioned at that time there was a lot of berries and ground squirrels. There were a lot of gopher type things. There were rabbit, hare and ptarmigans. It was like that. were a lot of fish in this area, they pinpointing as We did the fish study right in the bay. we speak. There was a burial site right across. At that time, we did see the burial site. At that time, that island, it was a beautiful island, good scenery. But today . . . when we look at that island today, when we look, no it does not look good today. That hill that we see with all that waste rock. Yesterday I did ask there was a hill there and what happened to it? Was it blasted? The hill that was there. And you supposed to respond back and let us know what happened to that hill. We used to live in the trailer on the North camp. That where we did the fish study so what the fish will be like in the future at that time we did the aquatic but I think today it is cold, in the summer in the month of September, maybe in August in the summer we should look at everything that is on island. But that hill that was there, it was a big hill. That waste rock hill will always be there as long as this world shall last. So there was some fish and now there is some PKC tailings, now that they have destroyed this huge land of ours. That island in the

past that we're talking about was very useful to our ancestors, for us when we hunted, fished and trapped. They used to live right on the mainland and also the Lac du Sauvage was very useful to our people in the past. We don't like what we see. We did go on the lake and every part and for 6 weeks we were here and we did.

I want to ask another question: when you do the process plant the water that you use and you putting the water back in the Lac de Gras. Now look at this camp. It's a big accommodation big building here. There are some washrooms in here like when you go to the washroom is there a sewage treatment plant here before it is something that is there a sewage treatment plant here before it goes to the water treatment plant? We would like to know. You only talking about the process kimberlite plant, tailings. Even the sewage it should be treated and we should be informed about it. It should be really treated before it goes back.

Drilling and underground, will the water ever be the same? Everything is underground. Are you going to fill up the water? Share that with us if they are going to leave anything. I am not the only one concerned about it but people in Behchokō there are concerns about Lac de Gras here. My friends that are here, my friends, the Inuit friends, it flows to Kugluktuk so let us see the water treatment plant and the sewage treatment plant.

Gord MacDonald: Yes we do have a sewage treatment plant and all of the sewage is treated. After it's treated we use it in the process plant, then to the PKC and then some of that water gets sent to the north inlet which goes through another treatment plant before it goes back to the lake.

Showing pictures of where the hill used to be for Alfred.

Colleen English: In terms of seeing the treatment plants, we did see it on another trip prior we did and we can again. Just maybe not this time due to how much time we have.

1 2 3 4 5	Gord MacDonald:	This is the drawing we can work too. This is what the engineers have produced that shows how the PKC should look at closure. This is the pond is and the red lines are the slimes. This is what it looks like from the top.
6 7		Fine kimberlite at the top at closure, pond in the middle.
8 9 10		Talking about pushing the rocks on top of the slimes at the edge so that caribou don't get stuck in the slimes and it makes the edges more stable.
11 12 13 14		They think that if we freeze some of the slimes first that they can then push this carpet (geogrid) out on top of it and then it would be able to support a two meter rock layer over top of it.
15 16	Joanne Barnaby:	That wouldn't be the whole pond, it just be at the edge.
17 18	Gord MacDonald:	That's right we don't want it covering everything but enough for if the water moves up and down.
19 20	Joanne Barnaby:	Could you answer the question about the hill being blasted?
21	Gord MacDonald:	The hill itself was not blasted.
22 23 24 25	Bobby Algona:	That pond that you have built all this over was it at the level of the Lac de Gras or did you build it to that level was it any higher. Or in the same level as Lac de Gras?
26 27	Gord MacDonald:	The pond would have been about half a meter higher then Lac de Gras so it drained into Lac de Gras.
28 29	Bobby Algona:	It's only a few feet difference from Lac de Gras and in that pond how deep was that pond?
30 31	Gord MacDonald:	In the middle it was 35 feet. There was one deep hole in it.
32 33 34 35 36 37	Bobby Algona:	You have permafrost under that pond. That is what you are building over and what I am really worried about is under that pond is that permafrost warming up and going further down? Who knows what is under that permafrost? There's probably fractures all around the pond which we've always come to see around the lake

because as the rock was growing many many years ago it was not settled and would still have natural cracks and water seeping into those areas. I think those areas are what I am looking at is with global warming and everything and all the permafrost may give in and all that sludge and everything would seep in through all these cracks under that pond and may get out into the lake itself and its surrounding areas. That is what I am worried about.

Alfred Baillargeon: That lake was a fair sized lake, was there any fish in that lake? You should have let us know, I know there was some fish there so you didn't say whether you fished it out and you should take the fish out then you should have told us whether you were putting some slime. My question to you is was the lake fished out prior?

Gord MacDonald: In that lake I don't think there were white fish. Yes we fished it out and pumped the water out prior to putting processed kimberlite in there.

Alfred Baillargeon: The fish that you taken out of that lake, did you personally nibble on it or did you eat it? If not, you are supposed to let us know when you first start that. First you fish it out then you drain it and you are supposed to let us know. That's one of the reasons I am asking because you never told us. If there is fish they're usually pike and jack fish. I never knew of a small little lake having white fish but there I don't know if they had sucker. There could have been pike or jack fish Even in some areas in BC there are some areas they took the fish out. Any fish, any lake, they usually have small fish.

What happened? You should have shared with us what happened to the fish that was fished out.

Gord MacDonald: I think they were given to dog food to the communities. We did fish out a few other lakes as well behind the dikes. I am sorry that you weren't told but it was all reported.

Natasha Thorpe: Yesterday we talked a lot about the pond itself and whether it's acceptable or not. And what we heard was really that the slimes possibly being in contact with wildlife was the issue and managing the depth (water)

1 2		overlying the slimes might be a way to prevent the wildlife from coming in contact with the slimes.	
3 4 5 6 7 8 9	Colleen English:	So the idea behind it is to try to simplify this and we will through some key areas. If everybody is supportive of a pond then there are a few things that can be done with that pond. What are some features that you want around the pond to keep the animals safe? The shoreline options, the water depth, the slimes.	
10 11 12		It will be Diavik's challenge to keep it at that depth but you can help us figure out what that depth should be.	
13 14	August Enzoe:	Does it move around or does it stay still the slimes with the wind?	
15 16	Colleen English:	They do move around but under the water. If the water was too shallow then yes it could be a problem.	
17 18	August Enzoe:	Your drawing from the top to the bottom, how deep is that right now.	
19	Colleen English:	Water is 15 feet deep right now.	
20 21 22 23 24	Natasha Thorpe:	The line with red is the slime. The deepest point in the pond is where the slimes are. What we recommend to Diavik is option A slimes stay, or B slimes go. Then we can talk about how the shoreline should be designed for you.	
25 26 27	Gord MacDonald:	I would just like to show one more thing. (Picture on the board) Describing Bobby's reasoning for not putting rocks on top. (Like a bowl)	
28 29 30 31 32 33 34 35 36 37 38 39	Ed Jones:	I just want to mention or bring back what Bobby was talking about. I don't think we need to worry about anything seeping into Lac de Gras because the sludge at the bottom of the PKC would be quite heavy to seal any fractures beneath that PKC. Between now and closure which is about 5 years away, there will be a lot of runoff from the snow rains and everything so the level of freshwater will rise above that center and at that time you could check and see if you had enough freshwater covering the center pond. Further to that,, after stabilizing the beach all the way around, we could probably deter the wildlife from	

getting any closer to the center by putting huge
boulders high enough that the caribou won't even think
of trying to cross it. I need be, at the end of
operations, they could put a fence around it to deter
wildlife from entering that area. As I said, keep in
mind by the end of the operations you'll have a lot of
freshwater from snow and rain and you need not worry
about any seepage from there to Lac de Gras because
all the fractures will have been filled by the sludge
at the bottom of the PKC.

- Mike Francis: I just wonder about the water going back to the lake again. What about the sewer line water, what do they do with it?
- 14 Gord MacDonald: The sewer water goes to the treatment plant then it 15 goes to the process plant and then it goes out to the 16 PKC along with that slurry and then it continues to 17 get reused in the process plant when we get too much water in the PKC which would have some sewage in it a 18 19 very small amount of sewage in it, treated sewage it 20 then goes to the other treatment plant which and then 21 in to Lac de Gras.
- 22 Mike Francis: One of the islands, there's some place where the water 23 comes from the middle of the island (like a fountain 24 or spring) and goes on the ground about two feet wide 25 on the grass but I don't know which island.
- 26 Gord MacDonald: No I haven't seen that.
- Joanne Barnaby: Follow up on Ed's comment and ask whether you've done
  any testing to determine if any slime would actually
  fill in any cracks and whether that would actually
  create any blockage which is I think what Ed is
  assuming in terms of the water preventing the water
  from leaking out.
- 33 Gord MacDonald: So I think what Ed and Bobby were talking about 34 fractures in the bed rock underneath again going back 35 to if this was not frozen it would probably be a much 36 bigger challenge. If these fractures were thawed the 37 water could move threw it and probably the slimes 38 would help seal them up but might not completely seal 39 them up but if this is frozen the water itself will 40 stop it from will seal up all these cracks. So right 41 now all these cracks are filled with water and ice so

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it's frozen so nothing can move down. If you believe global warming is going to thaw all the way down into the permafrost so this would be hundreds of feet and more hundreds of feet yeah then we have a concern if this is going to thaw. I don't think it's going to thaw and if it does thaw I think we've got much bigger problems in the north then this facility.

#### Ed Jones:

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Joanne you used that word that I am "assuming" - I am going to tell you right now I didn't assume. seen this underground at Giant when they backfilled some of the silts with tailings and they pumped it down using slurry pumps, that's water and sand and tailings and believe me it doesn't take that long for water to separate from that heavy stuff. It filled the cracks and made a definite seal. Therefore I am not assuming anything. I am talking from experience. This is knowledge I have gained from experience.

Joanne Barnaby: So we are going to come back to these issues but what we would like to do right now before we break for lunch is just have Colleen talk about the transition from EMAB to Diavik. Then we wanted to clarify whether you wanted an in-camera session to go through producing recommendations from your discussions the last couple of days. If you want an in-camera session, should we be taking notes the way we have been the last few days? If so, should we share those notes with Diavik or they would be confidential?

Colleen English: A couple of things that I just want to go through yesterday. Natasha talked about the Checking Nets and the Working Together documents that you guys had produced a while back and stated you had shown your support for continuing forward those recommendations.

The differences between EMAB and Diavik

EMAB	DIAVIK
-3 day	-4 day
-off site (weekday)	-on site (weekend)
-3 meetings per year	-2 meetings per year
-wait until next	(flexible)
meeting to clarify	-clarify now with the
what was said	same people
-DDMI staff could be	-DDMI staying through
called but not there	the meeting

1 Natasha Thorpe: The transcripts that you are verifying every night -2 we are making you work hard to do that - with EMAB 3 Diavik didn't have permission to see them, but we 4 think that it might help Diavik understand the full 5 context of the discussion that you are having and they have also been in the room during the sessions. The 6 7 suggestion is that we can share those transcripts with 8 Diavik but not necessarily the sessions that we have 9 in-camera.

10 **Ed Jones:** On the transcripts are you using a recorder to have as back-up.

Natasha Thorpe: Yes we are. When you double check and maybe don't like a word you used, you can change it to make it sound better.

In terms of 2 meetings or 3-4?

Wayne Langenhan: I see where we are changing it from 3-4 meetings per year to 2 meetings a year and its flexible about the timing on those 2 meetings per year, I think we should have a little bit of flexibility as to if something else comes up then there could be if need be a third meeting in winter or something.

22 Natasha Thorpe: Any other comments.

Off site vs. on site?

24 Bobby Algona: I'd like to say what Wayne just said. I have no qualms 25 with that: that is a good idea. Two meetings might be 26 sometimes. We get to meet each other again in the 27 communities. That way I think that 2 meetings per 28 year for a meeting right at camp here, not somewhere 29 else. Some other topics have really come up away from 30 Diavik and we really needed some people that really knew all of our concerns and can really answer all of 31 32 our questions. Colleen and Diane and facilitators and 33 everybody has done a good job for us. Yeah that is 34 good, that we should be doing something like that. 35 Also I have no qualms whatsoever meeting directly with Diavik: we are here to help Diavik do the job, that we 36 37 really want them to do. I have no qualms to kick them 38 out for some certain things but we're really here to 39 give Diavik a hand to help close this down and evaluate all what we have said. It'll be a good future 40 41 maybe in next year or so, might be changed again.

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Like we all said it's going to be another 10-15 years or whatever we're going to be coming up with ways to meet again but I like this idea about coming into camp and touring and seeing for ourselves right at hand. All the people that we really need to get a hold here. You know sometimes we have a question and he's the professional and he's not here and he should be in here. And it's like Ken yesterday, we really needed him to give us a hand and he answered our questions. That would be good for me.

Natasha Thorpe: So its sounds like Bobby's saying that sharing the transcripts with Diavik would be okay. As well as meeting on site.

Bobby Algona: Yeah they are right here with us throughout the meeting anyway and they listen and they have recordings and that too so it's' good.

Alfred Baillargeon: Yes you wanted to have our caucus meeting but there isn't that many of us here to have our own caucus meeting. So we can just have an open meeting instead of having a caucus meeting. It seems we are all here for each other. We all have one voice. If we are going to have a caucus meeting, you might not agree with some of the things because we all don't think alike, we all don't. That's what I personally think, that talking about the meetings that we usually have. You said when we were under EMAB 3 or 4 meetings per year but now under DDMI now we should have 3 meetings a year on site then also we should have a meeting in Yellowknife for the 4th time, also have a meeting in Yellowknife as well. Don't make too much of a gap in between. There are some things sometimes you lose a few things so we should have a  $4^{\rm th}$ meeting in Yellowknife. Have a meeting 3 times a year site and also we also have an office in Yellowknife. DDMI have an office in Yellowknife but also we should have the  $4^{th}$  meeting in Yellowknife so with the room. But today now it's cold now. weather could be very unpredictable at this time of year but have a meeting here in the summer when the scenery is good and everything is visible from the time for the closure of the mine. We are here for each other on how to make a really good plan for the closure of the mine, also to do a proper reclamation

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from now until the closure. Let's make a good plan 1 but I know it's very it's pretty close to lunch time 2 3 and I really need to go to the washroom. Natasha Thorpe: 3 days vs. 4 days? 4 5 Are there any problems that anyone would like to 6 identify? We've set aside time for tomorrow for you to 7 look through the wish list of future topics and we 8 will also look at the list Colleen put up about topics 9 for the next session. Louis Zoe: The meeting . . . would be nice to come here in the 10 11 warm summer months. It would be good scenery. A lot 12 of things would be open. Yesterday was really cold, a 13 little chilly. We did not have a really scenery or a 14 good look around. It would have been nice to come 15 here in the warm months so you could see a lot of 16 Things would be visible, more visible 17 scenery, so maybe perhaps we should come here when 18 it's warm. There are a lot of good things that we can 19 talk about but not only in one site visit. 20 here for each other, we are here to support and help 21 one another as we should have a very good discussions. 22 I am very thankful and it would like to come here when 23 its warm. 24 Mike Francis: What does EMAB stand for? 25 Joanne Barnaby: Environmental Monitoring Advisory Board. They are the 26 ones who started the TK panel and their role was to 27 take the recommendations and give them to Diavik but 28 there was some problems. The panel wanted to talk more 29 directly to Diavik and so this change has happened in 30 this past year. The panel is being sponsored by Diavik 31 directly now. People from EMAB are still being 32 invited, they didn't come this time but hopefully in 33 the future. 34 Mike Francis: Good to know. Joanne Barnaby: If there are no more comments that we outlined. 35 36 can talk more after lunch or if you are okay we can 37 check after lunch. 38 Alfred Lockhart: It seems to be okay with the meetings but I would like

to know if DDMI could go to the communities to present

what we talk about here and see what kind of feedback they would get from them.

