

## **APPENDIX IX**

# **TRADITIONAL KNOWLEDGE PANEL REPORTS AND COMMUNITY ENGAGEMENT SUMMARIES**

## **APPENDIX IX-1.1**

### **A Way of Life – Caribou Monitoring**

# A WAY OF LIFE

## **Bridging Science and Aboriginal Knowledge in Caribou Monitoring at Diavik Diamond Mine**

**Technical Report  
March 14-15, 2012 TK/IQ Panel Session**

*Presented by*

### **The Traditional Knowledge and Inuit Qaujimagatuqangit Panel Environmental Monitoring Advisory Board (EMAB)**

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## Report Summary

How can Aboriginal Traditional Knowledge/Inuit Qaujimajatuqangit (TK/IQ) be used to guide monitoring of caribou behaviour at Diavik? This is the question that TK/IQ Panel members were asked to explore during a two-day session on March 14-15, 2012.

This document includes four main sections reflecting the discussions at the March TK/IQ Panel session:

- 1. People and Caribou in the ?ek'adi (Lac de Gras) Area.** A discussion of Aboriginal people's relationships with caribou since time immemorial. This is what scientists call the "baseline" for caribou monitoring.
- 2. Aboriginal "Monitoring": A Way of Life.** Describes Aboriginal concepts and methodologies for the process that scientists call "monitoring."
- 3. Recommendations for Action: Monitoring Across Cultures.** Recommendations for accommodating TK/IQ approaches in the Standard Operating Procedures for monitoring caribou behaviour, as well as other general recommend
- 4. Introducing the TK/IQ Panel Team.** Session participants introduce themselves and talk about the experience and geographical knowledge base that they bring to the TK/IQ Panel.

## Recommendations for Action

Recommendations for action are provided in this document related to the following topics:

### Operating Procedures (SOP) for Monitoring Caribou Behaviour

- Capacity-building
- Methods
- Indicators (behaviours, herd composition, caribou health, environmental conditions)

### General Caribou Monitoring and Management

- Managing caribou movement
- Using all the knowledge that we've shared
- Working with our future leaders

## Conclusion

The TK/IQ Panel team together comprises a rich and varied body of knowledge and experience. In reviewing this document, panel members made it clear that the discussions over the two days of the March session represent only a small fraction of the knowledge they and knowledge holders in their communities have to share about the wildlife and landscape in the Diavik area. In particular, much work remains to be done in reviewing, assessing and adding to existing caribou TK/IQ documentation. As well, the TK/IQ Panel is eager to learn more about the totality of monitoring, management and research being conducted by Diavik about caribou. A full session focused on caribou in the future should include presentations about the Traditional Knowledge and scientific State of Knowledge about caribou in the Diavik area.

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APPENDIX B – DIAVIK STANDARD OPERATING PROCEDURES – CARIBOU SCANNING AND ACTIVITY BUDGETS

## Background: TK/IQ and Diavik Diamond Mine

How can Aboriginal Traditional Knowledge/Inuit Qaujimaqatuqangit (TK/IQ) be used to guide caribou monitoring at Diavik? This is the question that TK/IQ Panel members were asked to explore during a two-day session on March 14 and 15, 2012.

This TK/IQ Panel session was a new effort to establish the panel as a standing body so as to strengthen the role of Aboriginal TK/IQ holders in mine monitoring. In previous years, TK/IQ Panel sessions had been one-off events related to single issues. The March session aimed to build on recommendations from a planning session on May 20, 2011. Because this TK/IQ Panel is new, the group also took time to learn about each other's knowledge and experiences.

### EMAB and the Mine

The discovery of diamonds at Lac de Gras (Fat Lake in English, ʔek'atı in Yellowknives Dene Kwèka'tı in Tłı̄chǫ; "Tahikpak" in Inuinaqtun; Łuecho Kúé or Łuezáné in Dēnesų́líné, and newly dubbed François Beaulieu Lake by Métis TK/IQ Panel member Ed Jones<sup>1</sup>) in 1991 led to the biggest diamond rush in Canadian history. Three years later, diamonds were found on a 20 kilometre square island, known in English as East Island. Diavik Diamond Mines Inc. was established in 1996. Five Aboriginal governments and organisations were identified as Parties affected by the mine. A year later, an Environmental Agreement (EA) was signed between the Parties. Canada, the Government of the Northwest Territories, the five Aboriginal Parties (Kitikmeot Inuit Association, Dogrib Treaty 11 Council, Łutsel K'e Dene Band, North Slave Métis Alliance, Yellowknives Dene First Nation), and Diavik. EMAB was established by the EA with the task of ensuring that all those responsible for protecting the Lac De Gras environment are doing their jobs. EMAB is unique in that it was the first such board to include as signatories the Aboriginal Parties, whose primary interest is protecting the land of their ancestors for future generations.



Figure 1: Celebrating the Participation Agreement. Source: [www.businessweek.com](http://www.businessweek.com)

<sup>1</sup> For narratives related to these placenames, see 2012 TK/IQ Panel Technical Report 2 (June 2012).

An Environmental Assessment was conducted including a TK/IQ Study. The necessary Access and Benefits Agreements and permits and licenses for the mine were in place by 1999. Two years later, construction of the mine began, and production began in 2003.

## EMAB and the TK Panel

EMAB was mandated by the EA to serve as an independent public watchdog of Diavik. The EA supports the principle that Traditional Knowledge/Inuit Qaujimajatuqangit is fully considered and used along with science. The TK/IQ Panel is mandated to work with local communities and assist EMAB in ensuring that Aboriginal knowledge is appropriately and meaningfully incorporated into the planning and management of the mine.

Over the years, EMAB has convened a number of activities engaging with TK/IQ, including several on-the-land camps. Reports on some of these activities are available on the EMAB website at [www.emab.ca](http://www.emab.ca). Not all of the events were TK/IQ Panel sessions. Two of the events were jointly convened by EMAB and the Independent Environmental Monitoring Agency (IEMA) for Ekati Diamond Mine.

Reports on the earlier events repeatedly mentioned people's frustration that it seemed they constantly had to repeat themselves at every meeting. They didn't see evidence of decisions or actions influenced by TK/IQ shared. The March 2012 session aimed to address this frustration by reviewing messages from previous work, and working toward realistic recommendations that could be used by Diavik right away.

*"Are we wasting our time?"*  
(Caribou Monitoring Camp, 2005)

*"Community members have to repeat themselves so many times"*  
(Charlie Catholique, 2011)

*"Everything needs to be reviewed at each meeting and people end up repeating themselves a lot"* (Bobby Algona, 2011)

## TK/IQ Activities 1999-2012

Year	Workshop/Panel session	Monitoring Camp
1999		Diavik Science Camp, including TK teachings by Muriel Betsina
2001	Caribou Monitoring Workshop	
2002	Wildlife Effects Workshop	
2003	TK/IQ Monitoring Workshop (with IEMA)	Łutsel K'e youth-elder camps
2004	Fish (No Net Loss), and Fencing TK/IQ Panel sessions	Water, caribou, fish camps
2005		Water quality, fish tasting, caribou camp
2006		Water, dust, fish, caribou camp
2007	Environmental Monitoring Workshop (Behchokò)	
2008		Water
2009	Environmental Monitoring Workshop (Kugluktuk)	Łutsel K'e youth-elder camps
2010	Wildlife Monitoring and Environmental Agreement Workshops	
2011	TK/IQ Panel Workshop (with IEMA)	
2012	Caribou Monitoring and Closure and Reclamation TK/IQ Panels	



**Figure 2: Muriel Betsina and students talking about TK, Diavik Science Camp #1, July 1999. Credit: Peter Hardy**



## The Caribou Monitoring Session

The TK/IQ Panel session on caribou monitoring on March 14-15 was facilitated by Deborah Simmons and Natasha Thorpe. The aims of the session were ambitious, including team-building and priority-setting, discussions of general approaches to TK/IQ monitoring, and a specific focus on developing recommendations for caribou monitoring.

For the last year two years, we've talked about caribou. It's come out good. We're putting information together because we don't want to lose caribou. Number one thing, I don't want to lose caribou. Even when I'm six foot underground, I want the caribou in Canada and the Northwest Territories. If we accomplish that, everybody is happy. – *George Marlowe*

The TK/IQ Panel had a lot of independence. Although EMAB Chair Doug Crossley shared welcoming remarks via speaker phone, just one EMAB staff person (Michèle LeTourneau) joined the group to listen and provide support.

Colleen English and Diane Dul of Diavik were invited to give a presentation about their current Standard Operating Procedures (SOP) for caribou monitoring, but panel members decided that they needed to spend the remainder of the session working on their own. Discussions took place on the general themes of team-building and priority areas of work within the TK/IQ Panel, as well as caribou monitoring approaches.



Figure 3: Diane Dul on the job at Diavik. Source: Diane Dul, Diavik Diamond Mine Inc.

As a TK Panel, we should have a united voice when we meet with Diavik. We need to be well prepared. We're not ready yet. – *Ed Jones*

Recommendations for Diavik's Caribou Monitoring SOP from the workshop were approved by EMAB and delivered to Diavik in April, 2012. A short technical report on the workshop process was delivered in May. The "*Thinking Like a Caribou*" document with details about the session results was reviewed at a panel session on June 26-28, 2012.

## Session Participants

### Facilitation

Deborah Simmons, SENES Consultants Ltd. and Natasha Thorpe, Thorpe Consulting Services

### Note Taker

Shelagh Montgomery, SENES Consultants Ltd.

### TK/IQ Panel Delegates

Kitikmeot Inuit Association	John Ivarluk, Bobby Algona and Mark Taletok
Lutsel K'e Dene First Nation	George Marlowe, August Enzoe, Alfred Lockhart
North Slave Métis Alliance	Ed Jones, Wayne Langenhan, Sheryl Grieve (plain language interpreter)
Tłı̨chǫ Nation	Pierre Beaverho (Whati, Day 2), Louis Zoe (Gameti, Day 2), Jonas Lafferty (interpreter), James Rabesca (interpreter)
Yellowknives Dene First Nation	Fred Sangris, Randy Freeman (YKDFN staff)

### Observers/Presenters

EMAB	Michelle LeTourneau, Doug Crossley (by phone, Day 1 opening)
Diavik Diamond Mine	Diane Dul, Colleen English (Day 1)



## What's in this Document?

This document includes four main sections, briefly described here:

- 5. People and Caribou in the ʔek'adı (Lac de Gras) Area.** A discussion of Aboriginal people's relationships with caribou since time immemorial. This is what scientists call the "baseline" for caribou monitoring.
- 6. Aboriginal "Monitoring": A Way of Life.** Describes Aboriginal concepts and methodologies for the process that scientists call "monitoring."
- 7. Recommendations for Action: Monitoring Across Cultures.** Recommendations for accommodating TK/IQ approaches in the Standard Operating Procedures for monitoring caribou behaviour, as well as other general recommend
- 8. Introducing the TK/IQ Panel Team.** Session participants introduce themselves and talk about the experience and geographical knowledge base that they bring to the TK/IQ Panel.

The document includes a mixture of summaries of key messages along with quotes from session participants that give examples or bring alive the messages with a story. We've also included photos as a way of helping readers to get to know the TK Panel Team and our resource people. We hope that this will make the messages more meaningful and useful for both Aboriginal communities and Diavik decision-makers. We welcome feedback!

## People and Caribou in the ʔek'adı (Lac de Gras) Area

An important aspect of caribou monitoring is documentation of what scientists call "baseline data." Aboriginal people know about this through their stories of their relationships with caribou from past to present. The past and present are the basis for learning about changes that are happening and will happen in the future. As George Marlowe puts it, "Us Dene people must love caribou. So that means monitoring caribou." Aboriginal people have a strong historical understanding of the whole huge landscape, our homeland and the homeland of the caribou. This is why our stories can't be limited to the scope of a single mine site.



Figure 4: George Marlowe

## Sharing Stories

*Bobby Algona*

The elders are always talking about our ancient past how we came to be Inuit or how this world came to be, especially my grandmothers telling stories late into the evening or early morning. Sometimes they get tired. We want to hear more alright, but they say, “There’s always tomorrow.”

There came a time when the Ice Age took over and started to take over the land. They talk about some of us staying behind. It got cold over here on this continent and people from the Far East went off to find warmer climates. As Inuit, we stayed behind to be with our land and utilize the land. In my feeling, that’s always been given to me by my grandmother’s stories. That’s my way of thinking how we came to be out here on the land long before other cultures started to come on this land. The whole story goes on and on forever, so I’m just keeping it short.



Grandparents are the Traditional Knowledge we have nowadays. All of our generation have kept that cultural experience out on the land, how to utilize the land. We were on the land for many, many thousands of years and living out on the land. Sometimes we go for gatherings and tell stories about where the caribou might be or where the hunting might be at times. We’d tell stories and then from that experience, we tend to help each other a lot through these stories.

Figure 5: Bobby Algona

## When the World was New

*Lisi Lafferty*

A couple of years ago, probably in the early 1990s, there were a lot of Aboriginal educators. We got together and we were talking about how our culture needs to be taught to our children in the school. We didn't really have any documents. We had a lot of stories, but really nothing for us to follow. So we brought a lot of elders together.

They told us a story about when the world was new. That's how far back the caribou has been with us. At the time when the world was new, everything was formless, nothing had shapes yet. So all these beings came together and they chose their roles.

"I'm going to be a bird." "I'm going to be a fish." "I'm going to be a caribou." All these animals were together and they became what they wanted to be.

After they all became what they wanted to be, then the caribou said we're going to be the food source for the people that live in this area. Fish is going to be the food source for people that live in the Tł̨chq̨ area. Then the bear got mad. The bear said I want to be the food source for those people. This was how consensus government was built. So they let the bear talk because they needed to let him talk. After he talked, they finally asked him, "What's going to happen to people when you hibernate? How are the people going to survive?" So the bear had to think. "Okay," he finally said, "If there's no caribou, if there's no fish, then people can use me for their food source."

When the world was new, the people and the animals were given a chance to talk, and they had a big celebration at the end. That's how Notah got his flat foot. He was one of the animals that came last. He was so tired, he fell asleep and this big tea dance was happening.

So our stories go all the way back from there. These animals were the first people. When they looked around, they saw this helpless, helpless being. When this helpless being had a baby, the baby had to live with the mother for a long, long time before it went and survived on its own. That was human beings.



Figure 6: Lisi Lafferty



The human beings are the ones that depend on their parents and other people to survive. But animals, as soon as they're born, they can survive. So the animals are the ones that looked after us. We were very, very helpless and we really needed to rely on them.

The one thing about caribou is they are really, really, really concerned about their feet. They are very, very sensitive about their feet. So one of the things they told us was you really, really need to make sure that the caribou, wherever it's travelling its trail, make sure that it's clean. Make sure that they can live out there and their feet are well taken care of.

Those are the kind of stories that the elders we worked with at the time, they told us these things that is very important. I think it's very important for us to remember that because the animals, the plants, the water, the land can survive without us, but we cannot survive without them. So that's the reason why we really need to take care of the land, the animals, because they're not dependent on us because they're going to be able to survive without us.

## Monitoring Changes

*George Marlowe*

When Ekati first started operations in 1998 there were still lots of caribou. Towards the end of August, caribou used to come to Łutsel K'e. People go out by boat through August, September, October, and November. There were always caribou right there already. Lots, lots, lots. About this time of year, in the bay there at Łutsel K'e, right in the bay in the grass, caribou would just sleep there. Nobody cared, they would just look at them. Nobody cared to shoot them. Every year, it used to be like that.

Does anybody have an idea why caribou aren't coming back nowadays? For about five or six years now, there've been no caribou in our hometown, although this winter I shot two right by Star Lake. But for the most part we've lost that. I'm not going to blame the mine, maybe there's some other cause. In the old days, you had to be careful how you cut caribou or handle it. Maybe there's something that the caribou don't like that happened in Łutsel K'e, so they moved away.

Us Dene people must love caribou. So that means monitoring caribou. The hunters are the monitors. I'm a hunter. Every year I go there and even though I'm that old, I go to Artillery Lake every year. I know the caribou's movements, and their condition. Some years, the caribou have different fat. The hunters know that. Even my friends and relatives in Saskatchewan and Manitoba. They all phone me just about every second day to tell me the caribou are like this, the caribou are like that.

## Gathering Place at Kòk'eti

*Fred Sangris*

I've heard a lot of stories about the Dene and Inuit people sharing at Koketi (Contwoyto Lake), north of ʔek'ati. They were trading. The Yellowknives Dene had access to the trading post there, and at Fort Resolution and Lake Athabasca in the old days. Koketi means "camp lake," because that's where the Inuit from the coast and the Dene people used to camp together and trade together. There was friendship and kinship there. In spring, they would depart and meet the next year again. The last gathering at Koketi was in 1950. There hasn't been a Dene/Inuit gathering since. I'm still looking forward to a good gathering one day. It would be good to meet all the people that used to go there; the Akaitcho, the Tłı̄chǫ, the Sahtu Dene, and Inuit people. People used to travel before. Koketi was a gathering place. The muskox, char, the fish, caribou, everything was there. It was a beautiful place.



Figure 7: Fred Sangris

People have always travelled on the land, following the caribou herds. The caribou herds went north and that's how they got into Koketi. They followed the caribou right to the calving grounds. Babies need soft caribou hair for clothing, diapers, parkas, the thin skin of caribou. The clothing on the young caribou was very important for children, especially babies. They had to be well looked after and the young caribou provided that soft material. Even the old people wanted young caribou for its tender meat, easy to eat when you've lost your teeth. That's why the Dene people went up to the calving grounds to harvest them. At the same time, they went to harvest caribou antlers and many other things that the caribou left behind. Antlers are good medicine, and also make good tools.

The older bulls, they're not going to move until late April or May. They are the very last ones to go. As some of the elders probably know, those last herds that leave the area is what we harvest. We harvest the bulls in the spring or in the fall. December, because it's the rutting season, we hunt the cows. Then late season we hunt bulls again.

My grandfather lived to be over 107 years old. He was on the land with his family and when he was a kid, it would be the ancient past because there was only bows and arrows in those days.

No guns, nothing. Not even salt, tarps, nothing. Everything was made on the land and caribou hide. When they travelled, they didn't have anything. They went and wherever they caught caribou, they just made their tee-pees there out of caribou hides in the summer, spring and fall harvests. They followed the caribou. One year they followed the caribou up to Aylmer Lake. It's way passed Kennedy Lake and close to those mines. They spent the summer there and then came back this way again and followed the caribou coming back to the treeline.

In those days, that's how people depended so much on caribou is they just followed them. It was not just work, work on the land either. They'd finished harvesting and then they'd go competing with bows and arrows, sports. They'd compete for mostly caribou tongue and whatever they have.

The men were the hunters, trappers and fishermen. They had a big role, but the women too had a role in the communities and villages. The men and women worked together to move on the land and survive.

When my grandfather went out hunting, he would travel on snowshoes. He had a dog team, but he didn't use them. He went snowshoeing with a packsack and that's it, no blanket or nothing to carry. He went out and didn't come back until about close to Christmas. He was looking for caribou. He ended up close to Nonacho Lake, he says. That's where he found caribou. When he got those caribou, he cleaned and dried them, and put them up in a cache. Then he came back and got his dog team to pick up all the stuff, so the community knew where the caribou was and everybody went out to look.

They didn't have no guns, just bows and arrows. They used to hunt caribou with spears, and snares. You probably need a whole bunch of people to herd the animals.

We had a traditional management system. We managed the herds for thousands and thousands of years. It's only when the newcomers came here we started having problems with caribou.

It's been over 25 years since I've seen the Yellowknives Dene in this area harvest a lot of calves, unlike the old days. Today we don't hunt the calves anymore because we realize something is wrong with the herds today. We are slowing down on hunting the cows in spring too, because they are pregnant this time of year and they are going to give birth. It's given a bit of hardship to Yellowknives Dene hunters.

Now we have to hunt the young bulls. We have to work harder now. I have to climb this hill, go through the trees with snowshoes and get that bull. Now, mid-March, they are still in the treeline. The cows are pregnant. They put on a lot of fat right now, they are just working working, working at digging and putting on a lot of fat. In about ten days they'll start moving up

to the calving grounds. The cows know there is not much food there, so they are working really hard to put on enough to carry onto the calving grounds at this time of year.

We have a lot of ancient times information from thousands of years of generations, unwritten. It's all oral and we talk about it. We have big gatherings and we talk. We tell stories of the past, all the information that was passed onto us. But it's not recorded. It's not written in books anywhere. So for us Dene, it's a big challenge for us to capture all our histories.

## Understanding the Whole Picture

*Wayne Langenhan*

We're in a unique situation in this present day where we have three mines on track – Ekati, Diavik and Snap Lake. Soon there is to be another one just south of Snap Lake they're working at putting in, Gahcho Kué Mine. So you're going to have a group of four mines right there in a very limited area. This could cause problems with the caribou in so much of a compacted area with these mines and these mines are a much greater scale than the ones in earlier times. These four mines grouped together cover quite a distance, and it might be just right on the migration of where the caribou go. And who knows what other mines are going to be built in the future.

So what we're looking at here now is different than anything that we've ever seen in the past. What we're working on here will be used in the future. We have to make sure that it's done right the first time, so that it can be used for the mines that are coming in later on. It's not right now that we're thinking of just one mine, or even the four mines. It's going to be about all the mines that are coming up down the line.



Figure 8: Wayne Langenhan

## Caribou Monitoring at Diavik – Past and Present

Diavik has designed a science-based Standard Operating Procedure (SOP) for caribou monitoring that has been in place since 2003, with regular reviews and updates. The SOP is partly based on concerns that were expressed by communities about how caribou might be affected by the mine. The monitoring framework is shown in the diagram below. Diavik regularly approves the SOP. Monitoring takes place in spring, summer and autumn. If caribou are near the mine, monitoring is extended. When caribou are seen, observers check the caribou every eight minutes and fill out a form describing caribou behaviour. They do this at least for times, and up to eight times. Results are counted, and scientists use the numbers to learn how caribou are affected by the mine.

### Caribou Impacts – Community Concerns

Haul trucks and traffic causing injury to wildlife and creating noise  
 Roads and berms injuring wildlife, injury/predation from rock piles  
 Dust from crushing and blasting contaminating vegetation and getting eaten by wildlife  
 Toxic waste harming animals  
 Wildlife drinking from or getting stuck in tailings ponds  
 Contaminated water that wildlife drinks  
 Smells from camp/cooking attracting animals (including predators)

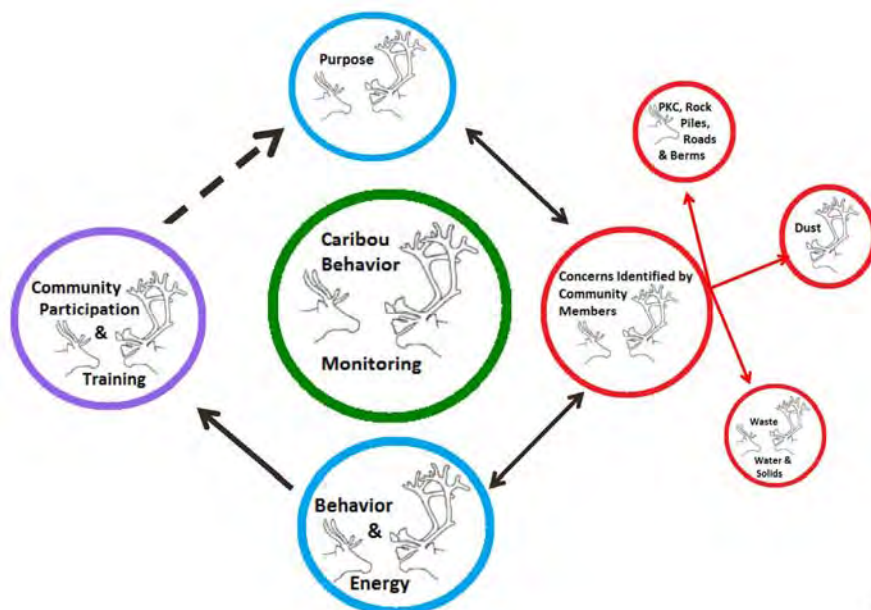


Figure 9: Caribou Monitoring Schema. Credit: Diavik Diamond Mine Inc.



## Aboriginal Methods of “Monitoring” – A Way of Life

Aboriginal people have always “monitored” the land and animals and way of life and part of survival on the land. Each of the five cultures whose traditional territory encompasses the mine have our own way of monitoring. For some, it’s not about watching or spying on animals, which might be considered very disrespectful. Watching animals may imply that it’s possible to control or manage them, and this is against some people’s laws.

In our different ways, our peoples learn about changes in the wildlife by maintaining our relationships with them, and with the landscape. We do that not by measuring, but by experiencing the land, remembering the stories that come with travel on the land, and practicing our spirituality. The animals are people too. They watch us, and they make decisions based on whether we can be trusted, whether ancient promises to treat them with respect have been kept. Our ancestors also watch us, and when we are travelling we pay respect to the gravesites that we pass on the land. It is because of them that we continue to survive as peoples.

Aboriginal peoples have a long term understanding of the animals, bearing knowledge of our homeland passed down through generations. In our different ways, we maintain our ancient and sacred relationships with the wildlife partly by travelling on the land, and partly by maintaining relationships and sharing knowledge with our families and communities. In harvesting, relationships among men and women are maintained, since they each have responsibilities in hunting and preparing meat. Relationships among generations are maintained, since all family members have roles to play as teachers and learners, leaders and followers on the land.

Relationships across families and communities are maintained through sharing meat, and sharing knowledge about observations on the big landscape. This is why large gatherings are part of the harvesting cycle.

Aboriginal peoples have a special ability to understand what scientists call “cumulative impacts,” impacts of all different activities on the land, because of our way of pooling knowledge from the past and present, and at different landscape scales.



**Figure 10: Paul Omilgoitok with caribou. Source: Caribou Monitoring Workshop Report (EMAB 2005)**

## Monitoring and Survival

*Fred Sangris*

We have changed, people have changed, but the wilderness is still out there, the caribou are still there. In the old days, the Dene followed the herds and went to the caribou, went to where the fishing areas were, went to the best hunting areas and spent many years over there.

For thousands of years Dene have lived on the land. We learned from our ancestors, but we also learned from our own experiences on the land, and passed that information down. We knew how the world worked and we passed that information on. When we went from to a new hunting area, we learned about that area through our own experiences and by learn from other people living in that area. So we did a lot of information gathering.

Now, we still go out on the land, but we don't spend as much time as we used to. Now we're dealing with industry, we're dealing with tourism, a lot of new things that never used to exist.

We long to be in the wilderness. We long to be out there. We miss something out there. We don't know what it is, but we miss it and we want to be there all the time. But our lifestyle has changed. Instead of living out there, we visit the area and check it to see if things are still intact, if things have changed. For example, burial sites and the migration routes. We want to go and check if the sand or gravel eroded at the caribou crossings, the migration routes, the spiritual places.

I call it visits, but it's much more a visit. It's a homeland that you miss. You experience it, and when you come home, you say, I've been there and this is what I saw. Boy, the place looks beautiful. There's more trees there, there's more wildlife. So you experience it and you gain knowledge from that. That's how you learn. I call it survival, but it's much more than survival. It's harvesting, travelling, seeing, experience.

When we're harvesting, we're observing. Has the caribou population gone up or gone down? Has the fox population gone up or gone down? People are there to see what's happening on the land because in the back of our minds, we still have that need to survive with the land. We want to be able to gather food, preserve food. Then we come back to communities and we share with other hunters and say I've been to this area, the habitat is still good, there's still lots of wildlife and people can go get the food when they need to.

Through ancient times, many customs and many laws were passed on, and one of them is we have to respect the wildlife, everything that's there, including caribou. In all our histories, caribou is the centre of our life. We have so many stories about caribou, caribou, caribou

because they are the only animal and species that the Aboriginal people have always relied on. It's a very close relationship, so they protect the animal.

In ancient times, they used to communicate with the animals. People wanted to know what the caribou thought about us, the people. The caribou monitors us. It has issues, concerns, about people. It doesn't like the way it's been harassed. It doesn't like the way it's been chased. It doesn't like the way it's been disrespected. So the elders would say "This is what the caribou are saying. We must do more to protect, we must do more to respect the animal."

## Being Dene: Our Way of Seeing, Our Laws

*Lisi Lafferty*

What makes us Dene people? The elders said if you have a picture of a caribou and a lot of non-Aboriginal people, they come and look at the caribou, they're going to say it's such a beautiful animal. But if you show the elder the same picture, they're going to see caribou tongue, they're going to see dry meat, they're going to see blood soup, they're going to see tools, they're going to see clothing, they're going to see shelter. That's what they see when they see a caribou.

That's the difference in the Dene way of learning. They told us these are the things you guys need to do to teach the children. Whatever you do in the school has to be authentic. It has to be something that is happening in the home, something that is happening in the community, something your people are still doing for your children to understand.

We also have laws. We have laws for how we treat caribou. We have laws for how we treat fish. According to those laws, you really, really have to watch the hunting gear of the hunters and the trappers and the fisherman. There are reasons for that. You also have to watch you don't step over blood. Way before contact with scientists, our people knew that if you cut your hand and you touch the blood of another animal, you're going to get sick. That's why they have rules around that. They also know that if another animal eats fish or meat, it's contaminated. You don't eat the meat that's been eaten by other animals.

Our people had laws about sharing and only killing what you need. Those are big laws that we need to teach our children. We have a whole generation of residential school victims who don't even know their stories, their histories. So even our own young children that are working at the mine, a lot of them miss out on all the Dene teachings. They need to know that. They need to be oriented about our culture, our way of life, the caribou and their migration and everything that's tied to the caribou.

The Tłı̨chq̓ elders were very, very upset when there was a ban on caribou hunting, because there's a whole knowledge that goes with the caribou. There's the preparation when people are getting ready to hunt. They are talking about where they're going to go, what they're going to take, who used to live in that area, how they used to live in that area. So you educate the young people that are listening. Then the women are really excited. They are making moccasins because they can just taste the dry meat and the caribou tongue when their husband comes back with the caribou meat.

## Recommendations for Action: Monitoring Across Cultures

Aboriginal people have always had our ways of knowing wildlife through harvesting. Recently scientists have come into our territory to learn about the wildlife, and they have a different way of doing their work. It is important that we have chances to continue practicing our different ways of knowing separately, perhaps inviting others to participate and learn on the land and at the mine site. The existence of the mine also makes it necessary to develop cross-cultural ways of learning and sharing knowledge. During our March 2012 Panel session, we concluded that it is not desirable or practical to try to implement a fully TK/IQ approach to monitoring in partnership with Diavik. Our seasonal way of life on the land must be fully governed and sponsored by us.

We can be creative in collaborating with Diavik in a cross-cultural monitoring program that includes observations and knowledge exchanges at the mine site and TK/IQ Camp, as well as



Figure 11: The TK/IQ Panel discusses monitoring on the land, in the community, and at the mine site

dialogue in the communities where harvesters share what they've been seeing on the land. A successful program will require good communication, and this is always challenging across cultures. Developing strong relationships will be key.

The TK/IQ Panel members are a very good group to lead this cross-cultural work, since we include people who grew up on the land, and people who have a lot of schooling with white people, and experience working at the mines. Many of us still have our languages, but we also are able to work in English. We're a group of Aboriginal people that bridge the two worlds, but there's still a lot of work to be done to develop our cross-cultural program with Diavik.

I've heard some people say that the caribou are not avoiding the mine, but some are saying they are avoiding the mine. There are two opposing views. There's nothing traditional anymore. The mines have changed that, and we have to start thinking that way. Don't try to brainwash the Aboriginals into thinking the mines are not affecting the caribou herd. Common sense tells me it is affecting the movement and the behaviour of the caribou. You may or not accept that view, but that's my opinion and I think it makes common sense. – *Ed Jones*

When I was seven years old, my Dad told me at least you should go to school a little bit and learn a little bit about the white folks so you can maybe teach the white folk how to do things on the land. A lot of times the elders take the white folk out on the land. Being a teacher, taking whit folk out on the land that's what it is. Gatherings like this, we are actually the teachers teaching the monitoring board how to think like a caribou. – *Bobby Algona*

If industry is going to monitor wildlife, at least they should learn about the customs and the laws of the Aboriginal people, how they look at wildlife. Maybe, in turn, they'll learn and learn how to respect the caribou the way we do it, not from an industry point of view. – *Fred Sangris*

One time there was a scientist that came in from Toronto. The community asked me to take him out on the land, so I did. We went out by skidoo to Nonacho Lake where the caribou were. He was using my son's skidoo, and he followed me. The scientist was travelling too slow so everybody else took off on us. So we ended up by ourselves.

When we got to Nonacho Lake we shot two caribou. We shot two, and then I cleaned it. The days were short then too, and it was dark by the time we got to the land. We made a fire and cooked ribs on the fire the traditional way, with no grill. Just on a stick poked up in the air over a big bonfire, the meat a little ways away from the fire.



We had that experience and came back to town at night. The next day he came to the house and said “I learned more in one afternoon that I learned in all my twenty years of teaching at the university.” So he learned from experience. That’s how people learn a lot of stuff. So in all those twenty years of teaching, he didn’t know what was he was talking about, I guess. He lived through the books, you know? – *Alfred Lockhart*

## Recommendations for Action on Diavik’s Standard Operating Procedures (SOP) for Caribou Behaviour Monitoring

The revision of Diavik’s SOP is one area where cross-cultural work can be done. The recommendations here were compiled through a review of the existing SOP as well as the TK/IQ Panel discussion. By permission of the TK/IQ Panel, the recommendations were delivered to Diavik in May 2012. The cross-cultural approach includes the use of what scientists call “indicators” that can be measured. TK/IQ Panel discussion showed that it is possible to use a more nuanced understanding of caribou populations and behaviours using Aboriginal harvester knowledge.

Involvement of Knowledgeable Aboriginal Observers and systematic communication with Aboriginal communities about the monitoring process and results will be important in ongoing assessments of the revised SOP. The panel expressed a lot of frustration about lack of involvement and communication to date.

## Recommendations for Action on Capacity-Building

- During early July before the caribou migrate south, a regular training session should be planned for Diavik staff in ways of properly respecting caribou and other animals.
- When elders are brought to site for staff training exercises, youth delegates and harvesters should also be involved.
- The TK-Science camp (known as the CBM Camp) should be moved to a location north of Diavik on Lac du Sauvage closer to the caribou migration route for developing skills and capacity in cross-cultural caribou monitoring. The setup must be in the Aboriginal way, not in a square, so that it’s not threatening to the caribou.
- Monitoring results should be reported back to the communities on a consistent basis.
- It will be valuable to “check nets” and synthesize what’s already been done by Diavik to incorporate TK/IQ into its processes, and document/share lessons learned from these experiences in order to avoid repeating work already done.

## Recommendations for Action on Methods

- Use pictures and/or other visual tools as part of the form for caribou behavioural scans.
- TK holders should be hired year-round to work with Diavik staff for general monitoring; additional TK holders should be hired seasonally for caribou monitoring.
- Community meetings are a good way to gather more information on how caribou are doing.
- Caribou observation logs can also be used by community members when they are on the land.
- Include more behaviours in the list for observation.
- Include more categories for herd composition (see detailed list below).
- Utilize Aboriginal terms/concepts as identifiers.
- Both ENR and Aboriginal harvesters should work together and assess animals that are injured.
- Scientists and TK holders analyze dead caribou together.

## Recommendations for Action on Indicators

### Key Monitoring Areas

The group identified four key areas for monitoring. Indicators or signs of herd condition were identified within each of these areas.

1. Behaviours
2. Herd composition
3. Caribou health
4. Environmental conditions

#### 1. Stress Responses

- Be aware of what stressed behavior looks like with caribou
- Flight/freeze reaction to flies and mosquitos
- Jumping, nose in the air



Figure 12: Credit: Diane Dul, Diavik Diamond Mine Inc.

If we look at the same picture, we're going to have different views, for those of you who are not familiar with wildlife, their behaviour and what they're doing. Those of us who are hunters probably know what the herds are doing. The caribou are running in front of the helicopter. When a caribou gets scared or surprised or threatened, that's what they do. They put their nose up and sometimes they jump and then they go on a really fast gallop because they don't know what's going on and they're threatened.

If I was to walk over there and the caribou sees us, they are going to go slow and take their time and look at us. They are not threatened because we're not creating noise or surprising them or anything. They know we're there, so they won't act like that. When a caribou is stressed, they're going to run and run, and probably go a long distance moving because they're threatened. They are acting like a bully.

When a caribou gets scared and surprised, that's what they do. They get uptight and come together. If that helicopter comes, we'll both put our horns down and go after it. That's how a caribou looks like when they're threatened or surprised. – *Fred Sangris*

When I was hunting in Rankin Inlet, I noticed that if the bugs were bad the caribou would head for the sea. If they are down in a swampy area, they'll just go like a freight train, and all of a sudden they'll just drop down. Then when the flies catch up with them, they get up and they go right back to just about where they started off from. They'll keep doing this. If the flies are there, that's a lot of stress on them, the amount of black flies. – *Wayne Langenhan*

## 2. Herd composition and behaviour

Fred Sangris said that “caribou has a family,” and this needs to be understood in the monitoring SOP. The different family members have Aboriginal names, and each has a different role in the herd.

- Balance of older/younger animals
- Balance of male/female
- Leaders and followers
- Caribou family behaviour
- Differences and changes in timing of migratory movements between bulls and cows
- Changes in migration route



Figure 13: Credit: Diane Dul, Diavik Diamond Mine Inc.



Caribou are very intelligent animals. I've worked as an outfitter and a guide in the past, and I see that. Thousands of caribou, but they would never come near the camp, never. Not even if the camp was right on the migration route. They avoid it. But as soon as you put up mine like BHP and Diavik, they just love being around people. They look at the mines as security. They know the people working at the mine are harmless and they know predators like wolves and grizzly bears are sometimes chased away. They never hang around that area, so it's a safe haven for caribou. But at the outfitters camp, no grizzly bear, no wolves, no caribou, no nothing. They know exactly what that camp is and they learn how to avoid it. Think about that.

– Fred Sangris

I've been surveying caribou around BHP and Diavik. I did a lot of walking with the caribou biologist Anne Gunn. A lot of people from Rae were with me. The company was complaining that the caribou were going onto the island. We said we should have put a fence across the lake or the caribou trail. We should have blocked them there and that way you wouldn't see caribou on the island. If they had put stakes up there to draw caribou in a different direction, the caribou would still be doing good. But they never did that. They didn't listen to us.

Way back in the 1980s, we had all kinds of caribou come north. There were no mines. We had no complaints about caribou. Since the mines came up, we've had lots of complaints about caribou. I told those guys when I was in a meeting, you should be monitoring the caribou before they hit the mine when they're coming back from the calving grounds, about 10 or 15 miles out from the mine site. Then when they pass the mine and after they pass the mine, monitor them and see how they look. I used to see a lot of crippled caribou around the mine in the 1990s when I was working down there with Anne Gunn. But they never did it. They never listened to my suggestions. –

*Alfred Lockhart*

There's no way you can keep an animal out of its migrating route when it's migrating somewhere. It's either going north or coming back south. There was always a different route they use. No matter if there is a tailings line, they'll go over it. Just like the mountains, they go over that mountain. They'll even cross a strong river. – *John Ivarluk*

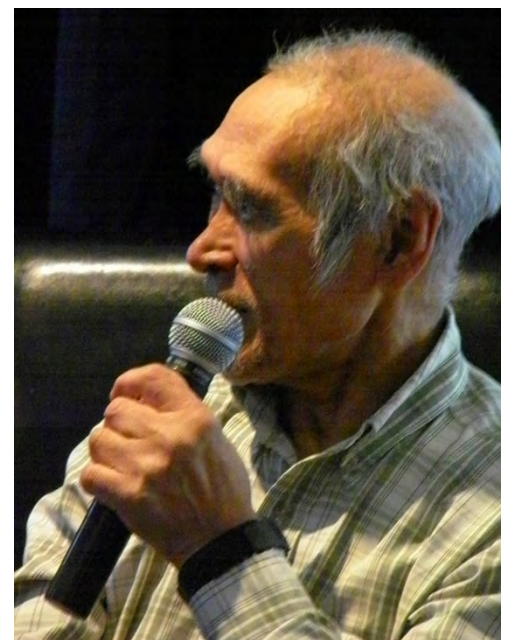


Figure 14: John Ivarluk

### 3. Caribou Health

- Appearance: fat or skinny (this fluctuates from year to year)
- Caribou crippling
- Caribou looks sick
- Hoof condition

### 4. Environmental conditions

- Noise
- Garbage impacts (eg. wire)
- Windmill impacts
- Presence of other animals (when caribou go away, other animals go away)
- Smells
- Climate change

You can silence the noise from the heavy equipment by putting what I call – it's not the proper name – a silencer, a catalytic converter or...(inaudible). – to put on heavy equipment including the power generating plants. That's one way of lessening the noise and you can do it. I've mentioned catalytic converters before but nobody pays any attention to it. They merely say it's too expensive. It is not expensive. – *Ed Jones*



Figure 15: Ed Jones

One time in Contwoyto Lake, me and my wife were watching caribou migrating north. It was a big herd. There must have been some exploration not too far from where the caribou went through. One big bull, you could see it tangled in yellow and black wire. I wish those exploration guys could collect whatever they do and not just leave it there. In the fall, when their velvet is coming off, caribou go against the bushes to take the velvet off. In doing so, it gets tangled with that wire that's lying on the ground. – *John Ivarluk*

I want not only me, but my family, everybody, to keep my land clean. I don't want garbage or anything. For the last three years now, when outsiders go hunting, we see whiskey bottles and cans, we don't want that. You go home, tell your communities, tell your people if you want to go out there to Łutsel K'e, respect the land and respect the people. You can drink at home, not over there. You don't know what's going to happen. You might end up in an accident, you don't know. – *George Marlowe*

You go hunting, you see fox, white fox, wolverine, wolves running, caribou, just running all over. We've got to monitor that, too not only at the mine site. The mine site is just around that area, but around our hunting area it's a big land too. So those kind of things we have to talk about. – *George Marlowe*

For 15 years, I've been hearing from First Nations that the weather is changing, the land is changing, it's unpredictable, we're seeing new things we don't see any more. What happens in the fall time is that you get snow and then it melts and then you get this layer of ice and then you get snow on top of that. That's one of the reasons the caribou are having so much trouble. Maybe that's why they are getting skinny. It's really hard to dig through that deep snow, that's one problem. The other is once they dig through, it's ice. – *Natasha Thorpe*



Figure 16: Natasha Thorpe

## General Recommendations for Action on Caribou Monitoring and Management

### Recommendation for Action on Managing Caribou Movement

In the old days, people used to use markers on the land to direct the movements of caribou for hunting. Those methods are still used today. People get on their snowshoes and guide the caribou where they want them to go. For example, Aboriginal people guided caribou away from the winter road last winter. Ed Jones noted that “the caribou need to be kept out of the Diavik zone of influence.” There could be two deflection zones, 20 miles away from the mine and another zone closer to the mine. It's possible to use knowledge of migration routes to guide caribou movements.

Working with Aboriginal knowledge holders, spruce and other markers, such as coloured fencing, or a deterrent like wolf scat, should be experimented with to find the best way to direct the caribou away from the caribou crossing to the island where the mine site is so they won't encounter risks and undergo stress.

## Recommendation for Action on Using All the Knowledge that We've Shared

The TK/IQ Panel feels that it is very important that all the knowledge that's been shared in the past is accounted for in future recommendations about caribou monitoring. The early work that was done for Diavik's Environmental Impact Statement and other planning processes included knowledge about caribou that should be reviewed and used.

## Recommendation for Action on Working with Our Future Leaders

"Look around you. There are no youth around us. We should have youth with us," observed August Enzoe. At any meetings related to TK/IQ, people talk about youth. The time has come to include youth in our work. The youth are living in a changing and complex world now. They have skills that the elders don't have, and they can help us to see a way forward. Everywhere that the elders are called upon to share knowledge or observe changes, the youth should be with them.

### Patience and Understanding

*Bobby Algona*

For myself, I'm thinking about my grandmother and my dad a lot. I travelled a lot with my dad ever since I started walking. I seldom stayed home. I never wanted to be at home with the ladies or with mom or my sisters. I'd rather be out hunting away from the camp or travelling with my dad.

The reality for the next generation is going to be very different from what we were used to with our parents and our elders, who gave us a whole lot of patience and understanding. We need to do a lot to help that next generation. We need to do more in communities and meetings like this. We're losing our next generation because we aren't teaching them our culture, who we are as Inuit.

### Learning About the Mine

*George Marlowe*

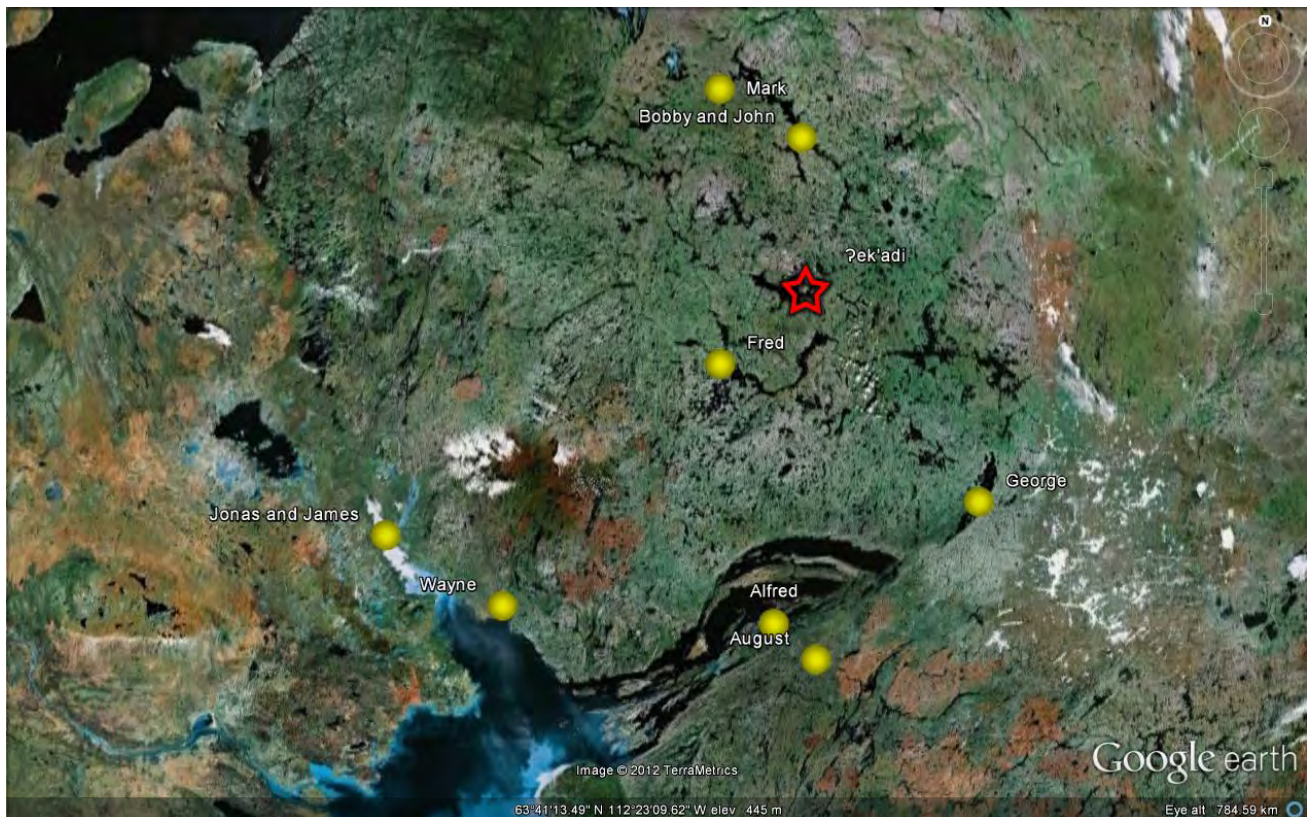
I took a lot of kids out on the land, me and my wife and some elders. When we're out there, we only talk with the kids about the land, not much about the mine site. I teach the kids how to shoot caribou or skin caribou or make a fire, set up a tent. They like that. But there's got to be more done about the mine site with the youth.



## Introducing the TK/IQ Panel Team

Many books and reports include reference or resource sections with lists of documents. The main resources for the TK/IQ Panel are the knowledge, experiences and stories of the panel members themselves. During the March, 2012 TK/IQ Panel session, participants shared some of their life experiences so that we could all get to know each other better, and learn about the knowledge that each person brings to the panel.

We learned that we bring together a lot of knowledge of the area surrounding Lac de Gras, as well as knowledge of development and mining in other places across Canada. The team also has a strong foundation in cross-cultural knowledge. There are elders who were born and grew up on the land and survived all their lives from subsistence harvesting. Others went to residential school and survived in part by working at mines and other jobs, but have at the same time managed to maintain their knowledge of the land. The resource people (Deb, Shelagh, Natasha and Michèle) all bring different experiences facilitating research with Aboriginal communities in various parts of northern and southern Canada.



**"Where I'm From" Map – Aboriginal TK/IQ Panel Members**

## Kitikmeot Inuit Association Delegates

### Bobby Algona

I live in Kugluktuk now, but I was born in Edmonton. I was born and raised around the Tahikyoak (Contwoyto Lake) and Pellet Lake area. My dad told me to go to school so I could speak English a little bit and get along with the white folk a little bit easier. He spoke very little English, and I guess what he wanted was some translation. I went to school in Fort Simpson for about seven years at the hostel there, the Alexander Mackenzie School. The very first time I went to school, I spoke not a word of English. I listened to my Dad and paid attention to my teachers, and did a lot of things that the white folks do. I started to learn a little more, and English caught on a little bit. After that, I went to school every year. At least some of us got to go home, not for Christmas, but for summer break at least we got to go home. That was hard alright.

When I was living at Pellet Lake, I tried to keep my family away from the community as long as I could. Just the same way my dad did for me. He kept us out there. Just being in the community, he says, you tend to lose your cultural experience on the land. Communities have a lot of distractions. Being distracted in the communities, they'd always say "palumuk, palumuk." You're not looking, not paying attention how you want to survive or do stuff on the land. You're not giving your total self sometimes. It's like covering your head and not looking at the land. That's why I tried to keep my children going out on the land as long as I can.

Being athletic and into a lot of sports, I played lots of hockey. It caught on really well. One day my skate got caught on a crack on the ice. I went flying and landed on the sideboard right on my back. I was almost paralyzed. I was at the hospital for about six months, tied to the bed, not even moving my head. My whole body including my head was strapped for almost six months. I've had this back problem ever since. Just ten years ago, I re-hurt my lower back and it's been giving me a whole lot of problems getting out on the land and carrying loads. I'm not really going out at all, though I've been really tempted. I'm mainly trying to heal from my surgery. Hopefully this spring I'll be able to go back out again, eating caribou and fishing on the land. Right up until ten years ago was going out on the land for most of the year and bringing my family out to my camp. The family misses that a lot. I'm having a hard time getting out there. Hopefully this spring, I'll be able to get out a little more. Quana.

### John Ivarluk

I lived mostly in Tahikyoak (Contwoyto Lake) before I moved to Kugluktuk. I worked there in 1979 when Lupin gold mine started. I worked there two weeks in, two weeks out, on rotation as a heavy equipment operator. I've had five kids, but I've got only four left. I'm on my second wife. My first wife died when I was in Edmonton in the hospital. They were getting no more food back home. They put dog food in a forty-five gallon seal oil barrel, and my first wife was so hungry she ate from that meat and she got poisoned. That's how I lost my first wife. Today, I'm happily married and she's back home waiting for my return. We want to go back to Tahikyoak

when I'm finished with this meeting. We like to live on the land. It's my life. After I finished working at the gold mine, I went back to being a hunter and trapper. I am now retired and just doing anything I want. I live on the land, trap and hunt. That's about it. Thank you.

### **Mark Taletok**

I had to go to a hospital in Edmonton. By 1988, I had no dog team. I'm having a hard time going back to my hometown Pinganatok (Concession Lake). Quana.

## **Lutsel K'e Dene First Nation Delegates**

### **August Enzoe**

I was born south of Lutsel K'e at a lake called Austen Lake. It's about thirty miles down the Snowdrift River near the mouth of the river where I have a cabin now.

I went to residential school in Fort Resolution in 1944, and I stayed at residential school until 1951. When I left that school in July 1951, I never saw my mom or my dad. They passed away when I was small, just a baby. My grandparents raised me. I told the story about how I was raised and what they were doing to me in Fort Resolution, so they told me never go back to school again. So I started learning the bush life, how to trap, how to fish, all those years. I learned from a lot of old-timers from way back, even from the 1800s. They were still with us from the 1950s until the 1970s. I've been travelling the south side of Lutsel K'e all my life, and north to the barren lands. In those days there were only dog teams. I had a good life.

I've got two boys and two girls, and I raised them mostly in the bush even though they went to school. So now the two boys know the bush life. I taught my grandsons how to work in the bush too. Now I'm retired so I don't go out hunting much. I've got a back problem. Most of my kids do hunting and fishing. I taught them good in the bush.

I worked for the government for twenty years, and retired in 1990. I had enough of government jobs. I wanted to do my bush life again. It's just like starting over again after all those years. I've always done pretty good in the bush. That's why we live out in Lutsel K'e right now. Thank you.

### **Alfred Lockhart**

I was born in Lutsel K'e. At an early age, I went to residential school in Fort Resolution, and then Fort Smith. I also went here in Yellowknife at Sir John Franklin High School. I was done school in 1964. Then I went on to apprentice in building and construction, carpentry work. In 1965, I got my second year in building. Then I went out on the land with my parents. My dad took me out and showed me the bush life, how to survive and be safe on the land. The following year, I went out into the barrenlands with him. I learned quite a bit in the barrenlands around the Artillery Lake area and Sandy Lake and the Whitefish Lake area. It took me two years to learn everything I know now.

I've trapped a bit with white fox. For the year I was out in the barren land, I met Fred Sangris's dad there. A whole bunch of people came from Dettah that year, so I met and got to know those people and drove dog teams with them. In those days we used only teams, no skidoos.

I was going to go back to school in 1968 and pick up a trade, but I never did. I never got a chance. I ended up in the States with an all-native band called Chief Tones. I toured the whole USA in 1968 and 1969. So I met lots of artists out there, country singers, George Jones. We were young then.

After that, I came back and went to school at SAIT [Southern Alberta Institute of Technology] in Calgary. There I finished my trade, and then I came back to work here. I worked on most of the high-rises here because that's my trade, big buildings. I've been here for 14 years. Later on, I went back to my community. All I do now is hunt. I'm also employed by NorthwesTel as a technician. I'm semi-retired, but I'm getting paid.

I go out on the land quite a bit, out on the barren lands around the Artillery Lake area. That's where my parents taught me how to survive, so I'm quite confident going out by myself. I built myself a komatik. It's good for the barren lands. I take everything in there. I take a generator and lights. I carry two tents. One is a four season dome tent. That's for a quick setup in the barren lands when you're stuck and caught in a blizzard. I also carry a propane heater, and a satellite phone. I've got everything you need, so you don't need to fear nothing. Just go out and enjoy. Thank you.

## George Marlowe

I was born in Łutsel K'e, that little town by the river, back in 1938 or 39, and I lived at Rocher River. No one lives at Rocher River any more. There are lots of houses, they've all fallen down but they're still there. It shows that people used to live there. It's just like a town. Lots of white trappers used go through there, they would stay with Dene people. I must have been about four or five, pretty small. I remember a little bit though. While I was growing up, I remember I used to go out with my grandfather and my dad hunting.

Then in about 1948 or 47, I went to residential school in Fort Resolution. My mother put me there. My dad took me out after my mom passed away at Rocher River. She died on March 31, 1949 and I didn't even know. The priest never told me nothing. The nuns never told me nothing. I didn't know until my dad came back and said, "Jesus took your mom." I was wondering what he meant. All this time he meant my mom passed away. I cried a little bit right there and he took me out.

I got my first job in 1955 or 56, commercial fishing. There was a lot of commercial fishing close to Łutsel K'e. I went there. I went in the boat with a young person who told me, "I'll pay you \$150 a month." I was happy. A hundred and fifty a month was so much for me. So I started working with him. The next year, 1957, they started cutting brush for that highway in



Providence. I worked with them for two years. I survived like that, little jobs. Me, all my life, I worked too. I worked for forestry too. I went training for about four years and I just about crashed in a chopper, so I quit. Then I went to heavy equipment operator training in Fort Smith. Even when I worked at the mine, I could drive anything.

I'd do a lot of hunting too. Right now, every year I go out to Artillery Lake where the caribou is right now. Now I'm old. I'm close to 74, but I still go on the land. I like it. If I don't go there for eight to five years, I'll forget the spot on the land. Every time I travel by skidoo, the memories come back. Hey, we used to have a fire there. Little trees, maybe six or seven trees there, I remember we had a fire there. Things like that remind me of everything. Sometimes I feel like crying, remembering my parents, my grandparents. But it's good to be on the land.

I have six girls and one boy and sixteen grandsons, three girls and four great ones, boys. Every one of them, I love them just the same. My grandkids have never seen me drink alcohol yet. They've never seen me smoking cigarettes yet. That's how much I love my grandkids. This spring I'm going to send them out, six of them. We'll take three skidoos, tents, stoves. I've shown them already how to hunt. We'll go up there at night, set up a tent, cut wood. It's not like the old days now. We have a chainsaw. Some people carry generators, gas stoves everything today. When I was a young kid, no gas stove, no gas lamp, a little candle, that's it.

I love dancing too. When I was a little kid, August Enzoe's grandfather told me go dance. He used to be a good dancer. He called square dance. I was too small, I was shy. One day I just got in there dancing. I danced a lot of places from Fairbanks, Alaska to Moose Factory, Manitoba, Kugluktuk, Saskatchewan. I won a lot of jigging contests. I used to have a lot of trophies.

## North Slave Métis Alliance Delegates

### Ed Jones

I've worked as a prospector for many years. I started out in northern Saskatchewan prospecting for radioactive minerals, and then spent five full seasons here in the Northwest Territories, looking for uranium. I believe uranium is the fuel of the future. I worked up at Nanisivik for four-and-a-half years as a diamond driller underground, and I worked at various DEW line sites for a construction company. I've worked underground. I was in the air force five years. I've been all over Canada for PEI to Vancouver Island, Herschel Island, Baffin Island, believe it or not.

I've spent a lot of time in the bush, though I don't have the knowledge of caribou that others do because I spent so much time working. I guess you could say I'm a product of seven years of residential school at Fort Resolution. But I love the bush life. That's probably the reason I got into prospecting. I'm 80 years old now, but I will be going back to the bush whenever I can accumulate enough cash and time. I don't think of myself as an old man. I don't think that way. I think we're young.

## Wayne Langenhan

I was born and raised in Yellowknife except for about ten years when I moved away with my parents at the age of one. I came back when I was just about 11. I've spent most of my life in this area around Yellowknife. I've hunted the area quite extensively for about the last 45 years, in a radius of say about 100 miles out from Yellowknife. I've also hunted other places, like in the barrenlands when I lived in Rankin Inlet for a couple of brief periods. Down towards Whale Cove, the Black Hills, the Copper Needle River, Ferguson River, that area. I've also hunted up around McKay Lake, Great Bear Lake and over in the Yukon.

These places give you different challenges because of the terrain and the people that you pick up for hunting partners also have better knowledge of their area, because they're there and they teach you how to tie different knots, how to hook up a load differently, how to pack a sleigh. Sometimes it's faster to use a combination of loading and packing from both the Inuit and Dene cultures. So I don't use just one method, I incorporate them all for what my preference is. I'm not saying that it's better than anybody else's, but it's handier for me personally.

I've worked in this area, up at Great Bear Lake, in the Yukon, over in the Keewatin area doing different things; staking, prospecting and in some of the mines like Port Radium, Echo Bay Silver, and at one little mine in the Yukon. I've worked down in British Columbia, and Thompson, Manitoba and, of course, Con and Giant gold mines here underground. I've done some carpentry work. I've worked with many of the Dene people and the Inuit people. I know a lot of their working habits. They still get the job done as well as anyone.

## Sheryl Grieve (plain language interpreter)

I was born in New Brunswick in a little town called Harvey, which is where both of my parents were raised. That was an accident because my family was actually living in Toronto. We were military family, so we moved every three years. I met Bill Enge in Calgary, and he talked me into coming to Yellowknife in 1981.

I worked on the Norman Wells pipeline. Then I went to college in Fort Smith for two years, 1985 to 1987, in the Natural Resources Training Program (NRTP). Then I went to Yellowknife. I worked for the Canadian Wildlife Service, I worked at the jail. People in Yellowknife probably even remember me from a long time ago waitressing in bars. I worked painting houses, as a construction worker, pipeline labourer, truck driver. I worked for Robinson's. I got a job as a Renewable Resource Officer for the Government of the NWT. They sent me to Clyde River on Baffin Island. From there I lived in many different places, and now I've settled in Victoria, British Columbia. If you put a caribou collar on me, it would go a lot of places. That's not including all the travel.

It was through the pipeline work that I started to learn about Aboriginal people in the North. I had received my education in Ontario where they taught us about Aboriginal people in Canada as

an historical artifact. They didn't mention to us that there were still Aboriginal communities existing. So it was a big surprise to see actual communities of Aboriginal people when I got here and I've been getting educated about that ever since.

## Tłı̨chǫ Nation Delegates

*The Tłı̨chǫ delegates, Pierre Beaverho and Louis Zoe, were not able to share their stories because they were delayed in arriving at the panel session due to a snowstorm. We were fortunate that Lisi Lafferty and interpreter Jonas Lafferty were willing to participate in their place for the first day!*

### Jonas Lafferty

I was born and raised in Behchokò. In 1963, I can recall going to residential school for a number of years. Later I became the Language and Cultural Coordinator of the Chief Jimmy Bruneau School. Every fall we had the fall hunt. We went to Courageous Lake, Jolly Lake, and Mohawk Lake to learn how to properly handle the caribou, how to sneak up on a caribou, how to care for a caribou, how to do a very good job. Traditionally, this tradition was passed on. You just take a knife and twine, that's all you have. You didn't have a backpack. You used to pack the caribou in a caribou hide. I used to love doing these things. Because of my health the last few years, I have not been out on the land.

### Lisi Lafferty

I'm a daughter of Harry and Liza Koyina. I was born on Hislop Lake out on the land. I was also raised out on the land when I was really young. When there was a shortage of caribou and fish, my family moved to Ray Rock. That's where my dad and my brothers worked for many years. I was picked up from there and sent to residential school. I went to residential school in Fort Smith, then Fort Simpson, and then I went to Akaitcho Hall here in Yellowknife.

Mainly I'm an educator. I became a teacher in 1982 and got my teaching degree at the University of Saskatchewan. I worked as a teacher for many years. Then I became a principal. Then I worked as a curriculum developer. I produce material for our Tłı̨chǫ teachers to teach our children their language and culture. I can read and write in my language. That's why when people are writing things in our language, I'm very critical of them. If you write something in English and there's a spelling mistake, you're not going to put it up. But we see a lot of our language written and there's a lot of spelling mistakes and it really bothers me a lot.

My current position right now is with the Tłı̨chǫ Government. They have a land claim and self-government. They have an Intergovernmental Services agreement and in there they have a position for the Cultural Coordinator. That's the position that I have right now. So I make sure the Tłı̨chǫ Government, the Territorial government and the Federal government are not doing something that's going to impact our language, our culture and our way of life.

My main issue is communication. You have to have proper communication to be able to have an effective meeting, and make sure that our people and people working for the government are understanding one another so they can make the right decisions.

I have six children and twelve grandchildren. Mahsi.

## Yellowknives Dene Delegates

### Fred Sangris (Nogache)

I was born here in this town of Yellowknife before it became a city in 1957. I was born to a nomadic family. Both my parents were hunters and trappers. They lived the land. They didn't speak English at all. They used their own indigenous language, which I picked up very quickly at a young age. I remember travelling with sled dogs on the land. My mother would cover me in a blanket, and I would throw the blanket over so I could see where we were headed. My mother allowed me to see the country at five and six years old. Today I travel through the same country and I still see the same hills, the exact same hills. Maybe trees change over time, but the hills and the valleys are still there. Sometimes I stop and look at it and I say, "Oh yeah, this is where I went through with my parents years ago. The very same places we used to camp." I'm still happy to see that.

I had a brother named Fred Sangris who was a year older than me. He passed away around 1956. He was only two months old. I didn't have a name when I was born, so my parents gave me my brother's name, which I still carry. I have to carry that name with a lot of respect because it's not really my name. It's a name for my brother and I carry it for him.

My real Dene name is Nogache. Noyacha in Chipewyan is Wolverine Tail. So when he was a young man, 15 years old, Nogache went into the greater barrenlands. One day I was going to school and I really enjoyed it. But the next thing I know, I was yanked out of school and I was told by my grandfathers that I have to have my feet in both worlds in order to survive. I had my foot planted on ancient times, the history and I lived that time too. I was taken out on the land and I lived the way of the past.

I travelled and learned from elders. They lived with the caribou, they monitored the caribou and they followed them, just like the Tłı̨chǫ in the olden days. When the caribou were quite a distance away, you'd take your dog team, you'd take your children, grandma and grandpa and just go. That's how we were.

My father said "I want you to travel past the treeline where there's no wood. Your grandfather did that already, and I'd like you to travel on your grandfather's trail." So that's what I did. I went all the way to McKay Lake, Courageous Lake and Lac De Gras. In the winter of 1977 and 78, I went right to Lac Du Sauvage, right beyond Lac De Gras. At that time, white fox were \$25.

Altogether I spent about ten years living up there. Everything was based on custom, traditional laws. Everything we did was by season.

I spent most of my time in the barren lands because my father wanted me to learn about using the resources. When I was 12 and 13, I was cutting a lot of firewood and my father noticed that I loved to cut trees at a young age. I still do it to this day. I cut firewood this morning too. I just love cutting firewood for the woodstove. My father noticed, that so one day he said, “We’re going to move into the barrenlands and show you how to use the resources wisely.” There are very few trees up there. That’s I learned to use the resources. I only made a fire when I needed to cook. If I didn’t need to cook, I wouldn’t build a fire at all. Most of the time I was sitting in the cold. Thank God I didn’t have a girlfriend at that time. She probably would have froze on me. It was cold. We would leave early in November and spend the whole winter there. About March 15th or 20th, we’d all come back to the community.

I was a competitive dog musher in the 1970s too. My father and I owned about 40-something dogs. All our uncles and our cousins, we were all in racing. That’s part of the reason my father brought me up in the barren lands, so I could travel longer distances with sled dogs, and at the same time they were getting the exercise they needed. So it was a good life. There was plenty of white fox, plenty of caribou, lots of wildlife out there.

### **Randy Freeman (staff)**

For the past year-and-a-half, I’ve been the director of lands for the Yellowknives Dene. I’m fairly new to Yellowknife. I think it’s about 27 years. I still feel like I’m a new-timer coming here. Prior to that I worked in archaeology. My first foray into the North was in 1973, and I vowed never to return. I just couldn’t stand the mosquitoes. Now I’ve gotten quite used to them. I just let them bite me in the beginning of each season.

I was born and raised in Medicine Hat, which I guess would explain my love of traditional placenames. The name Medicine Hat has a very interesting story. About 100 years ago, a bunch of businessmen in Medicine Hat got together and made up a story about it which people believe to still be true about some sort of Indian maiden and a medicine man’s headdress and war with the Cree or someone. It’s just all BS. The people that really still know about it say it’s the name of some cliffs that look like a medicine man’s headdress in the proper light when the sun shines on it at the right angle. It was a very important crossing of the river, and that’s why they named it. It was about 1912 that businessmen got together to make up the big story about it.

Most of my career in the NWT has involved working with various communities on traditional placenames. Nowadays people may give the English name of a place or places where they are from, but qualify that by giving it the real name, the proper Aboriginal name. That’s the way that I’ve looked at it for all these years. There are imposed names by explorers, geologists and anthropologists and then there are the real names. It’s been my work over many years to try to make sure that those names are still used, still known, put on the maps where they can be. That’s



one of the projects I hope to get into with the Yellowknives Dene, because they have traditional names that have been in use for many hundreds if not thousands of years.

## Resource People

### Michèle LeTourneau (EMAB)

I'm from a small town south of Winnipeg. It's a French town called St. Jean Baptiste. I didn't speak English until I was about six or seven. My family moved all over Canada when I was growing up. In 1998, I went to Rankin Inlet for a three-week contract. I fell in love with the North. The newspaper hired me and sent me to Yellowknife. I was surprised when I got off the plane, because it didn't look at all like Rankin Inlet. I worked at the paper for four years, and for the government for a year. I wasn't happy, so I got a job with EMAB and it's been an amazing experience. This is my favourite part; when people get together and try to get something going. It's my pleasure to be here and listen.

### Shelagh Montgomery (SENES Consultants Ltd)

My introduction to the Northwest Territories was moving to Délı̄nę in 2000 after finishing university in Montreal. I lived in Délı̄nę just over two years, working with the Délı̄nę Uranium Team on issues that the community had with Port Radium, the former uranium mine. So I've spent lots of time as well in the Sahtu area.

When I moved to Yellowknife, I worked for an environmental non-governmental organisation, Canadian Arctic Resources Committee. We were involved in some cumulative effects work in what's known as the Slave Geologic Province. It's that area where we're looking at now where the diamond mines are located, stretching from the Yellowknife area or Great Slave Lake up to the Arctic coast. I did some work related to the Bathurst caribou herd.

For the last seven or eight years, I've been working for SENES Consultants, primarily in the Northwest Territories. We do a lot of mine site contamination or remediation work. I've done work with Łutsel K'e and in the Dehcho working with different Aboriginal groups.

### Deborah Simmons (SENES Consultants Ltd)

My starting point is in Arizona, that's where I was born. My dad was studying mountain sheep, big horn sheep, wild mountain sheep down there. He got a job in the Northwest Territories and he didn't even know where it was on the map. But we got into a yellow Ford station wagon and travelled up to Fort Smith. He was studying Dall's sheep, and he worked mostly with Shúhtagot'ı̄nę people in Shúhtagot'ı̄nę Nė́nė́, the land of the mountain Dene who mostly now live in Tulı́t'a. So that's where part of my growing up was. As a wildlife biologist, my Dad realized that he was learning more about mountain sheep and mountain caribou from the Dene who lived with those animals than he ever could at university. Now I'm fulfilling one of his lifelong dreams, working on TK/IQ with knowledgeable Aboriginal people.

## Natasha Thorpe (Thorpe Consulting Services)

I feel lucky to have worked on TK/IQ projects probably for about 15 years, mainly in the North.

I grew up on the coast in and around the Vancouver area. I was brought up in a very scientific family, and I ended up pursuing a science degree. My first job out of university was working up at BHP. At that time I remember my boss saying, “We have these elders coming in from Kugluktuk. Can you take them around in the helicopter and write down what they tell you about Traditional Knowledge?” I was just out of university and thought I knew everything. I had things to do, and this was going to mess up my whole day.

I spent the whole day flying around with these elders. They spent the whole day telling me there’s a wolf den over here and there’s going to be caribou over here. Every single time they were right. It was like your whole life you thought the world was square and then all of a sudden, someone tells you it’s round. It really changed the way I started to think about the world and about the environment as a scientist. That was the beginning of my second education, which was primarily working with Inuit and having an on-the-land experiential education.

I spent most of my early twenties back and forth from the North. I can’t seem to ever really leave. It’s in my blood. Thank you.

## Introducing the Diavik Team

### Diane Dul

I was born in Fort Smith. My father was an RCMP officer. He married my mom, who is an Aboriginal lady and he got a dishonourable discharge from the force back in those days because they couldn’t get married until they’d been in the force for at least five years, had a certain amount of money in the bank, etcetera etcetera, and my dad had none of those. He loved my mom dearly. They are still together, and they are going on their 57th year of marriage.

When I was very little, we moved out of Fort Smith and we moved down south. So I wasn’t raised traditionally in the North. I really feel badly about that. I moved back up North in 1992, and I love the North. It’s my home. It’s where I belong. I came home.

I was very fortunate to end up working in the Environment Department at Diavik. I started working for Diavik in 2005 through the process plant operator’s course. I was selected as one of the people to go through the course. I went up to the mine, did a six-week practicum and ended up with a full-time job working in the recovery plant. When we were in the recovery plant in 2009 when they had the shutdown, I was asked if I would like to go and work in the Environment Department for six months doing the Water Monitoring Program. They decided instead of laying off their Aboriginal workers, that they would transfer people from the process plant into the environment department to do the Water Monitoring Program, if they were

interested. They hired me, and later they asked me to stay in the Environment Department. They told me I'm going to fly around in helicopters and be out in the boats and run around on skidoos and monitor all the wildlife and do all these cool things.

I'm really excited about where this can go, bringing in the TK/IQ into it, sharing knowledge both ways.

## Colleen English

I was born and raised in Winnipeg. I studied the environment and wildlife at university because I had grown up outside. I loved the outdoors, and it seemed a natural fit. While I was at university, we were out on a waterfowl reserve in Manitoba, and my professor saw a goose. The goose had been injured, it had been shot. But it was just its wing that had been damaged. It was running on the ground and trying to flap its wings and lift up. My professor stopped the vehicle, got out, ran after the goose, grabbed it, rung its neck, and put it in the back of the truck with all his students sitting in the back of the truck. We were all shocked. He just said, "Well, it wasn't going to survive anyway, so it might as well be dinner for somebody. I thought, "This is a whole new approach."

His wife taught Native Studies at the university, and he taught northern ecology. He put a very different twist on northern ecology, and he was focused on the people and the landscape. That really influenced me. One of the pivotal classes that I took a course with him and his wife in Churchill and it was an outdoor survival and education course. It was a week long and we built quinzis and igloos, we built trenches, we hunted, we trapped, we did everything and it was hard. It was cold. It was a long week, but it was amazing. We had help all along the way from local people in the community teaching us all the different aspects of living on the land.

Then I started to change some of the courses I was taking, started to look at life a little bit differently and started to think about where I wanted to live and what I wanted to do after that. I went to the High Arctic and started working up in the Resolute area and Prince Patrick Island. I passed through Yellowknife when I was going up there and loved Yellowknife. I started living here about 15 or 16 years ago.

Then I started working for Diavik. It was a very interesting job. It was getting to do all those little pieces that I loved. Getting to work with people in the communities and on the land. I really enjoyed all of those experiences. Now my newer job is melding those a little bit more. Before, it was strictly a lot of the environment work. Now I'm starting to get into working with TK/IQ, and help make some changes in how we do things.

## Conclusion

The TK/IQ Panel members comprise a rich and varied body of knowledge and experience. In reviewing this document, panel members made it clear the discussions over the two days of the March session represent only a small fraction of the knowledge they and knowledge holders in their communities have to share about the wildlife and landscape in the Diavik area. In particular, much work remains to be done in reviewing, assessing and adding to existing caribou TK/IQ documentation. As well, the TK/IQ Panel is eager to learn more about the totality of monitoring, management and research being conducted by Diavik about caribou. A full session focused on caribou in the future should include presentations about the Traditional Knowledge/Inuit Qaujimajatuqangit and scientific states of knowledge about caribou in the Diavik area.

## **APPENDIX IX 1.2**

### **Renewing Our Landscape**



# RENEWING OUR LANDSCAPE

## Envisioning Mine Closure and Reclamation of the North Country Rock Pile, Diavik Diamond Mine



**Technical Report**  
**June 26-28, 2012 TK/IQ Panel Session**

*Presented by*

### **The Traditional Knowledge/ Inuit Qaujimajatuqangit Panel Environmental Monitoring Advisory Board (EMAB)**

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*Compiled by* SENES Consultants Ltd.

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## No Prejudice

Section 2.1, *Environmental Agreement for the Diavik Diamond Project*

This Agreement is without prejudice to the positions of the Parties respecting any:

- (a) existing Aboriginal or treaty rights of the Aboriginal Peoples;
- (b) on-going or future land claims or self-government negotiations affecting Aboriginal Peoples;
- (c) constitutional changes which may occur in the Northwest Territories;
- (d) changes to legislation or regulations resulting from the settlement of land claims and self-government negotiations, or resulting from constitutional changes or devolution; or
- (e) existing or future Participation Agreements.

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## Report Summary

The Environmental Monitoring Advisory Board (EMAB) and Diavik are working collaboratively to develop an approach to Traditional Knowledge (TK) and Inuit Qaujimagatuqangit (IQ) processes required along with scientific research as the basis for sound planning related to closure and reclamation of the mine.

The TK/IQ Panel was asked to provide input on a vision for closure and reclamation of the North Country Rock Pile, and a process for community engagement and TK/IQ studies. Accordingly, a three day TK/IQ Panel session was convened June 26-28, 2012. The session added a new workshop component, providing opportunities for learning about some of the technical aspects of rock pile closure, as well as experiences and approaches to mine closure elsewhere.