Colleen English: So within each of your different nations we have set 3 4 up a closure working group, so we have closure working 5 groups within each of your communities. We did ask 6 that someone from the panel sit on the group but I 7 don't think that has happened yet but we share 8 anything that happens here with that group. We also go 9 around to each of your communities and present what we 10 are doing, the TK panel and closure plans. Depending 11 on the community some are open houses some are not 12 depending on what the community wants.

13 Joanne Barnaby: Any other questions before lunch?

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15 LUNCH

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17 Presentation on recommendations (Slurry being taken away)

18 Joanne Barnaby: I just want to be clear what Diavik tells us is that 19 there are no toxins or poisons in the slime. They say that 20 there is minerals that have been released from the rock 21 that they crushed but there has been nothing added. No 22 chemicals added in that process. When they blast there are 23 chemicals used there and that's also in there. So the real 24 risk to caribou and to other animals with the slurry is 25 stepping on it more than anything that seems to be the risk 26 because it's really slippery, really soft it just sucks you 27 in.

#### (Presentation)

29 Alfred Baillargeon: What you just had mentioned, today what are 30 peoples' thoughts? We would agree to it and we put down some recommendations, so we will have the feedback from 31 32 Diavik. This is not going to be the only discussion and 33 question to Diavik. Until they agreed with us ... maybe I 34 won't be here maybe 10 years maybe 20 years but, my 35 friends, we don't know how long we still going to be here. 36 Before that, we have to put some kind of recommendation not 37 only today but that will always be discussed until the 38 closure. And it's good that we all agree and that so those are the kinds of things that once discussion we agree to 39

- one thing is good and we make some kind of recommendation to Diavik and we will have the feedback. We need to discuss this until they agree to it.
- Joanne Barnaby: It will take time you are right, but we also want to give direction, so that if they agree that the slime can be removed what else do we want to see happen there? Should we keep the animals away because we were worried about animals getting stuck in it? If it is taken away do we want to encourage animals to return here or discourage them even if the slime is here?
- 11 Alfred Lockhart: When cleaning up the slurry here it doesn't have to go 12 into big containers. When a truck hauls, it's got its own limit weight, and there is no problem with trucks shipping. 13 14 All that out the weight is limited. And to clean that up, 15 they could do it right away, immediately. They don't have 16 to wait right until the end of the closing time and Wayne 17 said they could use back hauls on the ice road. 18 cheaper than hiring a truck to do it.
- 19 Joanne Barnaby: Perhaps they could start hauling it out now instead of
  20 waiting till the end.
- 21 Bobby Algona: I'm still having a hard time thinking the slurry is
  22 not chemical free because if it can't solidify than that
  23 doesn't make sense. So maybe it does solidify and freeze.
  24 Because maybe there are some chemicals in there that do not
  25 allow it to. What is that content that keeps it from
  26 solidifying?
- Natasha Thorpe: We can't answer those questions. DDMI people will be back later today and tomorrow.
- Joanne Barnaby: We can't answer those questions so there is no use
  guessing.
- 31 Alfred Lockhart: The slime is from when they make dynamite they have 32 ammonia and oil, diesel fuel oil mixed together that's how 33 the slime comes from the oil and it doesn't freeze.
- 34 Mona Himiak: You said about the slurry in the mine you were looking at it what was it Giant Mine.
- 36 **Ed Jones:** Yes definitely. While we were mining they were back 37 filling mined out slopes from the surface. They piped it 38 down in a slurry. That's the tailings from the gold mine 39 but you have to remember you can't compare the slurry from

1	Giant with the slurry here. At Giant it was far more toxic
2	or poisonous because they used cyanide in their process.
3	But when they backfilled the slopes, the slurry dried up
1	and filled the fractures and cracks or whatever you want to
5	call it. It made a permanent seal.

- 6 Mona Himiak: I thought they were the same.
- 7 **Ed Jones:** No definitely two different types of slurry. Slurry just means sand or crushed rock mixed with water so that it can be moved through the pipes using special types of pumps that are rubber lined.
- Mona Himiak: Maybe they should try and plant some vegetation in the ponds and then test the plants to see if there is any chemicals or anything bad in them.
- 14 Joanne Barnaby: Presentation on recommendations (Slurry staying here)
- 15 Wayne Langenhan: I think that maybe we are jumping the gun here. First
  16 of all, maybe what we should do is never mind about option
  17 2, we stay with option number 1 and just put it to them and
  18 say this is what we want. Could we have a show of hands?
  19 Everybody is in favour of it. There is no option 2, just
  20 option number 1.
- 21 Joanne Barnaby: Do you want to vote on whether or not to give them
  22 just option 1?
- Everyone voted in favour of only giving the one option of removing the slime.
- 25 Presentation
- 26 Joanne Barnaby: Let's discuss more detail on what should be done.
- 27 Bobby Algona: We're really here to all along we all have said we 28 would really like to see the wildlife come in the first 29 place and the re-vegetation in the first place. That's 30 what we have always said and that DDMI has really looked 31 into that option as well because that's what we were 32 wanting as a panel in the first place. That option was really the option we really wanted in the first place, to 33 34 encourage animals to be around the whole island and plus 35 the vegetation, we wanted it to come as closely as we wanted in the first place. 36

Mark Taletok: I myself even the caribou could smell their feeding grounds. The caribou will return back to the island and they always smell their feet when they are walking and we plant the vegetation again. I used to hunt in this area. There used to be lots of caribou in Lupin and people never used to have meetings. They used to take out lots of blasting lots of rocks and I seen that and sometimes some of the caribous get hurt from the blasting. We never used to go hunt around that area where they do blasting they call it just like seems like all the rocks are broken there. Sometimes the caribou get hurt because when they do blasting, the rocks they used to go really high. Those were the first miners they called them Canadians and later on they changed their names. I guess another company where we use to go hunting and with my wife we use to visit Lupin mine we used to come and work there. We used to walk to Lupin and my wife used to tell me I was going to the wrong place and I tell my wife I am going the right way. And sometimes the land always grow, even our river in Kugluktuk area.

Where we used to pick berries and there are lots of willows there now, lots of trees growing there too and blueberries but nowadays there are lots of willows because there's lots of roads. Where we use to pick berries, there's lots of buildings and nowadays I think of my uncle. Some days the climate change or the things will be different and in November when it's starting to get dark early and when we used to look at, then start to travel at night, we used to look at the stars to guide us.

And when it too stormy when I know where the wind is coming from and I learn from my uncle I used to travel in what weather even though by the stars I use to train my younger brother also.

- 34 Alfred Baillargeon: Is there more to discuss and what is the agenda?
- 35 Joanne Barnaby: Break now?

37 BREAK

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- DDMI Day 3 Session Notes 1 Natasha Thorpe: Think about recommendations. How do we want to plan 2 that shoreline given that the slime will be removed? Do we 3 want to do anything about the dam? Do we want to encourage 4 wildlife or not and how? We are looking at features that 5 might help clean and heal the pond. Joanne Barnaby: Maybe one thing that we haven't got any ideas on so 6 7 far is if that slime is out of there, do we want to change 8 that slope so that caribou can go up there? 9 Alfred Lockhart: Is the liner supposed to be a dam where the water was 10 coming in from the Lac de Gras before?
- 11 Natasha Thorpe: No it was for stopping the slime.
- 12 Alfred Lockhart: Once all the slime is out of pond and clean it out 13 real good, you put some gravel in there and (when Diavik 14 was in the community they told the community that when they 15 put the dikes in and drained the water that they saved the bottom of the pond). So if they still have it. It should be 16 17 somewhere, it must be in here somewhere, that they could 18 put it right here. Fill it up with water and open up the 19 upper dam there somewhere so the water will flow in and out 20 again and then you will have fish again.
- Once all the stuff is gone, the slime, it will be purified again and then when the water flows in, there will be new water in there all the time from the lake.
- 24 Natasha Thorpe: On top of that shoreline area between the dam and 25 where the water would be?
- 26 Alfred Lockhart: Put the rock here just like here.
- 27 Natasha Thorpe: And then would you plant vegetation on top of that
  28 rock?
- 29 Alfred Lockhart: Well they said they saved all those plants and stuff 30 so why can't it go back there? (moss and everything)
- 31 Natasha Thorpe: Any other thoughts or comments on that?
- 32 Alfred Lockhart: Original vegetation and ground cover that they supposed to have saved it.
- Joanne Barnaby: So right now there is the larger processed kimberlite.
  So you are saying on top of that you would want the original ground cover on top of that?

1 Alfred Lockhart: But I am wondering where all that material is?

Bobby Algona: In the first place, that's what we wanted all along, to keep the panel and communities happy, they wanted all the vegetation to be put back. We want to encourage animals and fish to go back to that area and pond right from the start, even before the mine started. To keep our minds at ease, they have said that all along that they would put it back to the original state, but then we are having these meetings. . . encourage all around the island and the processed kimberlite waste rock that you have there will not deter caribou away. In winter time you are going to have all the snow collecting and making a slope. But I've seen caribou go and climb some very steep hills especially in the migration route, which were something like this on both sides of the river and it's very deep. It's no different than in Africa from what we have here but some areas that the animals - maybe a small or fine sand is what they would really have a hard time going up and here we have the snow. Plus wolverine, they like to dig no matter where in the boulder field and then still come out on the other side and they was I've seen them digging in boulder They want to go down as far deep into the snow as possible to get into the deep rock. Wolverines, they like the snow to keep warm. Wolverines tend to move to different areas.

I don't really see any real difference in how we make this rock pile. In my view this rock pile is only just to keep all this in and keep it from going to Lac de Gras.

We wanted to encourage fish to come back in this area, build a stream deep enough so that fish can go out but can fish be living in this area for a number of years maybe 20 or 30 years after they have closed down? Maybe it will be washed and cleaned with rain water itself.

- Natasha Thorpe: I think what I heard from Bobby is that caribou will climb it, regardless of the slope.
- 36 Alfred Lockhart: I think Bobby was talking about here that would only 37 be in winter time but in the summer time probably not.
- 38 Bobby Algona: Like I said, it's really unbelievable how much they
  39 will climb which we have always observed especially
  40 around the Hacket River area where there are places where
  41 fault lines or something in the river where it is very

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- deep on both sides. Along as they have that footing, they
  can really climb those hills.
- Joanne Barnaby: I think some were concerned that maybe they could make

  it up there but should we make it safer and how would we do

  that?
- 6 Bobby Algona: Flatter slope, smaller material.
- 7 Alfred Lockhart: Yesterday when we went on the tour where they already 8 put the mine stuff on the slope.
- 9 Joanne Barnaby: Test slope for vegetation.
- 10 Bobby Algona: Yes we have that sample type of sand is what they want
  11 for that North Country rock pile so maybe they would do the
  12 same for all perimeter around the area where all the
  13 boulders are?
- Jonas Lafferty: (Aboriginal language) the slope is really deep down
  and we seeing and we find soil and they making a dam with
  it and some of the slope is really steep down how maybe we
  can smooth it down. Now if you look at it it's kind of
  scary for animals to climb even caribou it can get hurt and
  so that's the kind of thing that they are discussing. Louis
  you understand.
  - Louis Zoe: We know that in those rock piles there are really high and steep down maybe you can kind of slope it down to be easier for animals to get on top. Once there is a big snow bank so kind of slope it down but once there is lots of snow they get lots of snow and climb big piles of rocks and have it a little bit down for the animal to climb.
- 27 Alfred Baillargeon: They say all the rock pile and we went out on the 28 tour yesterday and what Jonas had just mentioned to us 29 maybe they don't have to have the rock really steep down be 30 good for the animal to climb up and down. It's going to be 31 quite a while before we see animals in this area and the 32 way we discussing things today and we have to get back to 33 Diavik and put the recommendation to Diavik but today to 34 think about it the way you see the rock piles, animals are 35 smart, caribous are smart they know the best place to 36 climb. So make it kind of sloped down maybe 3 best places 37 for them to climb. For me the top we know there are 38 chemicals in there as long as the mine is in operation and caribou will never go to that place until after many years 39 40 of closure.

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So those are the kinds of things that need to be monitored and those scientists so I see the rock pile is really high to know the animal will never come back until they change their route migration maybe way in the future after the mine closed the caribou will come back we know we need to prepare for the future and follow up with those things.

Muskox hair if we put it up maybe the wolverines would take it down somehow they are greedy animals.

- 9 Natasha Thorpe: Lots of recommendations but I am wondering if there 10 are any specific types of plants for this. Perhaps ones 11 that might help clean or heal the drainage.
- 12 Alfred Baillargeon: Yes there is two big open pits here that wasn't
  13 there before the open pit that they said that they were
  14 going to refill it with water but it was all these ammonia
  15 nitrates the fish will never be the same put water but no
  16 fish. Why should we put fish back in the water?
- Look at both open pits they had used ammonia nitrate for the blasting and that's not good for the fish. Leave it with just water.
- They are saying that the liner is goo but after so many years it will rot and there will be a seepage in there.
  - Every water no matter of good of a dam there will always be a leakage so tell the closure of the mine just leave it as it is and just continue to meet with them the way the white people do things the way they destroy our land. We are working with you guys and try to come up with proper recommendations try to come up with good words and recommendations. If it's a good suggestion and work from there.
- 30 Joanne Barnaby: Everybody is in agreement that they shouldn't do the
  31 re-vegetation until after the mine is finished.
- What kinds of plants should grow or be planted after closure?
- 34 Alfred Lockhart: Kind of vegetation would be things that grow in the barren land. Moss, lichen, no carrots.
- Natasha Thorpe: I know there was a lot of really rich discussion around this at the aquatic effects monitoring camp, about how the land makes fresh water. I am wondering about when you are collecting drinking water, what is it that you look

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for on the land that maybe we could recreate here. Is there
anything that comes to mind?

Mona Himiak: So they should do is compare you know go out 5-10 miles out around Diavik and try to look at all the plants and everything and bring some samples back and you know try to test them and see if there is anything growing out of that pond and test and compare and see if its' 100% then we can fix it but if it's 50 or less then we have to do more testing to see if its good too put or fix the dam or make it lower or anything else.

Bobby Algona: That's another good suggestion I brought it up at the last meeting that we had about the rock pile and a bit of sand the eskers are around these areas have a lot of vegetation on them that could also be brought in and local eskers a have lot of windblown seeds and things will help produce on there.

The slurry is very very soft on this PKC on the pond. Maybe if we collected a whole lot of willow and trees to put under and around this area — and put them in so the animals won't sink as much — put in just deep enough after they have done all they're producing. Maybe all this soft area, maybe they could put in some willows to keep it from sinking down in, since always the willow and roots. Revegetate this whole area by bringing in local willows, fine sand, baby birch, and things and help vegetate this whole area with local bit of moss from the surrounding areas will help vegetate the surrounding areas.

Alfred Baillargeon: There are some stores like Wal-Mart that have good soil.

Alfred Lockhart: We've been talking about cleaning up the slurry, but getting rid of the water can't happen until after the closure so now I don't know how long it's going to take to clean out the slurry and so that water has to stay in there until the mine is done and they need it for the process plant. We are talking now for after the life of the mine and we don't know how long that is going to take.