The three sections of the report are as follows:

1. **How We Did the Work.** A discussion of the Aboriginal knowledge and cross-cultural learning approaches that informed design of the session and workshop.
2. **Results: Reclaiming the North Country Rock Pile.** Key messages from the session and workshop, as well as linkages with relevant previous studies and Diavik's May and August 2009 closure planning workshops. This section provides a window into the social and natural history of the mine site and the landscape; a scoping of values and concerns; and an indication of areas where there are opportunities for TK/IQ input.
3. **Recommendations for Action.** The consensus perspective of the TK/IQ Panel on reclamation and closure planning, and the panel mandate and approach.

## Recommendations for Action

### Reclamation and Closure Planning

The June TK/IQ Panel session provided direction on a series of three recommended focal points for cross-cultural dialogue during upcoming sessions:

1. Baseline studies: previous TK/IQ studies and archaeological findings in the ?ek'atı area.
2. Reference condition options for the rock pile.
3. Planning for biodiversity in revegetation, wildlife habitat, and capping options for the rock pile (differences from the target reference condition)

### TK/IQ Panel Mandate and Approach

The panel made progress in clarifying its role in the broader framework for planning, management and monitoring at Diavik. Discussions gave rise to recommendations regarding clarification of the panel mandate; the need for State of Knowledge reporting on TK/IQ in the Diavik area; best practices in TK/IQ research; the role of the panel in community engagement; and the need for a system to measure success in TK/IQ processes.

## Conclusion

This document expands on the proceedings of the June 2012 panel session and workshop toward providing a foundation for future panel work, specifically in providing inputs on closure and reclamation planning at Diavik; and more broadly in contributing to the purpose of the Environmental Agreement “*to respect and protect air, land, water, aquatic resources, wildlife, archaeological and cultural resources, and the land-based economy that are essential to the way of life and well-being of the Aboriginal Peoples*” (S1.1[d]).

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## Appendices (Volume II)

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APPENDIX B – WORKSHOP PRESENTATIONS

APPENDIX C – TK/IQ PANEL RECOMMENDATION: CLOSURE AND RECLAMATION PLANNING

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APPENDIX E – TK/IQ PANEL UPDATE TO EMAB BOARD, SEPTEMBER 25, 2012

## Introduction

The Environmental Monitoring Advisory Board (EMAB) and Diavik are working collaboratively to develop an approach to Traditional Knowledge (TK) and Inuit Qaujimagatuqangit (IQ) processes required along with scientific research as the basis for sound planning related to closure and reclamation of the mine.

Diavik is preparing a revised *Interim Closure and Reclamation Plan* for submission in 2016, with a final plan due in 2020. This must be approved by the Wek'èezhì Land and Water Board (WLWB). The revised Interim Plan would incorporate findings from TK/IQ research and community engagements, including specific tasks outlined in the “Traditional Knowledge and Community Participation” section of the current Interim Plan (Appendix VII-1 [2011]). Diavik is required to submit an annual progress report to the WLWB.

Two of the goals identified in the current Interim Plan (Version 3.2, 2011) are “land and water that allows for traditional use,” and “final landscape guided by traditional knowledge.” Interim Plan 3.2 notes that “Diavik accepts future traditional knowledge considerations may influence or change the final landscape, in particular wildlife movement routes, final contours and surface textures.”

The “Traditional Knowledge and Community Participation” Appendix identifies the need for community inputs in a number of areas, including wildlife routes, target areas for revegetation<sup>1</sup>, and landform shapes. A particular focus identified by Diavik for 2012 is closure of the North Country Rock Pile.

The TK/IQ Panel was asked to provide input on a vision for the rock pile, and a process for community engagement and TK/IQ studies. Accordingly, EMAB convened a three-day TK/IQ Panel session June 26-28, 2012. Through a financial partnership with Diavik, EMAB was able to include youth representatives. The session added a new workshop component, providing opportunities for learning about some of the technical aspects of rock pile closure, as well as experiences and approaches to mine closure elsewhere.



<sup>1</sup> Although the approved closure design concept does not include revegetation of the rock pile.

### Diavik Closure Planning Process and Goals

Diavik's closure planning began in 1996-1998, before the mine opened, and the Initial Abandonment and Restoration Plan (1999) was issued in 1999. Subsequent versions were published in 2001 and 2006. The current Version 3.2 was submitted in July 2011, and identifies the following eight goals:

1. Land and water that is physically and chemically stable and safe for people, water and aquatic life.
2. Land and water that allows for traditional use.
3. Final landscape guided by traditional knowledge.
4. Final landscape guided by pre-development conditions.
5. Final landscape that is neutral to wildlife – being neither a significant attractant nor a significant deterrent relative to pre-development conditions.
6. Maximize northern business opportunities during operations and closure.
7. Develop northern capacities during operations and closure for the benefit of the north, post-closure.
8. Final site conditions that do not require a continuous presence of Mine Staff.

### EMAB and the TK/IQ Panel

EMAB has established a Traditional Knowledge/ Inuit Qaujimagatuqangit (TK/IQ) Panel with a mandate to assist EMAB in facilitating appropriate and meaningful accommodation of Traditional Knowledge/Inuit Qaujimagatuqangit (TK/IQ) in the planning and review of environmental monitoring at Diavik. The TK/IQ Panel consists of knowledgeable individuals appointed by each of the five Aboriginal Parties to the Environmental Agreement.

Prior to 2012, EMAB convened several TK/IQ Panel sessions on an issue-by-issue basis. In May 2011, EMAB held a workshop to explore how best to implement its mandate regarding TK/IQ. A first of a series of TK/IQ Panel session was held on caribou monitoring at the Diavik mine site March 14-15, 2012. Following a strategic planning session on May 20, 2012, EMAB decided to continue working toward establishing the TK/IQ Panel as a standing body. The current report is based on proceedings of the second TK/IQ Panel session, which took place June 26-28, 2012 with a focus on closure and reclamation of the North Country Rock Pile. A third panel session is planned for February 2013.

## Who Are We?

The TK/IQ Panel is a standing body of knowledge-holders appointed by the five Aboriginal Parties to the Environmental Agreement related to Diavik. As often as is feasible, the TK/IQ Panel works with a youth delegation, also appointed by the Aboriginal Parties.

We have learned that the diversity of our cultures and experiences needs to be accounted for in our work together. At the same time, we share common interests as peoples who have survived from the land across generations. We work with a small team of resource people to ensure that our knowledge can be applied to the new conditions presented by the existence of the mine in our shared traditional territories.

## Facilitation

Deborah Simmons, SENES Consultants Ltd.

## Note Taker

Shelagh Montgomery, SENES Consultants Ltd.

## TK/IQ Panel Delegates

Kitikmeot Inuit Association	Bobby Algona, Mark Taletok <i>Youth:</i> Mona Hiniak, Randy Hinaniak
Łutsel K'e Dene First Nation	August Enzoe, Alfred Lockhart, George Marlowe <i>Youth:</i> Darnian Marlowe, Helena Marlowe
North Slave Métis Alliance	Ed Jones, Wayne Langenhan, Susan Enge <i>Youth:</i> Jackie Strong, Nicole Enge
Tłı̄chǫ Nation	Pierre Beaverho and Louis Zoe
Yellowknives Dene First Nation	Fred Sangris, Phillip Liske

## Observers/Presenters

EMAB	Michèle LeTourneau
Diavik	Colleen English, Gordon Macdonald & Seth Bohnet
Integral Ecology Group Ltd.	Ann Garibaldi
Dialectic Research Services	Kathryn Scott

## What's in this Document?

This document reflects on three days of work together in June 2012, and is supplemented by a limited review of relevant literature. The three sections of the report are as follows:

4. **How We Did the Work.** A discussion of the Aboriginal knowledge and cross-cultural learning approaches that informed design of the session and workshop.
5. **Results: Reclaiming the North Country Rock Pile.** Key messages from the session and workshop, as well as linkages with relevant previous studies and Diavik's May and August 2009 closure planning workshops. Provides a window into the social and natural history of the mine site and the landscape; a scoping of values and concerns; and an indication of areas where there are opportunities for TK/IQ input.
6. **Recommendations for Action.** The consensus perspective of the TK/IQ Panel on our mandate and lessons learned about approaches to our work and measures of success.

The report weaves together summaries with background information and key messages from the TK/IQ Panel session, along with quotes from session transcripts, shared with the knowledge and approval of the speakers following review at the panel session on October 23-25, 2012. We share the quotes because these contain more of the full meaning of what was said. In some cases, the original narratives were spoken in an Aboriginal language. Unfortunately we are not able to provide the Aboriginal languages texts here, but have to rely on the transcripts of the English language interpretations.



Figure 1: TK/IQ Panel talking circle



## How We Did the Work

### Aboriginal Ways of Knowing

There are very few examples of this kind of work being done by a group of Aboriginal knowledge holders in Canada, or even the world. We are trying to use our traditional ways of knowing as five different nations working together, and addressing issues that are new to us as Aboriginal peoples in Canada. This is not easy. As Aboriginal peoples have always done, we are learning as quickly as we can so that we can address our responsibilities in a way that bridges the past with the present and future. Here we describe some of the processes that we've been developing for our sessions. The session agenda can be found in Appendix A.

### Prayer

Aboriginal research might be understood as a form of ceremony (Shawn White 2008). The TK/IQ Panel indicates the spiritual dimension of our work by starting and ending our meetings with a prayer.

It's only proper that we pray. Our elders always remind us to say an opening prayer and closing prayer whenever we meet, no matter what the size of the assembly. The reason why we pray in the morning is to thank the Creator, who united us together. The only guidance we depend on to do our daily work is the Creator's. That's the reason we pray. Thank you.

– Pierre Beaverho

### Talking Circle

Because of the cross-cultural context of our mandate and activities, we take a very flexible approach to our sessions. One of the methods that we rely on is the talking circle, which puts everyone on an even playing field as knowledge holders collaboratively working to create new knowledge. In the talking circle, we are all learning from each other. This requires that we practice the Aboriginal discipline of being respectful listeners.

I like the way the chairs are set up in a circle. In the past, years ago, this is how the old timers used to sit. This is how they used to share stories and conduct their meetings in the past. This is how they had prayed. They sat in a circle. So it's just like doing what the elders have done. As a kid, I used to see them sharing stories. So I just like the way it's set up now to have a workshop and a meeting with the chairs in a circle. I don't mind at all. – Pierre Beaverho

I think this word “expert” is used a little bit loosely. To start off with, this is all new. It’s never been done before and we’re sort of stumbling in the dark. We’re trying to do a good job the best we can, but we’re by no means experts because this has never been done before. What we’re trying to do here is get all our heads together and come up with the best solutions possible, but that doesn’t really make us experts. – *Wayne Langenhan*

## Youth Delegation

Elders have said many times that youth need to be involved in TK/IQ processes. Knowledge sharing is more meaningful when knowledge holders are able to address the future leaders and stewards of the land. Young people bring to the processes their unique knowledge of the cross-cultural circumstances for interpreting and applying the knowledge of their ancestors.



Figure 2: L-R Top Randy Hinaniak, Helena Marlowe, Jackie Strong;  
Bottom Mona Hiniak, Damian Marlowe, Nicole Enge

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Participants in the March 2012 TK/IQ Panel session made it clear that they consider youth involvement to be essential. In response to this recommendation from the panel, EMAB invited each Aboriginal Party to delegate two youth to participate in the June meeting. Youth delegates from three of the five Parties attended the session. Over time, it is hoped that full representation will be possible, and the youth delegation might achieve a life of its own.

It is a challenge to support meaningful participation by youth delegates. Aboriginal youth are familiar with educational methods introduced in schools. However, many of these are also fortunate to have grown up with traditional methods of teaching in their families and communities. This involves disciplines of learning through listening, watching, and practicing.

During this first TK/IQ Panel involving youth, a gradual approach was taken to involving the youth delegates. This was an opportunity to become comfortable sitting in the talking circle, and to listen to the discussions in order to begin to become familiar with the role of the TK/IQ Panel and the objectives of the session. When they spoke, knowledge holders often specifically referred to the youth and the importance of their learning and contributions. As the microphone travelled around the talking circle, youth had opportunities to speak. They made it clear that they were absorbing and reflecting on the knowledge that was being shared. However, as was pointed out by Susan Enge, as the TK/IQ Panel evolves it will be useful to consider a variety of different ways to involve youth, including cross-cultural methods.

The final day of this panel session coincided with a graduation ceremony in Yellowknife, and became an ideal occasion for reflecting on the potential for involving youth in the TK/IQ Panel, in EMAB, and at the mine – continuing the thread of discussion started in the March panel session. The large number of references to the role of youth (eight references by different speakers were coded in the transcripts) is an indicator of the value placed on their participation by panel members, as well as the need to be conscious of how to achieve success in engaging youth at this early, experimental stage.

We need youth. Even the youth in Rae Lakes, when we have meetings, we're leaving them out. It's their future that we're talking about. They need to be involved, so they can know what's happening in the community, on the land. So I would like to bring the youth from our region next time I attend a meeting like this. – *Louis Zoe*

I think about young people all the time. When we talk like that for the young people, they are the ones who are going to speak for the next 10 years. Those are the ones who have to put a lot of things in there after us. They are going to take over. I'm happy I've got my grandson with me here and also my niece. Those kinds of people like that, it's very important. For that, I'll say thank you and we're still not over yet. Thank you very much. – *George Marlowe*

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I know the youth is critical and I'm really personally glad to see them here today because they are going to carry the torch. We can incorporate youth by making our meetings more interactive. – *Susan Enge*

It's a good recommendation that the panel have more youth with them all the time. As Elders, we're not going to be here forever. The youth are going to be taking over what we're doing today. We want our wording to represent our youth also. Some thoughts may be changing in the future. The youth may have better access to how they put their wording down also. Thank you. – *Bobby Algona*

Myself too, at one time I was youth. All of us were once babies. And as young people, we were learning by listening. We didn't say a lot. We're learning. Even though we didn't talk, we learned a lot. Years later when I got older, all that listening helped me to learn to speak publicly. – *Fred Sangris*

Today I think we have a lot of youth graduating in our communities, in every region. We should pay our compliments to them. The Tłıchq Nation consists of five communities including Yellowknife and Dettah, so we make up a lot of the population. The future generation is growing and healthy. I would like to see students who have graduated work closely with the EMAB office and maybe doing some studies at the mine site, monitoring the water, the environment and the plants out there on the land. The Elders can't do this anymore. As an Elder, I'd like to see that. It's always good to have youth involved with us. The youth are the ones that will have to live through closure. I sure don't want to see them getting a good education and not doing anything with it. Along with education, you need Traditional Knowledge. That's where we as Elders come in. We can all benefit from working hand-in-hand with our youth and industry into the future. I sure hope that you'll be able to encourage youth to work with you in every region. They are the ones who we will have to depend on, and who will manage our destiny into the future. Thank you. – *Pierre Beaverho*



I'd like to say thanks to everybody here, all the youth, elders, board staff. This is the first time I've been to one of these meetings. It's a fun process learning and trying to get youth's input into it as well. I've had so much fun here. I definitely am looking forward to coming back to more of these meetings. Thank you very much. – *Randy Hinaniak (youth delegate)*

## Site Visit

TK/IQ Panel members felt strongly that in order to speak knowledgeably about the North Country Rock Pile, it would be necessary to see it in person. There was extensive discussion about the reasons a site visit would be important (14 references by different speakers were coded in the transcripts). This speaks to a fundamental principle in TK/IQ, that “being knowledgeable” requires that knowledge from the past be properly situated in the experiential context being discussed<sup>2</sup>. As Louis Zoe put it, it's not considered appropriate to “speculate or assume.”

There was consensus among TK/IQ Panel members that it would be impossible to talk knowledgeably about the rock pile as a feature on a map, narrative description, photos, video, or clay model – or all of the above – as was proposed at this panel session, in large part because it was a completely new feature for TK/IQ knowledge holders. There was no clear reference point that could be drawn from people's knowledge of the natural landscape. Colleen English noted



Figure 3: Diavik Site Visit, August 20, 2012. L-R Peter Huskey, Ed Jones, Louis Zoe, Pierre Beaverho, Bobby Algona, Mark Taletok

<sup>2</sup> Alice Legat (2012) discusses this principle at length based on her collaborative research with Tłı̨chǫ elders over more than two decades.

that in the past, Diavik had received similar feedback in discussing closure with Aboriginal stakeholders. A closure workshop was held at the mine site in 2009.

While requesting a site visit for the TK/IQ Panel, the group understood that it would not be feasible for everyone in the communities to see the site – for this reason, it was suggested that the site visit be videotaped. Although dreams for a visit the traditional way, through an on-the-land camp, were put forward, it was understood that this would not be possible within Diavik’s safety policy.

Diavik staff responded quickly to the proposal for a site visit with an invitation for a day trip followed by a debriefing meeting. This invitation was welcomed. Speakers engaged in a detailed discussion about the timing of the visit, noting that the weather would be unpredictable and potentially very unpleasant during the originally proposed date for the visit in September. August was suggested as the preferred timing.

Several speakers proposed that youth should be included in the mine site visit, so that they too would have an experiential reference point for participating in closure discussions. At the same time it was understood that a small group might be preferable.

The site visit following from this TK/IQ Panel session was sponsored by Diavik and took place on August 21, with a debriefing session at the Yellowknife Inn on August 22. The mine site tour was conducted by Colleen English. Unfortunately, due to mechanical problems with one of the planes, it was not possible for Seth Bohnet, Michèle LeTourneau or Wayne Langenhan to travel with the group. Panel members on the tour were Deborah Simmons, Ed Jones, Bobby Algona, John Ivarluk, and Pierre Beaverho, Louis Zoe, as well as Peter Husky (interpreter). George



Marlowe and Mel Enge joined the group at the debrief.

**Figure 4: Site Visit Debriefing session, August 21, 2012. L-R Peter Huskey, Deborah Simmons, Bobby Algona, Pierre Beaverho, Mark Taletok, Louis Zoe, George Marlowe, Mel Enge, Ed Jones, Wayne Langenhan**



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We've seen just a few pictures there. I don't understand. The last time I was there was ten years ago. Today it's probably changed a lot. So it would be good if we all go down there and check around the mine, walk around and look at pile and the pit that you're talking about now. We should go down and see the mine twice a year, winter and summer. Just to see how the mine is working. We all have to work together. Thank you. – *August Enzoë*

It's hard to make a recommendation without seeing with your own eyes what type of rock pile you're talking about. I, for one, would like to go back to the mine site again before I make any decisions or recommendations. I need to see where all the waste rock piles are and where all the tailings ponds are, how that's going to be treated down the road, and how those things will be reclaimed.

We need to do our traditional knowledge work properly. Traditionally that's how we did it. You have to visualize and see for yourself and know where you're going and what you're talking about. The last time I was at the Diavik mine site, it was back at the early exploration stage. There was no airstrip at the time. That's when I was there last. – *Pierre Beaverho*

A lot of our elders don't know how to read and write, but I agree with what they said in the past. In order to do a proper job, you have to go and visit the site and make your own decisions, not to speculate or assume. A lot of the elders that travelled that area in the past knew exactly what land they were crossing, where they were going, what direction the prevailing winds were, where the eskers and caribou crossings were. That's how they used to travel. They had a natural instinct for navigating in the area. Thank you. – *Louis Zoe*

It's really hard to come up with a plan or even a really informed discussion about the rock pile and how we're going to design this man-made plateau. There are some Elders here who haven't been to the mine site for a long time. There are others who haven't been there at all. There are youth who haven't visited there. They don't know the scale of these things, what kind of undertaking it would be to have the material to cover something that huge. They are just guessing. They have nothing to go on.

The people that haven't been there, they don't know what they're dealing with. So it's pretty hard to discuss things when you don't know what you're dealing with. – *Wayne Langenhan*

What that photograph doesn't tell you is the boulders there are about the size of this table. They are huge boulders all broken up on the side of the hill. You don't see that on the photograph. You can't go and make suggestions on that model and say "Do it this way, do it that way." You're likely to make a mistake. You have to go see that site. You have to go and look at that rock, the size of that rock before you make suggestions and recommendations. We can't really work with the model because we haven't seen the type of rock that's there or the size of rocks. We don't know. – *Fred Sangris*

## Learning from Others

Other ways of learning and sharing knowledge were incorporated into the TK/IQ Panel session in a "workshop" format to complement and inform the talking circle process. Presentations were made by Diavik staff (Colleen English, Gordon Macdonald and Seth Bohnet) and visiting resource people (Ann Garibaldi and Kathryn Scott), who provided examples of Aboriginal inputs into closure and reclamation planning from other places. Slide presentations are in Appendix B.

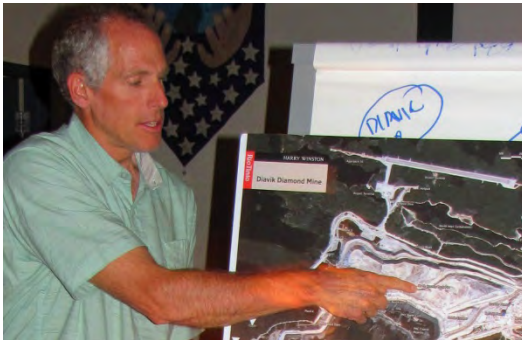


Figure 5: Clockwise from top left Gordon Macdonald, Ann Garibaldi, Colleen English

Diavik staff also offered opportunities to experience the rock pile by way of maps, short video clips, photographs at various scales, as well as a clay model. The possibility was offered of using computer modelling tools to reshape the rock pile during community consultations. In addition, Diavik staff prepared a demonstration including samples of different materials that could be used to cap the rock pile.

### Workshop Presentations

- Gordon Macdonald, Colleen English and Seth Bohnet: “Diavik: Closure and Reclamation Planning”
- Ann Garibaldi: “Aboriginal Values and Reclamation”
- Kathryn Scott: “Examples of TK Integration”

## Reflecting on Our Process

During the June 2012 TK/IQ Panel session, the second in the series, the session process expanded beyond the experience of the March session by including youth, as well as a workshop approach to some of the activities. Several lessons were learned in the process:

- The presence of youth significantly enhanced the proceedings; it may be possible to progressively develop mixed methods for engaging youth over future sessions.
- There needs to be coherence in the format of TK/IQ Panel sessions so that participants understand the flow of discussions as they relate to the session purpose.
- Cross-cultural learning processes can be very effective in providing knowledge holders with necessary context for providing meaningful input.
- TK/IQ holders are not comfortable speculating about situations that they have not experienced; a “reference condition” approach that refers to ecological features that resemble new scenarios may help to address this challenge.
- Site visits are invaluable as a means of educating TK/IQ Panel members about the closure process, and as a basis for developing process design for community engagement and TK/IQ studies.

## Results: Reclaiming the North Country Rock Pile

The TK/IQ Panel session provided an opportunity for panel members to get an overview of Diavik’s closure and reclamation plan, and to begin scoping options for closure and reclamation of the North Country Rock Pile. Presentations by Diavik staff and visiting resource people provided the context needed for the panel to understand their role and contributions in relation to larger processes underway. Panel members described their knowledge about the history of the landscape, identified concerns about the future of the rock pile, shared their values, and began to explore options.

### What is Closure?

When mining activities end, the owner is required to close it down or “decommission” it through a formal process. A mine begins to close the day it opens. Closure planning needs to happen before the mine opens, since decisions made in construction and operation of the mine will affect the closure process and reclamation of the landscape. Diavik is required to regularly review and revise its Interim Closure and Reclamation Plan. Since Aboriginal people will live with the post-mine landscape in the future, it is important that they be involved in closure planning.

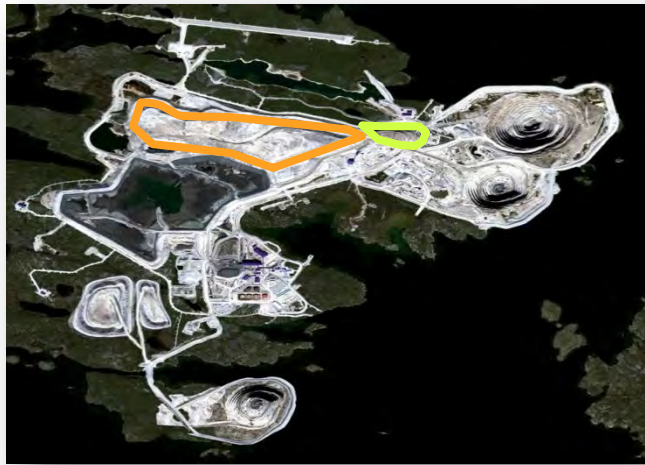


Figure 7: Diavik and the North Country Rock Pile (outlined in orange) and till stockpile (outlined in green)



Figure 7: Depiction of currently approved closure plan with flooded pits, waste rock pile and PKC pond.

### What is Reclamation?

The mine has changed the land. It is not possible to restore all the land to exactly the way it was before the development. But reclamation projects attempt to establish ecosystems that serve the needs of society and the environment. People's visions for the land are the basis for planning reclamation projects.

### Wildlife, People and Landscape

During the March TK/IQ Panel session, panel members were invited to introduce themselves by way of talking about where they were born and grew up. The June panel session provided an opportunity for members to share their historical knowledge of the landscape encompassing and surrounding the Diavik mine site. The richness of Aboriginal histories and knowledge of the area

was remarkable. At the same time, it was mentioned a number of times that considerable documentation of traditional knowledge had already taken place through the Environmental Assessment process – and a number of the knowledge holders involved at that time are no longer with us. The panel sent a clear message about the value of past and present TK/IQ work as a baseline for understanding closure and reclamation values and goals.

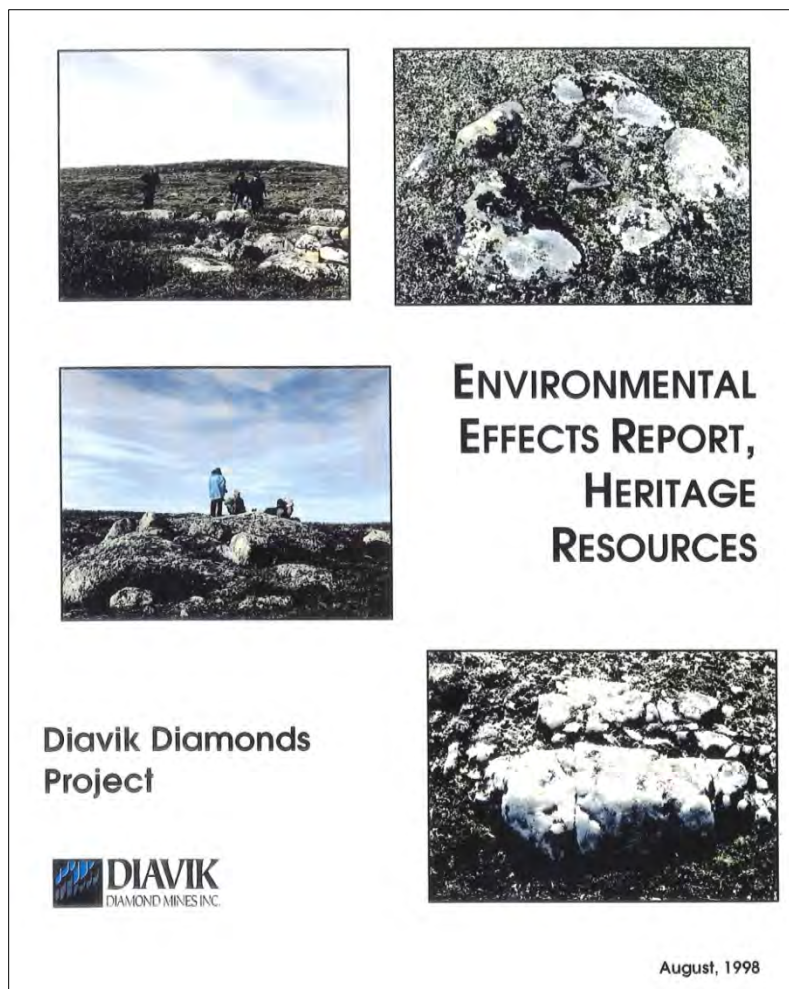


Figure 8: Cover page, Diavik Environmental Effects Report, Heritage Resources, August 1998



## A History of Research

A comprehensive review of previous TK/IQ research about the landscape now occupied by Diavik is not within the scope of this report. However, it is important to highlight several processes that are especially important in collectively serving as a foundation for present and future TK/IQ research, as follows:

- Interviews conducted as part of the Committee for Original Peoples Entitlement (COPE) program established in 1970 to resolve the Inuvialuit land claim agreement.
- The Dene Nation Mapping project undertaken during 1974-1983 as part of the research for the Denendeh Dene and Métis comprehensive land claims process, including interviews with approximately 600 trappers in the Mackenzie Valley.
- TK/IQ research as part of the Environmental Assessment process prior to mine development.
- A number of projects related to the West Kitikmeot/Slave Study (WKSS) program during 1996-2001 that centred or included TK/IQ research, under the oversight of the Traditional Knowledge Steering Committee, including representatives of the five Aboriginal partners in the WKSS program.
- TK/IQ research programs and projects independently initiated by the five Aboriginal Parties since 1983.
- The State of Knowledge Report of the West Kitikmeot/Slave Study Area (SENES Consultants Ltd 2006).

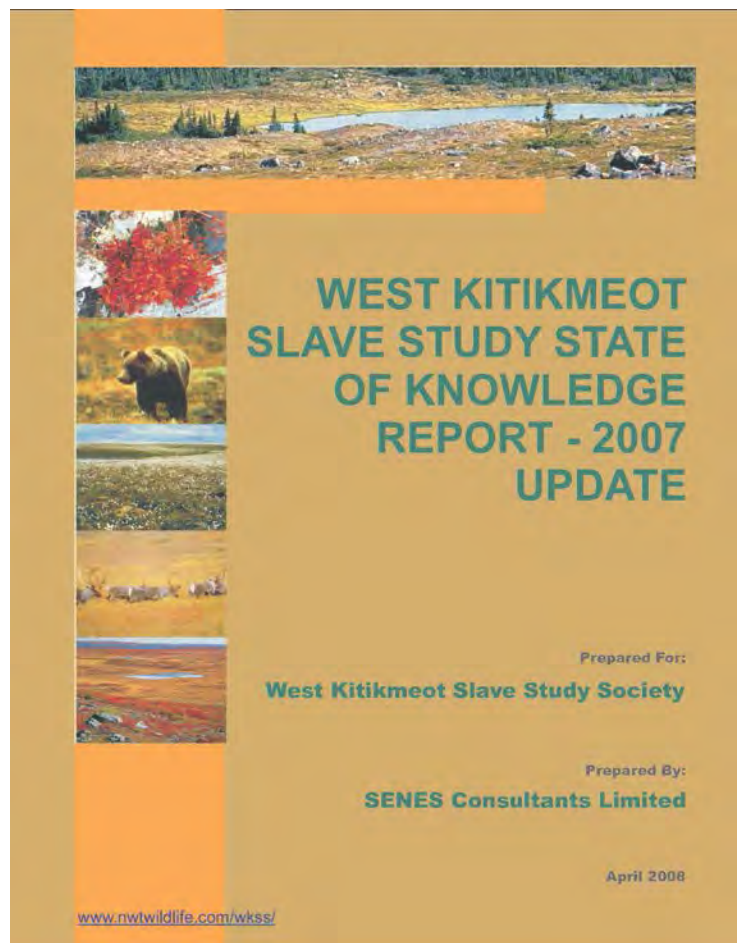


Figure 9: Cover page, West Kitikmeot Slave Study State of Knowledge Report - 2007 Update, April 2008



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Back in 1996 or 1997 we visited the mine site, and at that time we did mention the caribou crossing there, and we recommended that we should do something about it. We should do this or that. We could put a fence on the side of the shore and see if it works or not. If it's not working, they could take it down. We talked about those things. At that time, there were lots of caribou on that island. It was August when we were there. Some of them were sleeping on hills. Other ones were sleeping under a TV dish. There was a whole bunch of them. It's not like that anymore.

So we did put a lot of words in there, but nothing was done. Now they are going to start to work on it after all these years. I wonder what they did with the data that they wrote down back then? I'm confused. I don't know why we didn't work on it.

I've been to the Diavik mine site how many times now? Since way back when it started opening. We put a lot of work in related to the mine and how it should be designed. I look around and realize that a lot of the people I worked with from Behchokò and elsewhere are not with us anymore. They are all gone. It's only me sitting here now. There were books written on that, way back in the 1990s, how to deal with caribou around the island. But there doesn't seem to be anything happening. Now we are just starting over again. The same words are coming up again. Thank you. – *August Enzoe*



Figure 10: Louis Zoe

## Homeland: Placenames and Cultural Landscapes

The five Aboriginal nations represented on the TK/IQ Panel each have distinct languages and histories. Each of the nations, as well as each individual, brings a distinct overlay to the cultural and historical landscape of the mine, providing their own nuance to the socio-ecological knowledge of the area. This diversity is indicated in the placenames and stories that panel members have shared – including the new Métis name for the lake suggested by Ed Jones – that demonstrated the intimacy of their relationships with that place, as well as the ecological, cultural and spiritual values accorded to it. At the same time, the panel members shared a common interest in renewing the health of the land.

We came to learn that more work will be needed to fully understand the baseline for closure and reclamation planning – the meaning of homeland.

In Yellowknives Dene language, that whole island that Diavik Diamond Mine is on [East Island] is called ʔek'adı. ʔek'atı is the name of the lake. So ʔek'adı is an island, ʔek'atı is the name of the big lake.

There are five groups here, and we all have different traditional names of that lake. Every one of us probably has different names for that lake. We all use the same area, but we have different names for the same area. Bobby Algona and his people used to trap way out at Pellet Lake north of ʔek'atı in the 1970s. I used to trap just south of ʔek'atı, but we used traditional placenames that our grandfathers have used in the past.

The land is very important to us. Back in 1865, my grandpa was born on the land at the Coppermine River called Sahdezeh. People used to travel out there to go hunting for muskox and caribou. My grandpa has a lot of stories. He lived to be about 105. His son, Morris Sangris, was with him out there on the land when he was about three years old. At that time, an epidemic came around, so they went further up to the barrenland because of the sickness.

In 1976, when I was a child, I used to go out by dog team to the barrenlands. We had to travel, so we used a dog team. At that time, they had about five dogs for each team. If you have less dogs, you can travel further because it's a lot of work to feed the dogs. So I travelled on my grandpa's trail and my dad's trail. I followed where they went and listened to the stories they were telling me about life on the barrenlands and right down to Yellowknife. There are a lot of gravesites along this route.

The most important island on ʔek'atı is ʔek'adı where Diavik Diamond Mine sits. That's where the food source is for the caribou. It's also a shelter for caribou when they get injured. It's a shelter for small calves. That country is mostly esker and muskeg, and the island is good for young caribou. After the long migration, they just swim right along the channel. It's not a long

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channel, but it's a safe place for caribou where they can hole out and gain some weight with a lot of good feeding areas. South of ʔek'atı is really jagged rock country. It's a place where caribou could get injured. There's a lot of rock. On the eastern side of ʔek'atı is sandbar, muskeg and rocks, but it's a good place for caribou migration. The island itself, ʔek'adı, is well known for caribou habitat. Caribou just love this island. – *Fred Sangris*

Traditionally, when we wanted to go meet the caribou further south from where we lived because migration is a little bit slow coming slow this year, sometimes we go down and meet them even down past McKay Lake sometimes. We called the lake that Diavik Diamond Mine is on Hivogakhialok, referring to the big lake that is the southern part of our hunting territory. – *Bobby Algona*

We used to trap in that area. In our language we would call that Łuecho Kúé or Łuezáné (Big Trout Lake). That's what we call it all the time, that's what we've always called it. We don't change what we call it. – *George Marlowe*

I have a name for that lake, François Beaulieu. He was one of the first Métis in the North. In fact, it was François Beaulieu who brought a priest to Salt River just out of Fort Smith, and he helped introduce Christianity to the natives and Métis. – *Ed Jones*

When I first went and visited the island, it was some time ago with some other elders. The elders are not living with us today, but when I first walked over to the site before the construction started, the land looked the way it's always been. Today, there's a huge rock pile over there, a waste rock pile. In the early days, Dene people used to use that island. That's where they used to hunt caribou and that's where most of the caribou used to cross the water. That's where they used to kill caribou to get some meat out of it.

I'm an old-timer. I'm over 80. The kinds of stories I want to tell you are about how our ancestors and elders survived in the past. It was a real hardship in those days. The ancestors travelled by dog team and canoe. They trapped for furs and set nets. Today we have everything that we need to survive. When I was young, I never saw white man's food. We survived on the animals of the land. We went hunting for caribou, hunting for moose.

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All those things they did a woman would do, we had men doing those things too because we didn't have no women along with us. It was only the men who would go. How women worked, we had to work the same way, fixing meat and making drymeat. We would fix all the caribou hides, and we would scrape them and everything.

Those animals gave us shelter and meat. I never bought clothes from stores. We had them made through animal fur and hides. Our elders would go out and get furs – beaver, muskrat. In fall, they'd go out on the land until the spring comes. They would hunt and trap.

Then at this time of year they would gather in Behchokò. They'd make a big ceremony, a big feast. About July, during Treaty Days, they would gather again for the big event. They would come in with a boat from the outlying communities. That's when they would bring in all the furs that they caught through the winter. They would trade them for goods. They had a Hudson's Bay in Behchokò. People would all gather there. At that time, the Hudson Bay don't have money. Whatever we'd bring in, he'd give us some kind of ration and write down what the fur was worth on paper. We didn't get no money. Sometimes we traded for goods. That paper that they gave you, it was similar to getting an income from the government. He would keep the paper too.

The supplies would come in at this time of year by boat. There was only one shipment a year, so over the rest of the year there would be nothing in the store. After that, a boat comes in, a lot of stuff comes in. So when they'd give you that paper for the fur, you could get things out of it when that big shipment came in. So everyone would come in, and the store would empty out.

When people travel to the barren lands, they used to start out in August. The caribou are out



Figure 11: Pierre Beaverho

there on the land during that month. The people know it, and they try to get there before the caribou migrate down. We would go there by canoe. We could see the caribou crossing and the caribou swimming. It's still warm at that time in August.

It was kind of hard at that time too. I witnessed that myself. That's why I'm telling the story. It was hard in those days. We didn't know no white people. There were no white people on our land. We didn't know no government agencies. At the time when Monfwi took the treaty, there were RCMP stationed in Behchokò, and one store, the Hudson Bay, and the priest. That's all. We survived without government and without white people. We survived without them. It wasn't until after I got

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married that white people were starting come into our region.

In those days, our land was beautiful and healthy. We had fresh water, healthy animals, and good dog teams. Even the small animals were healthy. We had a beautiful landscape. When we went out on the land, we felt happy. We felt fresh. Elders love the land, they love the animals. We are protective of things. The land should be protected.

But today, since white people have come on the land, they have started doing development and they are destroying the land. We didn't do the damage, because we care for the land. The mines are getting all the licences now and opening all the mines and they are making big disturbances on the land.

The government has destroyed our land. They are giving the permits and licences to the companies. To think about it, we never did get any benefit from this. Now we are starting to negotiate, we are trying to get something. But it seems we are suffering more. We should get some kind of benefit.

If I look at it today, there's a huge waste rock pile, what benefit is it to us? Probably all we're getting is the damage that's already done and we're not too happy with it. But here, somebody has to do some work that we're doing. That's the reason why we're here.

I've got a lot of stories. I just want to share this story with you. Thank you. – *Pierre Beaverho*

For thousands of years, the Dene people lived on this land, slept on it, hunted on it, and they never damaged the land or polluted the land. Before the white man came, everything they used for tools and for food sources came from the land and water. They lived off the land well. Through the generations it was passed onto them how to live off the land through the spirits.

A long time ago, when people were surviving out on the land, they had spiritual power. They used to turn themselves into animals. If you wanted to be a caribou, you could be a caribou. If you wanted to be a wolf, you'd be a wolf. They would talk to one another at the time because they had the power to do so at that time. They say the grizzly bear have arms like a human being. A lot of them don't eat bears because of that.

The caribou and other fur-bearing animals used to have meetings. They'd gather themselves and say, "This is what I am, and this is what I'll do for my fellow human beings. They put me here for that reason."

There are a lot of stories like that. I just wanted you to be aware of it.



The First Nations people respect the land and they respect the animals, and even the fish. When we are done with the bones or the hides, we don't just throw them anyplace. We don't just throw the fish bones back into the water. We place them underneath the branches or the trees. It's Dene law to do that and respect the bones. It's a custom. In the long run, if you don't do this you'll get bad luck. If you look after and respect the animals and the fish, the animal will return and respect you and provide you with your food sources. Thank you. – *Phillip Liske*

### Landscape and the North Country Rock Pile

In reflecting on the task at hand, providing guidance on closure and reclamation of the North Country Rock Pile, TK/IQ Panel members spoke about the ecology of the landscape encompassing the mine site. There was discussion of the differences and similarities between the rock pile and eskers or boulder assemblages – and the group began to consider what the options might be for reclaiming the rock pile in relation to those landscape features and the needs of people and wildlife.

I've been on the barren land a lot of times hunting in August and September. There are lots of sandflies when it's hot, and the caribou like to stand on a hill that's blowing. Think about that too. Eskers shouldn't be touched. There are lots of foxholes and dens for wolves and grizzlies, that's where they sleep. And maybe that rock pile should be left there, or put more black dirt so the plants will grow on it again. – *George Marlowe*

When we were young, in the 1940s and 1950s, we used to travel down to the barrenlands. We would see a lot of outcrops of rocks and mountains. It was good scenery. The waste rock pile itself is just like a manmade island, or some sort of a pyramid. So to us, it's kind of an eyesore. Yes, on the barrenlands we would see a lot of good soil out there that you can find on the eskers. – *Pierre Beaverho*

In the summertime, sometimes they would put graves on top of the hills. I keep travelling in the sand areas, and I've seen a lot of things out there. There are a lot of good sand areas with gravesites. So I questioned the elders a long time ago. They said that when people used to work out on the land, they couldn't bury a person because of permafrost. So it was best place to bury them was where the sands are. When I see sand, I go there and I go on top of the hill, and I know I will find a gravesite there.



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I work for the Yellowknives Dene First Nation and help with their mapping projects. The elders have told us where the gravesites are, who the living relatives are. We've talked to them and questioned them. We went out there hunting in the fall-time. And the relatives to the ancestors in those gravesites came along with us because they want to visit the graves.

There are stories to them too, how far they travelled and how far they walked. There are trails they were travelling on. I hope the sand on the barrenlands is never removed. We don't know the rest of the gravesites out there, so it's really important that the sand never is touched.

In 1995, BHP visited the community and they wanted to use the sand. But we as the Yellowknives Dene First Nation said no, not to touch the sand. So they're not using them.

The Yellowknives Dene First Nation have three gravesites in the ʔek'atı area. They are our relatives. We are monitoring that area so it's not disturbed.

The animals are also important. Grizzlies make a den towards the sun on a hill. When the snow is melting, they know inside the den will dry right away. The animals know where is a good place for a den, towards the sun.

The caribou love their calves. When they travel, they don't want to go on a rocky place. They go on the eskers and sandy places. Sometimes they will go on the hills. Caribou and muskox know where the good places to travel are. But the sand is really important.

A long time ago when there was a war, non-Aboriginal people killed a lot of muskox to use. Today we have a big population of muskox coming down this way. So we're monitoring those things too.

If you see sand, there would be a gravesite there, and animals would use that place. Those are kinds of things that we need to monitor. So those kinds of things should be left alone. – *Fred Sangris*



Figure 12: Fred Sangris

I consider the rock pile to be just a boulder field. It's just a big, black hill compared to the colour of the eskers, it's totally different.

On eskers, there's permafrost under the sand. When you get up on top, it's always cold. Any little pond or lake or anything that gets on there, it's super cold all the time. Very few plants grow on there. Try swimming in the little ponds on the eskers. You think most ponds are warm, but these little ponds are super cold. You don't see little bugs that can survive in there.

Eskers are cool in the summertime. Wolves, foxes and grizzly bears tend to dig in that esker and keep cool in the summer time. The grizzly bears tend to stay close to the berry patches, where the blueberries, blackberries, cranberries grow.

When we walk around an esker, we know that there's going to be a natural foundation of super cold water flowing out of the eskers. That's permafrost flowing out of these eskers. In summertime, you feel the urge to go for a few berries. Sometimes we tend to get hot, and we want to find some cold, cold water, we need a cold drink as we're walking from here to there, and we look for these natural foundations. We drink a couple of gulps, that's all we can manage, just a couple of gulps of this super cold water until your throat gets frozen.

This rock pile is going to have some super cold spots inside, just like an esker. It's going to have natural fountains building up as years go on. – *Bobby Algona*

But if you make the rock pile walkable for caribou, then they'll probably go onto it. If that's the case, then have you made observations of caribou and other eskers or hills? If so, what have you found? I don't have firsthand knowledge, but I can consult the elders to see how they interact with hills and eskers.

– *Susan Enge*



Figure 13: Susan Enge

## Learning about the Rock Pile

The North Country Rock Pile is a major new feature on the landscape, 500 m (1/3 mile) wide, 2.24 km (1.3 miles) long, and 70 m (230 feet) wide. At the east end of the rock pile there is a pile of “till” that is 500 m (1/3 mile) in size. This is material that’s being saved for use in reclamation.

Right now, the rock pile is composed of large boulders from the mine pits, and within the rock pile is a landfill site for storing other kinds of waste from the mine operations.

Surrounding the rock pile are collection ponds (similar to what Bobby Algona described as a castle “moat”). Water collected in those ponds is pumped into the treatment plant before it flows into the lake.

The rock pile will not grow any more, since Diavik has stopped open pit mining, and there is very little rock that comes from the current underground mining. So the timing is now good for Diavik to start closure and reclamation of the rock pile.

Diavik has eight goals for closure and reclamation that were listed in the introduction to this report. Related to those goals, there are three main objectives that need to guide plans for the rock pile:

1. The slopes on the sides of the rock pile need to be stable and safe for people and wildlife.
2. Rock and till pile features (shape and appearance) should match the look of the surrounding natural area as much as possible.
3. Contaminated soils and waste disposal areas must not contaminate the land and water, so must be “capped” so that they are contained.

Within these objectives, there are a number of aspects of reclamation to be considered, including the shape of the pile, the kind of material that should cover the pile, how the water should flow off the pile, the kind of vegetation that should be supported (if any), and whether wildlife and people should be encouraged to go on the pile or be kept away from it.

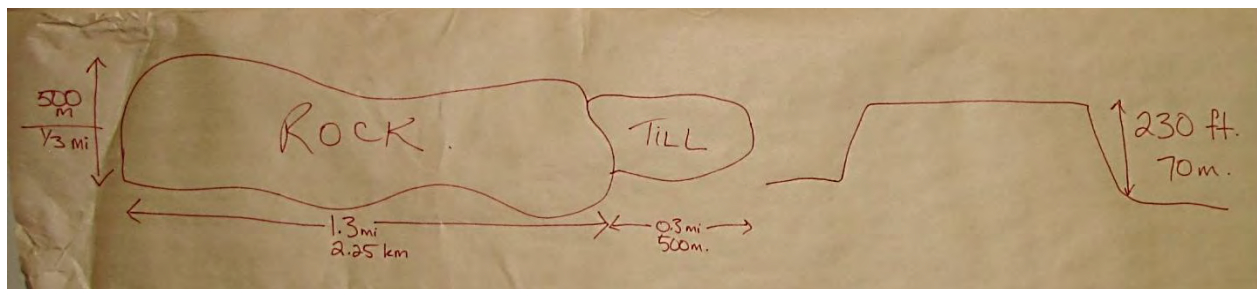


Figure 14: North Country Rock Pile shape and dimensions drawn by Colleen English, site visit debriefing session, June 21, 2012

## Identifying Concerns

A variety of concerns were discussed by TK/IQ Panel members for consideration in rock pile closure and reclamation planning. Panel members recognized that some of the concerns are the result of limitations of their own knowledge of rock pile conditions, and several times there were requests for more information from scientific experts as a basis for consideration from TK/IQ perspectives. The following are the seven key areas of concern that were identified, with a series of quotes to illustrate these. There were also concerns expressed about other aspects of the mine, including in particular the dyke and plans for flooding the pits, but these are not within the scope of this report. Careful consideration of these concerns is useful in developing risk management and communication plans.

- Contamination and water flow
- Caribou health and safety
- Future land use
- Waste materials
- Invasive species
- Global warming
- Accountability and follow-up

## Contamination and Water Flow

Understanding the risks of contamination caused by exposure of waste rock to air and water led TK/IQ Panel members to articulate concerns about risks that seepage from the waste rock would lead to contamination that could affect wildlife, vegetation, fish, lake water and, consequently, people.



Figure 15: Waste rock pile. Photo credit: Diavik Diamond Mine Inc.

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The rock pile itself, it must have a lot of materials in there, toxins for animals and maybe it's a toxin for any plants and might affect their growth. – *Pierre Beaverho*

We don't really know too much about what's in the waste rock in terms of toxins. It would be good to know what's in the waste rock. Once we understand this, then we can help. We need to know what the harmful effects are. – *Fred Sangris*

I was thinking about not only about the vegetation, the water, the fish and the air. All the elements from the waste rock are going to wash down to the lake sooner or later, because the water is beyond our control. You get high winds, lots of slush, and sometimes it rains. From slush, they get lots of wet water coming down onto the ground and it goes into the lakes.

My concern is for caribou, fish, and water. When people do go up hunting in that area after the mine closure, are they going to get sick from it or are they going to get cancer? We've got to watch those things. – *Phillip Liske*

The people who are expert in that should talk to us about it because I'm pretty sure there's lots of metal in that waste rock. When it rains, it's going to go onto the lake. That rock pile is too high, and it's really packed now. It's been nine years, and it's really packed underneath. The bottom must be really hard. I don't think water will go right through now, but it will run off. – *George Marlowe*

We don't want to see a pool of water on top of a rock pile. Once a pool of water forms up, it gets bigger and it becomes a little lake. That's when the animals are using it. – *Pierre Beaverho*

I'm wondering whether Diavik is going to be monitoring this rock pile. At the bottom part of the rock pile there is going to be a lot of water seepage and water flowing out of there into streams and into the lake. Wouldn't it be feasible that this water be contained in the castle, I call the Rock Pile a castle, around the mine itself until everything is all clean and safe to open and let the water go through? That's been one of my big concerns.



I was thinking you see in those pictures of people with castles that have moats around them. Looking at the rock pile as a castle, maybe it would be possible to build some kind of moat or something to contain and monitor the water that's coming out of the castle. Thank you. –

*Bobby Algona*

## Caribou Health and Safety

Caribou safety was a core concern discussed by the TK/IQ Panel. The focus on caribou in part is related to the value of caribou for survival and spiritual and cultural well-being, and as sensitive beings that need to be treated respectfully. Caribou were also on the minds of the panel since they had just completed review of a report on their previous session on caribou monitoring. TK/IQ Panel members were most concerned to talk about risks to caribou during mine operations, and there were suggestions made about ways and means of keeping caribou away from the mine site.

All mines in the North all have an impact on wildlife as well as cultural and traditional people who make a living on the land. Years ago, we tried to come up with traditional methods of driving the caribou away from the mines. There's probably a good, old, traditional way of doing it.

Diavik Diamond Mine sits right in the middle of the great caribou migration path, right in the centre. There's no doubt about it. They don't migrate further east or further west. It migrates in the centre of it. That's why the caribou always up at Lac de Gras during the summer, sometime in early or late July. They always seem to go there. Even in late September, the caribou are still hanging around there until freeze-up. The caribou are aware of their natural surroundings and where the main herd is headed and where the other herds are scattered. They have a sense of where they are.

So I think Diavik and other companies have to understand when they put the mine there, they put the mine in the path of the migration. That's why it had such a big impact. Many Aboriginal people here spoke in defence of the caribou because we don't want the caribou to be harmed in any way.

Caribou feet are really soft, so they don't want to go through the rough country to get around the mine. For them, the safest places are the soft ground near the





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mines. One time, I think it was in 1996, we tried to get the caribou to go at the crossing at Lac du Sauvage. But when we went there with the elders, we found two drowned caribou, one calf and one older caribou that had their hooves caught in the rocks in the river at the crossing, and couldn't get out.

So we told Diavik Diamond Mine that they should put some padding or something there so caribou can cross that little river. It's not a big river, probably three or four feet, but the caribou get caught there and they drown. So we have to find a method to make their crossing much safer. The calves who are just weeks old are making their way to Lac de Gras as well. Lac de Gras where Diavik is used to be a haven for young calves to catch up, feed and rest because they are tired after a long journey. Of course, the wolves are right behind them. So they have to rely on the island for security.

But we have to try to find other ways to help the herds get around the mine safely so they can get to other lakes further south. Those other lakes have islands as well. That's where you'll find some of the smaller herds and injured caribou. Injured caribou find a way to heal themselves. When a caribou is injured, he leaves the herd and goes to an island on his own. He'll stay on the island for weeks on his own until he heals. When he's ready, he'll try to find the main herd. When a caribou is injured, they don't go with the main herd. They move away from the main herd because the wolves can spot them out pretty quick.

We told Diavik many years ago to try to take some of the soft sand and cover all the jagged rocks at that crossing so the caribou can get in the water safely and come out the other side safely. That's one of the recommendations we made.

We have to make the other crossings safer before we do that before we put up traditional rocks or traditional ways of driving the caribou away from the mine. We can probably talk about finding different way for caribou to travel. Through our panel we can probably share all these ideas and try to come up with a good recommendation, a good solution, on how we can do that. The more we talk, we'll get closer to the idea. – *Fred Sangris*

We should share really good stories about the caribou that we're talking about. In the ʔek'ati area, at Diavik Mine, we know from our stories that the caribou would swim to that East Island, as long as we can remember. Our elders used to go by birch bark canoe out to the tundra. They would paddle all the way up to the East Island on ʔek'ati. That's how they used to harvest and kill caribou. Our elders used to live there. It was a good area for caribou to eat, with good lichen. They should fence that area because I know for a fact that the caribou would swim to

the island. If we fence that whole island, maybe the caribou won't go to the mine site. We can fence off that whole area on East Island. – *Pierre Beaverho*

The caribou should not be negatively impacted. I think they underestimate the importance of caribou. We're in court right now over caribou. It's important to us. So we need to do it right and we need to take the time to do it right. – *Susan Enge*

### Future Land Use

The TK/IQ Panel discussions about the future of Aboriginal land use in the area of the rock pile were inconclusive. This is consistent with some Aboriginal cultures, where it is considered to be inappropriate and even bad luck to make predictions, since “nature is the boss.”

There was pessimism expressed that the rock pile could in the foreseeable future be a desirable place to visit. However, Pierre Beaverho provided an alternative perspective, paralleling comments to the effect that if the rock pile were made accessible and safe, caribou would want to travel across it after closure. Historical narratives in this report and elsewhere indicate that as they always have done, the Aboriginal harvesters with roots in this territory will travel where the caribou go. Phillip Liske's comment that the land encompassing the mine site is a homeland points to the prospect that the five Aboriginal peoples will renew and maintain their relationships with that area for generations to come.



Most of the people are still using the land, all the impacted groups that are here today are reusing it. My ancestors, they used it in the past. It's not to say the future generations aren't going to use it. For sure they will be using it. We have to beautify our land as much as possible.  
– *Pierre Beaverho*

The Aboriginal people have the homeland. This is our land here, our land base. Some have treaty land and some don't, but it's still our homeland. – *Phillip Liske*

### Waste Materials

Diavik has a regulator-approved landfill in the rock pile that is designed to be used throughout the life of the mine. Wherever feasible, items are recycled, burned or backhauled for reuse elsewhere. Input is being sought about what should and should not be dumped in the landfill. The landfill is inspected by INAC, and an update on the landfill is included in Diavik annual reports. TK/IQ Panel members directed a number of questions to Diavik staff about the landfill site, and expressed a lack of awareness about the landfill and the provisions under which it was approved. A number of concerns were expressed by reference to experiences with other abandoned mines.

I know there's lots of metal in the rock pile that's been crushed. Lots of metal. What's going to happen in the future after thirty years or forty years? The metal under the ground will be rusted. I'm pretty sure the water from under there will go into the lake. It's the time to talk about those things. – *George Marlowe*

There are lots of things that have gone wrong in the past that we couldn't do nothing about it. We couldn't even speak against it. Today, we have the opportunity to be able to communicate with the Diavik company that is hurting the land. I see that we have some abandoned mines in our area, the Beaver Lodge area. They left a big airplane, a big Bristol airplane parked right on the shore of the lake. Not only that, they just left Terra Mine as it is and all the debris is sitting there. It still requires a cleanup.

I don't know what you guys do about recycling, but I'd like to see every material possible be recycled. I don't know about just leaving it there in the land because it wasn't like that before. I don't know how the caribou and whatever will react to everything. Thank you. – *Jackie Strong*

### Invasive Species

Fred Sangris pointed out that invasive plant species brought into the mine could be a real danger to the natural biodiversity of the landscape.

The other danger too is opening up new areas. If you look at the highway from here to United States all along the highways on both sides, and the highway across Canada as well, there are foxtail plants. They are not native to this area. A lot of the plants and seeds fall off the trucks that haul supplies up here to the mine site. I've seen it at Lupin Mine. I was kind of terrified because once foxtail plants start growing, they just take over. The native plants will die off. That's a danger to this area.

If Diavik wants to do some planting, they need to get rid of the foxtail plants. Once they flourish and grow, they are going to go across the mainland and go all over the land. They are one vegetation plant that we are really going to have a problem with. Once they grow, they grow quite a bit. So you must come up with a plant that can fight back and get rid of it. Otherwise we're going to have the barren lands full of foxtails growing all over the place and it's going to be really bad for caribou, lichen and everything else. That's one plant we have to try to understand and try to combat.

You can plant some real good native plants here, but the introduced plants will probably overtake them. One thing they have to do is study the non-native plants and see if they are a threat. If they are a threat, then they should somehow be removed or minimized. You need to keep pushing the native plants. They can really grow fast and cover that whole area. Nature can come back. It will take its time, but doing the right thing will probably help speed it up real quick. Thank you. – *Fred Sangris*

### Global Warming

Susan Enge raised a question about the effects of global warming on the rock pile. Colleen English pointed out that the rock pile has been modelled for global warming over the next hundred years to see what might happen as annual temperatures rise. There are instruments that are in the pile that can give us the information needed.

## Accountability and Follow-Up

TK/IQ Panel members want to know about the kind of follow-up that will take place to address issues raised at their sessions. It was clarified that all concerns are documented, and EMAB makes decisions with input from the TK/IQ Panel about recommendations to be forwarded to Diavik. There has been an effort since the caribou monitoring TK/IQ Panel in March to make progress on TK/IQ recommendations related to caribou monitoring. It is expected that there will be similar follow-up and reporting to the panel following the current session.

## Exploring Options

Diavik staff presented three options for rock pile closure that had been identified at an on-site workshop with Aboriginal delegates in 2009. However, these options emerged from a focused discussion about caribou movements, and did not account for the full range of values and socio-ecological components to be considered.

TK/IQ Panel members were unwilling to discuss their vision for the rock pile prior to a site visit. However, in dialogue with resource people they did scope out issues related to key areas of discussion, informed in part by the presentations provided by Gordon Macdonald, Colleen English and Kathryn Scott. The site visit allowed for a more detailed discussion of issues, also reflected in this section. In order to provide greater insight on the meaning and implications of these discussions, some background on technical considerations drawing from Diavik's Interim Closure and Reclamation Plan and other sources are provided.

The key issues addressed are as follows:

- Baseline and goals: “rebooting nature?”
- Shape of the rock pile
- Capping the rock pile
- Water flows
- Plants for life
- Wildlife habitat
- Renewing homeland

## Biodiversity: Values in Reclamation

One starting point for Aboriginal people to provide input into mine reclamation has been to develop an understanding of the cultural values that can shape reclamation goals and objectives. Anne Garibaldi and Kathryn Scott were invited to join this TK/IQ Panel so they could share some experiences in doing this kind of work from other places. Anne Garibaldi focused on her work with Fort McKay in the Alberta oil sands. Kathryn looked at the examples of Colomac Mine in the Northwest Territories, Faro Mine in the Yukon, Whistle Lake mine in Ontario, and a number of other examples.

Aboriginal peoples have always made it clear that reclamation needs to address environmental, cultural and spiritual components. The stories from other places inspired TK/IQ Panel members



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to talk about their values. They named some key elements in the landscape, always returning to the idea that it's the whole environment together that is valued: the land, water, air and all the animals, plants and Aboriginal peoples that live in the landscape. The word that scientists use for this is "biodiversity." Article 8(j) of the United Nations Convention on Biodiversity recognizes both the cultural practices and knowledge of Indigenous peoples. The relationships between ecological values and the practices of living in homeland were well expressed by George Marlowe and Fred Sangris.

### What is Biodiversity?

Biodiversity is a scientific word that brings together two words – "biological," which refers to living things, and "diversity," meaning lots of variety. The word was invented in 1968, and showed new scientific knowledge that the natural world needs many different forms of life in order to be healthy. This (biodiversity) is something Aboriginal people know a lot about because we have survived by harvesting a lot of different animals, birds, fish, plants and berries, and trees. Aboriginal harvesters are very knowledgeable about the things they harvest – it's a matter of life or death.

Usually scientists are just thinking about the land, water and animals when they talk about biodiversity. But as Aboriginal people, we consider people, culture, way of life and spirituality as part of biodiversity as well. Our traditional knowledge offers a different way of understanding what it takes to make a healthy environment. – *excerpted from Two Roads Research Team (SENES Consultants Ltd) 2011*

They say, diamonds are the best, and we've got diamonds here. Think about that. I don't know what to say sometimes. Me too, I love the land. I love the caribou. I love the fish in Lac de Gras. I still remember when I used to go there. We used to get fish there. The tourists would get fish and I'd fry them for everybody, nice golden brown. Everybody loves it. When I said before the pit, we'd fish from a little dock that was there. We'd catch three fish and brought them to the kitchen and fry them. I don't think I'd do that now.

Every time we say something it's the youth. We've got to put those youth on the right track, in the right frame of mind. My value is something like every winter, every summer, at Artillery Lake, I can portage all the way to French Lake. That's my value. That's my goal. I go to Artillery Lake. The first thing I do is watch a beaver lodge over there. I'm really happy. That's my value.

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If the mine is going to start around there, we'll tell the company not to destroy our values too much. Try to help them as much as you can. If I go to Artillery Lake right now, I know where to cast right away for fish, a nice little trout. I love that. And in August, I'll go right behind a muskrat lodge. I know where there's lots of blueberries. I'll go there right away. That's my value. We have to tell the company, you can work on it but let's try to make it as clean as possible for the next 10 or 20 years. We have to tell them that all the time. – *George Marlowe*

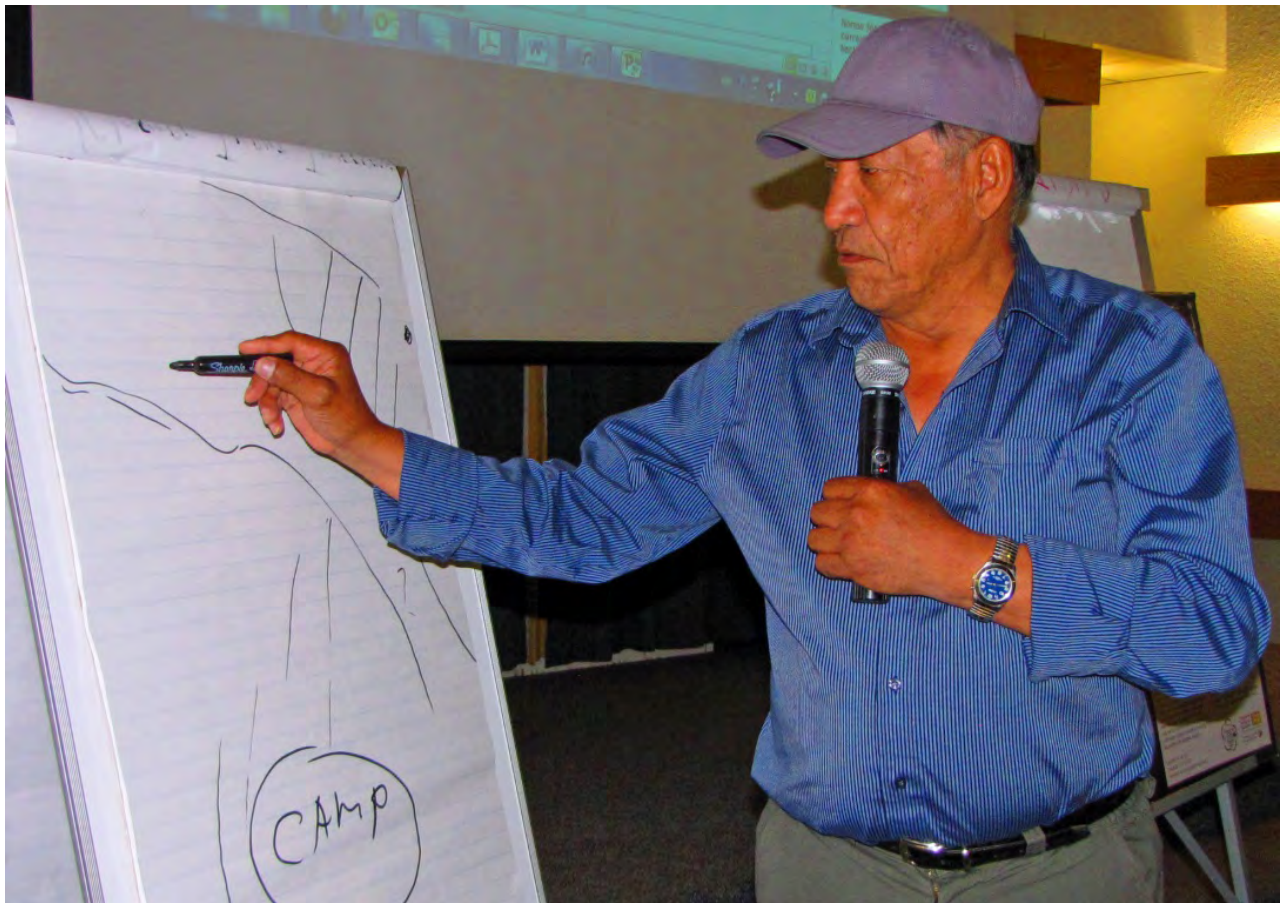


Figure 16: George Marlowe

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I think the three key areas to Aboriginal people that we should pay attention to are the land, water and air. Those are the three important things. What we don't see on the land, what we cannot see in the water, it will be in the air. Those are things that we need. Like I said, we don't know what Diavik buried, so we don't know what's going to come up in the atmosphere. We have no idea what's there under their big stockpile.

So those three areas are key that we monitor. Traditional knowledge is also important in four different areas; fall, winter, spring and summer. Those are the four different areas that we should monitor. During the winter you have the caribou migration and then you have the Arctic hare, the foxes, they are all visible. They can be seen. They all have different behaviour patterns.

During the spring and caribou migration, we monitor the herds too to see how they interact with the mines. If there's a smell there or something they don't like, they'll avoid it. But if their food is there, they'll come around to their food chain.

Caribou are very important to Aboriginal people. The caribou are still here with us, and there are other wildlife too that are moving into the land. Muskox are important as well.

Then we have fish in the summer. People go to the camp every summer, fry fish any way they can to taste the fish to see if the water changed over time because of the dust fallout from the mines on windy days. It gets into the water and into the food chain with the fish. So we're monitoring the fish to see if the fish changes over time. We monitor to see if the water has changed over time. These are important. Any change will tell us that there is something going on.

Muskeg is important to us. There are a number of berries that grow in muskeg as well. Just south of it, there are cloudberry that grow. There are a number of blueberries in the surrounding areas, as well as medicinal plants. These have values for us too. In the olden days, you couldn't go to a pharmacy. There was none around, it didn't exist. So they went and got it themselves. A person in a community who would be a medicine man or a traditional doctor would find the right plants and treat people. That's how they did it in the past.

We don't eat all the berries. We share it. Baby seagulls and all those other animals also feed on berries. So it's important that those berries are monitored as well wherever they are so we know what's in it, they're not contaminated or anything.

So those are the values. For Aboriginal people, all wildlife that live on the land are important to us. All the species that live in the water are valued by us. The air is a value to us too because it blows for hundreds of miles around. Does anybody know how far the dust from this mine

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blows? It goes quite a ways. Some people probably think a kilometre, maybe two kilometres, but you'd be surprised how far the dust can go, and it gets into everything.

So if there is acid rock or any toxins in the dust, it could affect the spawning areas or the growth of berries. If you consume enough berries or fish, it could be harmful. Not too harmful, but it could get into your food chain as well. So all wildlife, fish, everything else that's there, it's all of value to us.

The places of our ancestors on the barrenlands are of value to us. Many archaeologists who go on the land find arrowheads on the hills and in the sand. They think the native people were here, and they dropped this and left it behind. They don't understand the spirituality and religion of Dene people.

Religion was a big part of Aboriginal life in the past. There are arrowheads at old campsites that were buried there for protection, for spirituality. In the olden days, there were shamans or medicine men. In my language we call them holy men because these are the people who protected us from harm. These are the people who protected us from disasters. These are the people who went looking for caribou in the spirit world and told us where the herds were so we could survive. They told us where the best fishing areas were. They were connected to the natural world.

So many of the archaeologists who walk the land have no idea. They think native people camped here and forgot their arrowheads and left a lot of their artifacts. They don't understand the spirituality component that is still practiced today by different Aboriginal peoples in the north. We were told never to bother those arrowheads when we see them. They were left there for a purpose, and they're still there. There may be places in the barrenlands that have a spiritual connection. A person that's buried as well, and all his things are buried with him.

So we have spiritual sites and religious sites on the land too that we value above everything else. Archaeologists, Diavik and BHP find arrowheads and collect them. They bag them and collect them, not realizing those locations might be a temple or prayer sites and people place them for offerings and protection. They live in a different world. They don't understand. Thank you. – *Fred Sangris*



## Baseline and Goals: “Rebooting the Landscape”

In imagining a future for the rock pile, the TK/IQ Panel is considering whether this new landscape feature is a “dead zone” that just needs to be contained and isolated, or whether it should be “rebooted” to become reintegrated with its natural surroundings in some way. In looking at the options, it’s useful to know a bit more about the building blocks that can be worked with in terms of land formations and materials in the surrounding ecosystems.

Aboriginal peoples have stories about how the earth in the Diavik area was formed that the TK/IQ Panel has not yet had a chance to review. There is a lot of scientific research about the historical formation of the landscape that can be a useful starting point for discussion and interpretation by the panel.

Rocks of the Diavik area are very old, relative to the age of the Earth – the most ancient part of the Canadian Shield. Geologists call this the “Slave Geological Province.” They think the rock in this area was formed in the *Archean* era, before 2.5 billion years ago when the earth was a lot hotter. The earth’s crust from this era is composed of *metamorphic* rock that was transformed by the earth’s heat, and *igneous* rocks that were formed by the frequent volcanic activity of the era. Some of the land formations in the Slave Geological Province were formed by plates of the earth’s crust pulling apart and colliding. The kimberlite pipes that are associated with diamonds tend to be only in areas that are older than 1.5 billion years and where the earth’s crust is thick.

The surface of the landscape is largely shaped by the glaciers that covered the area 10,000-

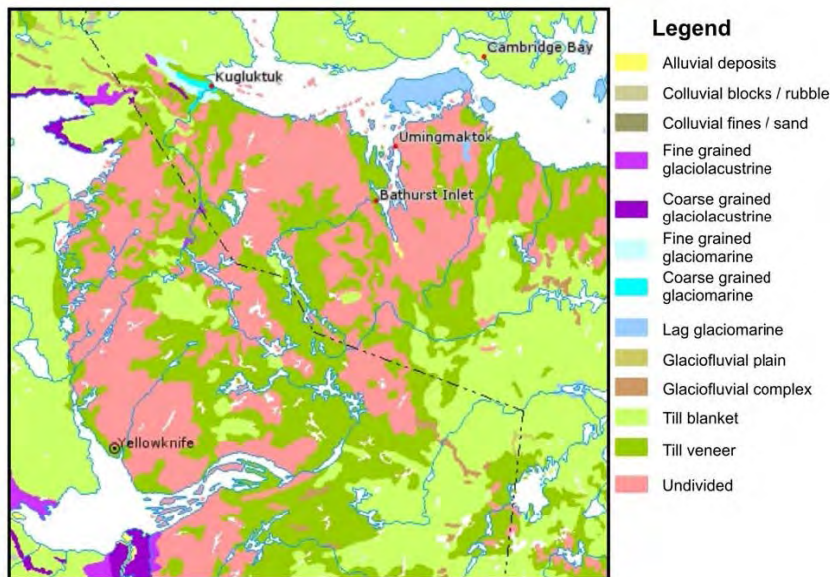


Figure 17: Glacial deposits in the West Kitikmeot Slave area. Source: Surficial Materials Map, Digital Atlas of Canada. <http://atlas.nrcan.gc.ca>.

10,000 years ago. This was an era marked by strong and periodic changes in global climate. As the glaciers melted a huge lake was formed, and sea levels rose.

What was left behind as the lake shrank and sea receded were lake sediments, raised sand and gravel beaches, and glacial grooves and deposits on the landscape. *Glacial till veneer* is an unsorted mixture of gravel, sand, silt and clay that has thin and patchy distribution across the Slave Geological Province. Till

areas tend to be poorly drained. Most remarkable are the patterns of gravel and sand *eskers* and



*kames* formed by streams and ponds under the glaciers. These are well drained areas. *Boulder associations* are deposits of larger rock fragments from glaciers on the bedrock surface. Different kinds of plant and wildlife communities are adapted to the conditions on each kind of landform.

The terrain on East Island is characterized by steep-sided bedrock ridges, undulating to strongly rolling slopes consisting of glacial till, ridged eskers and level to depressional glaciolacustrine [glacial sediment] and organic deposits. – Diavik Diamond Mine, Inc. 2011

### Shape of the Rock Pile

It is important that the shape of the rock pile is visually pleasing, and supports objectives for wildlife, people and plants. The “baseline” discussion above provided a glimpse of the kinds of land forms that are in the larger landscape of the Lac de Gras area.

Bobby Algona noted that the rock pile currently looks like a human construction alien to the natural landscape, a “big castle” with a colouration “totally different from the landscape around.” The TK/IQ Panel discussed the pros and cons of leaving the rock pile the way it is and “letting nature take its course” (Ed Jones), or finding ways and means of reshaping it.

It was agreed that in its current form with steep sides and large boulders perhaps closest resembling a glacial boulder association, the rock pile would remain a “dead zone” for a very long time, uninviting to plants, animals and people. Scientists have found that boulder associations support very little plant life, but a variety of lichens grow on the boulders (Matthews et al 2001). According to TK/IQ and scientific research conducted for the Interim Closure and Reclamation Plan, caribou tend to avoid boulder associations (Diavik 2010, Appendix VIII-1, 4.1).

The overall height and shape of the rock pile may also resemble an esker. Eskers are the opposite of boulder associations in that they are very attractive to a variety of wildlife, since they are well drained and exposed to the wind, providing a welcome escape from insects in summer. The mixed sand and gravel composition of eskers makes them good places for wolves, grizzlies and foxes to den. They are also good places for people as sites for camping and burial grounds.

Options for the shape of the rock pile were explored at a Closure Options and Criteria Workshop on May 12-13, 2009 including representatives of EMAB, the Federal and Territorial governments, the Wek’èezhìi Land and Water Board, the Kitikmeot Inuit Association and the Yellowknives Dene First Nation. Pros and cons of gradual “flat” slopes versus steep slopes were discussed. There were linkages to concerns discussed elsewhere in this report. The following table is adapted from the workshop report, linked to key TK/IQ Panel concerns. Because the positive or negative values assigned during the workshop may vary depending on objectives, the plus/minus coding is removed in the table.

**Table 1: Options for side slopes on North Country Rock Pile (adapted from Closure Options and Criteria Workshop, May 12-13, 2009)**

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<b>TK/IQ Panel Concerns/Values</b>	<b>Flat slopes</b>	<b>Steep slopes</b>
Contamination and water flow	Better stability Greater water erosion Increased snow accumulation	Enhanced freezing Smaller footprint More opportunities for natural drainage patterns Larger buffer from Lac de Gras
Caribou health and safety	Safe passage for caribou Caribou access to top of pile to get away from bugs	Prohibits caribou access
Revegetation	Greater opportunity for revegetation	
Other	Could cover adjacent roads	

Maybe you should flatten the rock pile a little bit just for the animals. In the future, if anybody goes there again they can walk on that site to look around. Make it better than the way it looks now maybe. That's what I'm saying. – *George Marlowe*

Put some gravel back in the open pit, not to cover the whole pit, just to cover maybe less than half. That's what we're suggesting. The mountain will shrink that way. Then we have a passageway for the caribou to migrate onto the rock pile. That's my thought by observing what we've said here. Thank you. – *Phillip Liske*

The rock pile looks like a big castle from fifty miles away, where my place is. You see Ekati's rock pile. The rock piles are sprouting up everywhere. They truly are eyesores. It's not natural anymore when you go up on a hill and you see a big, black thing over there. The colouration is totally different from the landscape around. – *Bobby Algona*

## Rock Pile Capping and Water Flows

The rock pile consists of rock that has been broken up through the mining process. When broken up and exposed to air and water, the natural metals in rock with lots of sulfur in it will undergo a chemical reaction that causes acidic water and metals to leach out. This can lead to contamination of the water and land. This is called acid rock drainage, ARD.