Natasha Thorpe: I am wondering about this area here what happens when all the slime is gone. Steep, gradual, wet land with lots of willows or a focus on moss? Is there any preference for what you want it to look like? [refers to shoreline flats]

1 Wayne Langenhan: Why can't it be put back to the way it was before? I 2 can't see why we are breaking our heads on this because it 3 should be put back to what it was? 4 Joanne Barnaby: So we need to be clear on what the shoreline was like 5 naturally. Was there lots of willow, lots of moss, marsh? 6 Natasha Thorpe: I think we saw in the picture of the lake this 7 morning, that that isn't what Gord showed [i.e. it wasn't 8 covered in willows]. 9 Alfred Lockhart: It was marsh before they built the dam. There was a 10 stream. 11 Joanne Barnaby: If, by some miracle, they agree to remove the slime, is there anything we want to say about how? They are going 12 to be continuing to fill in the slopes with more gravel 13 14 texture and the bigger processed kimberlite and so we could 15 make recommendations on how steep that should be and therefore how high the water should be? Should it be deep 16 17 or shallow? So that's another factor to think about. So we are encouraging Diavik to make it as natural as 18 possible and as it was before. So we need to identify what 19 20 animals and plants were there before. 21 Alfred Lockhart: We're thinking about building another dike and another 22 pit so the life of this mine here is going to be another 10 23 years or 15 years and who knows how much rock is going to 24 come out of that? It's got to go somewhere and we are 25 talking about 30 years from now. 26 Louis Zoe: Similar to the natural barrenlands, there is lots of soil, 27 dark soil, maybe we it be covered by dark soil and with 28 moss. If it's covered with natural soil from here I'm sure 29 the plants can grow back. 30 Joanne Barnaby: And by having good natural soil from their area, the 31 seeds from plants in the area are going to blow into that area and start growing? 32 33 Well unless somebody has more brilliant ideas maybe we 34 could invite Diavik back in and listen to the caribou 35 presentation and the presentation of the monitoring program 36 and of the mortality of animals that they have found near

38 Colleen English: Wildlife mortality presentation.

the mine.

- 1 Wayne Langenhan: What is natural?
- Colleen English: If we do find a dead carcass and we contact ENR and they decide if we ship them back to them for testing.
- When we talk about natural we mean there is nothing related to the mine, like a grizzly bear got a caribou. Not natural is anything like being hit by a haul truck or ingested something.
- 8 Mona Himiak: Water intake is where?
- 9 Colleen English: Where we pull all of our fresh water in from the Lac de Gras.

#### Alfred Baillargeon:

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We are here 1995-2005 and you talk about 8 caribou that died. Jonas has been here sometime and a lot of people have come to the mine and there was never any mention of those animals that died and we never did know how those animals did die. Even before production and wolverine killed the caribou and the grizzly took it over, the meat.

Whose report is that that's saying that? The report should have gone out earlier. Those the kind of presentations that Diavik should bring to the communities so like I said killed the female the wolverine and the male, rabbit hares. ENR don't do reports and we never knew about them and we would like to see the reports and if they have a fox and we had a trailer or there and went to the camp and the pipes that go to the treatment plants and other time there was no process plant and at that time they had sewage running and maybe those animals were eating it and maybe the animals were drinking from the sewage and just look the big dome and back medicine and the tongues were just frozen there and the powder and maybe it was just like arsenic and the animal dying and this is the first report and I am just kind of shock to hear this. We are like the watchdog for the environment. We know all the stories about how the animals travel and this should have come out back then.

- Colleen English: We do send them to the communities but we don't send them to everyone personally.
- 37 Diane Dul: wildlife Presentation
- 38 Mona Tiktalek: The caribou there on slide 12, they were surprising.
  39 To me, they look like I think those are the caribou from

Victoria Island and the caribou tend to migrate from across there. Those caribou look like from Victoria Island. These caribou are more easy to butcher and I think they are migrating there and then they go back in the spring to Victoria Island. These are island caribou.

Diane Dul: Thank you. I thought they were different than the ones we normally saw around here.

Mark Taletok: I'd like to say a few words. There's a lot of different caribou. As a hunter, I know different kinds of species around. In November, when the ice forms, I travel to Kugluktuk and the barrenland caribou there are quite big, larger than the ones we are used to in our area. I used to hunt caribou near Paulatuk. And I find sometimes some hunters would think they would be bull caribous and, as you know, they start to rut in November and sometimes they seem like they are like horses because they are so large, because of the smaller caribou we are used to seeing in our area. And the muskox are like that as well. From the west, the muskox, their legs are larger and the muskox we are used to have smaller legs or shorter legs. In 1989 perhaps, my brother and I went to go hunting in the [Victoria] island and we saw the caribou that are much smaller. When I saw the caribou I thought they were wolves! So the caribou from Victoria Island are starting to go to the mainland, I know because I have been hunting since I was a small boy. And I said that these are much smaller and are much easier to butcher and now he believes me.

29 Colleen English: Housekeeping items, check out time.

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31 **END** 

- 1 Janelle Nitsiza: Opening Prayer
- 2 Joanne Barnaby: Review and discussion on draft recommendations.
- 3 The shoreline, I think with all that fine sand and Bobby Algona: 4 silt that's going to be around that pond there, I think we 5 should at least put something in the bottom of that to make 6 it more stable on the bottom. Caribou might still get stuck 7 in that fine sand because of a little bit of the slurry 8 might still be there. Plus also maybe slime would still be 9 in there. I think some kind of baseline in the soft sand or natural trees or water bound trees that are in the area. 10 11 When we start to do that, even though we do take some of 12 that willows or plants from around the area. The willows 13 in the area will start to grow back anyway as long as we put something in the bottom of that. 14 It's going to become 15 mud maybe later on the bottom of that shoreline just like 16 We should at least put something under that to help 17 it, maybe in that way it will start to grow. Like most of 18 shorelines in the surrounding areas, most of the lakes, 19 especially you see the willows and stuff always growing in 20 streams and I think that would really help the lake and 21 pond.
- 22 Joanne Barnaby: We could add "ensure shoreline is stable."
- 23 Alfred Lockhart: In the barrenlands, in all the eskers where there's 24 trees, it always attracts animals to go there. If you put 25 trees and stuff it will attract the animals and I thought 26 we didn't want animals there.
- Joanne Barnaby: I thought we agreed yesterday about wanting animals to
  come back if the slime/slurry is gone?
- 29 Alfred Lockhart: Okay.
- 30 Joanne Barnaby: Discussion regarding recommendations
- 31 Alfred Lockhart: Right here is the dam that came from Lac de Gras to
  32 this lake here and they should open it again and then will
  33 have to open this rock pile here and then it goes down it
  34 comes in from this way and it leaves this way. Otherwise
  35 the water will be still which won't be good for the fish it
  36 has to move.

1 Wayne Langenhan: I don't think we need to add the risks because if they 2 pumped it out the same way they pumped it in - I mean it's 3 like to make a swamp you just add water to ground and stir 4 - so to pump the slurry out, you would have to add a bit of 5 water to it or maybe there is enough water there that they 6 could drain the water and the slime at the same time 7 because they are not going to pump it out hard. 8 going to go through a hose, there is no pumps to pump it 9 out hard it'll come down here. So somehow they are going 10 to have to mix that slime up a bit with water before they can move it. So if they are putting it through a hose to 11 12 pump it, I can't see where there is a risk involved. Ιt 13 shouldn't be a problem.

Joanne Barnaby: I think Ed was referring to the possible risks of transporting the slime/slurry on the ice road.

We talk about the recommendations - those are Alfred Baillargeon: good recommendations. The tailings pond, the PKC, it's not going to be done tomorrow. In the future, when it comes to the closure of the mine, the chemical things in the PKC will be there for a long time I don't think in the pond there would be fish. It's going to be quite a while before the pond gets back to it's original state so maybe we have to think about ways in the future that maybe the fish can be put back in there. What Wayne has said is right. are they are going to pump things out? They can't ever pump the slurry out - that PKC - without water. Everything that has to go in the water, it will maybe get sick and die and will get poisoned. I don't think we can ever use the pond once this has been mined, I don't think. Human beings will be afraid to have eaten anything from this island again. So after the closure, we still have to discuss this in further meetings. We don't know when there's going to be closure so we are just talking about the recommendations here. I prefer that no aquatic things be put back in the PKC pond. I don't think any human being will eat that fish.

36 **Ed Jones:** I should mention that I had a good look at the Long Lake containment at and I wanted to mention that most of the lake had been drained of water or evaporated. The edges had a lot of vegetation so I asked the environmentalist if they planted that vegetation and they said no it grew on its own. Also caribou were crossing quite a bit of that containment area because it was dry and was solid so I was

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- thinking if Diavik should decide to not take the slurry and the dry stuff out they could perhaps just pump out the slurry and leave the dry stuff out because it will vegetation will eventually come back because there's a certain amount of fertilizer in that, what I call tailings.

  Mike Francis: The water is still all the time or change the water?
- 7 Joanne Barnaby: Presentation of revised recommendations.
- 8 Mike Francis: I mean that old water inside the dam here they stay
  9 there all the time or change?
- Alfred Lockhart: Ekati have 4 ponds right from the drain. They built a 10 11 dike with rocks, not too big, so that the water will flow through and collect all the slimes and whatever is in the 12 slime and then it goes to another lake and then another 13 14 lake is the same thing it goes to another one again and by 15 the time it gets to the fourth lake, the water is cleaned. That's what they say so maybe that's something that they 16 17 should look into?
- 18 Joanne Barnaby: That's kind of what we are saying because there were a
  19 few natural ponds.
- Wayne Langenhan: I was just wondering if there was any word back about what Gord was saying yesterday about the pond where the slime is? Here is what we are talking about and he said it had been fished out but wasn't really sure because it was before he started working here at this mine. We would like to know for sure exactly what happened to the stock that was in that lake.
- 27 Natasha Thorpe: Diavik's coming back in the room at 10:30 so we can check then.
- Joanne Barnaby: Where did they put all the original material that was
  removed? Can it be used for reclamation?
- 31 So are we happy with that? Good job. Very clear recommendations.
- 33 **Ed Jones:** In the event that Diavik doesn't accept this recommendation, what steps can we take and how soon will Diavik make final plans for the PKC or more time down the road?

- Natasha Thorpe: Gord mentioned yesterday that some of the guidance
  from the TK Panel will help guide what they do with the
  slopes.
- 4 Wayne Langenhan: I am just wondering, like Ed said, what steps can we take to put more pressure on? Say they don't accept any recommendations, nothing is carved in stone here and they can just push us aside (maybe not roughly but discreetly). So we got to have some sort of leverage here. So I am just wondering if we cut their water off. We have to figure out something to use a lever here for these recommendations.
- 11 Alfred Lockhart: When Gord was talking about the slurry coming out of
  12 the process plant he said that it all falls on that fine
  13 sand and from there, the slurry is pushed to the center. I
  14 am wondering by the time the water leaves the slurry some
  15 of the slime will be there. I wonder if they could clean
  16 that up right away.
- Joanne Barnaby: We can ask. Did we lose something? I thought we talked yesterday about a recommendation that they begin removing the new slurry that's produced from here on in so that they don't keep adding to the slurry in the pond?
- 21 **Ed Jones:** We could recommend to Diavik and they stop recycling the water from the PKC 2 or 3 years before they are done.
- Joanne Barnaby: To begin drying out that pond so they can access the
  slurry to take it out?
- 25 Ed Jones: Once the water drains from the slurry, or evaporates, that dried stuff is not toxic and won't pose any danger to 26 wildlife. I was thinking if they should go that route of 27 28 leaving everything as it is and let it dry out by shutting 29 down or re-siphoning the water from the PKC 2 or 3 years 30 before shutting down. They could re-vegetate, they really 31 don't have to, but they could by replacing the stuff that they removed in the first place. They might go that route 32 33 and we might have to consider that but I am also wondering 34 about other steps that we can take if they should decide what I just described. 35
- 36 Joanne Barnaby: Those kinds of ideas we can explore with them if they
  37 respond to our main recommendation by saying they can't
  38 remove the slurry and slime.

1 Alfred Lockhart: When Gord was explaining how the slurry was pumped 2 into the pond, the slurry will push the other ones up ahead to the middle of the pond. They should try to clean it 3 4 then, before more slurry comes in. 5 Wayne Langenhan: At the breakfast table this morning Alfred Lockhart, Ed Jones, August Enzoe and I were talking about getting 6 this slime off the mine site with the least amount to 7 8 We discussed that maybe the mine should start danger. 9 talking about get in touch with all the mines and the government and get a machine built to dry this stuff. 10 11 stuff could be shipped out. If everybody chipped in for a 12 drying machine, it wouldn't be just one mine that would 13 benefit from it. Every one of these mines will have the 14 same problem. 15 Joanne Barnaby: Explore ways of treating and or removing the slurry 16 with the other diamond mines in the area to make it 17 feasible. 18 Show of hands for the recommendations? Everybody in favour 19 please raise your hands. I see all panel members are in favour. 20 21 decide who is going We need to to present these 22 recommendations to Diavik when they come back in.

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24 BREAK

- 26 TK Panel Recommendations Presentation YOUTH
- 27 TK Panel Topics & Schedule Suggestions 2 years
- 28 When, where and what
- 29 Wayne Langenhan: I think we pretty well covered most or at least a lot 30 of the above surface issues here in this meeting so I think 31 that maybe next meeting we might be able to talk more about 32 underground and how they are going to seal that up. What 33 are they going to use for back filling? What are they going to leave under the ground? How about the oil? There has to 34 be a certain amount of oil, hydraulic fluid, brake fluid 35 36 stuff from the machinery due to break downs. I think we 37 should talk about clean up from underground.

Natasha Thorpe: At this point, they are not ready to discuss underground closure, but Diavik is ready for re-vegetation discussions.

Bobby Algona: Wayne read my mind about the next plan. We always have to put in our mind that as a panel together we are here for reclamation of everything that goes on around the mine including the early stages. We know that these are the early stages of underground mining now and reclamation, in my mind, should always be considered right off the bat before you start and sometimes you have issues that are pursuant to closure, especially the pit and underground mining and we should always be thinking about reclamation right from the beginning. Because some things like the North Country Rock Pile became a big issue because we are trying to reclaim the land after all the things the mine has been doing and we don't know really know what the mine was doing right from the beginning and we should be started right from the beginning. And then start to reclaim what's been done because we do know what things have been done before and sometimes don't really know what's been done. I think it would be a really good idea to go into the underground pits to see what they are doing underground because that's another big issue for all of us. Because of blasting and fault lines and how they blast and create fault lines and maybe seeping up to the top and I think it would be a really good idea to start now, not half-way through what they have already done.

Joanne Barnaby: So maybe we can present some of the earlier needs identified to see the ground and plants for vegetation. Do we revisit the need to have women who know the plants from this area in that session?

Louis Zoe: We are talking about PKC and we are talking about the slurry and slime. We look at the other mine and how they are proceeding and get some information about all the chemicals used and goes to the tailings pond. How can we get the slimes out of the tailings pond? What about the waste rock and being piled up? How can we think about it being safe for the animals? We know that in spring-time, some of the lake gets overflowed and it can run off to the other ponds. We see the big barrels here and at one time there was a gas or oil spill and those are the kinds of

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things that need to be monitored so nothing needs to be 1 2 leaking out of the trucks and leaking into the ponds.

> One time there was a blast and from that blast a lot of things can go even when it's windy and the wind can blow the dust far. Not good for things to breathe the air.