When a pit is blasted, the broken up rock is tested for sulfur content, and depending on the amount of sulfur present, the rock is identified as *Type I* (“clean”), *Type II* (moderate acid and metals leaching potential) or *Type III* (high acid and metals leaching potential). The three categories of rock are stored separately. Type I rock is used for roads and the airstrip. There is very little Type II rock, and it is currently stored as an outer layer on the North Country Rock pile.

In closing up the rock pile, water seepage through the rock pile needs to be contained and enclosed so that there will be no contamination. The assumption is that seepage will be limited by permafrost conditions (assuming predictions for climate change over the next 100 years). Glacial till is considered to be a good material for covering the rock pile and keeping water out of the Type III rock. The currently approved plan is for a till cap of 1.5 meters to be put on the pile. A second layer of Type I “clean” rock 3 meters thick will be added on top of the till to keep it from eroding. So the total covering of the rock pile would be 4.5 meters.



Figure 18: Seth Bohnet demonstrates Rock Pile capping

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Another possible material that can be used is processed kimberlite (PK). This is the rock that the diamonds are found in, and it gets crushed in order to take out the diamonds. This PK could maybe be mixed with something else to use for reclamation, but it is more likely to leach contaminants than till or Type I rock.

Diavik is now reviewing the kind of capping that should be used for the rock pile for its revised Interim Closure and Reclamation Plan. The kind and thickness of materials that should be used for the outside layer can be reconsidered depending on the goals for revegetation and wildlife access on the rock pile. It's likely not a good idea to get soil from other places, since this would just damage another part of the landscape. Other possibilities include crushing the Type I rock to a finer size, using more glacial till for topsoil, and mixing in sewage sludge as a fertilizer.

The Closure Workshop on May 12-14, 2009 reviewed three options for capping the rock pile, with a focus on the till cap. Table 2 outlines the options linked to key TK/IQ Panel concerns. As in Table 1, the plus/minus coding is removed. There was no discussion of the additional Type I rock layer included in the 2009 workshop report.

**Table 2: Options for Till Cap on Country Rock Pile (adapted from Closure Options and Criteria Workshop, May 12-13, 2009)**

<b>TK/IQ Panel Concerns/Values</b>	<b>Option 1: Till Cap on Top and Sides</b>	<b>Option 2: Till Cap on Top</b>	<b>Option 3: No Till Cap</b>
Contamination and water flow	Reduces oxygen into piles Reduces freezing Reduces infiltration [water] Shortage of till material Difficulty in sorting usable till	Better freezing Vegetation on surface holds snow, increases infiltration amounts	Enhanced freezing
Caribou health and safety	No discussion	No discussion	No discussion
Revegetation	Good for revegetation	Good for vegetation	

The TK/IQ Panel members asked a number of questions about the options being considered for capping the rock pile. There was a lot to learn about the rock pile, since it's very new to people and not a part of the natural homeland; the main source of information is scientific research. There was some discussion about ways of ensuring that seepage from the rock pile does not lead to contamination of the surrounding land and water. The discussion about the best capping approach was also closely linked to the topics of revegetation and wildlife, areas that more easily tapped into the knowledge base of panel members.

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We asked Diavik at the hearings to pile the rocks where it is away from the water because that island is so small. One of the plans they had was to make a break to the mainland, but the community didn't support that. They wanted everything piled in the middle, so that there is no danger of any leak into the lake. Also, that centre area is probably the proper place. – *Fred Sangris*

There is going to be a lot of water seepage and water flowing out of the bottom part of the rock pile. I'm wondering whether this water could also be monitored as time goes by? This water that's coming from that rock pile is going to seep into the streams and into the lake also. Wouldn't it be feasible that this water be contained in the castle, I call it a castle, around the mine itself until it's safe and the water is all clean?

You see in those pictures of people with castles, they have moats around the castle. If you look at the rock pile as a castle, maybe build some kind of moat or something so you can contain and monitor this water that's seeping out of this rock pile. Thank you. – *Bobby Algona*

**Plants for Life**

According to the scientific assessment in the Interim Closure and Reclamation Plan 3.2 (Diavik Diamond Mine Inc. 2011), there are a variety of vegetation types on ?ek'adi. The main kind is called *heath tundra*. This is also the type of vegetation most affected by the mine footprint. There are also six other types of vegetation related to the different land forms on the island. The kinds that are most related to the rock pile landform are *esker complexes* and *boulder associations*.

**Table 3: Vegetation Types on ?ek'adi (from Matthews et al 2001)**

<b>Vegetation Type</b>	<b>Plant Community</b>
Heath tundra	Mainly herbs and shrubs in the “heath” family. Common plants include dwarf birch, Labrador tea, cranberry, crowberry, alpine milkvetch, and alpine azalea. Plants form a mat on the ground.
Boulder associations	Support very little plan growth. A variety of lichens on boulders.
Sedge associations	Sedges look like grasses or rushes. The sedges grow in tussocks (bunches), and form hummocks (humps) invaded by a variety of other plants including bog rosemary, cloudberry, Labrador tea, blueberry, and cranberry. Moss lives in the troughs between the hummocks. Dwarf birch and willow grow on the old hummocks.
Esker complexes	Vegetation on eskers varies depending on exposure to sun, wind and snow. Esker tops are windswept and dry, and as a result vegetation is sparse and in low mats, including three-toothed saxifrage, moss campion, sandwort, blueberry, crowberry, cranberry, bearberry, and alpine azalea. The areas away from the prevailing winds support dwarf birch, willow,

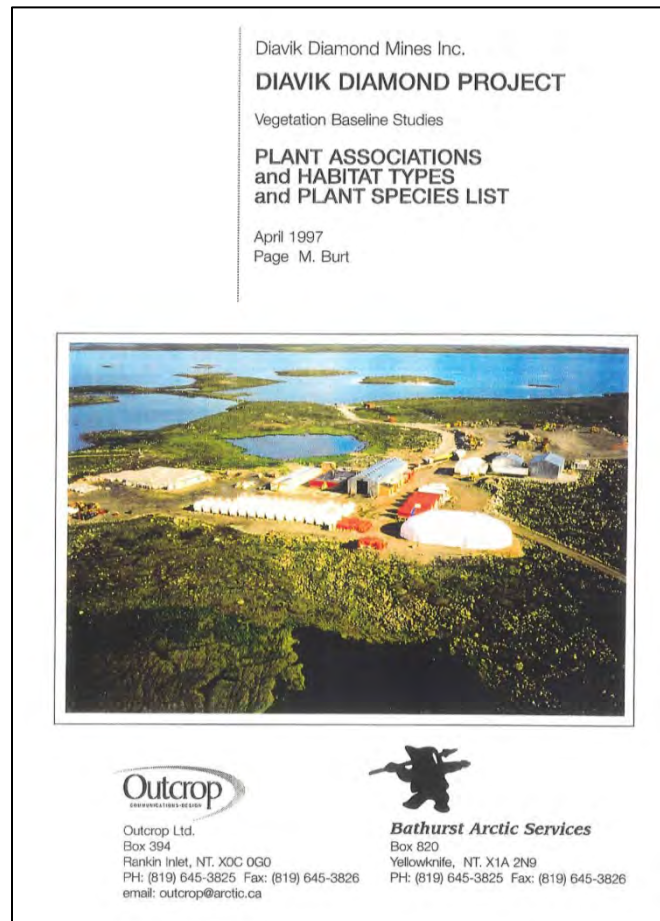


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	shrubs and grasses. Low heath plants and some dwarf shrubs grow on windward slopes.
Bedrock associations	Dry and windswept areas. Lichens on the bedrock, and variable vegetation in protected crevasses and depressions in the rock.
Riparian tall shrub	Birch, willow, alder and occasionally black spruce. Understory includes dwarf raspberry, dwarf marsh violet, cloudberry, grasses, sedges, club mosses and common horsetail.
Lichen veneer	Windswept and dry areas including esker tops may have a mat of different kinds of lichen. Where there's some shelter and moisture, some heath shrubs and saxifrages may grow.

The approved Interim Closure and Reclamation Plan for the rock pile does not include revegetation – but Diavik has conducted research on revegetation at the mine site that may shed light on options for rock pile closure. The May 12-13, 2009 Closure Workshop included a discussion about pros and cons of revegetating the rock pile. Vegetation will hold snow and thus increase seepage through the pile, but on the other hand it will help with dust control. Vegetation will attract wildlife, which depending on objectives may or may not be a good thing.

The August 20, 2012 mine site visit included a short tour of a revegetation plot, as well as a look at volunteer revegetation that's taken place on the “test pile” and elsewhere. A more detailed review of revegetation study results would be needed in combination with TK/IQ research to assess options. Pierre Beaverho made an interesting analogy with the community garden in Whatì that has recently been introduced. Like gardening, revegetation is not a traditional practice – but there is strong Aboriginal interest in renewing plant life on the landscape, and learning what works through experimentation.



**Figure 19: Report cover, Diavik Plant Associations and Habitat Types and Plant Species List, April 1997**



Figure 20: Heath tundra (August 20, 2012 site visit)



Figure 21: Volunteer revegetation at Test rock pile  
August 20, 2012 site visit



Figure 22: Tour of a revegetation test plot  
August 20, 2012 site visit

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That whole area needs to be studied. At one time, it used to be a beautiful island with a lot of food sources. It's not like that anymore. You are going to have to try to recreate it, but you can't bring in anything from the outside. You have to use what's there, the local plants.

I used to bring the elders to the south side and there used to be all kind of cloudberryes, blueberryes, everything that grows. They were telling me there were some native traditional medicine plants as well. I think plants are an important part of the whole ecosystem. It will take a very long time to bring plants back to life, but eventually it will come back. Once they come back, they'll take over.

You need to keep pushing the native plants. They can really grow fast and cover that whole area so nature can come back. It will take its time but doing the right thing will probably help speed it up. Thank you. – *Fred Sangris*

The Métis for sure would like revegetation on that rock pile. – *Susan Enge*

We see a lot of good soil out there on the eskers. I would use that to put on the rock pile so proper vegetation will grow back. The reason is we're really concerned about the Diavik island. That's a traditional area where the caribou roam, and it's a good feeding area and resting area. Even our area where I come from, Whatì, some of the community residents have a little garden and they planted some vegetables such as potato plants. People have a lot of interest in vegetation and replanting nowadays. Forty-five years back, those things weren't even thought of. We know the land. We're not farmers, but we have an idea how we can have good proper growth on the land, no matter the size. – *Pierre Beaverho*

The vegetation for caribou is the lichen. It takes a long time to grow, 80 years so that caribou can eat it. I'd like to go back to the natural vegetation as close as possible to the way it was before the mine started. If it's going to come back as natural, it's going to take 80 years and we won't be here. – *Phillip Liske*

If there is a waste rock pile that is finished now on the Diavik site, maybe we could put something on it, to grow some plants and see what happens. – *George Marlowe*

## Wildlife Health and Safety

Comments made by TK/IQ Panel members made it clear that the diversity of wildlife on the landscape is valued as essential to maintaining overall biodiversity. However, the focus of discussions about terrestrial wildlife has been on caribou. A workshop with Aboriginal community delegates was held at the mine site August 17-18, 2009, with a focus on post-closure caribou movements (a second on-site workshop was held on fish palatability immediately afterward, on August 19-21). The TK/IQ Panel session on March 14-15, 2012 was focused on caribou monitoring. Further work would be required to gain a full picture of wildlife values, concerns and solutions in relation to closure and reclamation.

During the August 2009 workshop, participants toured ʔek’adi and Diavik by helicopter, including caribou trails on the island and surrounding areas, as well as the North Country rock pile. The workshop report reflected on previous research by Ann Gunn (1998) noting that caribou may use the rock pile as a vantage point for seeing predators, and for keeping away from mosquitos and flies in summer. On the other hand, if the rock pile is understood to be similar to boulder associations as described earlier, it’s likely that caribou will avoid it.

When thinking about caribou, 2009 workshop participants talked about a number of variables for consideration in closing down the rock pile. These are reproduced below with links to aspects of reclamation identified during the June 2012 TK/IQ Panel session.

**Table 4: Caribou and North Country Rock Pile Closure (adapted from August 17-18, 2009 Closure Workshop report)**

Issue	Consideration
Shape of the rock pile and access	<ul style="list-style-type: none"> <li>• Concerns regarding caribou crossing very high rock piles.</li> <li>• Smooth the sides of the rock pile so that wildlife can go over it if they want to.</li> <li>• Smooth crossing/access areas so caribou feet don’t get hurt.</li> <li>• Contouring the waste pile so it is similar to natural topography.</li> <li>• Find traditional paths and plan access/crossing areas around these.</li> <li>• East Island is now dead due to mine development, and caribou may naturally avoid this area in the future for this reason.</li> <li>• Ramps have been used along the Misery Road to facilitate caribou crossing.</li> </ul>
Contamination	<ul style="list-style-type: none"> <li>• Restricting caribou access to the pile so they don’t eat any vegetation growing up there.</li> <li>• A fence around the PKC; concerns that caribou will sink down into the PKC area.</li> </ul>

A number of comments were made during the June 2012 TK/IQ Panel session to the effect that that caribou should be kept away from the mine during operations (see the section above on “Identifying Concerns”). It was not always clear whether the panel members felt that this should also be the case post-closure, or whether conditions should be created for safe caribou travel at



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the mine site, and on the rock pile in particular. Colleen English mentioned that caribou have been observed walking on the test rock pile, which is capped with smoother material and with slopes reshaped to be less steep.

Now that Diavik has made some disturbances on that island, we have to try to bring it back as close as we can to the way it was, so that the calves and caribou maybe one day want to come back to their secure island. If there's concern, we could probably find traditional methods to get them to avoid that island somehow. Thank you. Máhsi. – *Fred Sangris*

We're not going to be here all the time. The young people are the ones who are going to take over. So today is a chance to talk to them and say, "Think like a caribou." We've got to talk about not disturbing caribou, or not wasting meat.

Caribou is a very smart animal. After the closure, sure, they could go back there again. We'll make some kind of a trail again and they'll go back to their old trail, the one they used to walk on before, twenty years from now maybe. When everything's gone, the building, the trucks, the roads are gone, guaranteed the caribou will be there on the rock pile. But right now, I don't want the caribou to go to the mine site. – *George Marlowe*

After closure, everybody's gone, the caribou will come back and swim across again and I'm pretty sure they'll go to that hill where there are no flies. I know there are lots of flies in August and September, too much. You guys know that too; everybody knows it.

Some time in the not too distant future, Diavik will be finished their job. They will be leaving. Us, our children, our children's children and their children will be here for a long time. Mahsi cho. – *George Marlowe*

The mine is right on the caribou migration route. The caribou will eventually go back to this landscape if the mine does a good job with closure. So the caribou will go back onto the same migration route. So we have to make a recommendation on caribou to make sure the closure is good so the caribou comes back. – *Phillip Liske*



## Homeland or “Dead Zone”?

As discussed above, biodiversity was identified as a core value for TK/IQ Panel members. Linked to this, panel members had many stories to share about the value of the ʔek’atı area as a part of their traditional homelands – a place for living, burying their family members, and harvesting. However, the future of the mine site area was considered as an open question. More work is required to clarify whether Diavik should plan for closure as renewal of a homeland, or as a “dead zone” that needs to be closed off from wildlife, people, and the surrounding landscape.

## Recommendations for Action

### Recommendation for Action: Future TK/IQ Panel Work in Closure and Reclamation Planning

The TK/IQ Panel developed a series of three resolutions following from the June 2012 workshop, related to: the need for a site visit; the role of panel members in communicating with communities; and the communication of TK/IQ Panel processes to the other environmental monitoring boards, such as the Independent Environmental Monitoring Board (IEMA) and the Snap Lake Environmental Monitoring Board (SLEMA). These recommendations were approved by consensus, and are provided in full in Appendix C. Further to the formal recommendations by the panel, a number of action items can be extrapolated from the proceedings of the session, briefly described as follows:

Panel members shared much baseline knowledge about the landscape encompassing Diavik. This knowledge sharing suggested that a “reference condition” approach (including ecological and cultural landscape aspects) be used in TK/IQ studies related to closure and reclamation. This underscored the value and importance of reviewing earlier TK/IQ studies as part of the context for planned community-based TK/IQ studies.

Panel members also pointed to a number of linked technical issues related to closure and reclamation of the rock pile that would provide critical context for further development of TK/IQ inputs, including questions about which landscape form should be considered as the “reference condition,” what surface capping options might best support revegetation (if revegetation is desired), and what wildlife habitat conditions might be supported (including species other than caribou). These questions point to the usefulness of a cross-cultural learning approach to TK/IQ processes in closure and reclamation planning.

The June TK/IQ Panel session provided direction on a series of three recommended focal points for cross-cultural dialogue during upcoming sessions:

1. Baseline studies: previous TK/IQ studies and archaeological findings in the ʔek’atı area.

2. Reference condition options for the rock pile.
3. Planning for biodiversity in revegetation, wildlife habitat, and capping options for the rock pile (differences from the target reference condition)

## **Recommendation for Action: TK/IQ Panel Mandate and Approach**

The second TK/IQ Panel session in the 2012-2013 series has provided a number of general insights into the mandate of the panel, the knowledge base that can be used a starting point for TK/IQ processes, best practices in new TK/IQ research, best practices in Aboriginal engagement, and criteria for assessing successful use of TK/IQ in mine planning and monitoring, particularly as it relates to mine closure.

### **Revisiting Our Mandate**

EMAB is currently considering a revised draft Terms of Reference for the TK/IQ Panel. At the same time, the implementation of the Panel mandate is being developed in practice. In part, the panel is learning through experience about who it is not answerable to, and what it is not mandated to do. These boundaries provide clarity about the panel's role in relation to the Parties to the Environmental Agreement.

The panel is not directly answerable to Aboriginal Parties/communities or to Diavik – rather, it was established to provide advice to EMAB. The Panel does carry out TK/IQ studies or consultation; this is Diavik's responsibility, working in partnership with the Aboriginal Parties.

As a regional body of knowledge holders, the TK/IQ Panel is well positioned to review existing and ongoing community-based TK/IQ studies and consultation processes, identify best practices and guidelines for these processes, and develop initial scoping and methods for new community-based processes around mine closure.

There is bound to be some level of TK/IQ knowledge sharing in activities of a panel of TK/IQ knowledge holders. However, such knowledge sharing should be considered as issues scoping and piloting of methods, as well as a basis for assessing and synthesizing community inputs. It is also in keeping with respecting Elders and knowledge holders as a key tenet of Aboriginal ways. The regional scale of the TK/IQ Panel limits the level of detail possible in TK/IQ research, but at the same time the cross-community level provides an opportunity for learning about method through best practices or comparative reflection, and identifying regional patterns and priorities emergent from community-based study and consultation results.

### **TK/IQ State of Knowledge**

An update to the State of Knowledge Report for the West Kitikmeot Slave Study Region was published in 2007. The report notes that it was not within the scope of the update project to complete a full review of TK/IQ in the region, and recommends that a separate TK/IQ State of Knowledge Report be completed as a follow-up to the 2007 update. This work might be

combined with development of a secure, web-based system for accessing TK/IQ materials for use in new TK/IQ studies.

### **Best Practices in TK/IQ Research**

The TK/IQ Panel is learning through experience that Indigenous methodologies need to be adapted to the specific conditions of addressing monitoring objectives related to mine operations, closure, and reclamation. The cross-cultural learning approach allows for productive dialogue with scientists so that TK/IQ knowledge holders fully understand the context for their work, and the specific ways in which they can meaningfully contribute to planning and monitoring. A reference condition approach allows knowledge holders to bridge their understanding of the baseline social-ecological landscape with the reality of the mine in operation and post-closure.

The TK/IQ Panel would be well situated over time to lead development of TK/IQ Research Guidelines specific to the West Kitikmeot Slave Region that can be used to establish best practices for new studies with stakeholding communities.

### **Aboriginal Engagement**

In some cases, individual Aboriginal Parties may have established their own guidelines for consultation and engagement, as well as TK/IQ research. However, the TK/IQ Panel is a regional body that can synthesize experiences among the communities in order to crystallize best practices.

### **Measuring Success**

Community-based TK/IQ studies and community engagement processes need to be monitored, validated, and assessed in terms of their success in having been accommodated for in planning and monitoring processes. Although the Parties are in part responsible for this, the TK/IQ Panel is in a unique position in being able to assess these processes from a standpoint of expertise in relation to Aboriginal inputs.



Figure 23: L-R Back ???, Louis Zoe, Pierre Beaverho, James Rabesca, George Marlowe, Phillip Liske, Susan Enge, Fred Sangris, August Enzoe, Wayne Langenham, Alfred Lockhart, Shelagh Montgomery, Bobby Algona, Kathryn Scott, Randy Hinaniak, Ed Jones, Ann Garibaldi; Front Jackie Strong, Nicole Enge, Helena Marlowe, Helena Marlowe, Darnian Marlowe, Mona Hiniak, Michèle LeTourneau

## Conclusion

The second TK/IQ Panel session of 2012 represented significant progress in the twofold objectives of providing input on the Terms of Reference and procedures for establishing the panel as a standing body, and providing a preliminary scoping of TK/IQ processes in closure and reclamation planning, with specific reference to the North Country Rock Pile. Panel members took strong ownership of their mandate and process. They insisted on being provided with information necessary to fully understand the context for questions that they were being asked to address. The panel requested, firstly, clarification about the decision-making framework within which the TK/IQ Panel is situated. Secondly, they made it clear that it would be necessary to ground their inputs on closure and reclamation planning in direct experience of the mine site, as well as full information about the technical context for planning.

This document expands on the proceedings of the June 2012 Panel session and workshop toward providing a foundation for future panel work, specifically in providing inputs on closure and reclamation planning at Diavik; and more broadly in contributing to the purpose of the Environmental Agreement “*to respect and protect air, land, water, aquatic resources, wildlife, archaeological and cultural resources, and the land-based economy that are essential to the way of life and well-being of the Aboriginal Peoples*” (S1.1[d]).

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TK/IQ Panel Session

Environmental Monitoring Advisory Board

Technical Report 2,

2012 Series

# RENEWING OUR LANDSCAPE

Envisioning Mine Closure and Reclamation  
of the North Country Rock Pile

*Diavik Diamond Mine*

VOLUME II—APPENDICES

October 2012

PRESENTED BY

The Traditional Knowledge &  
Inuit Qaujimajatuqangit Panel



COMPILED BY  
SENES Consultants Ltd.

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## List of Appendices

APPENDIX A – TK/IQ PANEL SESSION AND WORKSHOP AGENDA, JUNE 26-28, 2012

APPENDIX B – WORKSHOP PRESENTATIONS

APPENDIX C – TK/IQ PANEL RECOMMENDATION: CLOSURE AND RECLAMATION PLANNING

APPENDIX D – SITE VISIT DEBRIEFING PRESENTATION AND DISCUSSION NOTES, AUGUST 21, 2012

APPENDIX E – TK/IQ PANEL UPDATE TO EMAB BOARD, SEPTEMBER 25, 2012

# Appendix A

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Tk/IQ Panel Session and Workshop Agenda

*June 26-28, 2012*

# Caribou Monitoring, and Mine Closure and Reclamation *Workshop and Session*

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Northern United Place, 5403 Franklin Avenue  
June 26-28, 2012

## Facilitation and Recording

Deborah Simmons, SENES Consultants Ltd.  
Shelagh Montgomery, SENES Consultants Ltd.

## Confirmed Participants to Date

*\*Two youth for each delegation TBA*

Kitikmeot Inuit Association	John Ivarluk, Bobby Algona and Mark Taletok
Łutsel K'e Dene First Nation	George Marlowe, August Enzoe, Alfred Lockhart
North Slave Métis Alliance	Ed Jones, Wayne Langenham
Tłı̨chǫ Nation	Pierre Beaverho (Whati), Louis Zoe (Gameti), Jonas Lafferty (interpreter), James Rabesca (interpreter)
Yellowknives Dene First Nation	Fred Sangris

## Observers/Presenters

EMAB	Michèle LeTourneau
Diavik Diamond Mine	Colleen English, Kathryn Scott
Integral Ecology Group Ltd.	Ann Garibaldi, specialist in Aboriginal Values and Reclamation

## Background and Purpose

EMAB TK/IQ Panels are mandated to work with local communities and assist EMAB in facilitating appropriate and meaningful accommodation of Traditional Knowledge/Inuit Qaujimagatuqangit (TK/IQ) in the planning and review of environmental monitoring at Diavik Diamond Mine. This event is part of a series of TK/IQ Panel workshops and sessions for 2012/2013 to address key questions.

This Workshop and Session will include a review of our work and progress to date on caribou monitoring, as well as a start to activities related to mine closure planning. This gathering will include youth delegates, ensuring that they have opportunities to both learn and share their ideas for the future of the mine site.

## Session: Caribou Monitoring Review

On March 14-15, the TK/IQ Panel met to review the current Standard Operating Procedure (SOP) for monitoring caribou behaviour, and lay the groundwork for developing a traditional knowledge caribou monitoring plan. In April, a Briefing Note on the approved TK/IQ Panel recommendations for the SOP was submitted to Diavik. Our half-day session on June 26 will include an update on the status of the recommendations, and review of the full report on the TK/IQ Panel session.

## Workshop and Session: Closure and Reclamation Planning

Every three years, Diavik is required to revise the closure plan for the mine site, which includes the rock pile. The TK/IQ Panel now has an opportunity to provide input on the vision for the rockpile, and the approach to working with communities in the coming years. Activities will include a 1.5 day Workshop on closure planning, and a one day Session to develop recommendations, including next steps for the planning process.

### What is Closure?

When mining activities end, the owner is required to close it down or “decommission” it through a formal process. A mine begins to close the day it opens. Closure planning needs to happen before the mine opens, since decisions made in construction and operation of the mine will affect the closure process and reclamation of the landscape. Diavik is required to review and revise its Closure and Reclamation Plan every three years. Since aboriginal people will live with the post-mine landscape in the future, it is important that they be involved in closure planning.

### What is Reclamation?

The mine has changed the land. It is not possible to restore all the land to exactly the way it was before the development. But reclamation projects attempt to establish ecosystems that serve the needs of society and the environment. People’s visions for the land are the basis for planning reclamation projects.

## Talking Circle Approach

The TK/IQ Panel often shares knowledge within a Talking Circle format that ensures everyone has equal opportunities to speak. The main principle of the Talking Circle is respect. The microphone serves as the Talking Stick, and is also important because we are recording the proceedings. The person holding the Talking Stick is not interrupted – but the group gives the facilitator permission to ensure that our time constraints are respected by signalling to the speaker when it’s time to wrap up. If the Talking Stick comes to you, you can choose not to speak, or you can request that what you say not be recorded.

This gathering includes a Workshop with resource people who are knowledgeable about closure and can share examples of other indigenous experiences in working on closure plans – the Workshop will include presentations and back-and-forth discussion so that people can have their questions and concerns addressed by the resource people.

The first and last parts of this gathering are a TK/IQ Panel Session, which is a forum for TK/IQ Panel members to talk among each other and make recommendations. TK/IQ Panel members can decide whether they wish to have Diavik representatives or other resource people present for their Session discussions.

It may at times be useful for elders and youth to work separately so they can develop their own perspectives and then share these with each other. The group can decide when and whether group work is a good idea – the facilitator will have suggestions!

The recording will be transcribed, and used as the basis for the report on the Workshop and Session. The report will not be shared without review and approval by the TK/IQ Panel (at the October meeting). The TK/IQ Panel can decide to approve some recommendations for immediate sharing with EMAB and Diavik, as we did with the Caribou Monitoring SOP recommendations.



## AGENDA

### Tuesday, June 26 – Caribou Monitoring Session Review and Closure Planning Workshop 1

*Note: There will be at least one short break with refreshments during each morning and afternoon.*

9:00	Opening prayer, introductions, welcoming remarks
	Review and discussion of Workshop and Session purpose, agenda, roles of TK/IQ Panel, EMAB and Diavik
	<p><b>Caribou Monitoring Session Review – TK/IQ Panel Members only</b></p> <ul style="list-style-type: none"> <li>• Update on Caribou Monitoring SOP recommendations (Michèle)</li> <li>• Review and approval of TK/IQ Panel Session report</li> </ul>
Noon	LUNCH PROVIDED
1:00	<p><b>Closure Planning Workshop Part 1: Background</b></p> <ul style="list-style-type: none"> <li>• Introduction and background on EMAB involvement in Closure Planning (Michèle)</li> <li>• Presentation on the site and the closure process – what are the possibilities? (Colleen, Kathryn)</li> </ul>
1:30	<b>Talking Circle:</b> What does closure mean to you?
3:30	Review workshop agenda for Day 2.

### Wednesday, June 27 – Closure Planning Workshop

9:00	Opening and agenda for the day
	<b>Checking In:</b> Key messages from Day 1
	<p><b>Closure Planning Workshop Part 2: Reclaiming the Rock Pile</b></p> <ul style="list-style-type: none"> <li>• Introduction to the rock pile (Colleen, Kathryn)</li> <li>• Discussion</li> </ul>
	<p><b>Small Group Work</b></p> <p>Envisioning a future for the landscape at the rock pile site.</p>
	Small Group reportbacks
Noon	LUNCH PROVIDED
1:00	<p><b>Closure Planning Workshop Part 3: Aboriginal Values and Reclamation</b></p> <ul style="list-style-type: none"> <li>• Presentation by Ann Garibaldi</li> <li>• Discussion</li> </ul>
	<p><b>Talking Circle or Small Group Work</b></p> <ul style="list-style-type: none"> <li>• What are the most important values in reclamation planning? What would successful reclamation look like?</li> </ul>
	Analysis of key messages or small group reportbacks
3:45	Review workshop agenda for Day 2.

**Thursday, June 28 –TK/IQ Panel Session on Closure Planning**

9:00	Opening and agenda for the day
	<b>Checking In:</b> Overview of key messages from Closure Planning Workshop
	<b>Closure Planning Recommendations</b> <b>Talking Circle</b> What are the key messages to be shared on closure planning?
	Review and approval of key messages
Noon	LUNCH PROVIDED
1:00	<b>Next Steps for Community Involvement in Closure Planning</b> <b>Small Group Work or Talking Circle</b> How should the TK/IQ Panel continue to be involved? How should communities be involved?
	Analysis of key messages or small group reportbacks
	<b>Workshop and Session Reporting</b> <ul style="list-style-type: none"> <li>• Reporting and review schedule</li> <li>• Approval of any immediate recommendations for interim report</li> </ul>
	<b>Group Photo</b>
	<b>Concluding Talking Circle</b> What were the highlights of this Workshop? What should be different at the October event?
3:45	Closing remarks, prayer.

# Appendix B

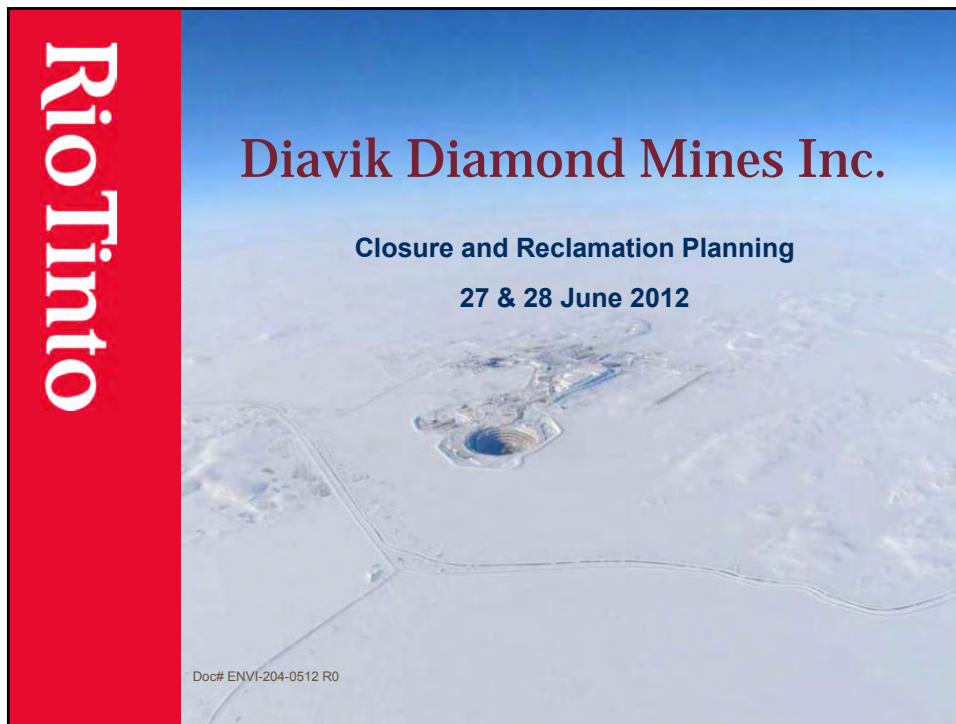
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## Workshop Presentations

*Presentation 1: Diavik Diamond Mines Inc, "Closure and Reclamation Planning"*

*Presentation 2: Integral Ecology Group, "Aboriginal Values and Reclamation Planning"*

*Presentation 3: Dialectic Research Services, "Examples of TK Integration"*



**RioTinto**

**Diavik closure and reclamation planning**

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Diavik closure concept – then and now

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Diavik closure goals

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Diavik closure process & timelines

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Diavik closure plan overview – by mine area

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Waste rock pile closure objectives

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Rock pile closure process & considerations

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Review of ideas from 2009 community consultations

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Questions to consider for the rock pile

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**RioTinto**

## 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

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4

**RioTinto**

## Closure process & timing

- Interim closure & reclamation plan (ICRP), v3.2
  - Approved through WLWB review process
  - Further work to be done on closure criteria & reclamation research
  - Annual progress reports required
- 2016 – next version of ICRP due
  - 3 year window for community review & input
    - Many different aspects that each require discussion & recommendations
  - Some closure work can start soon, e.g. rock pile

5

**RioTinto**

## Overview of closure plans, by area

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**RioTinto**

## Diavik waste rock pile closure objectives

- Physically stable slopes to limit risk of failure that would impact the safety of people or wildlife
- Rock and till pile features (shape and appearance) that match the look of the surrounding natural area, as much as possible
- Contaminated soils and waste disposal areas that cannot contaminate land and water

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**RioTinto**

## Rock pile

- Opportunity to begin the closure process - no more rock added after open pit mining is complete later this year
- One of the most important areas for community input and TEK – landform considerations, waste disposal, wildlife movement/use
- Key focus area over the next year; began discussions with communities in 2009

8

**RioTinto**

## Wildlife movement – post-closure

- Closure design for wildlife movement is current focus
- Communities workshop at site 17-21 August 2009
- Outcome was three main options:
  - 1 Leave rock pile as is – little to no access to rock piles

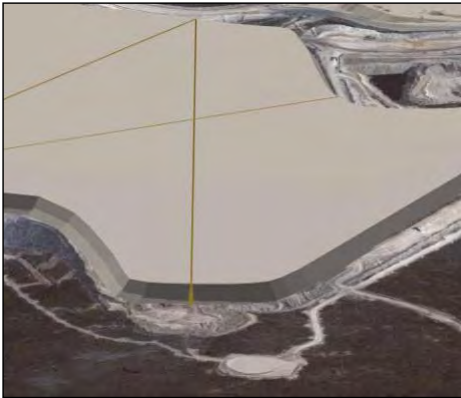



October 12
9

**RioTinto**

## Wildlife movement – post-closure

- 2 Use traditional caribou trails to develop defined paths - controlled access to rock piles

October 12
10

**RioTinto**

## Wildlife movement – post-closure

### 3 Contour the pile - full access to rock piles



October 12

11

**RioTinto**

## Rock pile technical considerations

- The rock in the pile would not go back in to the pits
- Water has to run off the pile without causing too much erosion or pooling in various areas
- The rock may release metals if it is not covered effectively
- Burying basic waste on site is a common practice and is currently done for operations – it can be the more environmentally friendly option for disposal at remote mines
- There may be an opportunity to use clean rock from A21 pit development to cover the pile

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## Rock pile

- Purpose of discussion today is to continue developing some of the ideas we've already heard from communities
- What would you recommend the rock pile look like after the mine is done?
- How would you recommend wildlife use the rock pile?
- In order to make that happen, what would you recommend the pile look like?
  - Is there vegetation?
  - Are the sides steep or more of a gradual slope?
- What can we continue to discard waste into the pile?
- How are we best to discuss these questions & get feedback from community members?
- Timeline: want to start work on closing the rock pile in early 2013

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## Discussion



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# Aboriginal Values and Reclamation

EMAB Traditional Knowledge Panel  
June 26-28, 2012



Integral Ecology Group

## Thank you!

### **TEK Project Team**

Andrew Boucher, Rena Boucher, Mary Bouchier, Gary Cooper, Flora Grandjambe, James Grandjambe, Wilfred Grandjambe, Celina Harpe, Dorothy McDonald, Fred McDonald, Victoria McDonald, Francis Orr, Walter Orr, Elsie Rolland, Elizabeth Stokes, Mary Tourangeau, Clara Wilson

### **The community of Fort McKay – this truly is their project**

### **Fort McKay summer students**

Brittany Cardinal, Lori Lei Mercredi, Katrina Delisle and Shawne Courtorielle







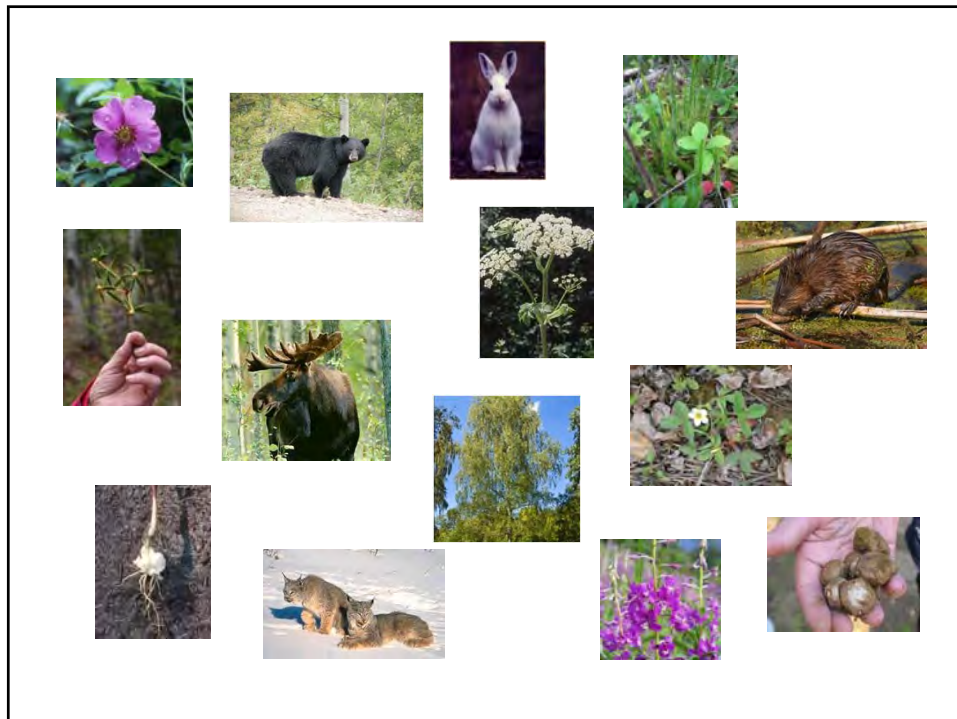
## Fort McKay





## Initial key messages

- “Put it back the way it was as fast as possible”
- Reclamation needs to address environmental, cultural and spiritual issues
- Wanted to feel that they were a part of the process
- Need to involve multiple generations, particularly youth
- Traditional knowledge should be included in reclamation decisions
- Everything is related – you can’t put back one piece at a time
- Lack of trust that reclamation would work (hadn’t seen any done yet after decades of mining)





### Fort McKay's Key Species



Beaver help shape and build the land.