6 Wayne Langenhan: I just like to say we have put forward recommendations 7 or I guess EMAB has put forward recommendations to this 8 mine and other mines and maybe they might get the feedback but it rarely every comes the way of Ed and Wayne and the information is not passed and if they do get feedback from 10 the mines. I remember that at one meeting Ed gave feedback on the air quality around the mines and how to put these 13 devices on the exhaust to clear up the diesel and they weren't a very costly thing but I haven't see anything on 14 those trucks so obviously that recommendation wasn't And if they stop and have a coffee break and followed. 16 there are leaks, there should be one area where they park over top of a pan or something to catch any possible leaks 18 19 and we have had no feedback as far as the other 20 recommendations.

Natasha Thorpe: That comes back to the fact that they weren't passed on so one of the jobs that Joanne and I have is to go through all of the past panel sessions and make sure that Diavik has received all of these good recommendations.

Wayne Langenhan: Well does anyone have any idea what EMAB's been doing all along here or have they just been sitting around drinking coffee or what?

28 Natasha Thorpe: I can't speak to that and I know there is valid 29 We are working directly with Diavik to make frustration. 30 sure that we communicate.

> How do you want to spend the next session? There is pretty clear direction about the vegetation piece and I wondering if that is something that panel can commit to for next year.

Joanne Barnaby: That would be onsite late June early July so we can see the vegetation and that there be women be invited who know this land, who've been out here, women who have the TK for plants that were used for eating or making medicine and can help us with that re-vegetation work.

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Wayne Langenhan: Yes and I would like to suggest the month of July because it's too hot to set nets and pretty well too hot to do too much work so that's kind of the lazy month, but the other times like June and August, September is cooler and you get a lot of work done.

The month of August around the 15 of July that's Alfred Baillargeon: when we see all the berries like cloud berries in July. Maybe in September we see cranberries. Maybe we went on the mine site and it's kind of cold before the freeze-up so We have young those months like August early September. people. We should have quite a few of the young people, maybe 2 from each community. They are talking our knowledge too so. The month of August maybe during the weekend and some of the workers maybe they fly home for the weekend so we can use their rooms just like what we did. Maybe we can go out on the lake by boat and just paddle We had a really good discussion the last four days and we still have lots to discuss. Underground. that we are in the middle of operation and even there is underground people working underground and so there is only one underground. What kind of work do they do? don't know what kind of work they do. Are they going to undo? I know that from underground there is cement. I look at it, 8 feet underground that's how the dam was made so that's the thing we need to take a look at.

Ed Jones: Getting back to what Wayne brought up on my recommendation on the emissions from the heavy equipment and the power plant, I suggested they use exhaust purifiers which are inexpensive. I suspect the reason why I didn't get a response is that they felt they didn't have to because they are already meeting the national standards which are lower than what we think the standards should be. That's my suspicion and nothing more was ever said or conveyed to me.

Joanne Barnaby: So I think we can explore the next session with Diavik and give our reasons for our suggestions for timing and topics and location. We can see if we can resolve that with Diavik back in the room so that everybody is clear before we leave here as to what we are going to be doing and when.

Janelle Nitsiza: PRESENTATION OF RECOMMENDATIONS

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1 2	Gord MacDonald: Thanks for the presentation. You guys have been busy.  Can I ask some questions so I am clear?
3 4 5	Removal means you want it gone from the mine site and do you have an idea as to where it should go? You don't have to, but I am just curious.
6 7 8 9	Joanne Barnaby: There was the thought that it should be taken outside of the Northwest Territories and that there was places including Rainbow Lake and other places that are designed to deal with waste so that was the idea.
10 11	Gord MacDonald: You are using "lake" like I was using "pond" or the body of water in the middle?
12	Joanne Barnaby: Yes where there used to be the lake.
13 14 15 16	Gord MacDonald: The reclaimed lake here we are talking about is inside the PKC. So you want to try to have fish in there from the Lac de Gras and be able to get from Lac de Gras into that lake, ideally.
17 18	Joanne Barnaby: That's the ideal. We recognize that the elevation has changed and so we want to explore that with you.
19 20	Gord MacDonald: You are saying that you want it to be back to the same level as before.
21	Joanne Barnaby: To be like the original lake bottom.
22 23	Gord MacDonald: Make the closure lake as similar to the original lake as much possible?
24 25 26	Joanne Barnaby: Are you comfortable with switching those two? This whole recommendation is with the goal of not having the slurry there at all.
27 28	Gord MacDonald: What I am hearing is make the closure lake as similar to the original lake as possible.
29 30 31	Alfred Lockhart: I think this is where the dam that flows into this lake here, if you remove this and then there is an outlet here so it is moving all the time.
32 33	Gord MacDonald: I can't make water flow up to the lake. I understand what you are asking for.

- 1 Joanne Barnaby: I think the main goal is that if fish are going to 2 survive in that lake, they need access to Lac de Gras. 3 Historically, before the mine was here, they must have had 4 Otherwise there wouldn't have been any fish in 5 that small lake. And so somehow that needs to 6 accommodated.
- 7 Gord MacDonald: I get the basis for that, having fish back in the lake.
- 9 Wayne Langenhan: The panel has come up with different ways to help save 10 the mine some money so we want to present you with ideas on 11 this if you would like us to.
- 12 Gord MacDonald: Always open for ideas.
- Joanne Barnaby: That was part of the point related to the last bullet,
  explore cost sharing with other mines for some of this
  technology that might make this more feasible. Wayne and Ed
  have had some ideas for equipment that could be used to
  perhaps dewater the slurry.
- Gord MacDonald: Thanks for that. Removing the slimes from the PKC is 18 included in most of the 16 ideas and probably 3 of the 5 19 20 short listed. Whether they got treated here and put on the 21 beach or whether slimes are not there. We didn't have a silver bullet to help us deal with them. The best one was 22 23 to dredge it and put it underground. I am hearing from you 24 that the pond in itself is very desirable and that a pond 25 with the slurry is still a very bit worry for you. 26 than just for caribou, but fish as well.
- I really like the idea of trying to simulate what was in the lake.
- 29 Colleen English: I think that there are a couple of ideas in there that
  30 are specific to reshaping the pond and the vegetation and
  31 which places would be the best for reshaping the healed,
  32 the cleaned, the safe, I think we will probably again have
  33 you explore what that looks like. How do we monitor that,
  34 how do we look at that?
- 35 A lot of ideas came from the AEMP Traditional camp.
- 36 Joanne Barnaby: Where is the material that was removed? The ground cover? Lake bottom? How accessible is it and what state is it in? Was the intention to bring that back after closure?

Gord MacDonald: It's all piled up right in here. Its mixed up but it is also frozen, it's a material that is going to be in short supply. It will take almost all of it for the North Country Rock Pile. It is there but there may not be enough but we are trying to find the best place for using that.

Joanne Barnaby: This leads quite well into the discussions about the next session. The feeling is that the session should be held in the summer on site where the berries are there. The panel wants to bring extra people - women and youth - because the women have knowledge that the men don't have.

Really only discussed the next session in detail. There was interest in discussing the pits and underground mine shafts because the sooner we start planning for those areas means we could have more options about what to do with them.

Gord Macdonald: I heard you were concerned about slimes and we are concerned with slimes solutions differently. Nothing specific about water quality. We need to find out how you look at water and how we look at water. The sooner we can start thinking about how to get rid of the water treatment plant. Put some of the water in another small pond so that you can start to see how it looks over the years? The big difference in now its encourage not discourage. Is it fair to ask why that changed?

Bobby Algona: The reason for discouragement was because of the slime and slurry in the pond. That is what we came up with, was discouraged fish and wildlife. But we - as a panel - came up with getting rid of the slurry and slime which really changed our direction, to get away from discouraged. We have - as a panel - all along, we always said right from the beginning, before the mine became a mine, that we want to become as close as it was before. discouragement was one of our options, maybe something to think about in the first place. Then, as the meeting went on, we were still having a hard time with that slime being in its state right now and we still don't know what is in that slime to keep it as a slime for hundreds of year or for how long it ever will be. Because once you leave that pond, there will always be seepage. Once you stop production and it will be thawed, there may be more seepage and the slime getting into the Lac de Gras. We don't know what is in that slime to keep it in that state and that was

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one of the suggestions we started to think about. Now we 1 2 want to encourage wildlife and fish and habitat that was there before you started taking things out. 3 4 Gord MacDonald: Thank you Bobby. That's what we thought, but I wanted 5 to be clear. Joanne Barnaby: Your question about water and water quality and the 6 7 importance of that and the values associated with that. In 8 terms of providing further guidance and helping to sort 9 through what that would look like. 10 Can you present the 16 options? Gord MacDonald: I have to compliment you on absorbing the amount of 11 12 information you have had to. 13 Joanne Barnaby: Preliminary view of the 16 options. Gord MacDonald: Presentation of 16 ideas. 14 We will look at the slimes from the perspective of a 15 16 caribou licking it. We have only looked at it from its 17 properties. 18 Wayne Langenhan: Is it all right to pass on to Diavik how we think it 19 could be achieved? Like I said in the first place, why can't we deal 20 Bobby Algona: 21 directly with Diavik and have our comments be directly with 22 Diavik instead of going through another consulting firm. 23 We are trying to help Diavik put together a closure plan 24 with Diavik and Diavik has been here throughout most of our 25 meetings and that should be a good. Joanne Barnaby: I think Wayne you are talking about how to achieve 26 27 your recommendation. Wayne Langenhan: This is sort of what we have come up with, we don't 28 29 know if it will work or not. When they have nuclear waste 30 they put it in a cake form that's a hard yellowish stuff 31 there that they can ship or it can even be granular. We are 32 proposing to you to get together with the other mines 33 seeing as how this wouldn't be just a thing for one mine. 34 It would be a help to all mines and because you are all 35 going to have the same problems so our idea was to come up 36 with a machine to put the slurry through to dry it instead

of taking it out wet. Maybe we could get a kiln to dry

this thing and shipped up in sections and take it over to the next mine to be used and this way it wouldn't be a onetime cost. Maybe a shared operation the first mine making this concentrate. You are getting concrete up here all the time, so why not send it out in the same bags?

- Gord MacDonald: The idea of drying it or treating it is about the same thing as what they are doing it but the question is if we could make it like a solid or soil why do we have to take it off site? If you could make it into a cake my question is, why would you have to take it off the island?
- 11 Wayne Langenhan: The reason is because if it ever got wet then it might 12 revert back to the original state. Truck it to Hay River 13 and ship it to Rainbow Lake then they could deal with it. 14 If it is off site, there is no worry about it.
- 18 Natasha Thorpe: Can you explain to us what exactly the slurry is?
- 19 Gord MacDonald: It's got the same kimberlite particles in it and some 20 are more ground up.
- 21 All along I have been really leery of the contents of Bobby Algona: 22 the slurry/slime and maybe what I should have said is that 23 from the beginning to recommend to you that if you can 24 physically show to me that the contents of the slurry 25 that's keeping it as a slime and it's not going to dry out 26 That would be really helpful for me to understand. 27 If you can physically show to me that the contents of this 28 slurry to really give my mind at ease if I have any 29 Saying we wanted to ship it out is because we concerns. 30 don't know what is in that, the content. We don't want to 31 get it into our waters.
- Natasha Thorpe: As a facilitator, I've been incredibly impressed at the action oriented solutions that people in the panel have come forward with and I really see a genuine willingness to come up with the best solution as well as a genuine willingness to work together so it's great to see.

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- 1 Mona Himiak: Maybe next summer we could be included in the testing
  2 of the ponds to ensure they are safe.
- 3 Maybe have indoor environment first.
- 4 Gord MacDonald: That's why I would like to do an aquarium.

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6 ROUND TABLE

- 8 August Enzoe: I thank you very much. We've been here since this 9 morning. Now they explain everything and now I know the 10 way they are saying it be done earlier.
- 11 Alfred Lockhart: I just have to say that I am glad we made some 12 recommendations similar to you guys so I'm sure things will 13 work out very well in the future.
- 14 Wayne Langenhan: To me this meeting was one of the best we have had 15 since we started. We actually accomplished something. It is 16 very frustrating when you just sit here meeting after 17 meeting, it seems like you running in deep mud, and you're 18 just not getting anywhere. At least we can see a little 19 bit of headway this time. Everyone came up with good ideas 20 and I was very pleased and want to thank Gord and Colleen 21 and thank the interpreters.
- 22 Ed Jones: I have nothing to add to what I've already said. I just
  23 want to thank everyone for participating and voicing their
  24 concerns. Thank you.
- Mark Taletok: I would like to thank you too for the discussions that
  we have had. It was very informative and when we talk
  about what we know as aboriginal people it is very
  informative. For those that work in mining companies, it's
  very important too that we know. I thank you for allowing
  me to be a participant.
- Thank you very much again for inviting us as well, 31 Bobby Algona: 32 Diavik, as we are making decisions here. It is very important. Not rushing into decisions that we have. If we 33 34 work together and help each other in discussions for 35 anything hazardous that we don't want in our environment, in the lakes, in the rivers and as well it's very important 36 37 that we work together. Joanne and Natasha and they help us

quite a bit. I would like to thank them. For the interpreters and for the people who were typing, the technicians, its very good that we work together. We will keep on working even though it doesn't get done right away and we strive to go forward. Thank you.

We had a good discussion. This is the land of the Alfred Baillargeon: Dene people and we have concerns. That's why we are bringing things forward. All those chemicals shouldn't be left on the land. The land should be put back to place. When is the next meeting? We should be informed maybe before we leave. I would like to thank the interpreters, really good hospitality, and we ate well. everything will go well with us until we meet again, maybe people get sick, that our Creator will take care of us. Aboriginal, Dene, people, we all come from one people. creator will make two people, there is a scripture and we speak different languages about it. The company, we get some kind of benefit and they do take our word. This kind of discussion and the company maybe we might just leave, but until we meet again I hope that everything will be Only the Creator is the controller of all things. fine. The land is changing. I think I've been going out on the land since I was a young kid, I never went to school. Maybe I can't really express myself to non-Aboriginal Today, Diavik, Ekati . . . how they treating people. All the diamond mines coming up and with that we would like to have some kind of good treatment. care of things together. We need to have some kind of agreement and that's how we can go forward. I'd like to thank the people here, Joanne and Natasha, and the young ladies that are here and they listen and maybe sometime in august we meet again.

Alexandra Crapeau: I have nothing to add because it looks good and as a youth going to the meeting for the first time I didn't know what we were talking about but later on I was understanding what we were talking about. If I'm here next time I'll bring a note book or something to write notes in.

Janelle Nitsiza: I would like to thank the elders for recommending that youth come. I have come to the realization that it is going to be the youth responsibility one day. We're the ones who are going to see the outcome from all the impact that has happened. It's unfortunate that we weren't able to see the

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beauty of the land pre-mine but hopefully one day when I venture out on the land with my family I can come to this area with my children or grandchildren and tell them that it's because of our elders it's fixed up, because we talked about it, because we came together became one with the mines to come up with a good outcome. I really hope to come back next year to be part of this panel, because I am learning from my elders here and I am coming up with my own thoughts.

Colleen English: I'd also just like to thank everyone for their hard work. And I second Gord's comment around the level of understanding that we've seen from everybody here has been very impressive and it's very clear that you know the PKC inside and out now. So I also thank you for giving up your weekends to come and participate in this and I would like to give a little shout out to the youth, I think they have been incredibly involved and have put forward their ideas and recommendations sometimes behind the scenes and sometimes in the group and that's both okay.

Gord MacDonald: Wayne said it quite well. I am a very results orientated person. I can't hide that and you guys have done very well. I see a lot of hope about what we can do together and you worked really hard.

Louis Zoe: I would like to thank everybody in the room. discussed a lot of issues that took days. How things can be shipped out from here? We can never say no to those kinds of chemicals or things that's dangerous to be left on the land. We kind of supporting each other. Thank you for being here. The Creator is the controller of all things. I would like to sit in decision for next meeting. I am really thankful for being here.

Mike Francis: That we think about each other while being in the health of everyone here.

Mona Himiak: This is my third meeting and I am learning a lot. I've
been raised on the land so I am kind of getting to know
what to think about and what the concerns and all that. I'd
like to learn more and thank you for having us here.

38 Diane Dul: I really don't have a whole lot to add. I am really 39 impressed with how you have worked together with Diavik. 40 Participation is awesome.

Mona Tiktalek: Thank you very much as well. It is very informative that I am here for elders and youth getting together. This is what we will move forward on and my granddaughter had a baby while I was here. You know the water that we are drinking is going to our children and we will travel safely again. I believe we will meet again in May and I would like to thank the Creator for working with us.

Gwen Angulalik: I'd like to thank each one of you here. I am very honoured to be interpreting for the elders here and I hope you invite me back for the next time. I'd like to thank Natasha, and Joanne and Colleen and Gord for being with us here and meeting with us here and each one of you elders and Dene people. I thank you very much.

Berna Martin: I would like to thank the elders for all the people for the TK ladies and more youth and would like to thank all the people that worked here. I knew Joanne back in the days and she was always my friend and Natasha, Colleen and Gord, Diane and the youth. I ask the Creator to get us safe home that Diavik will listen to the community to help heal the community.

Natasha Thorpe: It's a real honour to be able to work with such an amazing group of people - young and old - from all over the north. When I think back to a few years ago when we first started, you were acquaintances and then you moved into friends and then a team, now a family. It is amazing to see over the last few days all the coming together, supporting through what could be challenging times. It's a real joy to see that. When I look at all that was shared. I see people take things to heart and really coming together for action and results. I really commend you to be courageous and I personally thank you for trusting us all with your words - me, Joanne as well as Janet our newest member of the team. I thank everyone in the room - Diavik, elders, youth, interpreters, everybody.

Joanne Barnaby: This is only the second panel session that I have been involved with and I am really glad I came. I know it must have felt like we were bugging you to think about things in a different way so I really appreciate your patience to answer. I am really pleased with the commitment that you've made and I know it's hard at times when you see change. I know you don't see the mine-site as good and to think beyond that and to come up with solutions for making things

well again in the future, is very encouraging for me. I see the difference from the last panel session to this one, the difference that it made to have Gord and Colleen here and available to us whenever we needed them. We didn't get lost in terms of misinformation, misunderstanding or misinterpretations and that really makes a difference. It allows us to be more productive. Any questions, we can ask right on the spot and move on and that really is very good. Thank you for your full availability to us and your real efforts to answer the questions and those concerns as quickly and honestly as possible. So thank you for that. I wanted to mention Ryan from Pido productions because nobody else has and he has been amazing.

- 14 Alfred Baillargeon: Closing prayer
- 15 Mona Tiktalek: Closing prayer.

**END** 

#### Appendix C

**Informed Consent** 

#### **Diavik Diamond Mines Inc.**

#### **Traditional Knowledge Panel**

#### **Informed Consent Form**

I (name)				
on	, 2013 give permission for Diavik Diamond Mines			
Inc. and its contractors to take notes, photographs and / or audio and video recordings				
related to my participation in meetings, workshops and events related to the Traditional				
Knowledge Panel established for the Diavik Diamond Mine. I understand that my				
participation includes meetings and workshops held throughout each year either in				
communities in the NWT or NU or at the Diavik Diamond Mine.				

Through my signature below, I understand that:

- I consent to have my words, activities and responses regarding and related to my knowledge recorded on maps, in notes and photographs, and using audio- and video-recording equipment (collectively referred to as Traditional Knowledge Data);
- **2.** I am free to choose not to respond to any questions asked or participate in any discussions without prejudice or penalty;
- 3. I can choose to be anonymous in my participation without penalty;
- **4.** My representative Aboriginal Organization, DDMI and / or its contractors may use the information collected to contribute to operations and closure planning at the Diavik Diamond Mine:
- **5.** DDMI and its contractors may share my information which I have verified and given permission to share in either reports and/or photographs and provide such information to my Aboriginal organization and other regulators:
- 6. I agree that my contributions may also be used for future educational, cultural, heritage, and environmental purposes that are outside the scope of the TK Panel and that my representative Aboriginal organization, DDMI and/or its contractors will make all reasonable efforts to consult me, or my descendants, before using my information for purposes not indicated above;

- **7.** I will receive financial compensation for my participation in accordance with DDMI policy;
- **8.** I am free to request that any information I share is removed, erased or deleted and that I will have the opportunity to verify draft video-documentaries, reports and maps to make edits before I sign them off and that final copies will be provided to me;
- 9. I also understand that DDMI cannot ensure the protection of the Traditional Knowledge from public release once the reports are released (e.g., via youtube.com, Facebook, other social media, or Aboriginal group websites);
- **10.** The Traditional Knowledge Data will be summarized and integrated with scientific data into a report, which will be publicly available.

Signed this	_ day of	_ 2013, in
Northwest Territories	3	
Signatures:		
Participant		Aboriginal Organization
Diavik Diamond Mi	<del></del>	DDMI Contractor

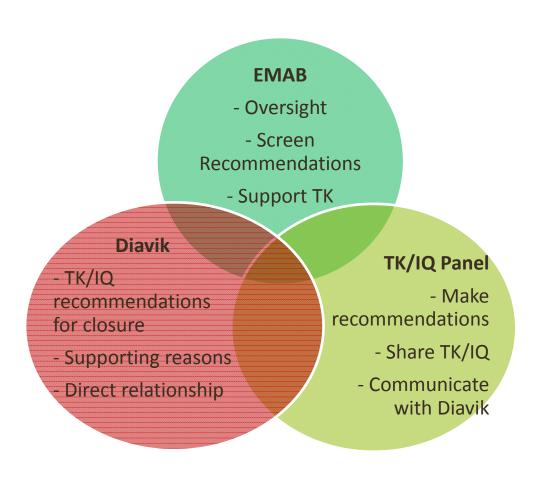
#### Appendix D

**Presentations by Diavik** 

# Diavik Diamond Mines

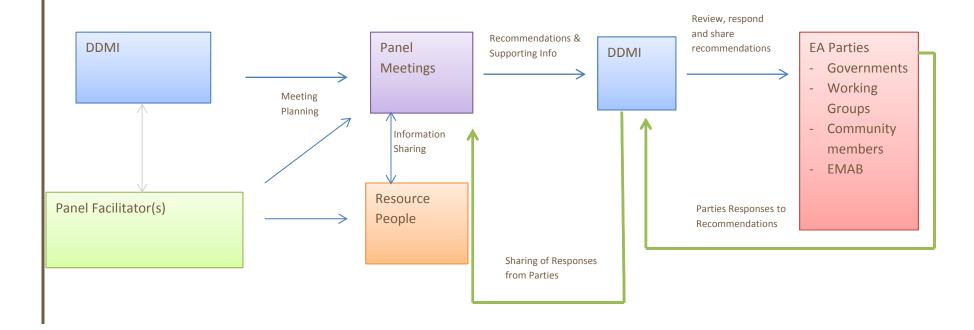


#### TK/IQ Panel – From EMAB to Diavik – How did we get here?



# TK/IQ Panel Process – What has changed?

- Panel to finalize purpose and goals this session
- Diavik will respond to Panel recommendations
- Diavik will build on the work already done by EMAB
- Diavik to share Panel recommendations with others



# TK/IQ Panel Purpose – Diavik's View

- Review Diavik's closure plans and programs
- Make recommendations that identify how TK/IQ can be used alongside scientific, technical and financial considerations
- Panel members are not necessarily representative of their community or organization

#### The role of the Panel could include:

- TK recommendations on mine closure planning & management
- TK monitoring program development for closure
- TK study proposal development for closure planning
- Methods for TK engagement or community participation
- Review of TK study results
- Other

## TK/IQ Panel Goals – Diavik's View

- Panel recommendations & supporting reasons are approved at the end of each session
- TK Panel reports their recommendations and reasons directly to Diavik
- TK/IQ Panel does not conduct TK/IQ studies, but members may be involved in such studies
- Panel facilitators frame sensitive TK/IQ shared by the Panel and respect confidentiality
- Panel members may be invited to assist with presenting recommendations
- Panel scope is to focus on Diavik

Topics for Panel sessions provided by Diavik, with consideration of Panel

suggestions and input

FMAB invited to observe.



#### Diavik's Role in the Process

- Provide resources to support the TK Panel
- Review and respond in writing to Panel recommendations
- Seek feedback on Panel recommendations with other parties
- Explain Diavik's closure plans and programs in an understandable manner
- Advise on preferred topics and schedule for meetings



## TK Panel Topics & Schedule Suggestions – 2 yrs

Session #6 – October 2013 – *PKC closure options* 

Session #7 – May 2014 – Revegetation

Session #8 – October 2014 – Review of landscape at closure

Session #9 – May 2015 – *Post-closure monitoring: wildlife interaction and water* 

Session #10 – October 2015 – Fish Habitat Design Reviews

- TK/IQ studies to support the recommendations of the Panel could be planned
- The next update for Diavik's closure plan is due at the end of 2015

## What are your ideas?

- How do you feel about the Panel now reporting directly to Diavik?
- What should Diavik do about the other recommendations in past reports?
- Do you agree with the Panel's purpose?
- What should be the Panel's goals?
- Is there anything else you need from Diavik to do this work?
- What topics should be planned for discussion?
- When are the best times to meet?

# Diavik Diamond Mines



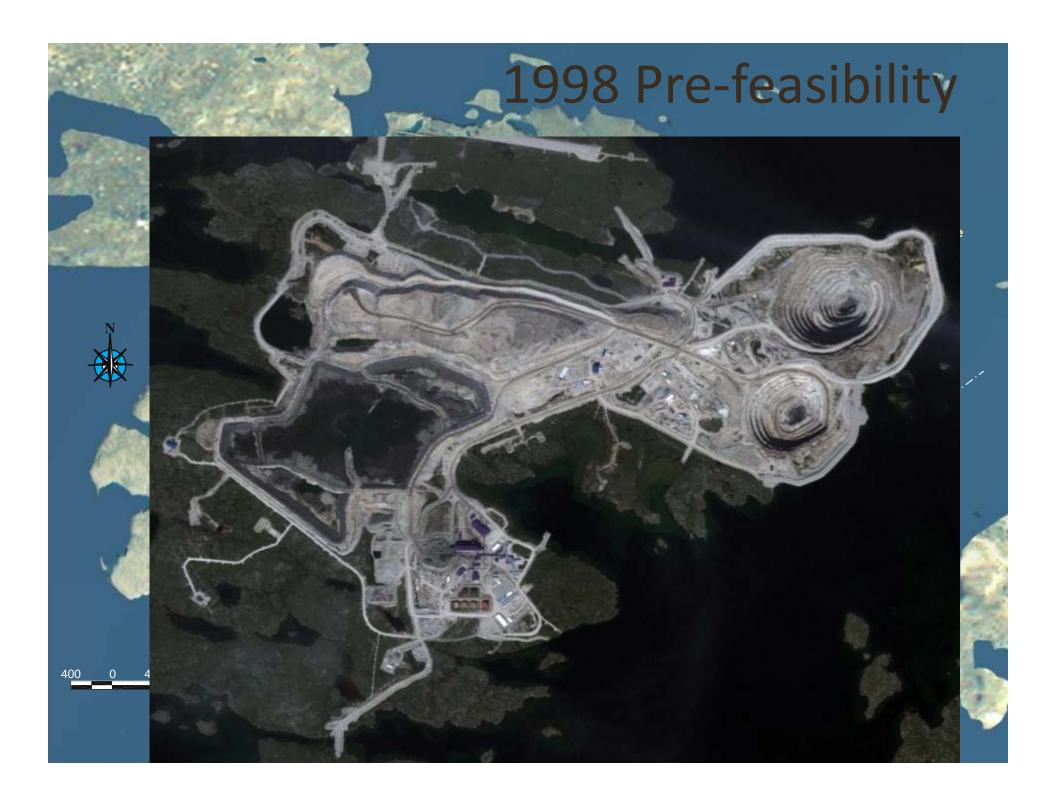
# **PKC Closure Planning**

#### **Content**

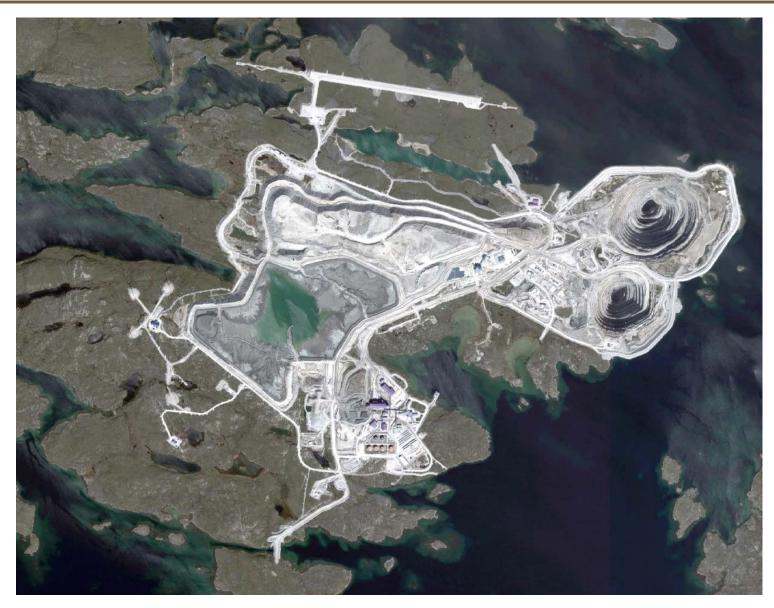
Closure Plan – How we got here

The PKC - focus for TK Panel Session 6

- What it is and where it is
- Closure plan development
- Preferred closure option
- Key information requests from TK Panel



# Overview of Closure Plan by Area



# Open pits



# Rock Pile









# North inlet



# Infrastructure









## **PKC**

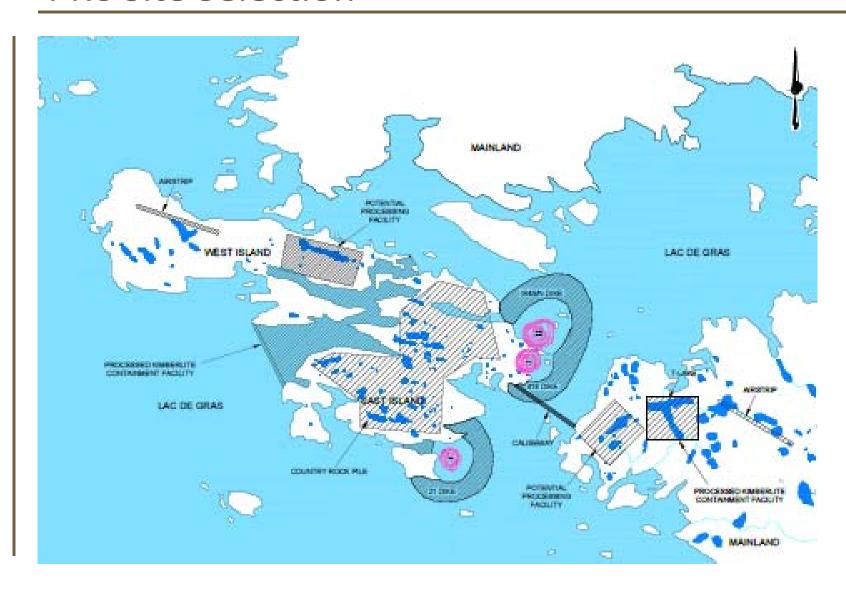








# **PKC Site Selection**



# 2001 Closure Option for PKC



### PKC Closure - current objectives

- No adverse affects on people, wildlife or vegetation.
- Physically stable area to limit risk of failure that would affect safety of people or wildlife.
- Prevent processed kimberlite from entering the surrounding land and water.