Moose are an important source of food and provide material for moccasins, clothing, and tools.

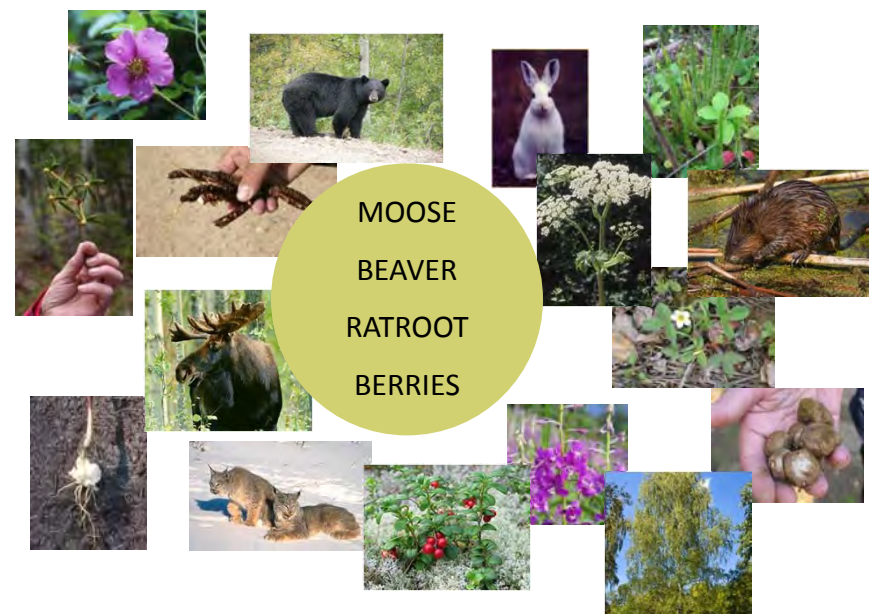


Ratroot is a highly valued medicinal plant.



Berries are a prized seasonal food and contain medicinal properties.

### Project Approach



## We we did

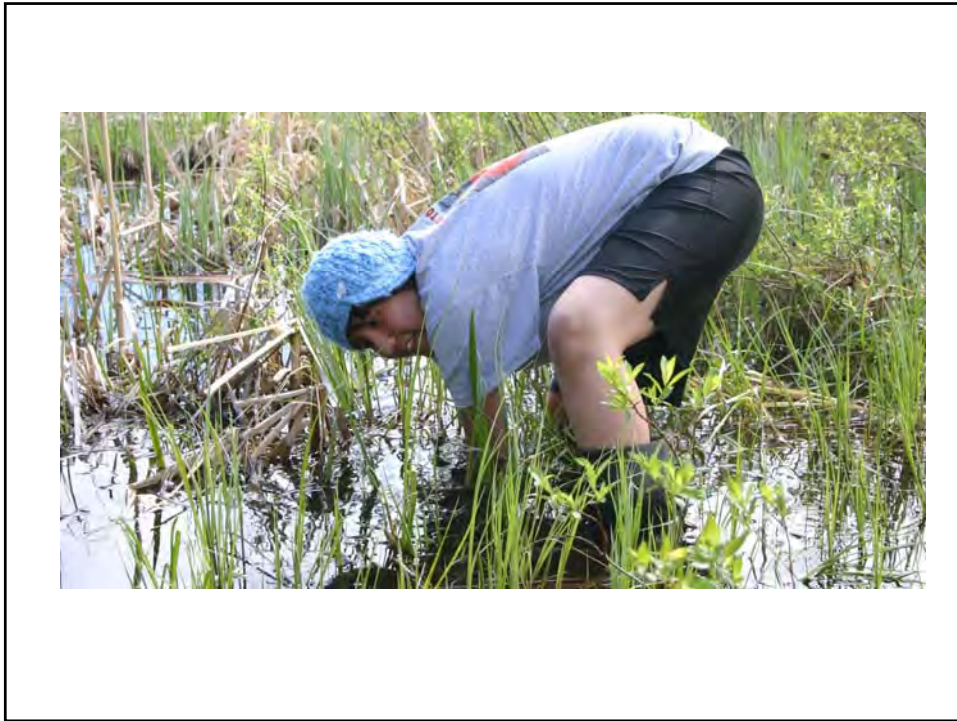
- Established a project focus group
- Visiting sites before they were disturbed (or adjacent sites if necessary)
- Identified reclamation values (e.g., importance of muskeg)
- Youth and elder TU field camps (pre- and post-disturbance where possible)
- Reclamation site visits
- Reviewed existing information

## Learnings – More time on the land

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More time focusing on species relevant to *community members* has encouraged sharing of traditional knowledge with direct implications for reclamation.







## Learnings - Communication

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*When industry come I listen good, [but] the half of it I don't understand what he's talking about. And if I talk to you, and if you don't understand me...you don't understand four or five words in between, you're out. You're out of what you're listening [to].*

## Learnings – planning for the future

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Focusing on plants and animals that are important to community members support more meaningful conversations between the current state of the developed landscape and the long-term goals for the land following reclamation



## Learnings – Muskeg

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*My father would tell you that our body is like the earth. We need a heart to live. And he would tell you that the muskeg is your heart, and that the mountains are your brain, and the creeks and rivers are your blood vessels...Muskeg is very important to rivers and creeks and everything in them. Muskeg is connected through water to the rest of the earth. With that comes our spiritual values and how we are connected and respect the earth*

(Cecelia Fitzpatrick, Fort McKay )

## Learnings – Muskeg

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## Learnings – Spirituality

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It was most challenging to find ways to support spirituality in the reclamation process. The focus group determined that people need to be on the land to sustain their spiritual connection.



If you fly them [children] to an area (rather than have them walk or sled there) that is:

*" like dropping them in a bowl.  
What have they learned?  
Nothing. They have to walk [in order] to learn."*

James Grandjambe  
Cree Elder, Fort McKay

## Current structure

- Community Advisory Groups that meet ~4 times per year (more than 16 companies)
- Advisory Group meets on their own (when possible); they have internal technical experts that participate when requested (e.g., dust concerns)
- Intense focus on one key issue per year (though all issues of concern are discussed)
- Ongoing reclamation tours
- Companies required to demonstrate reclamation of key species identified by the community
- (Potential) joint community-industry projects
- Much still needs to be done – still not much demonstrable reclamation (and people are very cautious about possibility of success)

### Next Steps

- Need additional internal staffing to manage the many Community Advisory Groups
- More community involvement (even more youth participating)
- Explore alternative places to have discussions (reclamation field camps) – no powerpoint ☺
- Develop aboriginal criteria for reclamation certification
- Conduct (ethnobotanical) inventories of adjacent areas
- Establish community-based monitoring of traditional territory and reclaimed sites
- Fort McKay to establish their own reclamation company

Thank you!

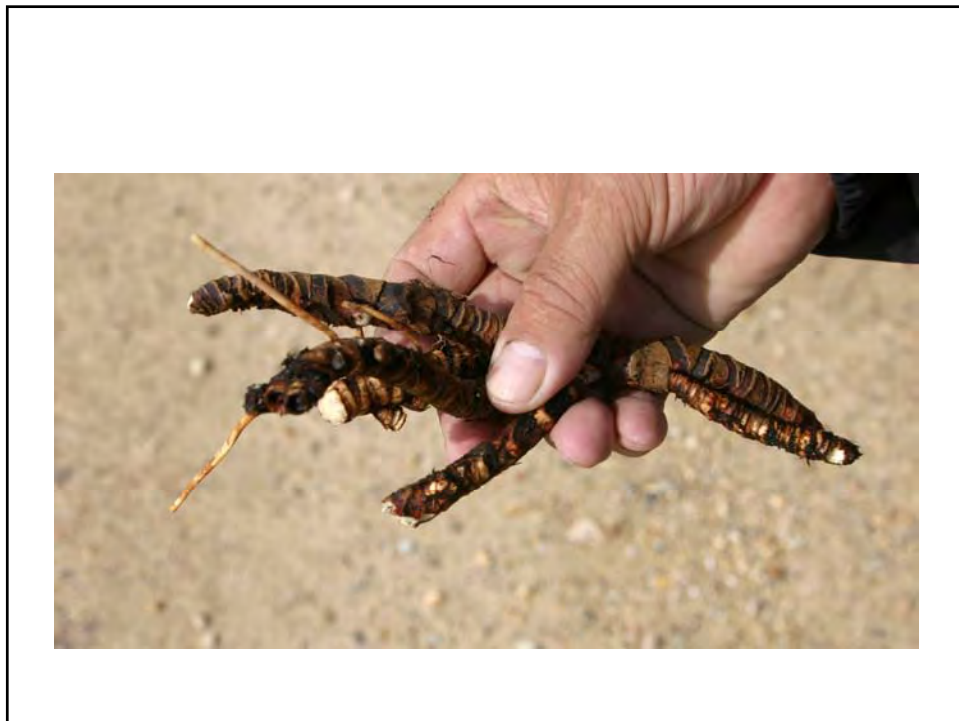
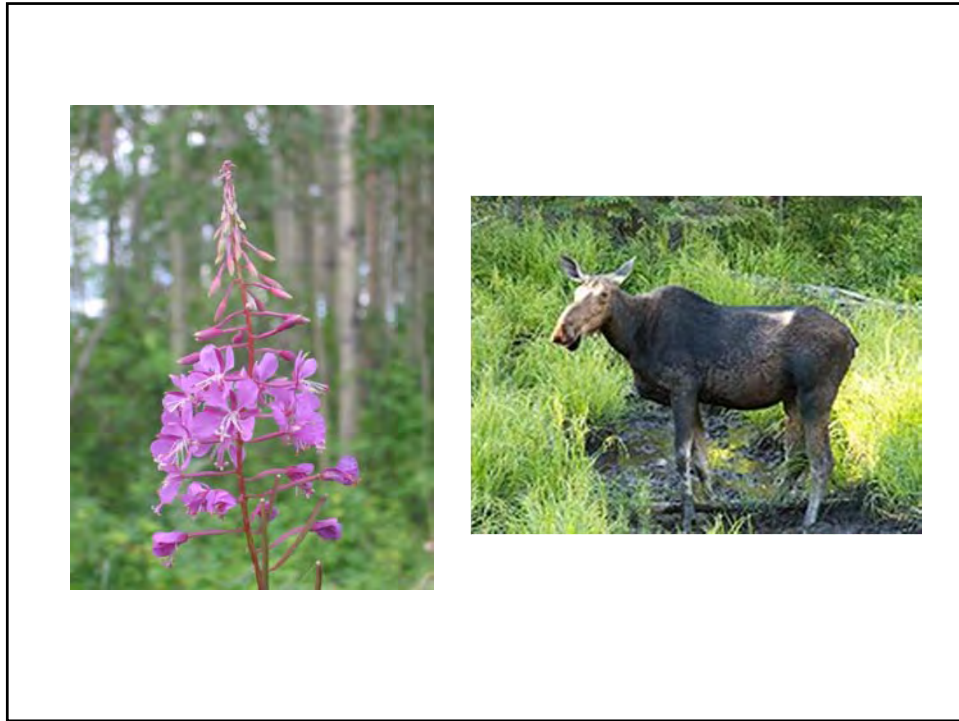




- How would you like the reclaimed landscape to look?
- How would you (or animals) like to use the reclaimed and adjacent areas?
- How will you know reclamation is successful?
- What do you need to have (see/smell/test) to trust that reclamation is successful?







*Animals they've got a spirit,  
everything. The trees. The earth.  
That's why we have to respect  
it...according to my elders, they told  
me, don't play with everything.  
Don't. Have respect for everything.*

### Learnings – Muskeg

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*So if you don't put everything [back] the same...if  
you don't put anything underneath, like  
muskeg...it is no good. 'cause a lot of spruce grows  
[naturally] and there's always a muskeg dip  
someplace close by. That's kind of a bank. That's  
a bank for all the trees now. And it rains, all that  
moss and everything holds that water. And if they  
have a dry spell, the trees suck all that water now  
from that muskeg. They survive on that.*

## The path forward

- Establish joint land use objectives between communities and Diavik

# EXAMPLES OF TK INTEGRATION

EMAB Closure Workshop (June 26-28, 2012)

## Outline

- ❑ Case Studies of TK Integration in Closure (Colomac, Faro, Whistle Lake)
- ❑ Other Examples of TK Integration
- ❑ Esker/Hill Analogy
- ❑ Suggestions from Previous Closure Workshop and TK Panel
- ❑ Questions for Discussion

## Colomac Mine (NWT)

- Based on discussions with Tłı̄cho and evaluation process, the following options were explored and the preferred option selected in 2003
- **Reclamation Options:**
  - Flatten tops and partially revegetate
  - Contour tops and partially revegetate
  - Construct wildlife access ramps onto rock pile
  - Re-establish natural drainage and enhance stream fish habitat
  - Clear vegetation to create wildlife trails around waste rock piles
  - Ensure long-term care and maintenance are minimized or eliminated;
  - Identify activities required to return site to aesthetically acceptable condition
- Both Tłı̄cho and INAC chose dry cover option based on different values/input

## Colomac Option Evaluation Process

- Tłı̄cho participated in evaluation of closure options for abandoned Colomac Mine with INAC
- Tłı̄cho gave scores to 6 tailings closure options based on Aboriginal values
- 6 tailings closure options:
  - Move tailings: to another tailings or to pit
  - Cover tailings: wet rock cover, dry cover, plant (no cover)



## Colomac Option Evaluation Process

- Tłı̄cho selected criteria to rate how closure options would do:
  - ▣ Safety to people and wildlife
  - ▣ No dust
  - ▣ No new sites disturbed
  - ▣ Walk-away effect
  - ▣ Restores natural conditions
  - ▣ Gets rid of contaminated sites
- Tłı̄cho rated each criteria based on 3-point scale → 1) low = poor job; 2) medium = acceptable job; 3) high=good job

## Colomac Option Evaluation Process

	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6
Safety	2	3	2	2	1	2
Dust	3	3	3	3	2	3
Disturbance	3	3	3	3	3	2
Walk-away	3	3	2	3	1	1
Natural Conditions	3	4	1	2	2	2
Con. Sites	1	2	1	1	1	1
Average Score	2.5	3	2	2.3	1.67	1.83

## Idea for Process

- Aboriginal groups could create their own values to measure each closure option; framework for organizing and presenting what's important
- Each group, EMAB and DDMI could do their own scoring and weighting based on values most important to them
- Get together and compare results of everyone's scoring to determine which option is preferred and what is behind preference

## Faro Mine (Yukon)

- Selkirk First Nation & Ross River Dena Council
- Consensus-based 15-year closure plan with Yukon Gov't
- Aboriginal groups collected TK to inform closure planning, including current/future use of Faro Mine site by groups
- Involved in selection of closure options based on TK, including:
  - Soil cover to prevent human and wildlife contact
  - Uncompacted top growing layer of soil for revegetation of cover (improve habitat for birds/wildlife)
  - Waste rock reshaped to look like natural environment
- Learning from other Aboriginal experience: Collaboration with Intertribal Nursery Council (INC) based in Albuquerque, NM to consider re-vegetation options

## Whistle Lake Mine (Ontario)

- Inco and Wahnapiatae signed MOU in 1999 for greater participation in closure planning
- Treated mine water released to Post Creek which went through Wahnapiatae reserve
- Meet quarterly to discuss closure planning
- TK informed closure of open pit
- Capacity bldg: Contracts and training in closure processes

## Other Examples of TK Integration

- **Red Dog Mine Airstrip** – TK of prevailing winds changed design of airstrip in Alaska
- Using traditional Inuit methods of corralling caribou to divert them away from mine components
- Elders involvement in problem solving: Vegetative species not thriving; suggested adding particular nutrient-rich soil to encourage vegetation growth

## Esker/Hill Analogy

- ❑ Use Aboriginal esker knowledge links to closing rock pile
- ❑ Importance of direction of esker related to meltwater flow
- ❑ Important wildlife habitat (esp wolf denning)
- ❑ Travel routes for humans and caribou
- ❑ Vegetation patterns on eskers → more vegetation on sides than top due to wind
- ❑ Steep slopes → good drainage
- ❑ Top of eskers good for temporary camp due to drainage
- ❑ Visibility: Ability to see surrounding areas on top of esker

## Closure Objectives from Previous Workshop

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>❑ Safe for wildlife/people</li> <li>❑ No dust</li> <li>❑ Stability</li> <li>❑ No erosion</li> <li>❑ Survivability in case of an earthquake</li> <li>❑ Perpetual frozen core</li> <li>❑ Promotion of vegetation (monitoring for metal uptake)</li> <li>❑ No ARD</li> </ul> | <ul style="list-style-type: none"> <li>❑ Elimination of run-off/seepage</li> <li>❑ Construct gradual slopes along the edge of the waste rock pile</li> <li>❑ Leave the steep slope to discourage use by animals</li> <li>❑ Noted: Could potentially be used by wolves and fox to hunt caribou trying to climb the pile</li> </ul> |
|--|---|

## Suggestions/Input from TK Panel

- ❑ Move rock pile to pit →DDMI response: geochemical and cost reasons not feasible
- ❑ Caribou seek hills for relief from bugs (related to wind), esp in August and September
- ❑ Metis in favour of caribou access to pile with vegetated PK/soil cover

## Questions for Discussion

- ❑ How have you and/or ancestors taken care of the land?
- ❑ How have you and/or your ancestors used rocks / elevated areas on land? What do eskers/hills mean in your culture?
- ❑ What have you observed or how have you taken part of reclaiming natural/traditional disturbances (e.g., caribou highways, camp clean-up, snowmobile tracks)?
- ❑ How can these practices be used in managing the land after the closure of the mine?

## Questions for Discussion

- ❑ What have you observed on the land about migrating caribou when they encounter esker/hill? What do they do? Do they go around it? Do they climb over it?
- ❑ What have you observed on the land about wolves and foxes and their use of eskers/hills? How do they interact it?
- ❑ What have you observed on the land related to plants and berries growing on hills or rock piles? What makes them strong in some years? Why are they weak or die in some years? Water, nutrients, and/or weather?
- ❑ What on the land will tell you that the rock pile is done being reclaimed? Return of caribou? Taste of berries? Taste of fish in nearby water? Use by people?

## Key Questions to Consider

- ❑ Caribou/wildlife on rock pile? Yes / No
- ❑ Vegetation on rock pile? Yes / No (If yes, where?)
- ❑ Sloping of rock pile? Yes / No (If yes, where?)
- ❑ Contouring of rock pile? Yes / No (If yes, where?)
- ❑ Trails for wildlife? Yes / No (If yes, where?)



## Examples of Traditional Land Management

- There are many forms of Aboriginal land management, including:
  - ▣ **Active manipulation of landscape:** Burning berry patches to encourage growth of bigger and better berries.
  - ▣ **Avoidance:** Non-hunting areas where group leaves certain valleys alone to allow for wildlife breeding and/or rearing.
  - ▣ **Selective harvesting:** Using a fish weir to catch fish, but sorting out and releasing female fish back into water.
  - ▣ Focusing wildlife hunts on males rather than females to encourage the viability and sustainability of species

# Appendix C

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Tk/IQ Panel Recommendation: Closure and Reclamation Planning

# Closure and Reclamation Planning

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June-28-12

*The following recommendation was approved by consensus of the TK/IQ Panel at 1:15 pm on June 28, 2012.*

## Background

1. The TK/IQ Panel is provided for under the Environmental Agreement as a panel of experts to *“assist in the application and consideration of traditional knowledge.”*
2. The TK/IQ Panel is a standing body of knowledge holders appointed by each of the five Aboriginal Parties.
3. TK/IQ Panel members are responsible for providing expertise and recommendations to the Environmental Monitoring Advisory Board (EMAB), Diavik Diamond Mine Inc. (DDMI), the Aboriginal Parties and their respective leaderships and communities.
4. The TK/IQ Panel is assisting in developing options for closure and reclamation planning at Diavik Diamond Mine through a series of activities including the June 26-28 Panel Session and Workshop.
5. DDMI is required to educate and seek input from communities with respect to TK/IQ aspects of closure and reclamation.
6. DDMI is required through the terms of their water licence and through the Environmental Agreement to include TK/IQ in their monitoring plans and programs.

## It is Therefore Recommended That

1. EMAB work with DDMI to plan a site visit by the TK/IQ Panel to learn firsthand about the North Country Rock Pile, with follow-up activities to prepare recommendations on rock pile closure and reclamation planning; the site visit should include an overnight stay at the Community-Based Monitoring Camp.

2. EMAB request funding support from DDMI for TK/IQ Panel members to play a leading role in reporting back to their respective communities, to inform the communities about the role they are playing in closure and reclamation planning, working with DDMI and EMAB as needed.
  
3. Due to the fact that Diavik, Ekati and Snap Lake diamond mines all share the same landscape, EMAB should facilitate sharing the TK/IQ Panel’s work with the Independent EMA and the Snap Lake EMA so that our work can be used to inform closure and reclamation planning at the other diamond mines, per Section 1.1(b) of the Environmental Agreement, in order *“to respect and protect air, land, water, aquatic resources, wildlife, archaeological and cultural resources, and the land-based economy that are essential to the way of life and well- being of the Aboriginal Peoples.”*

# Appendix D

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Site Visit Debriefing Presentation and Discussion Notes

*August 21, 2012*







## PARTICIPANTS

Diavik Diamond Mine Inc.	Colleen English
SENES Consultants Ltd	Deborah Simmons
North Slave Métis Alliance	Mel Enge, Wayne Langenhan, Ed Jones
Łutsel K'e Dene First Nation	George Marlowe
Kitikmeot Inuit Association	Bobby Algona, John Ivarluk
Tłı̄chǫ First Nation	Pierre Beaverho, Louis Zoe, Peter Husky (interpreter)

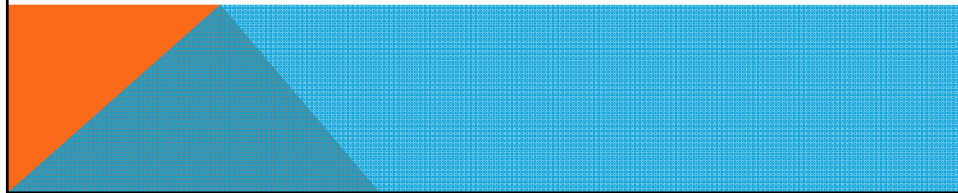


## CLOSURE OBJECTIVES

- Physically stable slopes to limit risk of failure that would impact the safety of people or wildlife
- Rock and till pile features (shape and appearance) that match the look of the surrounding natural area, as much as possible

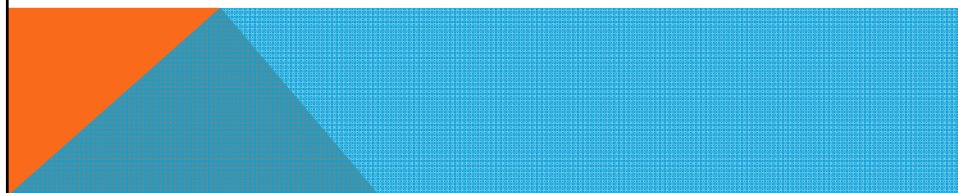
## DIAVIK REQUIREMENTS

- Capping to contain contaminants within the pile
- Maintain the temperature of the rockpile



## HOW DIAVIK WILL USE TK PANEL RECOMMENDATIONS?

- 3 year window before next submission of closure plan – 2016.
- Diavik wants community input.
- There will be conflicting views, but some of the best ideas that work with technical considerations will be used.
- Diavik will report back on what input was used.
- The rockpile is just under 200m (about 190m or 700 ft)
- The more ideas, the better.



## HERITAGE (RENEWING HISTORY)

- Hunting and fishing
- Campsite
- Berries

### Goal

Future generations will want to visit!

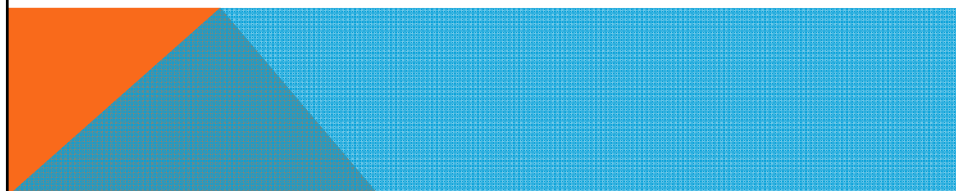
## TEST ROCK PILE





## SHAPING THE LANDSCAPE

- Simulate an esker
- Slope the top edges so they're rounded
- Slope the sides so less steep, like the test pile
- Remove big boulders
- Rock from piles back into the pit
- Flatten the top to that there are no berms and caribou can easily walk – there are fewer places for predators to hide.





## SHAPING THE ROCKPILE

- Less than 8 miles NE of Diavik that might be good to look at as an example – it's sandy.
- In winter NE or NW (prevailing) wind will shape the snow, so that it's smoothed over and cuts straight down at the lee side – people from Kugluktuk know this. People who travel on the land with skidoo know that you have to watch this when you get to an esker.
- There are a lot of sandflies in August, so the caribou will want to go up on the slope to catch the wind, sleep, and get away from the flies. There needs to be something for them to eat up there.
- Caribou ramp? The caribou will come across from the northwest side to the east side, and swim across the lake – that's what they used to do before. And coming back, from southwest again.
- Use waste rock to slope the pile.





## REVEGETATION

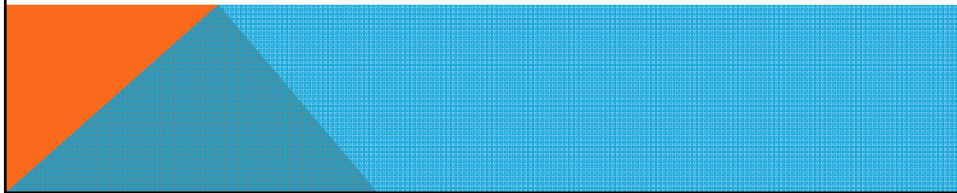
- Options: Use soil from tundra; cover with rock and till from pit A21
- Natural revegetation
- Plant shrubs near bottom in the soil being placed there (dwarf birch and willow)
- Visit old archaeological sites to view regrowth
- Place soil near the bottom
- On the tundra, there's black soil – if they create an esker and put that soil, there might be more regrowth. Eskers are usually just rocky and sand, so they need soil added for regrowth.





## REVEGETATION ISSUES

- Soil nutrients
- Erosion from water and/or wind
- Disturbing another area by moving materials

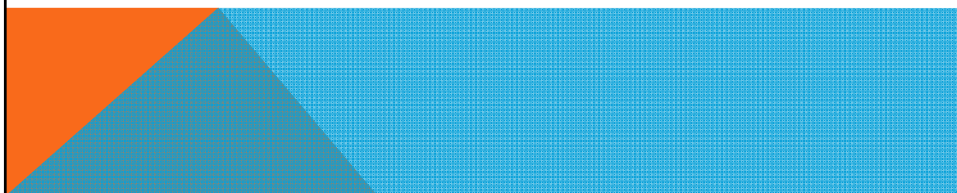


## WATER CHANNELS

- Water can be diverted onto the tundra, or go directly into the water.
- Water will find its natural channels as well.
- Channel to a pond contained geotextile, deep enough so water will seep into ponds in four different areas
- Let nature take its course

### Issue

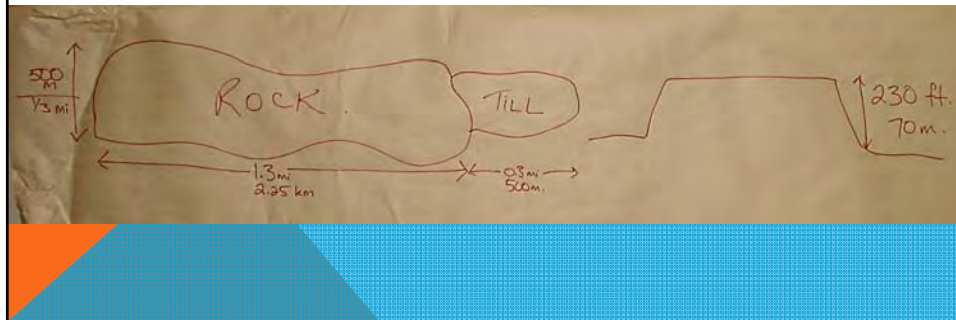
Contaminants are or are not a concern.





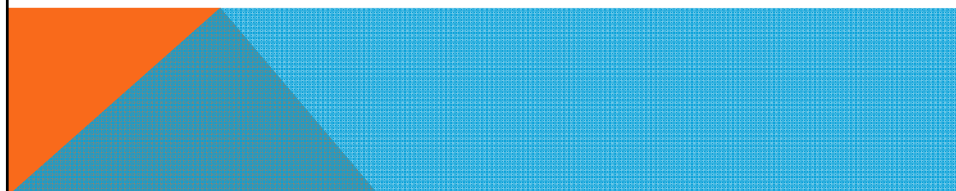
## ROCKPILE DIMENSIONS

- 1/3 mile or 500m wide
- 1.3 miles or 2.24 km long
- Till pile 500m or 0.3 miles
- Height 230 feet or 70 metres.



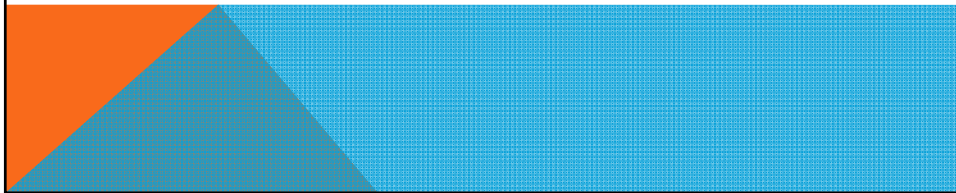
## SIMULATED ESKER

- Caribou will have easier access to the hill when the hill is reshaped, from all different directions.
- There's a lot of seepage from the bottom of esker.
- Esker material compared with gravel from rockpile.
- Gravel holds nutrients in the ground that makes the baby birch grow easy.
- Under the topsoil is natural till from long ago.
- A little bit of gravel from an esker or even crushed rock will hold more nutrients for plant life.



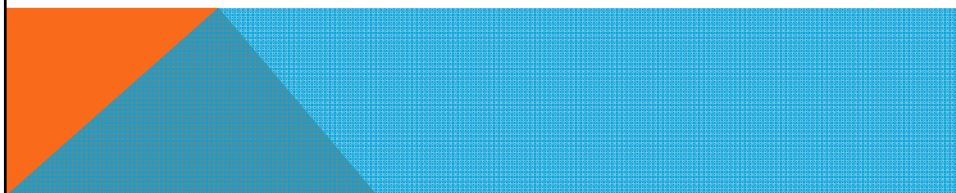
## PROCESSED KIMBERLITE POND

- What we do with one part of the pile, we don't necessarily need to do with the whole pile.
- Could shape the landscape to prevent caribou from accessing a certain area like the PKC area.
- Option to cover the PKC area – the material isn't as solid, so there might be more movement, and could become unstable.
- There may need to be an open water area for catching water from the rock pile.



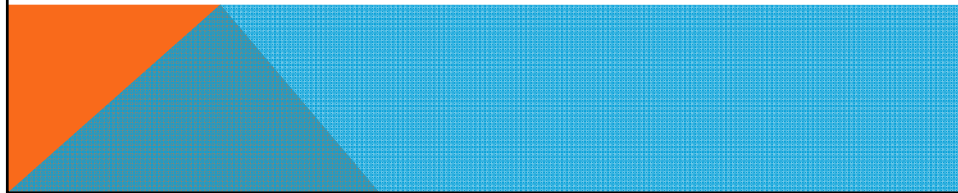
## ISSUES IN SHAPING PILE

- Caribou travel (but caribou travel anywhere! Can be injured with steep slope; safety is a key consideration)
- Channeling water to ensure contaminants don't reach Lac de Gras
- Snow drifting



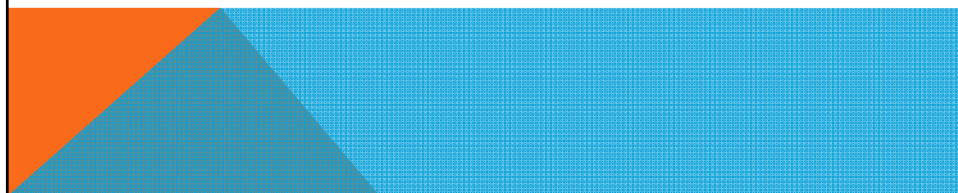
## WATER/CONTAMINANTS

- Don't bury metals in the pile
- Use geotextile in drainage areas d/s of pile and revegetate these areas.
- There may be seepage from PKC pond. They drain that pond back from water plant, cleaning the water in that way?
- Use esker materials nearby as cover materials
- There is a dump for inert materials in the pile, including metals, rubber, styrofoam, machine parts (but not vehicles).
- Can metal be backhauled? But there's a short window on winter road, it's costly, and there's no storage space. Don't want to bury things on our ancestors' island. Our ancestors used to clean up after themselves when they left that island.



## PKC POND

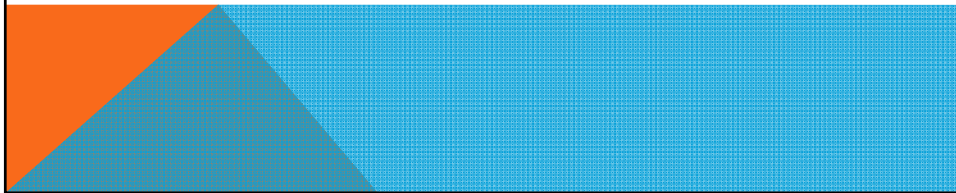
- The PKC pond will be drained but there's a mud, and water will come out of the mud as it gets compacted. There may need to be a pond for the water to escape. Any contaminants may be more concentrated after closure and draining the pond.
- What will the water quality be? It will be tested for a lot of years. Currently tested monthly.





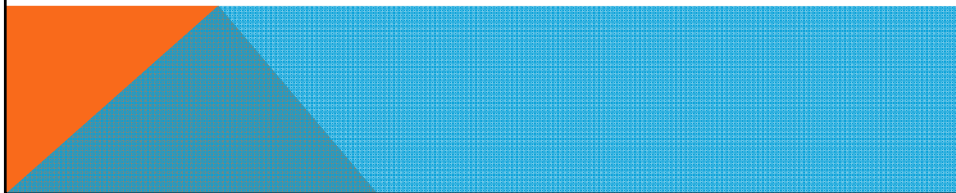
## OPTIONS FOR PKC

- Should caribou be kept away from PKC pond until it's certain that the water is safe?
- Options for keeping caribou away could be:
  - steep sides to rockpile to keep caribou away
  - Options for keeping caribou away from the other side of the pond?
- Option B could be to shape rockpile for safe caribou access all around and let nature take its course. The landscape will definitely change and won't be the same as it once was. Work with what we have.



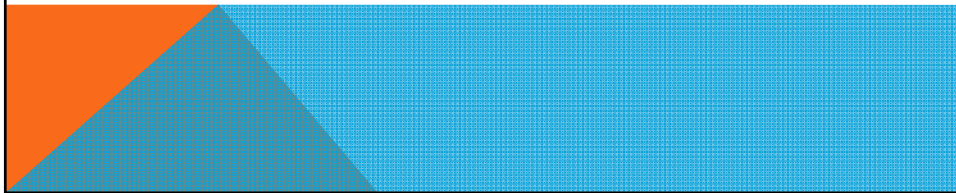
## INFRASTRUCTURE

- Current plan to reclaim airstrip; suggestion to keep airstrip as an emergency landing site (Wayne) – but this would not be maintained. Needed for long term monitoring of the site (Pierre). It won't go back to a pristine state anyway.
- Keep some small buildings for hunting/fishing parties – but someone would have to own/lease the building and the land
- Debate about whether people would want to use that place – but there are cabins elsewhere on the lake.
- If Diavik leaves materials behind, all the other mines will do the same thing.



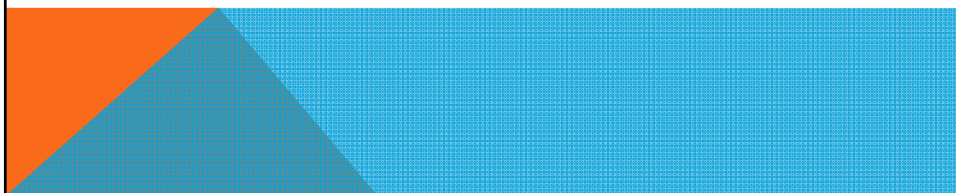
## PLANTS THAT ARE GOOD FOR REVEGETATION?