#### Diavik Closure Goals

- Land and water that is physically and chemically stable and safe for people, wildlife and aquatic life
- Land and water that allows for traditional use
- Final landscape guided by Traditional Knowledge
- Final landscape guided by pre-development conditions
- Final landscape that is neutral to wildlife being neither a significant attractant nor deterrent relative to pre-development conditions
- Maximize northern business opportunities during operations and closure
- Develop northern capacities during operations and closure for the benefit of the north, post-closure
- Final site conditions that do not require a continuous presence of mine staff

### PKC Closure – assessing the options



# 16 Options

Table 2-1: Alternatives Attributes Summary

	14010 2 1.7110	•		•		•								
	ALTERNATIVE	Water pond at closure	Domed, no water pond	Existing PK slimes untreated	Existing PK slimes treated	PK slimes removed	Future PK slimes treated/removed	Changes to operations	Capital expenditures during operations	Progressive closure and reclamation	All reclamation post-ops	Changes required to mine plan	PKC footprint expansion	Active ground freezing
1	2001 Base Case, 5 m Type I rock over till cover, with coarse PK spacer over PK slimes		х	Х							Х			
2	2011a closure concept (nominal cover, residual pond with outlet, PK slimes untreated)	х		Х			Х	х	Х	Х				
3	2011b closure concept (minimal thickness domed cover, PK slimes untreated)		х	Х			х	Х	х	Х	Х			
4	Do nothing	Х		Х										
5	Minimal intervention													
6	Dredge PK slimes to pit post-operations, backfill with rock		Х			Х	Х				Х			
7	Dredge PK slimes to pit in last year(s) of operations, backfill with rock		х			х	х	Х	?	х				
8	Treat and deposit PK slimes to Pond 6		Х		Х	Х	Х	Х	Х		Х		Х	
9	Treat & redeposit slimes to PKC facility, cap as per 2011b plan (essentially the same as 3)	Repeat of option 3 but with more specificity on slimes treatment methodology, so redundant.												
10	Change operation to create thickened, non-segregating fine PK		Х	X				Х	Х	Х				
11	Filter fine PK and develop as dry stack		Х	Х			Х	Х	Х	Х			1.	
12	Use paste plant to filter fine PK		Х	Х			Х	Х	Х	Х				
13	Use freeze/thaw cycling to consolidate fine PK						Х	Х	Х	70.07	Х		Х	
14	Treat PK slimes in place (ground improvement)		Х		Х		Х				Х			
15	Engineered/floating cover or liner encapsulation over PK slimes	х		х							Х			
16	Thermosyphons/tubes to enhance & accelerate freezing		Х											Х

### 5 Options

Option 1A – dry cover (rock) – semi-fluid PK removed with treatment and re-beaching during operations.

Option 1B – dry cover (rock) – semi-fluid PK removed by dredging to a pit/underground at end of operations.

Option 2 – wet cover – semi-fluid PK left in place

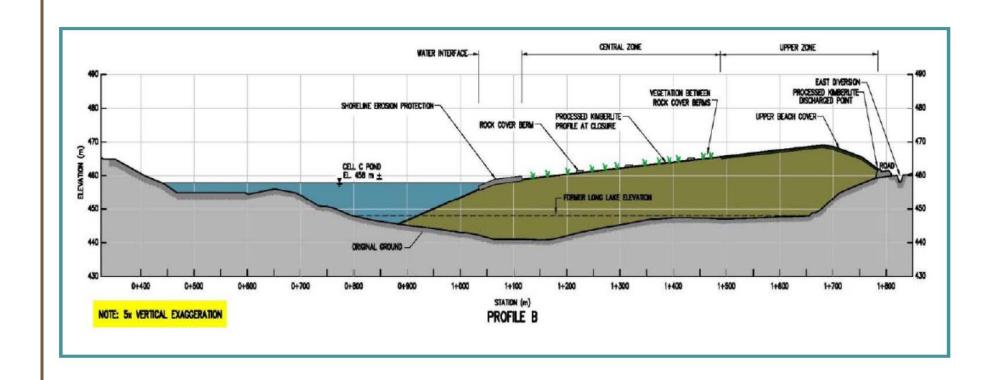
Option 3A – wet cover – semi-fluid PK - removed with treatment and rebeaching during operations.

Option 3B – wet cover (rock) – semi-fluid PK removed by dredging to a pit/underground at end of operations.

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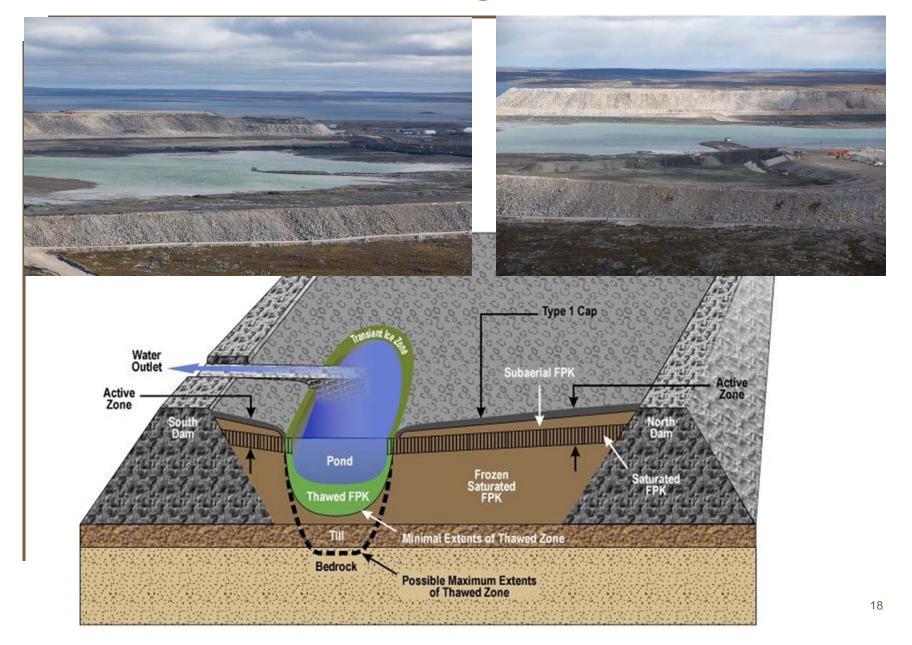
## Ekati's Preferred Option (an example)



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Template #: DCON-029-1010 R2

## Preferred Closure Design

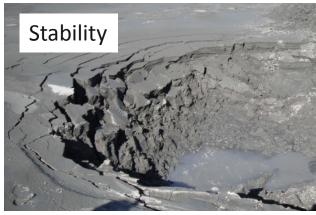


### PKC Closure – Requested Input from PK Panel

- 1. Inclusion of a pond in the final closure landscape
- 2. Shoreline design options
- 3. Wildlife use of the area
- 4. Features to help clean/heal drainage

# Some reasons for a pond

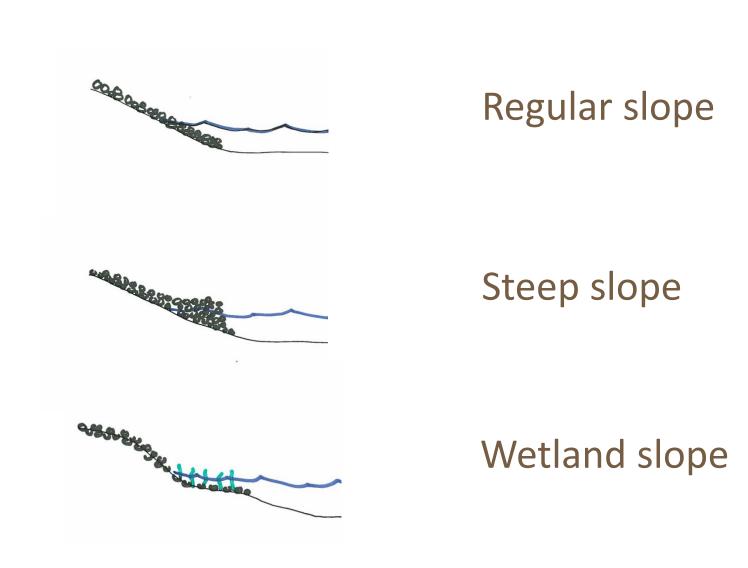








## Shoreline options



## Wildlife use



# Drainage paths



### PKC Closure – Requested Input from PK Panel

- 1. Inclusion of a pond in the final closure landscape
- 2. Shoreline design options
- 3. Wildlife use of the area
- 4. Features to help clean/heal drainage

### Questions and Answers from Diavik's PKC Closure Planning Presentation to the TK/IQ Panel (Discussion #6) – 25 October 2013

- Q: How long does it take for the material to settle away from the water?
- A: In the summer it would be a day maybe, in the winter its a little harder because it'll freeze along the way and it sort of forms blocks of frozen kimberlite that then might get stuck on the beach and won't thaw again until next summer.
- Q: Could processed kimberlite (PK) be used for animal paths or would it create dust or harm wildlife?
- A: Coarse PK is a good construction material but we would want to think more about using it outside of the PKC area before using it for wildlife paths, or the like. The physical properties of it are challenging. It may take around 100 years before the slimes consolidate.
- Q: How do you know it will take 100 years, 200 years?
- A: Its an engineering estimate so they do tests where they actually put loads on it to try and force it to settle this would simulate what time would do. It's a long time, it may not be 100 years, it may not be 50 years, but it's a long time before it would settle.
- Q: Are there chances that caribou will get bogged down in it?
- A: The material is not a problem where it is right now, underneath the pond. It will be a problem at closure because we don't want it to be an exposed material that caribou or any animal could get into as there is a chance they could very easily get stuck.
- Q: Possible uptake of metals in plants if used? What are the other concerns that Diavik has about the PKC?
- A: Our concerns for the closure of the PKC are the stability of the slimes, how the slimes will react down the road and also the water in the PKC because the slimes will always be in contact with the water.
- Q: On closure couldn't you put a layer of courser material on top? For example, use crushed granite to cover the whole PKC on closure.
- A: That works very well for the beaches and it works well for the coarse PK, but it doesn't work for the slime because it doesn't have the strength to have rock on top of it.
- Q: Can those chemicals in the PKC be harmful to fish in this area or in the river? Would it still be harmful in 100 years or 200 years once it settles down?

- A: As far as we know now, the water is safe for the caribou to drink from the science perspective, and for people. We are unsure as far as the fish and the bugs, as they are the most sensitive to the differences.
- Q: This is not the first diamond mine. I am pretty sure there have been other ponds like this and maybe other mines might have an idea already on how to deal with this.
- A: There has not been a successful diamond mine closure that we could use; they are either abandoned or still operating.
- Q: How big of a spillway are you going to be putting in? Will it go all the way to the bottom?
- A: The spillway would be about halfway down.
- Q: How deep is the water from the slime? Couldn't you keep the whole pond frozen all the time?
- A: We don't know yet how deep the water would be, but the pond would be deep enough that the wind wouldn't move it.
- Q: Can you send the drainage from the pond to the treatment plant you mentioned?
- A: When the mine is closed, we don't plan to have the treatment plant there anymore. What we want is for the water to be good enough that it can go to the lake so that we don't have to keep a treatment plant there.
- Q: To ensure that clean water gets down to the lake, would it be possible to build one or two cells before the lake to clean the water on the way to the lake? Between the PKC and Lac de Gras, somewhere along the route?
- A: We do have three of those right now (shown on map).
- Q: Right now as it stands, with that sludge on the bottom of the pond and the water on top, can the water kill the caribou or the ducks that land?
- A: Not if it drinks it, but if it were to get in there I could see it getting killed by getting stuck.
- Q: Would an animal die later on from the water?
- A: No.





# Diavik Diamond Mine

TK Panel for PKC Closure
October 24-28, 2013



# July 2006 Off Site

Aerial
Observation
Off Site

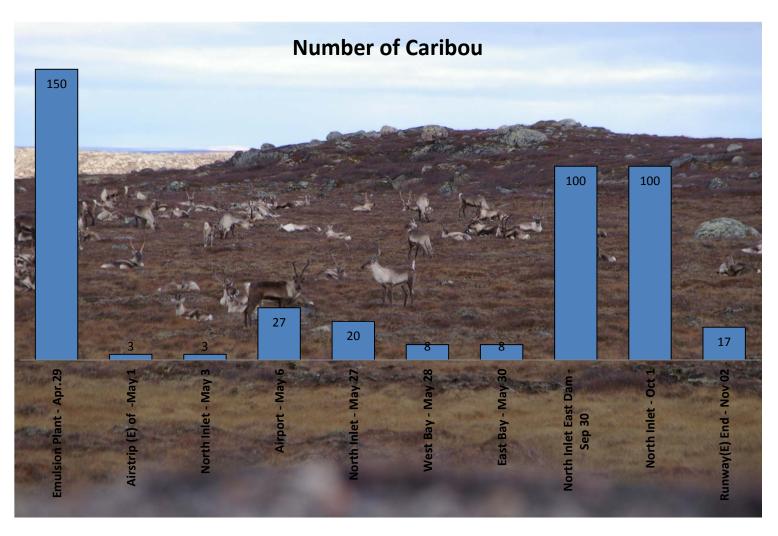


# 2009 Activity Budget Off Site

## Sept. 25



### 2009 Caribou Observations on Site



## 2009 On Site

May 6 Nov. 2



#### 2009 Caribou Observation Locations

Apr. 29

May 1

May 3

May 6

May 27

May 28

May 29

Sep. 30

Oct. 1

Nov. 2

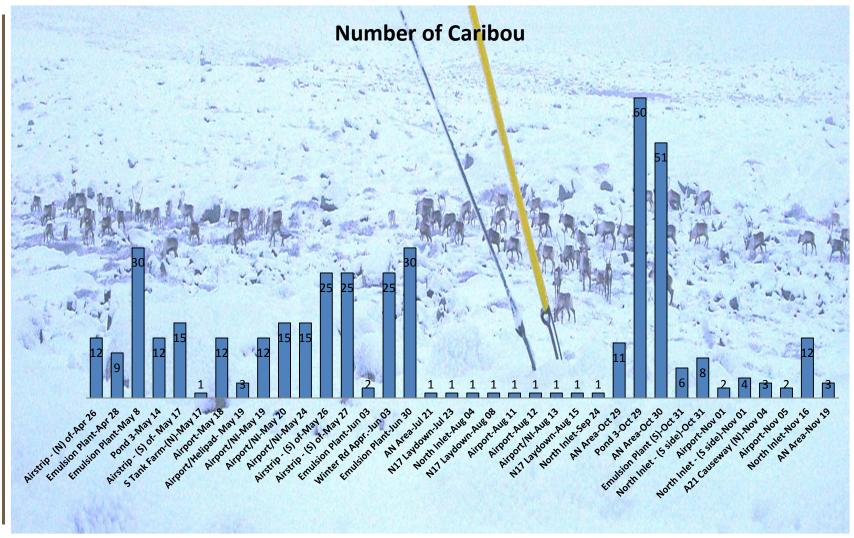


#### 2010 Off Site Observation

Oct. 14



#### 2010 Caribou Observations on Site



Document #:

Template #: DCON-029-1010 R5

2010 Activity Budgets on Site

Document #:

May 08

May 24

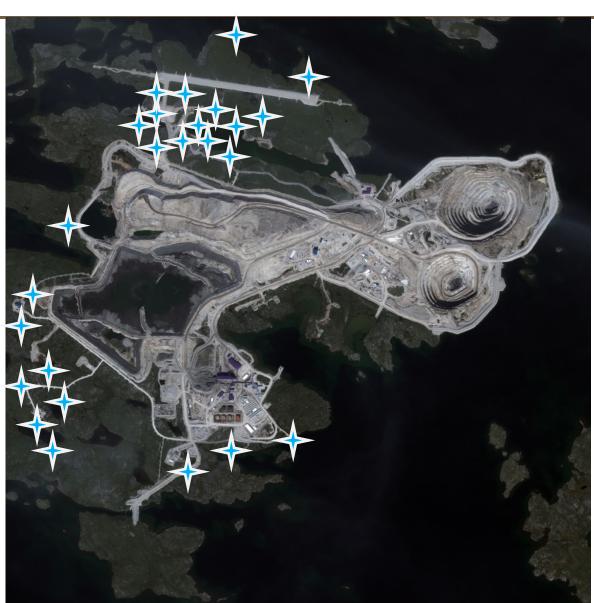
Aug 11

Oct 29

Template #: DCON-029-1010 R5

#### 2010 Caribou Observation Locations

Apr 26 Apr 28 May 8 May 14/17 May 17 May18 May19 May19/20 May 24/26/27 June 3 June 3 Jun 13 Jul 21/23 Aug 4/8 Aug 11/12/13/15 Sep 24 Oct 29 Oct 29/30 Oct 31 Oct 31 Nov 1 Nov 4 Nov 5 Nov16 Nov 19



### 2011 Off Site Observation

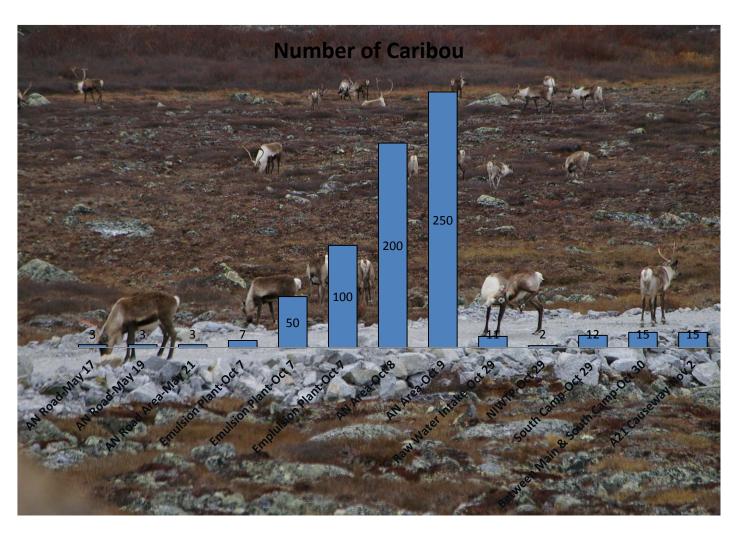
Oct. 12



Document #:

Template #: DCON-029-1010 R5

### 2011 Caribou Observations on Site



# 2011 Caribou on Site

May 17

Oct 9

Nov. 2



Document #:

Template #: DCON-029-1010 R5

#### 2011 Caribou Observation Locations

May

17/19/21

Oct 7

Oct 7

Oct 7

Oct 8

Oct 9

Oct 29

Oct 29

Oct 30

Nov 2

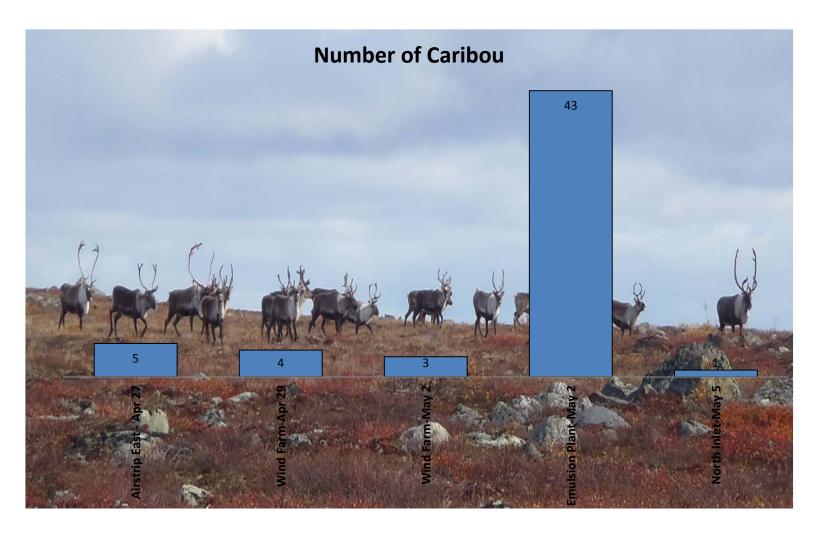


#### 2012 Off Site Observation

Sep. 30



#### 2012 Caribou Observations on Site



# 2012 Incidental Observations

May 5

- North Inlet



#### 2012 Incidental Observation Locations

April 27

April 29

May 2

May 2

May 5

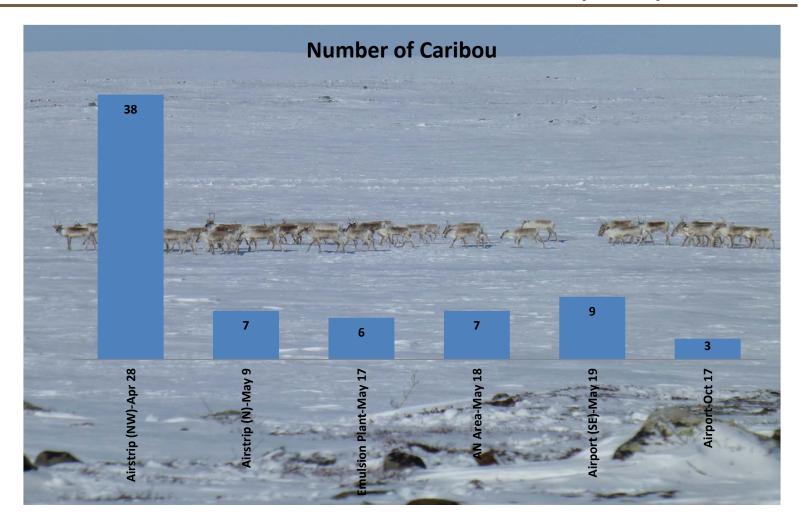


### 2013 Off Site Observation





## 2013 Caribou Observations on Site (YTD)



#### 2013 Incidental Observations

Apr 28

May 9

May 18 May 19



#### 2013 Incidental Observation Locations

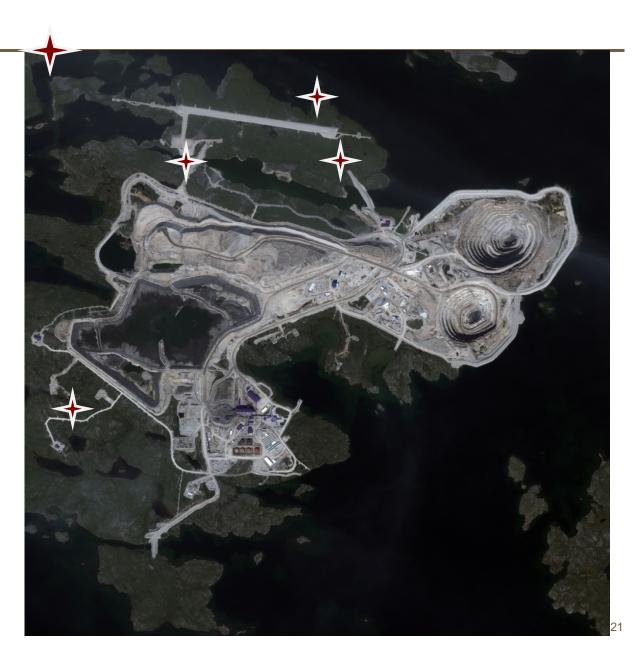
Apr 28

May 09

May 17 May 18

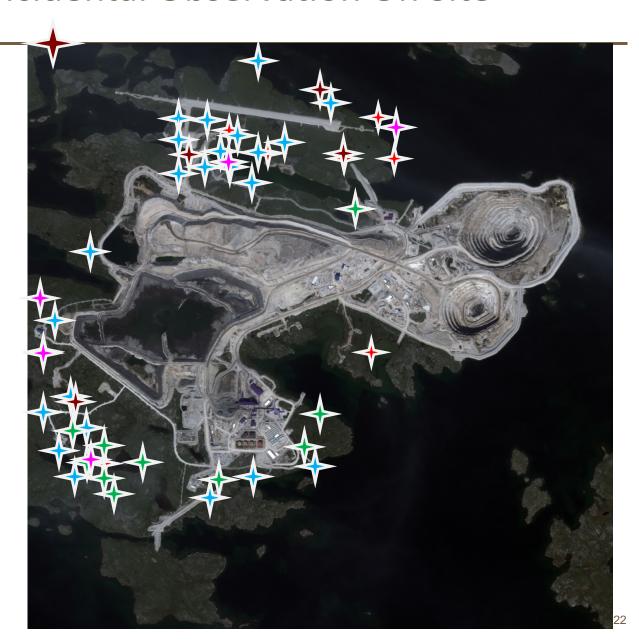
May 19

Oct 17



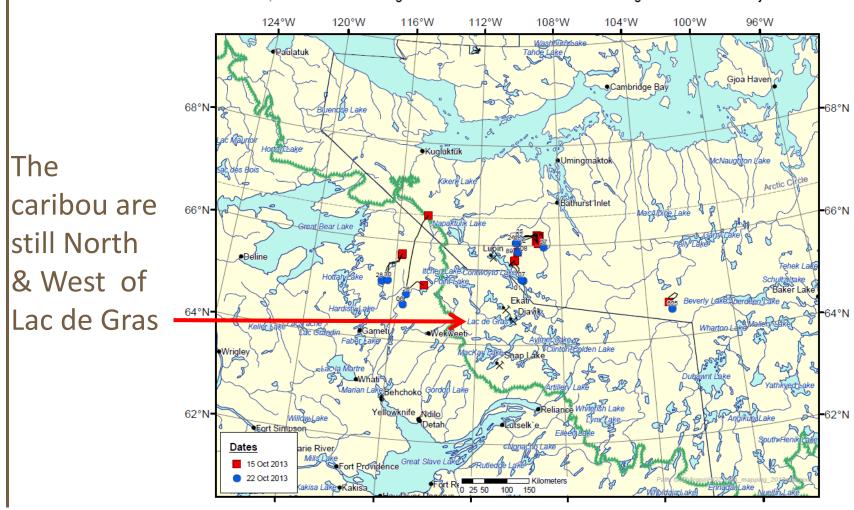
#### 2009-2013 Incidental Observation On Site

- 2009
- 2010
- 2011
- 2012
- 2013



#### Collared Caribou Location Map

22 Oct 2013, Movements of barren-ground caribou cows collared on winter ranges of Bathurst and adjacent herds.



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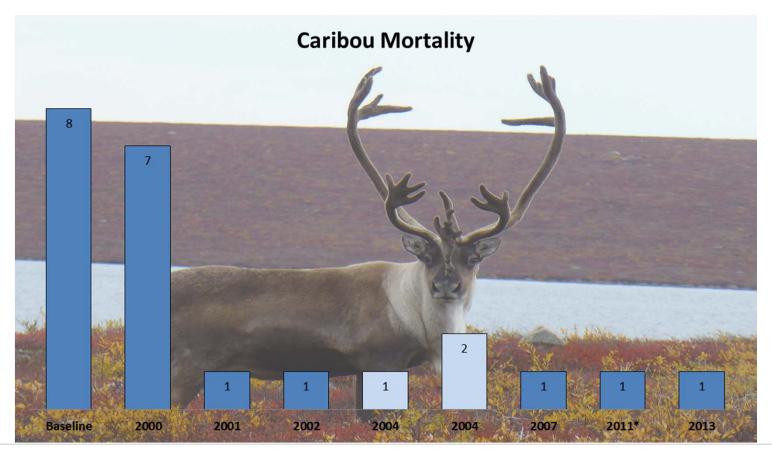


#### Diavik Diamond Mine

Click here to add subtitle
Enter date – September 10, 2013 (use this format)



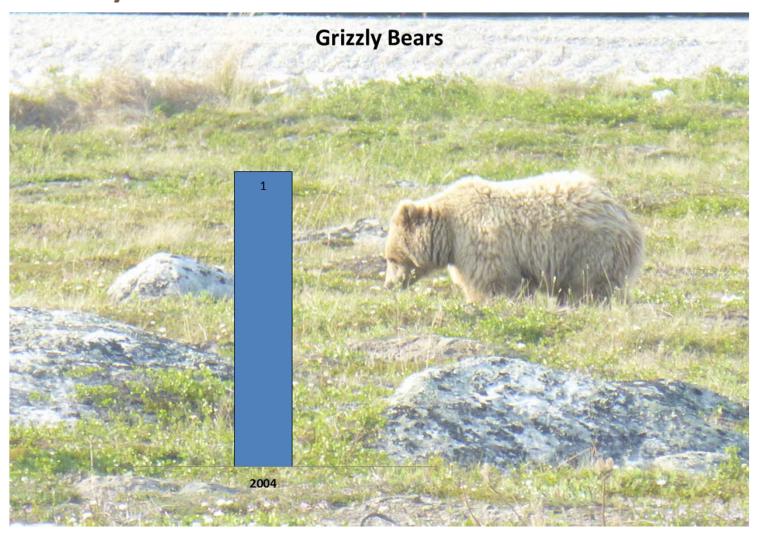
#### Caribou Baseline - 2013



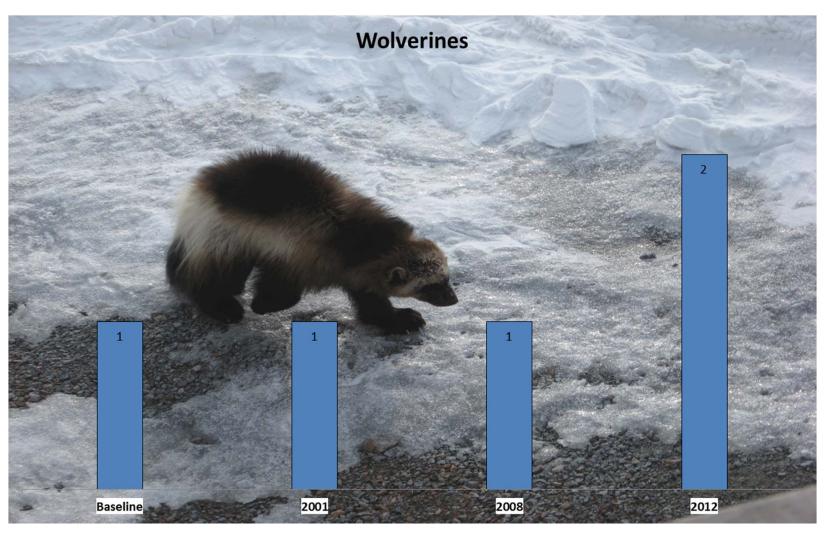
\*Two other caribou carcasses were seen off-site during 2011, but were not located on East Island and were not able to be visited by DDMI staff due to ice conditions and the presence of wolves in the area. 1 was 200 m (600 ft) off A154 dike in June, the other was 400 m (1200 ft) off A21 causeway in November