- What's a good way to speed up the revegetation process?
- Look at an esker that's lined up the same way as the rock pile to see what grows there naturally in different areas (shade, leeward, side, top).
- Take materials from the natural eskers and spread it on the rockpile to revegetate.
- We have the opportunity to have our plan ready so that the closure of the pile can start when the A21 pit is being dug.



## A21

- This pit was always part of Diavik's mine plan – and was approved during the initial Environmental Assessment.
- The rock from this pit will be used to close the rockpile etc.
- If there's any left over waste rock, it will be down near the pit.



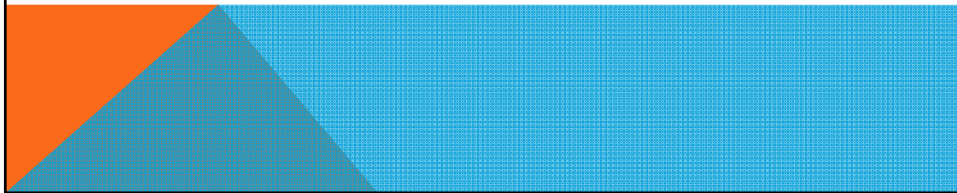
## LOOKING BACK

- Comprehensive Study Report – brought together all the studies (1998-1999) – completed by the government.
- Problem that we're asking some of the same questions over and over, because different people are involved.
- Need to include youth more.

## PREFERRED "LOOK" WITH CONTOURS FOR WATER FLOW

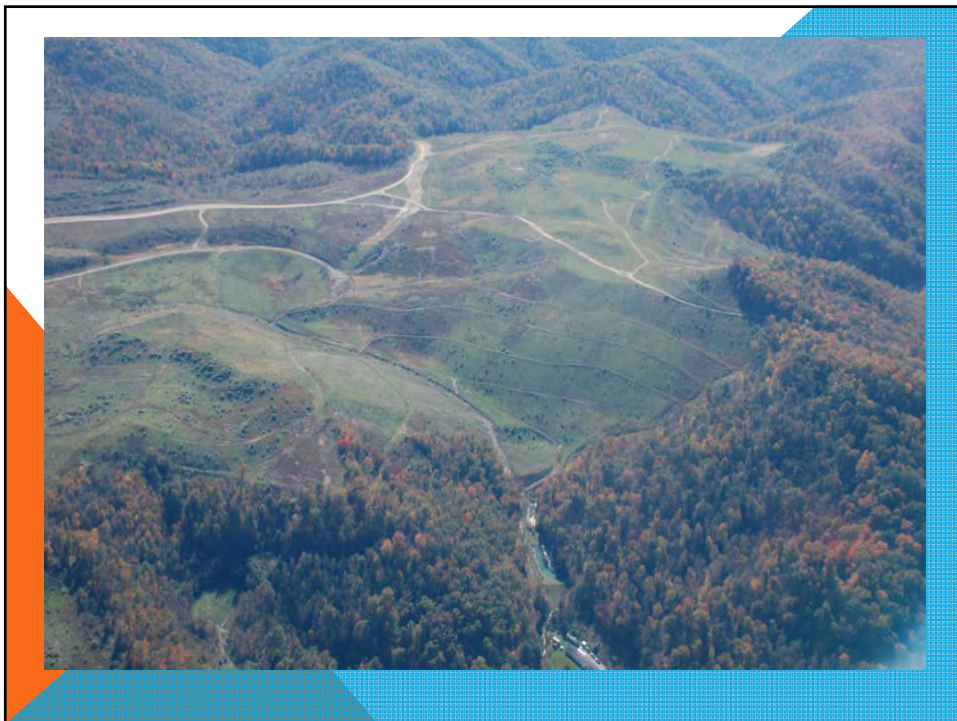
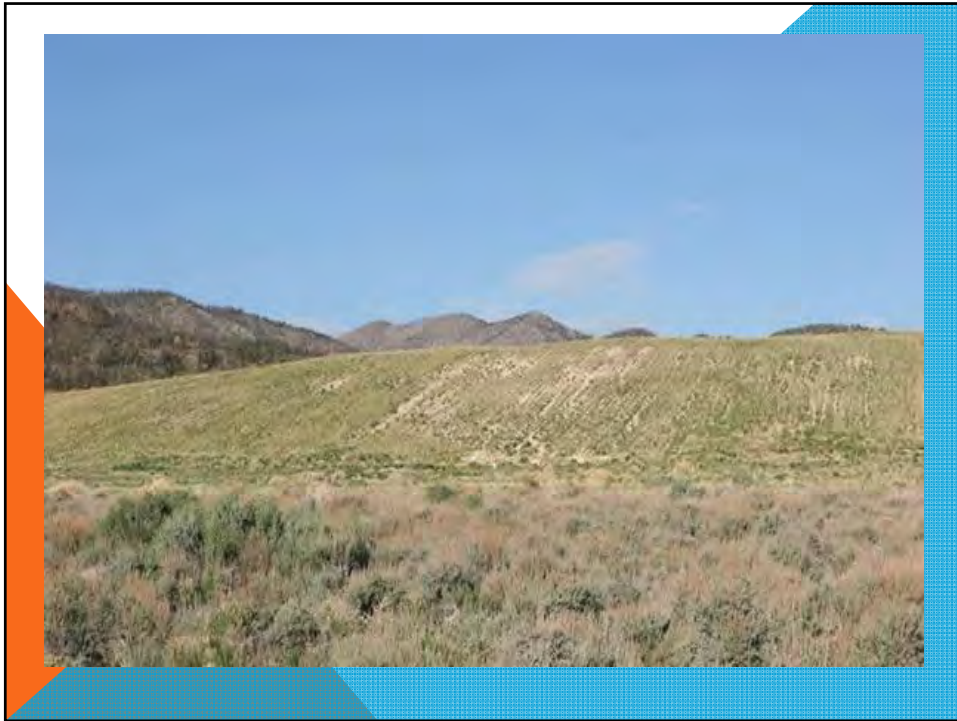


## TEST PILE AT DIAVIK















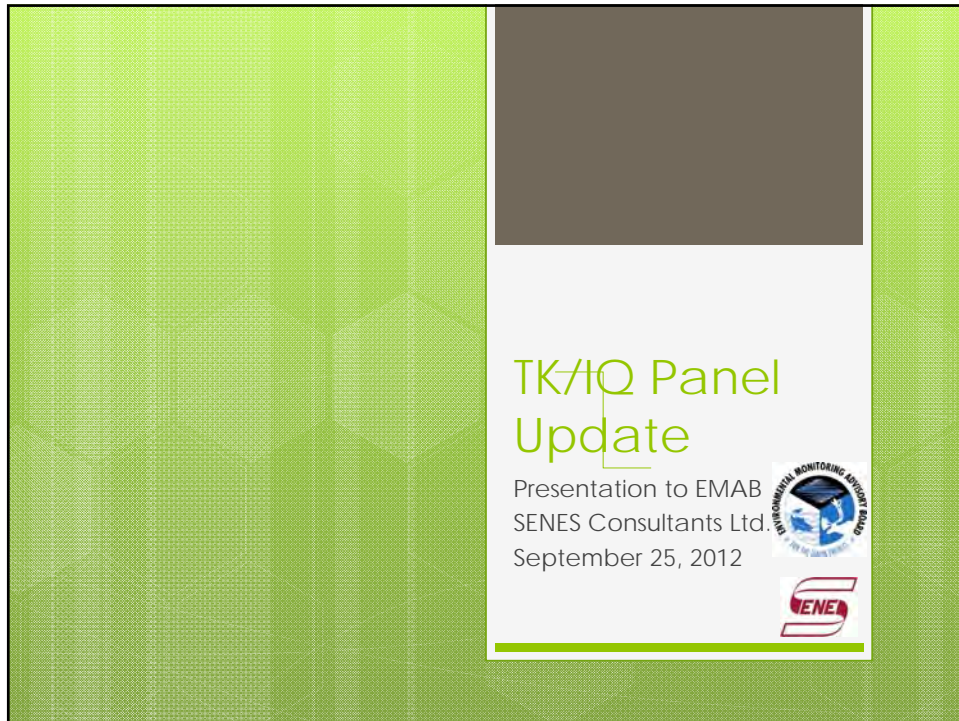
# Appendix E

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TK/IQ Panel Update to EMAB Board



*September 25, 2012*



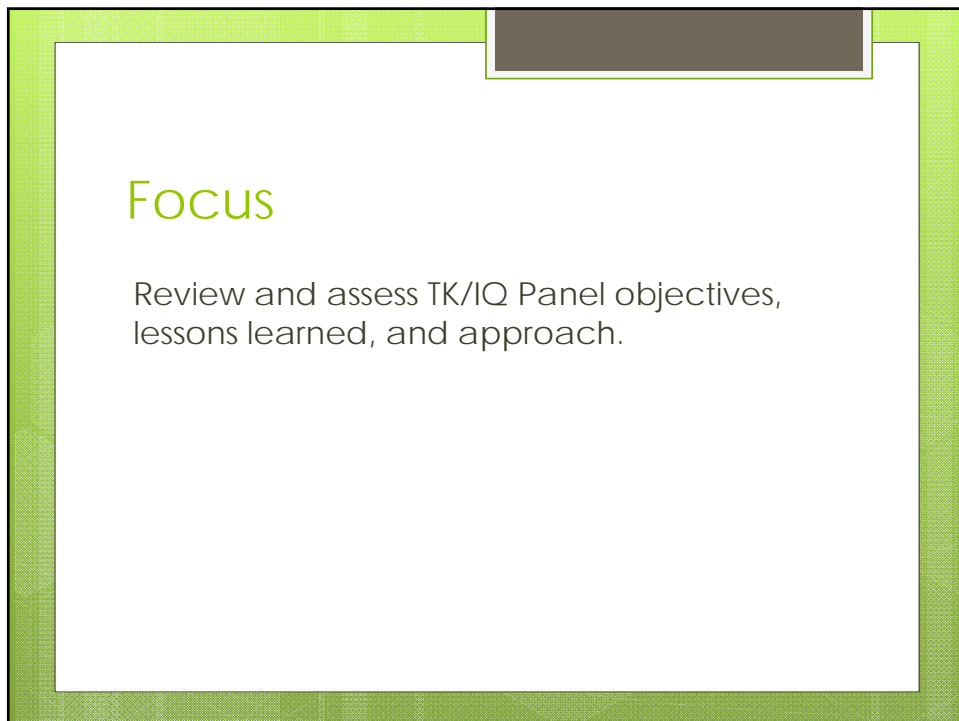


TK/IO Panel Update

Presentation to EMAB  
SENEC Consultants Ltd.  
September 25, 2012



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Focus

Review and assess TK/IO Panel objectives, lessons learned, and approach.

The slide has a green textured border and a white central area. The word 'Focus' is written in green. Below it, the text 'Review and assess TK/IO Panel objectives, lessons learned, and approach.' is written in black.

## TK/IQ Panel Purpose

*Established under Section 4.9 of the EA*

EMAB TK/IQ Panels are mandated to work with local communities and assist EMAB in facilitating appropriate and meaningful accommodation of TK/IQ in the planning and review of environmental monitoring at Diavik Diamond Mine.

## Timeline

March 2010	Report on Environmental Agreement Implementation Review
May 20, 2011	TK/IQ Panel Workshop
July 19, 2011	Literature review – TEK in the resource sector (Diavik/Golder)
March 14-15, 2012	TK/IQ Panel Session – Caribou Monitoring
June 26-28, 2012	TK/IQ Panel Workshop/Session - Closure
August 20, 2012	Diavik Site Visit and Debriefing
October 23-25, 2012	TK/IQ Panel Session - Closure

## Objectives

1. Establish TK/IQ Panel as a standing body
2. Pilot partnership approach with Diavik
3. Provide input on key monitoring issues
  - a) Caribou Monitoring SOP
  - b) Provide input on rock pile closure
4. Develop general approach to TK/IQ Panel processes

## 1. Establish TK/IQ Panel as a standing body

- Relationship-building
- Educate about mandate
- Build trust and confidence



## 2. Partnership approach with Diavik

- Co-facilitation
- Work with Diavik timelines and objectives
- Diavik presentations
- Learn from community engagement activities
- Independent knowledge processes
- Accountability framework

## 3. Inputs on key monitoring issues

- Recommendations on caribou monitoring SOP
- Three preliminary recommendations on closure planning
  - Site visit
  - Communicating with communities
  - Knowledge sharing with other EMAs

#### 4. Develop General Approach to TK/IQ Panel Processes

- Indigenous knowledge methodology
- Youth involvement
- Sessions vs. workshops
- Balance of EMAB leadership and independent knowledge creation/sharing
- Cross-cultural learning approach
- Research vs. consultation

#### TK Research History

1. Social science approach
2. Indigenous methodologies
3. Cross-cultural learning approach

## 1. Social Science Approach

Questions/objectives	Science-driven
Methods	Structured, quantitative, extractive
Accountability	"Integration" or "incorporation" into science-based processes
Benefit	Easy to interpret
Challenge	Knowledge holders lose control Quality/meaning suffers

## 2. Indigenous Methodologies

Questions/objectives	Arise from TK/IQ holders
Methods	Indigenous knowledge creation processes – "research as ceremony," talking circles, on the land, story-based
Accountability	Embodied knowledge mobilization (community and external)
Benefit	Knowledge holder ownership, quality control
Challenge	Difficult to validate and accommodate in external decision-making

### 3. Cross-Cultural Learning Approach

Questions/objectives	Jointly agreed to, accounting for new scenarios
Methods	Mixed, involving two-way learning
Accountability	Dual
Benefit	Contextual; "everyday"; easier to validate and accommodate in decision-making
Challenge	Complex, new

### TK/IQ Approaches























## Preferred Rock Pile "Look"







## **APPENDIX IX-1.3**

### **Closure-Reclamation & Landscape History**

## Closure/Reclamation and Landscape History

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EMAB Office and Tree of Peace Friendship Centre, Yellowknife, NT  
October 23-25, 2012

### Facilitation and Recording

Deborah Simmons, SENES Consultants Ltd.

Natasha Thorpe, Thorpe Consulting Services

Shelagh Montgomery, SENES Consultants Ltd.

### Invited Participants

Kitikmeot Inuit Association	Bobby Algona, Mark Taletok, Mona Tiktalik (interpreter)
Lutsel K'e Dene First Nation	George Marlowe, August Enzoe
North Slave Métis Alliance	Ed Jones, Wayne Langenhan, Susan Enge
Tłı̨chǫ Nation	Pierre Beaverho (Whati), Louis Zoe (Gamèti), Peter Husky (interpreter), James Rabesca (interpreter)
Yellowknives Dene First Nation	Fred Sangris

### Observers/Presenters

EMAB	Michèle LeTourneau
Diavik Diamond Mine	Colleen English (3:00-4:00 pm October 25)

### Background and Purpose

The EMAB TK/IQ Panel is mandated to assist EMAB in facilitating appropriate and meaningful accommodation of Traditional Knowledge/Inuit Qaujimajatuqangit (TK/IQ) in the planning and review of environmental monitoring at Diavik Diamond Mine.

This TK/IQ Panel session consisted of five main parts:

1. Update on actions and decisions – previous TK/IQ Panel recommendations
2. Review and release of March 14-15 2012 TK/IQ Panel session report, *Bridging Science and Aboriginal Knowledge in Caribou Monitoring at Diavik Diamond Mine*, and recommendations for follow-up.
3. Review and release of June 26-28 TK/IQ Panel session report, *Renewing Our Landscape: Envisioning Mine Closure and Reclamation of the North Country Rock Pile, Diavik Diamond Mine*, and recommendations for follow-up.
4. Development of preliminary draft TK/IQ Panel Procedural Manual (in large part through the process of reviewing the two draft reports from the March and June sessions)
5. Development of other recommendations for action

During the session, EMAB staff and session facilitators emphasized that the TK/IQ Panel must release their two reports in order for funding to be allocated to continue the work of the panel at future sessions.

This Interim Report provides a summary of session activities, including immediate recommendations for action to be considered by EMAB and notes that were posted during the session. Discussion notes should not be construed as recommendations.

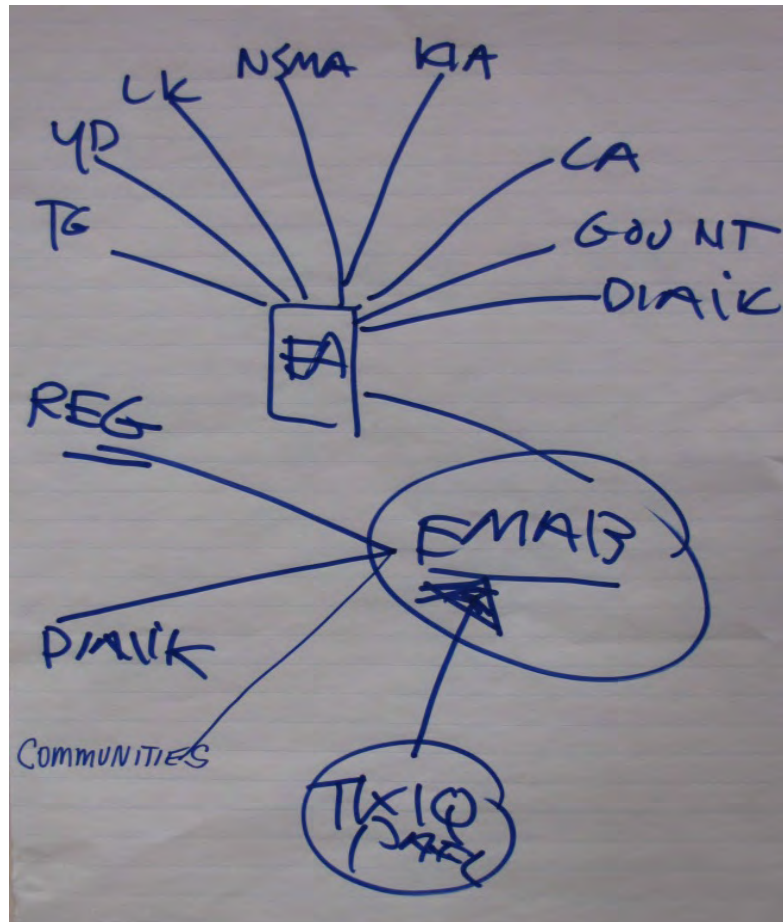


Figure 1: Schematic of Framework for TK/IQ Panel Inputs

## Approach and Methods

The TK/IQ Panel is developing an approach to fulfilling its mandate that combines Indigenous ways of knowing and learning about results of scientific research. This cross-cultural learning approach provides the panel with tools that are needed to make TK/IQ relevant and meaningful when dealing with major changes on the land, like the diamond mine.

The process involved a combination of presentations by facilitators, semi-structured discussions, and more formal talking circles. This allowed for a balance of learning, self-direction and consensus-building among panel members. Diavik staff was invited to participate in a discussion of questions developed by panel members for one hour at the end of day one (October 23, 3-4 pm).

The proceedings were audio-recorded – including recordings of interpretations in English for aboriginal language contributions. Detailed notes were taken, and key messages were posted on flip-charts and Post-It notes clustered on brown craft paper (included in this report). Full transcription and coding of the proceedings is planned, and the proposal is that the procedure for developing the full report follow the procedures suggested by the TK/IQ Panel, as summarized in this report.



Figure 2: L-R Back Row Louis Zoe, Mark Taletok, Pierre Beaverho, Phillip Liske, Susan Enge, Wayne Langenhan, Peter Huskey, Natasha Thorpe, Mona ??, BobbyAlgona; Front Shelagh Montgomery, August Enzo, George Marlowe, James Rabesca, Ed Jones, Fred Sangris; Front Michèle LeTourneau

### Update on Actions and Decisions – Previous TK/IQ Panel Recommendations

Michèle reported on actions and decisions following from March and June TK/IQ Panel recommendations, as follows:

Session	Recommendation	Follow-Up	Status
March 14-15, 2012	Recommendations for accommodating TK/IQ in caribou behaviour monitoring Standard Operating Procedures (SOP)	<ul style="list-style-type: none"> <li>Recommendations delivered to EMAB directly following session</li> <li>Approved by EMAB and submitted to Diavik</li> <li>Diavik is compiling photographs as the basis for a revised SOP</li> </ul>	Incomplete
June 26-28, 2012	EMAB to work with DDMI to plan a site visit by the TK/IQ Panel to learn firsthand about the North Country Rock Pile, with follow-up activities to prepare recommendations on rock pile closure and reclamation planning; the site visit should include an overnight stay at the Community-Based Monitoring Camp.	<ul style="list-style-type: none"> <li>Recommendation delivered to EMAB and Diavik during session</li> <li>Discussion of site visit scope and timing during session</li> <li>Approved by EMAB and submitted to Diavik</li> <li>Site visit August 20</li> <li>Debriefing session in Yellowknife, August 21</li> <li>Incorporated into final report on June 26-28 session</li> </ul>	Complete (Panel recommends more site visits)
June 26-28, 2012	EMAB request funding support from DDMI for TK/IQ Panel members to play a leading role in reporting back to	<ul style="list-style-type: none"> <li>Recommendation delivered to EMAB directly following session</li> <li>Michèle, as Program Manager for</li> </ul>	Pending implementation



Session	Recommendation	Follow-Up	Status
	<p>their respective communities, to inform the communities about the role they are playing in closure and reclamation planning, working with DDMI and EMAB as needed.</p>	<p>EMAB, will be responsible for communication.</p> <ul style="list-style-type: none"> <li>TK/IQ Panel members will be invited to participate in EMAB communication activities in their communities, compensated at standard panel honorarium rate</li> </ul>	
<p>June 26-28, 2012</p>	<p>Due to the fact that Diavik, Ekati and Snap Lake diamond mines all share the same landscape, EMAB should facilitate sharing the TK/IQ Panel’s work with the Independent EMA and the Snap Lake EMA so that our work can be used to inform closure and reclamation planning at the other diamond mines, per Section 1.1(b) of the Environmental Agreement, in order <i>“to respect and protect air, land, water, aquatic resources, wildlife, archaeological and cultural resources, and the land-based economy that are essential to the way of life and well-being of the Aboriginal Peoples.”</i></p>	<ul style="list-style-type: none"> <li>Recommendation delivered to EMAB directly following session</li> <li>EMAB agrees with the recommendation</li> <li>Released reports will be distributed to IEMA/SLEMA and Wek’èezhì Land and Water Board</li> </ul>	<p>Pending implementation</p>
<p>June 26-28, 2012</p>	<p>The following TK/IQ Panel Guiding Principles were recommended:</p> <ol style="list-style-type: none"> <li>The TK/IQ Panel works independently and in a spirit of cooperation with EMAB to develop recommendations related to environmental monitoring plans and programs at Diavik diamond mine.</li> <li>The TK/IQ Panel can communicate its views independently to EMAB and DDMI regarding its recommendations and reports.</li> <li>Youth play a critical role working with and learning from the TK/IQ Panel.</li> <li>That a spokesperson or spokespersons of the TK/IQ Panel will present recommendations in person to EMAB and DDMI as and when needed.</li> </ol>	<ul style="list-style-type: none"> <li>Recommended Guiding Principles delivered to EMAB directly following session, and made the following determinations:</li> <li>Re Principle 1: the TK/IQ Panel is an advisory body reporting to EMAB; an overview of the framework for panel inputs was diagrammed by Michèle (Figure 1)</li> <li>Re Principle 2: EMAB approves TK/IQ Panel reports and recommendations, and delivers these to Diavik</li> <li>Re Principle 3: Agreed in principle, but budget is a constraint in implementation</li> <li>Re Principle 4: Planning is in the initial stages for the TK/IQ Panel and EMAB to spend a half-day together</li> </ul>	<p>Principles as approved by EMAB to be included in TK/IQ Panel Manual; half-day joint session planned for February 2013</p>

## Discussion Notes - Accountability

- Keep in mind that we are protecting our treaty rights
- How do we measure use of TK/IQ by Diavik?
- EMAB “facilitates” and “promotes” use of TK/IQ

## Discussion Notes – TK/IQ and Science

- Pronunciation of Inuit Qaujimagatuqangit – *Inuit Cow-yema-ya-two-kan-geet*
- TK/IQ and science are never going to get married
- We’re here on behalf of TK/IQ
- Our stories hold our knowledge about/laws about “respect and protect” [in the Environmental Agreement objectives]
- We are 99.9% TK/IQ
- Taking the message back to the communities
- “Best available TK/IQ” – work with the *real* knowledge holders
- Put the TK/IQ and science together and *practice* it

## Discussion Notes – TK/IQ Panel Vision

(from *Environmental Agreement Objectives and Principles*)

- Respect and protect air, land, water, aquatic resources, wildlife, archaeological and cultural resources, and the land-based economy that are essential to the way of life and well-being of the Aboriginal Peoples.
- Opportunities for community and public input and participation.
- Principle of full consideration and use of both TK/IQ and other scientific information where appropriate.
- Advise EMAB on whether TK/IQ is being properly accommodated in Diavik’s plans and processes.

## Discussion Notes – TK/IQ Panel Objectives to Date

- Document aboriginal understandings of TK/IQ monitoring – on the land, in the community and at the mine site
- Help Diavik with one of many caribou monitoring Standard Operating Procedures
- Provide input to Diavik’s annual updates to the Wek’èezhìi Land and Water Board about TK/IQ in rock pile closure planning

## Discussion Notes – Challenges

- Our third meeting
- Being empowered
- Being accountable
- Being timely
- Cross-cultural learning
- No one has done this before
- New procedures and protocols
- Five Aboriginal Parties, five cultures and knowledges
- Responding to needs of EMAB, Diavik and Wek’èezhìi Land and Water Board

## Report Review: March 14-15, 2012 TK/IQ Panel Session on Caribou Monitoring

The draft report on the March 14-15 TK/IQ Panel session entitled *Bridging Science and Aboriginal Knowledge in Caribou Monitoring at Diavik Diamond Mine* was reviewed and edited per panel member input.

## Decision

Formal oral and written consent was provided for **distribution to the public**, with the proviso that detailed copyright information and “no prejudice” disclaimer be included.

## Discussion Notes

*From Post-Its and flip chart notes*

- Explore the behavioural differences in herds/caribou
- Our laws for respecting caribou
- Thinking like a caribou
- Caribou herding Standard Operating Procedure
- Study TK/IQ of caribou movement tool

## Report Review: June 26-28, 2012 TK/IQ Panel Session on Rock Pile Closure

The draft report on the June 26-28 TK/IQ Panel session entitled *Renewing Our Landscape: Envisioning Mine Closure and Reclamation of the North Country Rock Pile, Diavik Diamond Mine* was reviewed and edited per panel member input.

## Decision

Formal oral and written consent was provided for **limited distribution to EMAB, Diavik and the WLWB only**, with the proviso that detailed copyright information and “no prejudice” disclaimer be included.

## Discussion Notes – Timeline for Closure and Reclamation Planning

- Annual update from Diavik to the Wek’èezhii Land and Water Board.
- Next full revision of closure plan is due in 2016
- Final plan 2020

## Discussion Notes – General Closure and Reclamation Ideas

- Visit the burial sites
- Study TK/IQ about snow drifts
- From anywhere, animals can walk over
- Go to site to *see* rocks, site etc.
- The last person who leaves that island should do a tobacco ceremony
- Connect piles, look like an esker (again)
- Keep caribou away
- See landscape with your own eyes
- All the islands are important refuge areas for wildlife
- Assess archaeological sites and heritage resources

## Discussion Notes – Rock Pile Closure and Reclamation Ideas

- Rebuild the denning sites
- Talk more about rocky pile, boulders etc.
- Okay for caribou to wander through
- Not too steep

## Preliminary Draft TK/IQ Panel Procedural Manual

This component of the session was interwoven with the discussion about the agenda and review of the March and June session reports. The following procedural notes represent the beginnings of a manual for the TK/IQ Panel.

### TK/IQ Panel Sessions – Learning and Sharing Knowledge

- Have an aboriginal co-facilitator
- The Big Picture
- History of TK/IQ research on the topic
- How scientists are learning
- Decisions so far
- TK/IQ Panel develops the questions/topics with resource people
- Summary notes soon after a meeting

### Developing Reports

- Interim report – recommendations for timely action
- Full report
  - “Grounded theory” – organised based on what you said, using quotes and photos
  - Includes extra research on scientific/ technical context]
  - Includes clearly highlighted recommendations
  - Background materials compiled separately
  - Aim for plain language – less acronyms
  - Include translated text as much as possible (titles at minimum)
  - Include recommendations, action items, and concluding remarks
  - Include edited transcripts for each individual in appendix? For future consideration (not decided)
  - Copyright page
  - Lots of photos

### Reviewing and Approving Reports – Prior to Sessions

- One liaison from each delegation for work between panel sessions?
- Hard copy delivered one month before meeting mail
- Include compilation of transcript excerpts for individual in report package
- Make sure plain language is used as much as possible
- Don’t need appendices for review
- Hard copy mailed to each panel member
- Liaise with organisation staff for assistance
- Honorarium for preparation

### Reviewing and Approving Reports – TK/IQ Panel Session

- Overview by report writer
- Delegation caucus
- Discussion and revisions
- Approval with recommended changes
- “LIVING DOCUMENT”
- Formal signing ceremony with talking circle

### Monitoring and Follow-Up on Released Reports

- Inuktitut should report back in person to TK/IQ Panel about progress in implementation of recommendations and action items .

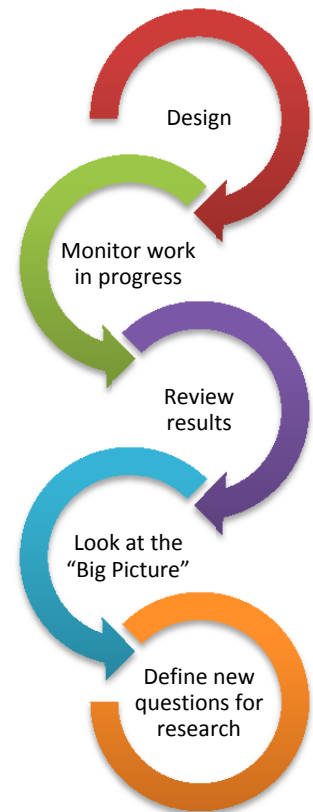


Figure 3: TK/IQ Panel Role in Research and Monitoring

## **Communications**

- Michèle is the coordinator
- TK/IQ Panel members provide assistance in their communities
- Poster is a tool?
- Send the report to the schools

## **Recommendations for Action**

### **Recommendation 1 – Caribou Work**

#### **Background**

There are many more considerations about caribou and Diavik that have not yet been addressed. The TK/IQ Panel would like to suggest another session on caribou monitoring at the mine site.

#### **Recommendation**

The TK/IQ Panel should develop a report that more fully represents our knowledge and practice for maintaining the well-being of the caribou.

### **Recommendation 2 – State of Knowledge on TK/IQ**

#### **Background**

There has been a lot of TK/IQ documented in the past, and there is current no way of assessing this knowledge or how it is being applied in mine planning, monitoring and management. Specifically, Diavik employee Colleen spoke to the panel in March of a few practices at the mine site that stemmed from TK/IQ information. The panel wondered why these were not gathered into a document that it can access.

#### **Recommendation**

Diavik should carry out and make public a review of its use of TK/IQ in its environmental plans and programs. This review should document the successes and lessons learned from TK/IQ studies, and what changes or improvements in adaptive management can be attributed to TK/IQ.

### **Recommendation 3 – Monitoring Implementation of TK/IQ Panel Recommendations**

#### **Background**

The TK/IQ Panel wants assurance that Diavik will document and report on progress made in implementing recommendations and action items.

#### **Recommendation**

Diavik to develop and maintain a tracking sheet for documenting progress on recommendations and action items and present progress to the panel at the beginning of sessions.

### **Other Recommendations**

- Women to have opportunities to participate in TK/IQ Panel – especially for the session on caribou.
- Extend length of session to 4 days



## **APPENDIX IX-1.4**

### **Reclamation & Landscape History**

# EMAB Traditional Knowledge/ Inuit Qaujimajatuqangit Panel Interim Report

## Closure/Reclamation and Landscape History

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Champagne Room, 5006 Franklin Ave, Yellowknife, NT  
February 19-22, 2013

### Facilitation

Joanne Barnaby, Joanne Barnaby Consulting  
Deborah Simmons, SENES Consultants Ltd.

### Participants

Kitikmeot Inuit Association	John Ivarluk, Bobby Algona and Mark Taletok, Mona Tiktaluk
Lutsel K'e Dene First Nation	George Marlowe, August Enzoë, Alfred Lockhart, Terri Enzoë
North Slave Métis Alliance	Ed Jones, Wayne Langenhan
Tłı̄chǫ Nation	Pierre Beaverho (Whati), Louis Zoe (Gamèti), Jonas Lafferty (interpreter), James Rabesca (interpreter)
Yellowknives Dene First Nation	Fred Sangris, Phillip Sangris, Jonas Sangris

### Observers/Presenters

EMAB	Michèle LeTourneau
Diavik Diamond Mine Inc.	Gord Macdonald, Seth Bohnet
Thorpe Consulting Services	Natasha Thorpe
Other Resource people (Cross-Cultural Learning Session)	Tee Lim, Pembina Institute Karen Hamre, Avens Consulting Suzanne Carrière, NWT Environment and Natural Resources Alicia Legat, Gagos Social Analysts

### Background and Purpose

The EMAB TK/IQ Panel is mandated to work with local communities and assist EMAB in facilitating appropriate and meaningful accommodation of Traditional Knowledge/Inuit Qaujimajatuqangit (TK/IQ) in the planning and review of environmental monitoring at Diavik Diamond Mine.

This expanded Session, the fourth in the series that took place during 2012-2013, included an update on Diavik and EMAB responses to previous TK/IQ Panel recommendations, review of the report on the previous session, a Cross-Cultural Learning session on closure, an informal meeting with EMAB, and a session for developing new recommendations.

## Cross-Cultural Learning Approach

The TK Panel is developing an approach to fulfilling its mandate that combines indigenous ways of knowing and learning about results of scientific research. This cross-cultural learning approach provides the Panel with tools that are needed to make traditional knowledge relevant and meaningful when dealing with major changes on the land, like the diamond mine.

The process involved a combination of presentations, semi-structured discussions, and more formal Talking Circles. This allowed for a balance of learning, self-direction and consensus-building among Panel members. Diavik was invited to present

The proceedings were audio-recorded – including recordings of interpretations in English for aboriginal language contributions. Detailed notes were taken, and key messages were posted on flip-charts and Post-It notes.

Full transcription of the proceedings has been completed, and the proposal is that the procedure for developing the full report follow the approach suggested in the *TK/IQ Panel Manual* developed in collaboration with the Panel (Technical Report Volume II, October 23-25, 2012 TK/IQ Panel Session), as follows:

Full reports are structured like Talking Circles. There's a common thread that is reflected in the main text, but the issues are also expressed through quotes from different Panel members. This brings the points to life, and shows a bit of the complexity and diversity of perspectives in the Panel.

Reports should be written in culturally appropriate plain language that is accessible for TK/IQ Panel members and possible readers from their communities. As well, the TK/IQ Panel hopes to include more Aboriginal language terms and concepts in reports – for example, we would like to try including Aboriginal language report titles. Photos and other visuals are used to illustrate who the sources for the report have been, and to help readers better understand what we're driving at.

Recommendations, action items and concluding remarks are very important parts of the reports, since they are the means by which knowledge is interpreted in relation to present reality and planning for the future.

## Agenda

This four day TK/IQ Panel Session was structured in six parts, as follows:

1. Joint meeting with Diavik (Diavik progress report on EMAB recommendations to Diavik based on TK/IQ Panel recommendations)
2. Cross-Cultural learning session on mine closure (presentations and activities with Tee Lim, Suzanne Carrière, Karen Hamre, and Natasha Thorpe).
3. Review, approval and release of reports from previous Sessions: *Checking Nets: Reflecting on Progress in 2012*; *Renewing Our Landscape: Envisioning Mine Closure and Reclamation of the North Country Rock Pile*; *Working Together: TK/IQ Panel Manual*.
4. Overview of landscape history at ?eka Du (review of previous TK/IQ studies)
5. Recommendations for closure planning
6. Planning for future TK/IQ Panel sessions

EMAB Board Members also joined the TK/IQ Panel for informal discussion during lunch on Days 1 and 2, and attended presentations during the Cross-Cultural Learning Session in the afternoon of Day 1.

## Proceedings

### 1. Joint Meeting with Diavik

Gord Macdonald presented a tracking sheet patterned on the comments form provided by the Wek'èezhii Land and Water Board listing TK/IQ Panel recommendations and Diavik responses in relation two categories: Wildlife Monitoring and Closure.

Seth Bohnet shared a presentation about revegetation research at the Diavik mine site.

### 2. Cross-Cultural Learning Session on Mine Closure

This session included presentations, discussions and activities led by four resource people, as follows:

- a. A Story of Closure: Nanisivik, Canada's First High Arctic Mine (Tee Lim)
- b. Planning for Biodiversity – the NWT's Biodiversity Strategy (Suzanne Carrière)
- c. Shaping a Mine Landscape with Aboriginal Values in Mind (Karen Hamre)
- d. Literature Review of TEK Related to the Resource Sector (Natasha Thorpe)

### 3. Review, Approval and Release of Reports from Previous Sessions

The report from the October 2012 TK/IQ Panel Session, *Checking Nets: Reflecting on Progress in 2012*, was reviewed and approved for general release. Part II of the report, *Working Together: TK/IQ Panel Manual*, was approved for limited release, pending further review prior to the next Panel Session.

The report previously approved for limited release, *Renewing Our Landscape: Envisioning Mine Closure and Reclamation of the North Country Rock Pile*, was approved for general release.

#### 4. Overview of Landscape History at ?eka Du

Deborah Simmons provided an overview of TK/IQ Studies conducted during and since the Environmental Assessment, and each Panel delegation had an opportunity to discuss this research in small groups before presenting their assessments of the research to the Panel as a whole.

#### 5. Recommendations for Closure Planning

Recommendations were developed, reviewed and approved by consensus based on discussions during the Cross-Cultural Learning session.

#### 6. Planning for future TK/IQ Panel sessions

This was an opportunity for the Panel to identify their priority issues/topics to be addressed at future Sessions, based on issues that had arisen at this and previous Sessions.

### Recommendations and Questions

#### 1. Closure and Reclamation Recommendations

##### 1.1 Rock Pile Height

**Option 1** (preferred): Is it possible to lower the height of the rock pile? This is our preferred option, if scientifically feasible.

**Option 2:** If required by terms of water license, we recommend keeping the height as low as possible. Do what you need to do to contain the contaminants in the Type III and II rock.