Document #:

## Grizzly Bears Baseline - 2013

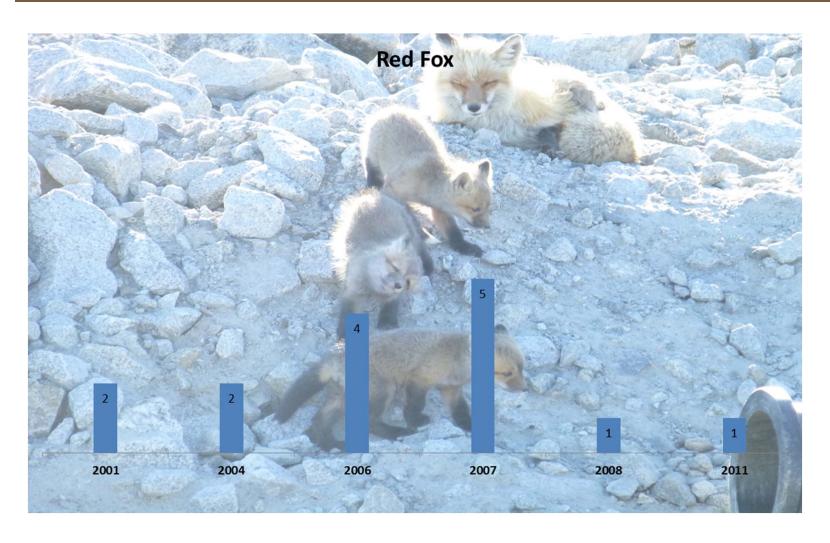


## Wolverine Baseline - 2013

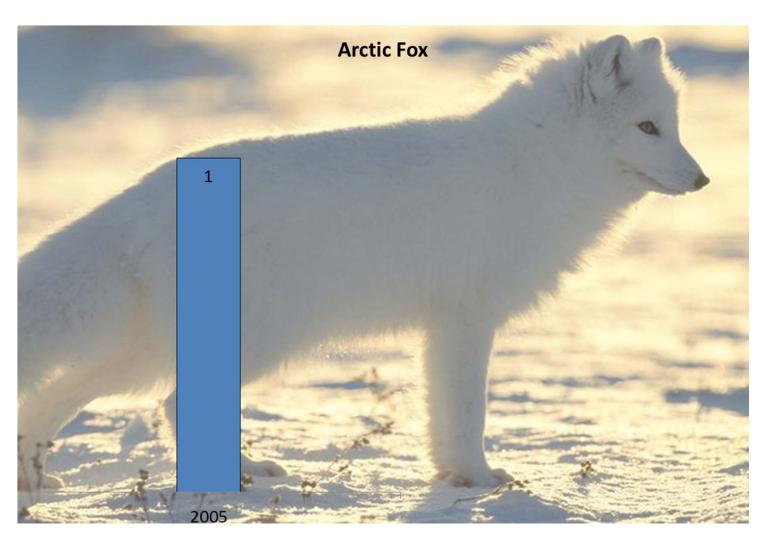


Document #:

#### Red Fox Baseline - 2013

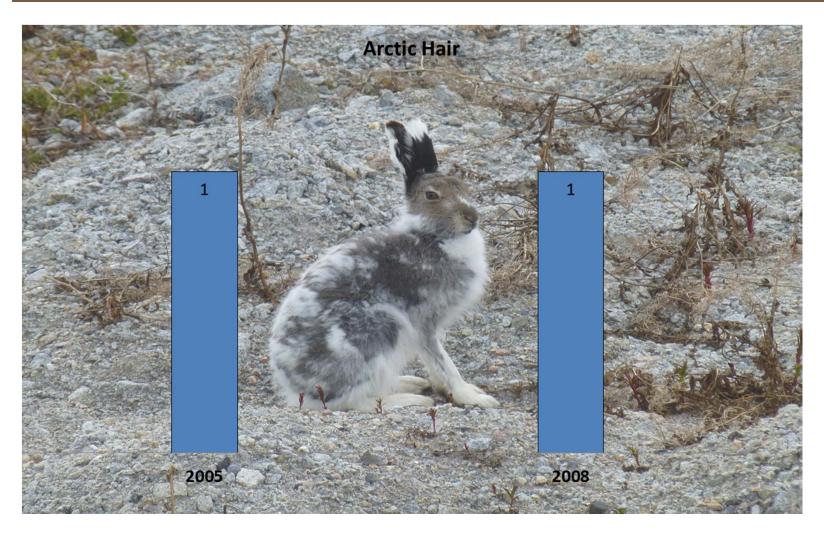


#### Arctic Fox Baseline - 2013



Document #:

#### Arctic Hair Baseline - 2013



Document #:

#### Birds Baseline - 2013

Blue - Peregrine

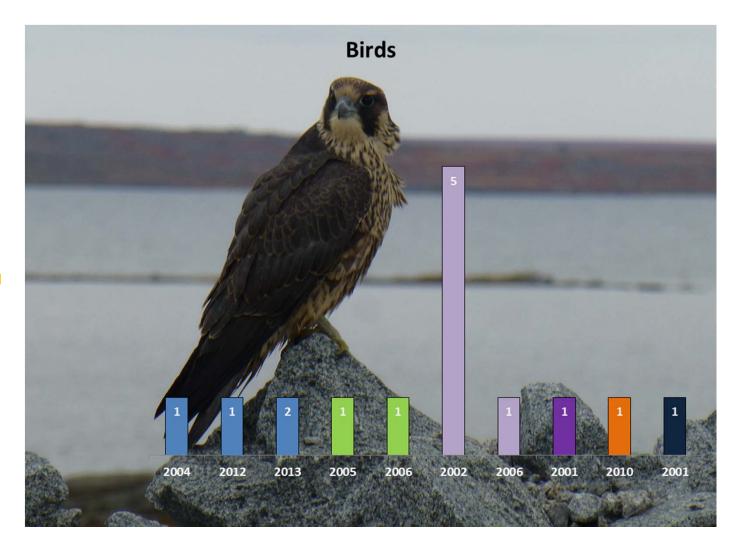
Green - Ravens

Violet - Red Throated Loon

Purple – Scaup Duck

Orange - Short Eared Owl

Dark Green - Canvas Back Duck



Document #:

#### Relocations Baseline - 2013



#### Appendix E

**Presentation by TK Panel** 

# TK Panel Session #6 PKC Closure Recommendations

Diavik Diamond Mine October 24-28, 2013

## Introduction

- The TK Panel has considered the preferred option of a pond to cover the slurry/slime within the PKC area for closure as put forward by DDMI and has determined that the TK Panel preference is for the removal of the slurry/slime from the minesite upon closure.
- Removing the slurry/slime offsite remains the preferred option until DDMI can demonstrate through chemical and toxicological analysis that the slurry/slime is not harmful to the environment (i.e. plants, wildlife, fish, humans).
- This preference is based on the acknowledged problems created by leaving the slurry/slime onsite, in particular safety concerns for people and wildlife and the uncertainties associated with impacts from environmental change (e.g., a rise in temperature and associated drought, permafrost melting, earthquakes) long into the future.

## Rationale

• The removal of slime/slurry provides a level of comfort and certainty to northern communities that is not otherwise available. Further, it provides an opportunity to return the landscape to a more natural state which is a key goal expressed by the TK Panel throughout sessions to date.

#### Recommendations

- The TK Panel is prepared to provide advice on this option, assuming the area is healed, cleaned, healthy and safe. The TK Panel has established the following recommendations specifically for the:
  - PKC Flatland
  - Lake and Shoreline
  - Drainage
  - Dam Design

#### **PKC Flatland**

- Cover PKC area with a combination of natural sand and soil to ensure that the PKC is not over-heating the area (and melting permafrost) and to support natural revegetation
- If there were eskers within the PKC area, reclaim these to their original state as close as possible
- Revegetate the PKC area according to baseline traditional knowledge and science
  - Create wildlife habitat and stabilize ground with transplanted willow
  - Create marshy areas with moss, lichen and berries

### Lake and Shoreline

- Return the lake and shoreline to their natural states, as much as possible (e.g. gradual slope)
- Ensure shoreline is stable
- Once the slurry/slime is removed, line the lake bottom with granite gravel and rocks and other natural materials that were there before
- Re-vegetate the lake with water plants of this area
- Re-stock lake with fish and bugs

## Drainage

- Recreate small ponds along the drainage route to encourage settling and healing of the water and fish habitat
- Support the drainage streams to encourage fish to migrate from Lac de Gras to the reclaimed lake
- Make the closure lake as similar to the original lake as much as possible

## Dam Design

- Provide sufficient travel-ways for caribou and muskox over the dam through re-sloping and topping with smaller material
- Recognizing that caribou may return, provide areas of soft materials that are good for caribou feet so that they may pass over the reclaimed site
- Leave some areas steep to encourage snow accumulation for wolverine and other denning wildlife (e.g. wolf, bear, fox, ground squirrel, etc.)
- Open up sections of the dam to recreate natural water flow

## Recommendations

- The TK Panel requests that DDMI starts to remove any new slurry/slime from site, effective immediately
- The TK Panel requests that DDMI provide an overview of the sixteen closure options that have been considered and the preferred five options identified (including costs). Further, the TK Panel requests that DDMI provide an overview and cost estimate to remove the slurry/slime from the mine site.
- The TK Panel recommends that DDMI explore ways of treating and removing slurry/slime with other diamond mines in the area to make it feasible

## Slurry / Slime NOT Removed

• The TK Panel recognizes that DDMI has a preferred option as well as alternative ideas that have not been ruled out, some of which have been suggested by the TK Panel as well as from internal DDMI sources.

## Slurry / Slime NOT Removed

The TK Panel is prepared to provide advice on these options and has established the following guiding principles, all of which would have the slurry/slime remain onsite:

- Discourage wildlife from accessing and using the PKC area through traditional ways of directing them (e.g. rock piles, flags, spruce, wolf scat, muskox odour or hair)
- Recognizing that wildlife may enter the pond (regardless of efforts to discourage them), ensure that they are able to enter and exit the pond safely

## Slurry / Slime NOT Removed

- Explore alternatives to the pond as a means of containing the slurry/slime (e.g. making a dome from the surrounding rock, or through a concrete dome)
- develop slurry/slime treatment options through continued research and technological advance
- Revegetate with both shoreline and water plants of this area according to traditional knowledge and baseline acquired by DDMI
- Use natural vegetation to the area to help heal the water before it is released

Appendix F

**Future Topics** 

## TK Panel Topics & Schedule Suggestions – 2 yrs

#### **DDMI**

- Revegetation
- Review of landscape at closure
- Post-closure monitoring: wildlife interaction and water
- Fish Habitat Design Reviews

#### TK Panel (as per Session #5)

- Caribou
- TK Values that Support Recommendations
- Aboriginal Participation in Closure
- Cultural Landscapes / Vegetation
- Air Quality
- Pits / Underground

#### Appendix G

**Evaluation Form & Summary** 

#### TK Panel Workshop Evaluation Form

Thank you for participating in TK Panel workshop held at the Diavik Diamond Mine from October 24 to 28, 2013. We hope you enjoyed your time at the workshop. We appreciate your constructive feedback on your experience of the workshop. Your responses will help us maintain and improve future workshops.

1.	How would you rate how you were <b>informed about your role</b> for the Panel workshop?
0	Very good Good Neither good nor poor Poor Very Poor
0	How would you rate the workshop for working and communicating together?  Very good Good Neither good nor poor Poor Very Poor
0	How would you rate the workshop for <u>mutual respect among participants</u> ?  Very good  Good  Neither good nor poor  Poor  Very Poor
0	How would you rate the opportunities for you to share your knowledge and experiences? Too many opportunities Enough opportunities Too few opportunities
0	How would you rate the documenting of TK during the workshop?  Very good Good Neither good nor poor Poor Very Poor

0000	How would you rate the facilitation of the workshop?  Very good  Good  Neither good nor poor  Poor  Very Poor
0	How would you rate the <u>outcomes and findings of the workshop</u> ?  Very good Good Neither good nor poor Poor Very Poor
0	How would you rate the <u>amount of time</u> to discuss the topic(s) during the workshop?  Too much time Enough time Too little time
0	How would you rate the <u>venue and food</u> for the workshop? Very good Good Neither good nor poor Poor Very Poor
10.	How useful was the site tour for understanding the area?
0	Useful Neither useful nor not useful Not useful
0	How would you rate the <u>logistics</u> for the workshop (e.g., hotel, travel, and honoraria)?  Very good Good Neither good nor poor Poor Very Poor
0	Overall, how would you rate the workshop? Very good Good Neither good nor poor Poor Very Poor

Would you prefer to have <u>future meetings</u> at the Diavik mine site or in Yellowknife?
<ul><li>Mine site</li><li>Yellowknife</li></ul>
13. What were the strengths of the workshop? What did you enjoy about the workshop?
14. How could the workshop be improved?
Please specify your organization:
Date:

#### Summary of Evaluations - TK Panel Session #6 (PKC) October 2013

Question	Very Good	Good	Neither Good nor Poor	Poor	Very Poor
Informed about role	6	10	0	1	1
Working & Communicating					
together	10	7	1	0	0
Mutual respect among					
participants	13	5	0	0	0
Documentation of TK	7	10	1	0	0
Facilitation of workshop	12	6	0	0	0
Outcomes of workshop	6	11	1	0	0
Venue and food	12	6	0	0	0
Logistics (travel, honoraria)	9	6	3	0	0
Overall rating	12	6	0	0	0
Totals	87	67	6	1	1

Question	Too many/ much/ useful	Enough/ Neither Useful or Not	Too little/ few/ Not Useful
Opportunities to share			
knowledge & experience*	2	14	1
Amount of time for discussions	1	14	3
Usefulness of site tour	14	4	0
Total	15	32	2

<sup>\*1</sup> person did not respond

	Site	Yk
Preferred location for future		
meetings*	15	9

<sup>\*</sup>some people answered both site & Yk

#### **Summary of Comments**

Strengths	# comments
Working together	4
Elder involvement	
Supporting each other	5
Strength of Panel - learning &	
listening	4
Good topics/learning more	
about Diavik	2
Shared understanding &	
ideas (both Diavik & Panel)	2
Answers from Diavik	
professionals	
Learning from the Elders	4
No tables - more comfortable	
Amount of time	
Young people participating	-
Better controlled than	
previous sessions	

Improvement Opportunities	# comments
More youth	7
Women with TK	4
Talk more slowly for	
interpreters	
Work closely with topics that	
DDMI needs	
More Elders	
More tours/sightseeing	
More input from youth/ youth	
session	3
Pens that work!	
Notebooks for youth	
Increase focus/forward	
looking	
Stick to agenda more	
Some people taking too long	
to make their point	
Provide maps for site visit	