##### *Questions for Diavik*

- We request accurate GPS information at established waypoints about the height and size of the pile.
- Why is the rock pile so high now? Did Aboriginal people have input into the rock pile design?

##### 1.2 Rock Pile Shape

The rock pile should look as natural as possible, with varying levels of steepness, imitating the historic effects of glaciers and prevailing easterly winds in the surrounding landscape – just like an esker. The north slope should be more gradual for wildlife and people to access. People and caribou may want to use the hill to get away from bugs in the summer.

##### 1.3 Rock Pile Capping

- Cap the rock pile with the best materials for biodiversity based on traditional knowledge and scientific experiments. Use nearby natural hills as a “reference condition.”

##### 1.4 Pathway for Caribou

- There should be some soft material on the rock pile that’s good for the caribou feet.



### *Question for Diavik*

Can Processed Kimberlite be used for animal paths, or will it create dust or harm wildlife?

## 1.5 Rock Pile and Water

Experiment with different kinds of natural wetlands for filtering at the base of the rock pile where water collects. This should be combined with the current purification system for any remaining contaminants. There should also be long term monitoring involving trained Aboriginal people.

### *Questions for Diavik*

- What will eventually be the impact of erosion on water flow?
- We're concerned that there may be cracks in the Type I and II protective layers. How can we know that Type III rock will always be kept isolated from the rest of the environment? How do we know that the runoff from the Rock Pile is clean after closure?
- How does Diavik treat the water?
- What has Diavik been learning about water drainage from the test pile? What would be the pros and cons of creating channels for water?
- How might climate change, permafrost melt or increased precipitation affect water drainage?

## 1.6 Infrastructure

- Keep the **airstrip**, but take away some boulders. Smooth slopes similar to an esker.
- The sides of the airstrip and roads at ground level should be **landscaped** with vegetation to filter runoff.
- Keep all **roads** leading to pits and airstrip to facilitate monitoring. Smooth slopes like eskers.
- **Scarify surfaces** at camp, plant site, and laydowns (not surfaces that haven't been disturbed).
- Leave **two good buildings close to the airstrip** for an emergency shelter.

### *Question for Diavik*

If you scarify the surfaces, do they need to be flat (ie. option B, height question)?

## 1.7 Waste Disposal

- **Remove** all equipment, unused buildings, pipes, and toxic and non-biodegradable materials.
- **Distribute buildings, equipment and materials** as requested by Aboriginal communities.

### *Question for Diavik*

What's already been buried on site, and where?

## 1.8 Areas for Revegetation

- Do not revegetate airstrip or roads.
- Revegetate everything else in a way that supports maximum biodiversity (T̄ich'adī, Atogominatok), including culturally valued species.
- Conduct research on revegetation at historical sites and on wildlife trails

### ***Question for Diavik***

What measures are being taken to prevent invasive species from taking hold at the site?

#### **1.9 Some Opportunities for Aboriginal Participation**

- Detailed design processes with technical people
- Experiments
- Landscaping with heavy equipment
- Planting
- Ceremony – healing and reconciliation with the land
- Train youth to assist in building and monitoring a site that meets our cultural landscape objectives

#### **1.10 General Question**

How has climate change been incorporated into Diavik’s closure planning? How will it be incorporated?

##### **1. TK/IQ Use in Planning**

- Diavik should provide information about how they have followed up on best practices identified in the Golder literature review.
- Diavik should do a review of documentation related to previous elder site visits and resulting actions.
- Diavik should carry out and make public a review of its use of the TK/IQ studies carried out by the five Aboriginal Parties in its environmental plans and programs. This review should document the successes and lessons learned from TK/IQ studies, and what changes or improvements in adaptive management can be attributed to TK/IQ.

##### **2. Diavik’s Tracking System**

- The TK/IQ Panel supports ongoing verbal reports by Diavik regarding their follow-up on recommendations.
- The TK/IQ Panel will develop the topics and topical framework for responding to our recommendations.

##### **3. Recommendation Regarding Caribou SoP**

- Diavik should involve at least two individuals designated by the TK/IQ Panel to guide provision of input on more behaviours and categories for herd composition as previously recommended.

##### **4. Site Visits**

Diavik should advise the TK/IQ Panel of planned elder site visits and topics to be discussed, seeking input on how elders can well prepared and briefed to make full use of those visits. Discussions during site visits should be fully documented for review by the TK/IQ Panel. The TK/IQ Panel should develop guidelines for such visits, including “elder care.”

## **5. Expertise Needed on Session Topics**

We are an expert panel, and when engaged in cross-cultural learning sessions, we need to work with scientific/technical experts in the fields that we're discussing in order to make progress; we seek full cooperation from Diavik in providing the required Diavik experts (staff and consultants) to assist in our processes.

## **6. WISH LIST – 2013-2015 Session Topics**

*Note – to be considered by EMAB in relation to regulatory timelines.*

- Caribou TK/IQ (already approved)
- TK/IQ values and principles (to support recommendations)
- Opportunities for Aboriginal participation in closure
- Guidelines for working with TK/IQ Holders
- Cultural landscapes
- Air quality
- Pits

## **APPENDIX IX-1.5**

# Processed Kimberlite Containment at Closure Report

# DDMI Traditional Knowledge Panel Session #6

FOCUS ON PROCESSED KIMBERLITE CONTAINMENT

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Diavik Diamond Mine

October 24 - 28, 2013





**DDMI Traditional Knowledge Panel  
Interim Report**

## **Session #6: Focus on Processed Kimberlite Containment**

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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)
Lutsel K'e Dene First Nation	August Enzoe, Alfred Lockhart, Chase Loutitt (youth)
North Slave Métis Alliance	Ed Jones, Wayne Langenhan
Tłchq Nation	Louis Zoe (Gamèti), 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)





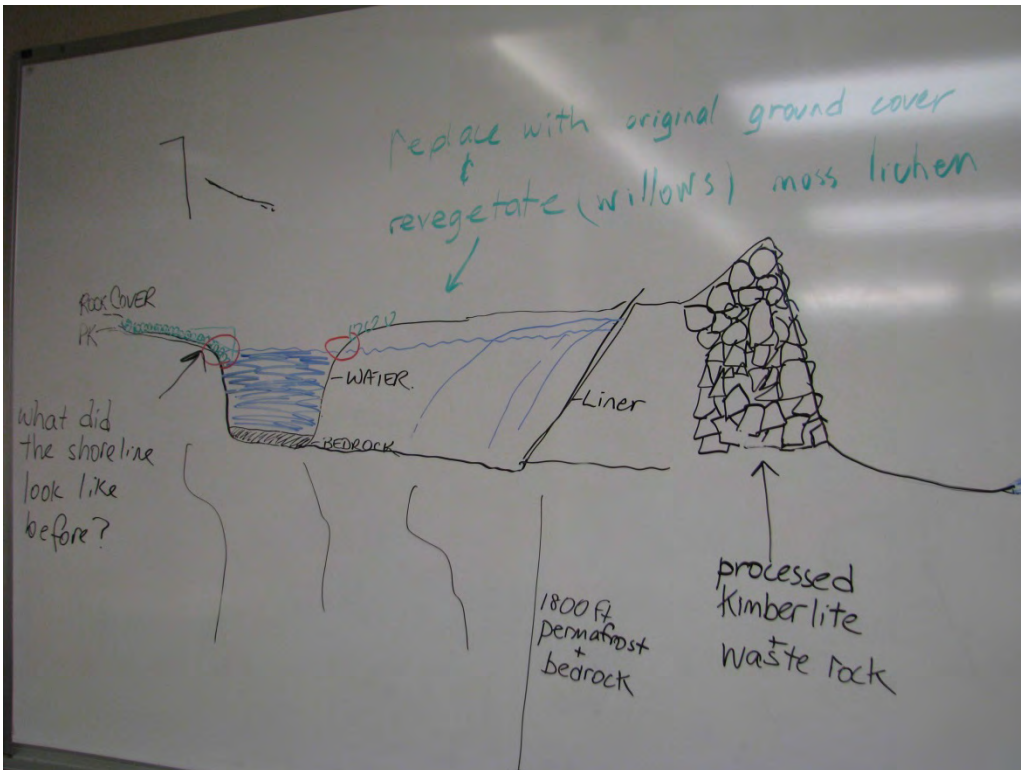
9: Alfred Baillargeon and Janelle Nitsiza listen to a DDMI presentation



10: Louis Zoe listens to words of the TK Panel

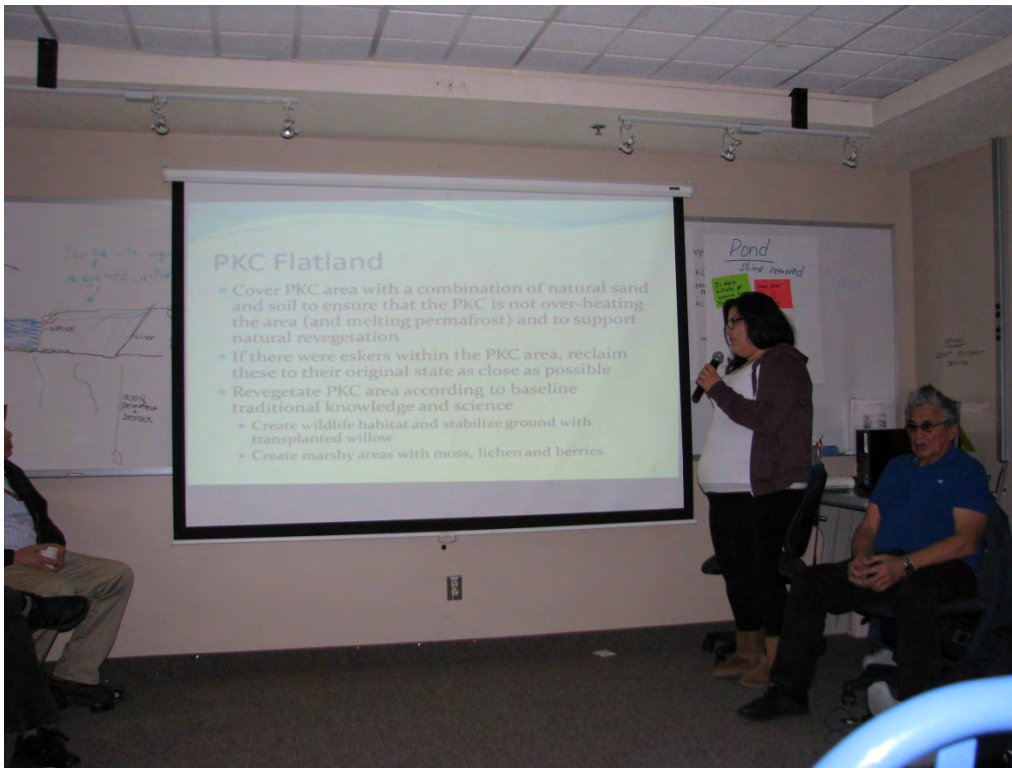


11: Key points were recorded on notes throughout the session and verified during plenary sessions



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**

## Appendix B

### DDMI Day 1 – Session 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  
8 beautiful land of ours. Whenever we are in a meeting  
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.

12 **Colleen English:** Directions for lunch, snacks, washrooms.

13 **Natasha Thorpe:** Welcome everybody to site. It's an honour to be able  
14 to be meeting with the TK Panel again, this time on  
15 site. 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 and some issues related to the mine site, in  
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  
28 insight on whether this agenda is okay for you.

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.

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

## Appendix B

### DDMI Day 1 – Session Notes

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

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

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

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

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

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

## Appendix B

### DDMI Day 1 – Session Notes

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

15 **Alexandra Crapeau:** Mahsi cho for having us.

16 **Janelle Nitsiza:** I am with Tłı̄ch̄o government the Department of Culture  
17 and Lands Protection. Mahsi cho.

18 **Joanne Barnaby:** Thank you for your quick consensus on our schedule.  
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. So that  
26 would save us time in the morning to just keep doing the  
27 work. And maybe the youth could help with that.

28 **Natasha Thorpe:** There was a request early on to be able to look at the  
29 notes sooner than later. I think before there was some  
30 frustration going back 4 or 5 months and trying to remember  
31 what you said then. This way, you will just have to look at  
32 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  
40 that I don't work directly for Diavik anymore but I do  
41 contract work back to Diavik. Happy to be here again.



## Appendix B DDMI Day 1 – Session Notes

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 weekend. 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.

10 **Mona Tiktalek:** I am from Kugluktuk and an interpreter. I used to work  
11 for KIA.

12 **Jonas Lafferty:** I am an interpreter/translator for Tłı̄chǫ and other  
13 various organizations for about 33 years.

14 **Berna Martin:** I'm from Dettah. I'm an interpreter and cultural  
15 instructor.

16 **Gwen Angulalik:** I'm from Cambridge Bay and I'm an  
17 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  
21 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.

28 **Natasha Thorpe:** Presentation from Colleen English about transition  
29 from EMAB to Diavik.

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.

36 Early recommendations were that you wanted to have contact  
37 directly with Diavik but the way the environmental  
38 agreement was written had EMAB sort of being the body that

## Appendix B

### DDMI Day 1 – Session Notes

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

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

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

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

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

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

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

33  
34 **Colleen English:** Gord is the top person and then I work for Gord  
35 helping to coordinate the panel sessions and work with the  
36 facilitators to develop the content of each of those  
37 sessions. Any other questions on what's happened? How do  
38 you feel about it?

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

## Appendix B

### DDMI Day 1 – Session Notes

1 **Natasha Thorpe:** I think this way your voices and your words are being  
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  
11 person role that EMAB had played and I'm going to go into  
12 that in a little bit here but I just wanted to sort of  
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.

17 **Wayne Langenhan:** I think from what we've been shown here so far EMAB,  
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  
24 Natasha and Joanne are for. (PowerPoint)

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?

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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  
4 it back to you obviously and making sure that you guys have  
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.

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

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

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

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

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

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

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



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

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

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

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

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

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

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

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

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

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

8 **Colleen English:** No. Thorpe Consulting Services is Natasha and then  
9 Joanne is an independent. Both of the facilitators are  
10 contracted directly by Diavik. This time yes.

11 **Natasha Thorpe:** Ed's question was whether I was with SENES anymore? I  
12 never was with them, I am on my own.

13 **Colleen English:** (Presentation)

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

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

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

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

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

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

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

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

20

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



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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  
6           get their friends or their relatives when an opening comes  
7           up and everything is a nice little package things are  
8           getting shifted around so that 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.

16

17 **BREAK**

18

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.

26 \*Success depends on good communication and relationships.

27 \*Nature is the boss.

28 \*Learn by doing and seeing.

29 \*Visits to site are key.

30 \*Youth must be included.

31 \*Respect for all and for everything.

32 \*Responding in writing.

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1 \*When were speaking about Inuit language we are speaking about the  
2 current knowledge but we have to remember the knowledge  
3 from past elders.

4 \*Interpreters very important.

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

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

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

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

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

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

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

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

43

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1           Reviewing TK Panel Workshop Overview sheet.

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

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

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

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

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

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

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

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

## Appendix B DDMI Day 1 – Session Notes

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  
4 Diavik we have a direct relationship with Diavik it would  
5 be a good chance to get clear on what the rules will be  
6 around your sharing of knowledge and your consent to do  
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  
15 knowledge that you share can be used.

16 **Natasha Thorpe:** Discussion about informed consent.

17

18 **LUNCH**

19

20 **Gord MacDonald:** Presentation on closure planning.

21 Question from before from Alfred Baillargeon was how much  
22 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  
30 for longer than yes we would do more but not for the  
31 time we are going to be here. I can get you an  
32 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  
36 from the water?



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1 **Gord MacDonald:** Pipeline comes out on the shore and the liquid slowly  
2 flows towards the center towards the pond and along  
3 the way it creates a big beach of that settled  
4 material. In the summer it would be a day maybe, in  
5 the winter its a little harder because it'll freeze  
6 along the way and sort of forms blocks of frozen  
7 kimberlite that then might get stuck on the beach that  
8 won't thaw again until next summer. So we keep moving  
9 our way around because we don't want to make those  
10 blocks of ice to thick or they won't thaw back each  
11 and what we'll be storing is a lot of frozen ice  
12 instead of solid material.

13 **Natasha Thorpe:** One of the questions from the last session was could  
14 whether processed kimberlite could be used for animal  
15 paths or would it create dust or harm wildlife?

16 **Gord MacDonald:** It's a good construction material particularly the  
17 course. It could be used for something like wildlife.  
18 We would want to think about that one before we went  
19 and did something like that. Right now the only place  
20 kimberlite goes on the island is in the PKC.

21 At the bottom it's the consistency of tooth paste and  
22 it'll stay that way for like a hundred years. It's a  
23 very soft, fine material mixed with water that won't  
24 separate. Its the physical properties of it.

25 **Wayne Langenhan:** How do you know it will take 100 years, 200 years?

26 **Gord MacDonald:** It's an engineering estimate so they do tests where  
27 they actually put loads on it to try and force it to  
28 settle that would simulate what time would do. It's a  
29 long time, it may not be 100 years, it may not be 50  
30 years it's a long time before it would settle.

31 **Wayne Langenhan:** Are there chances that caribou will get bogged down in  
32 it?

33 **Gord MacDonald:** That's the main reason for the question about  
34 shoreline design so I'll come to that. Our concerns  
35 with that material it's not a problem where it is  
36 right now underneath the pond. It will be a problem at  
37 closure for two reasons, one just like you said we  
38 don't want it to be an exposed material that caribou  
39 could get into or any animal. Because yeah I think  
40 they could very easily get stuck.

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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:** On 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  
11 works well for the course kimberlite but it doesn't  
12 work for the slime because it doesn't have the  
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. We all  
17 feel tremors what about fracturing in this pond and  
18 leaching into the water. Because of that my thinking  
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  
26 people. If it leaks it could come all the way down to  
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  
35 or on the river? Would it still be harmful in 100  
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.

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- 1 **Gord MacDonald:** We share your questions about water and the concerns.  
2 As far as we know now the water is safe for the  
3 caribou to drink from the science perspective and  
4 people. We are unsure as far as the fish and the bugs  
5 they are the most sensitive to the differences.
- 6 **Wayne Langenhan:** What I am wondering about is this is not the first  
7 diamond mine. I am pretty sure there have been other  
8 ponds like this and maybe other mines might have an  
9 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  
17 fast and we can't depend on that permafrost to keep  
18 all our chemicals and alternatives to or solutions for  
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 are  
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.
- 35 **Gord MacDonald:** Presentation.
- 36 **Bobby Algona:** Before that water is it drinkable is it? How big of a  
37 runway are you going to be putting? Maybe in the  
38 future is it going to go down to the bottom? Is it  
39 going to be stable?
- 40 **Gord MacDonald:** The spillway would be about half way down.

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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 **Alfred Baillargeon:** Talk about the landscape of the mine were looking  
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  
11 plants at the mines sites. We know that it's all kinds,  
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. So before  
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.

20 That's why we're here to support each other so we should  
21 really take a good look at this before we discuss. The only  
22 way we're going to be able to discuss is by seeing first

23 Should be treated first before it puts back in the lake and  
24 those the kinds of things that we see like the tailings  
25 pond at Giant Mine we don't get to see it there's lots of  
26 birds dying and even Bobby said it can come up to  
27 Coppermine and the people from the other communities have  
28 concerns.

29 I don't think we should have drainage to one lake then  
30 another little lake things that we discuss should be worked  
31 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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1           there if we need to but from our view we'd be failing if we  
2           have to have that treatment plant.

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

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

10           Planning on 5 years of testing.

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

33

34 **BREAK**

35

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

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

4 **Bobby Algona:** The discussions we had earlier we have to take it in  
5 heart as the weather is having we're having our  
6 climate change and the permafrost is melting rapidly.  
7 The discussions that Gord had earlier were to keep it  
8 in heart and know it and for those that in talking  
9 with the people from Kugluktuk and we've discussed the  
10 climate change as well and we're to listen to our  
11 elders what they are saying and the other people that  
12 we meet and we're to work together and to listen to  
13 each other.

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

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



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

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

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

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

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

5 **Mike Francis:** The water, the wildlife also relies on the water so if  
6 we do take care of the water and treat it the best way  
7 that we can and also one of the others so some of  
8 these batteries from the vehicles from all the heavy  
9 equipment so what do they do how do they dispose of  
10 the batteries from all these heavy equipment where is  
11 it being disposed of?

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

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

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1 years old but take our words as we speak. Prior to  
2 this mine they had said a lot of words.

3 **Janelle Nitsiza:** I only have a suggestion that maybe we could have a  
4 session for youth like get everyone up to date on what  
5 the TK Panel has done so far just maybe we'd have more  
6 questions if we had back ground on everything. Also  
7 I'd like to share that I'm very honoured to be around  
8 all these amazing elders just to hear all the stories  
9 I feel like it's my responsibility as a youth to  
10 gather these stories and to listen so I can pass down  
11 to generations to come because realistically mining  
12 isn't going to end for a long time and it is part of  
13 our history now. And so I'm glad to be here.

14 **Colleen English:** Just to respond to your question Mike about the  
15 batteries all of the batteries on site small to large  
16 they are all shipped off site. They stay here until  
17 winter road and are packed and shipped then.

18 **Gord MacDonald:** I am not sure how to answer the questions about broken  
19 promises related to closure. I was around in those  
20 days, I did go to the communities and this is the  
21 picture that we showed in 1999 which is not, other  
22 than the pond on the PKC is not very different what I  
23 described to you earlier. Talking about broken  
24 promises about closure. The picture is not that  
25 different from what I am saying now.

26 **Joanne Barnaby:** Talking about changing the tour to PKC.

27 **Ed Jones:** Could you show us the overflow route or creek wherever  
28 the over flow route in the morning. We might be able  
29 to come up with more solutions.

30 **Gord MacDonald:** We will try to get to these two places.

31 **Ed Jones:** Just to ensure that clean water gets down to the lake  
32 would it possible to build one or two cells before the  
33 lake to clean the water on the way to the lake.  
34 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 **Alfred Baillargeon:** We're going to tour out there we would like to  
38 tour that place where how are we going to go with  
39 skidoo. About this time the snow gets really wet Gord

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1 pointed that it takes a little ways to get there. I  
2 would really like to get to the site and talk about  
3 it. Without looking at it we really can't say without  
4 looking at it. I know it's hard to get around.

5 **Colleen English:** Explaining where we are going.

6 **Wayne Langenhan:** I have a question for Gord. Right now as it stands is  
7 that sludge on the bottom of the pond and the water is  
8 on top. Can the caribou or if the ducks land is that  
9 water going to kill them.

10 **Gord MacDonald:** Not if it drinks it but if it were to get in there I  
11 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  
17 Ekati Mine when I worked there I worked there as a  
18 security I was allowed to handle guns, all wild  
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  
26 you're never going to get heat stroke there is a lot  
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  
33 you don't know about it because you don't monitor it  
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.

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

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

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

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

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

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

## Appendix B

### DDMI Day 1 – Session Notes

1 **Wayne Langenhan:** Could Diavik come up with the number of animal deaths  
2 when, where, how, what since the mine started for us to  
3 see.

4 **Colleen English:** 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.

12



## Appendix B

### DDMI Day 2 – Session Notes

- 1 **Ken Quackenbush:** (Question and answer regarding PKC) The rock fill is  
2 type one material that came out of the pit.
- 3 Geomembrane, Jaw run, 2" mtl, liner, CPK cover. (see  
4 diagram)
- 5 **Alfred Lockhart:** You have boulders, will there be gravel going on top  
6 before the geomembrane?
- 7 **Ken Quackenbush:** No the geomembrane goes right on the rock fill; it's  
8 the finer material. The liners all tie together in a  
9 trench (anchor trench).
- 10 **Alfred Lockhart:** That's what I wanted to know because it'll be a lot  
11 smaller than the rock fill at the beginning.
- 12 **Ken Quackenbush:** The sequence of building. The first piece of dam was  
13 in natural valley on the north spigot road.
- 14 **Bobby Algona:** Your membrane the geomembrane your liner that's the  
15 only ones for the dam. It doesn't go down all around  
16 the bottom with those two layers in the bottom of the  
17 PKC.
- 18 **Ken Quackenbush:** At the bottom it's tied into the permafrost. The goal  
19 is to not defrost that which has a good seal between  
20 the base and the membrane. The membrane does not go  
21 all through the base.
- 22 **Bobby Algona:** What do we have on the bottom? Is it just the liner  
23 itself, not the geomembrane?
- 24 **Ken Quackenbush:** Neither.
- 25 **Mona Himiak:** What is the "Mtl"?
- 26 **Ken Quackenbush:** 2 inch material. 2 inch material is 2 inch minus gravel  
27 so it goes through our crushing operation and it's  
28 basically road gravel.
- 29 **Alfred Lockhart:** So it's just crushed rock then.
- 30 **Ken Quackenbush:** Exactly.
- 31 **Colleen English:** Can we ask the questions that the panel had [during  
32 the tour].
- 33 **Janelle Nitsiza:** Do you think that the diamond market will collapse?

## Appendix B

### DDMI Day 2 – Session Notes

1 **Ken Quackenbush:** No I don't think it will collapse. It's projected to  
2 grow. How fast it grows is a good question. I don't  
3 know if anyone can really answer that. From what I  
4 hear the market especially in India and overseas is  
5 still strong and growing.

6 **Alexandra Crapeau:** How do you monitor the plastic liner or barrier?

7 **Ken Quackenbush:** On the rock fill side we have both wells that if there  
8 is water in it, then its leaking. And the other thing  
9 is there are thermistors under the liner at various  
10 spots. They are right down. They have been installed  
11 right from the start of construction so we know that  
12 if the dam is frozen, then there likely isn't not  
13 leaking but if the temperature is trending up or is  
14 above zero then you probably have some water action  
15 thawing things out. Then that's a good indication  
16 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 density polypropylene, 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  
35 lasts a very long time.

36 **Alexandra Crapeau:** Are they black or do they break down over the  
37 summer?

## Appendix B

### DDMI Day 2 – Session Notes

- 1 **Ken Quackenbush:** The liner material? The plastic liner would be  
2 susceptible to sunlight if it was exposed and that  
3 would break it down. The bituminous liner, I suspect  
4 not so much, but I don't really know. So we do have a  
5 liner and it is buried from the elements.
- 6 **Janelle Nitsiza:** Has the liner been tested for elasticity?
- 7 **Ken Quackenbush:** There are a whole bunch of tests they put it through.  
8 Tear resistance as well.
- 9 **Alexandra Crapeau:** How is the water in the PKC reused?
- 10 **Ken Quackenbush:** The water is really used as a conveyer so it's just  
11 going around and around the same loop. Back to the  
12 process plant and back out to the PKC.
- 13 **Janelle Nitsiza:** When you talk about seepage how much per day?  
14 (Gallons/day)
- 15 **Ken Quackenbush:** Gord was supposed to get you that number. 10 liters a  
16 second from the west end there. I will figure it out  
17 after Q&A.
- 18 **Alexandra Crapeau:** Will the size of the dam stay the same or will it  
19 be covered in rock?
- 20 **Ken Quackenbush:** It's dumped and falls on its slope but there is a plan  
21 to deal with it.
- 22 **Colleen English:** For the PKC right now it's the slopes that are there  
23 are very much envisioned what it is going to be  
24 already. Do you want it re-sloped?
- 25 **August Enzo:** Does anybody here know about monitoring caribou from  
26 2011-2013. Every summer, I would like to know how  
27 caribou act around here.
- 28 **Colleen English:** We have a quick visual presentation for a bit later  
29 on.
- 30 **Ken Quackenbush:** As we are working up there, the grizzly bears have no  
31 problem climbing up, they come visit us.
- 32 **Wayne Langenhan:** We were all wondering about that to here if this is  
33 being used in here somewhere?
- 34

## Appendix B

### DDMI Day 2 – Session Notes

- 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  
6 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  
17 detects it?
- 18 **Ken Quackenbush:** No there is no sensor in the liner. The thermistors  
19 and the wells do that.
- 20 **Ed Jones:** 3:1 is a 30degree slope.
- 21 **Alfred Baillargeon:** We went down to tour those places and we talked  
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.

## Appendix B DDMI Day 2 – Session Notes

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

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

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

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

## Appendix B

### DDMI Day 2 – Session Notes

1 young people, they still like to go out hunting as far  
2 as Mackay Lake and sometimes they go out hunting. Our  
3 people young people they still go out today and hunt  
4 for caribou and moose. We heard at one time this  
5 place was a good place for caribou hunting and the way  
6 we see this land.

7 They used to have arctic rabbit in this area and we  
8 talk about slopes and now the drainage and plastic and  
9 this land is dead. I can speak well and I can express  
10 my concern. White people are the ones with money: we  
11 as a Dene people, we live and survive on the land. We  
12 go hunting on the land, we survive on the fishes and  
13 right beside us the mining is destroying the  
14 environment. . . It's all the water that leaks up to  
15 Kugluktuk. So the way we did the mines we went to mine  
16 visit and today we can see everything so that's a good  
17 time to see everything is during the warm weather.

18 We have elders here. Some of the people have a cold  
19 so next time for the site visit it be a good time when  
20 it's warm weather. It's nice and warm in this  
21 building. I don't think we should be here this time,  
22 the weather is really bad it gets foggy.

23 **Natasha Thorpe:** Thank you for your comments. One of your questions is  
24 coming up "Can we come back when there is no snow on  
25 the ground?" On Monday we will discuss how we can work  
26 out the site visits.

27 **Janelle Nitsiza:** What time of the year does the PKC start to freeze?

28 **Ken Quackenbush:** The water at the barge doesn't freeze. We have  
29 bubbles that help that.

30 **Alexandra Crapeau:** How much higher will the PKC dam go?

31 **Ken Quackenbush:** The plan is to have one more 5 meter lift so it would  
32 be 470m, but are looking at other options.

33 **Janelle Nitsiza:** Why are the wind turbines green at the base?

34 **Ken Quackenbush:** Got them from Europe and people from Europe like them  
35 to blend in.

36 **Ed Jones:** On that question of the wind turbines, you would think  
37 that you wouldn't want them to blend in because of the  
38 airplanes.



## Appendix B

### DDMI Day 2 – Session Notes

- 1 **Ken Quackenbush:** They all have beacons on the top.
- 2 **Janelle Nitsiza:** How deep is the slurry PKC on top of the original  
3 valley floor of the tundra? How deep will it be at  
4 closure and how heavy?
- 5 **Ken Quackenbush:** Deepest point is through that valley. Finished  
6 elevation will be at 435. Depth of the water is quite  
7 deep.
- 8 **Gord MacDonald:** 20 meters
- 9 **Alexandra Crapeau:** How will the bottom of PKC protect the water from  
10 seeping out?
- 11 **Ken Quackenbush:** By being frozen - and we see it freeze - when there is  
12 no water movement.
- 13 **Janelle Nitsiza:** Were there caribou around this summer?
- 14 **Ken Quackenbush:** I don't remember seeing any reports, but when they  
15 were monitoring, they were close.
- 16 **Alexandra Crapeau:** Can we see pictures of the island before the  
17 development?
- 18 **Ken Quackenbush:** 5 ½ km perimeter
- 19 **Janelle Nitsiza:** How would the PKC be impacted by a new pit?
- 20 **Ken Quackenbush:** Helpful. In one sense we would have that rock for  
21 another level. Otherwise, it would really be business  
22 as usual up there. There would be no change to what we  
23 are doing now. It would just be some more volume.
- 24 **Janelle Nitsiza:** Do you ever catch birds with the wind turbines?
- 25 **Ken Quackenbush:** Not as far as I know. Concerns were noise and birds,  
26 but seems okay so far.
- 27 **Colleen English:** Beacons help for bigger birds and we are monitoring  
28 for dead birds for 2 years.
- 29 **Ken Quackenbush:** Ice throw off of the turbines. But no pattern this  
30 year.
- 31

## Appendix B DDMI Day 2 – Session Notes

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

5 **Gord MacDonald:** Probably in the next year or 2 to make that decision.  
6 We need to make decisions so we can start planning. We  
7 are going to be making submissions at the end of this  
8 year to the regulators. It's going under the  
9 assumption that we have to re-slope it.

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

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

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

## Appendix B DDMI Day 2 – Session Notes

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

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

14 **Gord MacDonald:** I think you are right that there are risks that the  
15 winter road will get shorter and shorter. Certainly  
16 2006 was a wakeup call for all of us, that that's very  
17 possible. From a closure and whether we have to haul  
18 material off site or not we're still expecting that in  
19 10 years time there will still be a winter road but it  
20 may be short. There would be enough of a winter road  
21 that could be used for that type of thing. I know the  
22 winter road is getting better and better, how they  
23 make the road every year. The technology is getting  
24 better, the tools they use to measure the ice  
25 thickness and the safety is getting better so they can  
26 make the road longer and longer each year to try to  
27 help or mitigate or compensate for changes in climate,  
28 but it for sure changes and when you rely on freezing,  
29 this is a risk.

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

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

## Appendix B DDMI Day 2 – Session Notes

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  
6 using the climate change information. They perform the  
7 same or sufficiently in each situation right now.

8 **Joanne Barnaby:** It is hard to develop those scenarios when the climate  
9 change scientists change their own forecasts all the  
10 time. They see things changing faster than expected,  
11 they can't keep up and have to modify their forecasts.  
12 I know traditional knowledge holders/elders don't feel  
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  
17 planning for closure with all of this uncertainty  
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  
24 the length of time it's safe to travel is a big issue  
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

37 **BREAK**

38

## Appendix B

### DDMI Day 2 – Session Notes

1 **Joanne Barnaby:** Moving people around. We are hoping that we can move  
2 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.

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  
37 water to bury the slime?

38

## Appendix B DDMI Day 2 – Session Notes

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

5 **Joanne Barnaby:** Treatment center?

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

8 If you do take that pond water out of the that holding  
9 area, that slurry is going to be there forever and  
10 animals are probably going to be, especially caribou,  
11 they are being heavy animals. Even muskox, as heavy  
12 as they are, they can sink very fast down in that  
13 slurry and because the slurry is not going to solidify  
14 any time soon, maybe there should be some thoughts to  
15 those sorts of things that maybe keep the animals out.  
16 Or is there something else that can be done like put  
17 in a rock or something so that the rock can settle  
18 down into the bottom of that PKC area. And because  
19 it's not going to solidify soon, that's been one of my  
20 big concerns too. Because the caribou are very hot in  
21 July, they just dive into any type of water to cool  
22 down. What I'm thinking is if they tend to jump in,  
23 maybe because of that slurry and that mud they're just  
24 going to have a hard time getting out or maybe sinking  
25 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  
30 first water we would get rid of through the treatment  
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.

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

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

37



## Appendix B DDMI Day 2 – Session Notes

1 **Wayne Langenhan:** It seems to me like the slurry is not going to be a  
2 problem unless it's left wide open. If the water is  
3 deep enough, they won't reach the bottom to get stuck.  
4 So the thing would be to keep the water at the certain  
5 height off that slurry so that there's no danger of  
6 animals getting caught as they swim across it.

7 **Louis Zoe:** We're talking about the pond that maybe the water is  
8 being retreated again and all the rocks that being  
9 piled up into the slope once it rains and snows and it  
10 all goes back down and in the spring time it melts and  
11 it just like a wash, maybe even that water being  
12 treated, and all the drainage from the slope and it  
13 goes back in the water. How would the water be from  
14 those country rocks?

15 And the young ladies here, they had some questions  
16 about how the island was before the mine began, and  
17 how was the island before and what kind of animals  
18 that roamed this place and berries, blueberries and  
19 cranberries. I'm sure there was a lot of stuff on this  
20 island and they had squirrels and arctic fox and maybe  
21 it's being covered with the country rocks. Those are  
22 the kind of questions the young girls they had, but  
23 didn't respond.

24 **Joanne Barnaby:** How much of an understanding do you have of what was  
25 there before? Maybe we should be using that as a guide  
26 as to what should be put back.

27 **Gord MacDonald:** I can't speak to what there was before as far as  
28 berries however where the pond is now there was a pond  
29 there before.

30 **August Enzoe:** I've been listening two days to this. So I was  
31 wondering, the company can't do anything about it.  
32 They can't take anything out. Everything. They want  
33 to leave it, the way it is, after it closes so they  
34 don't want no animals to go in there. So I'm thinking  
35 they can't do nothing about it. They should tryout a  
36 fence around it before closure. They should do that  
37 and then figure out something else I think.

38 **Mona Himiak:** Or even a dome so that animals or birds can't get in,  
39 like metal or something.

## Appendix B

### DDMI Day 2 – Session Notes

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 Enzo:** 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.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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



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

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

14 **Alfred Baillargeon:** This is not going to be the first discussion  
15 about the closure. We are going to be talking about  
16 it until really the last stage of the closure. This  
17 is not going to be the only time that we are going to  
18 keep discussing this and how things are going to be  
19 done. That's why we are working together with Diavik.  
20 This is not going to be the only meeting, maybe in the  
21 next 10-20 years we might still be discussing phase  
22 1,2,3. How are things going to be down and we're  
23 going to be the watchdog; that's why we are here. We  
24 would like to get things done neatly. We know that  
25 the land will never get back in place but in only one  
26 discussion, nothing will get done. There's going to be  
27 a lot of meetings like this before the closure. Now  
28 we are talking about the pond. Maybe once the mine  
29 gets to closing time, maybe get some kind of pump in  
30 there and get it back to Lac do Gras. I don't think it  
31 sits there be healthy the water be good.

32 **Joanne Barnaby:** Any comments? Mark?

33 **Mark Taletok:** I just want to say a few words as we've seen what's  
34 happening . . . once the water is purified and can be  
35 brought back to the lake and you can't see foam in the  
36 water purifier as well and as long as it's cleaned up  
37 it can be used up. Even though we aren't supposed to  
38 be using the water purifier and we know the wildlife  
39 needs somewhere to drink.

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

42

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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.
- 14 **Gord MacDonald:** When you call the water contaminated I don't know what  
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 the  
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  
26 going to be good in terms of being safe to wildlife  
27 and to people and to fish but it would still have more  
28 things in it than 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  
34 what runs off from on top of the rock.
- 35 **Wayne Langenhan:** Would that water in the pond once it leached down off  
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  
38 there now take it out so it would be clearer water to  
39 start off with but would the water be safe for animal  
40 consumption or birds to land on say without them dying

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1                   off from what the contents from the sludge would leach  
2                   into that new water?

3   **Gord MacDonald:** That's the hope. We still have to do work on that but  
4                   that is our hope.

5   **Mike Francis:** Talk about the water around the mine here but the  
6                   water, anyway the water change everyday, just like a  
7                   drain the water everyday. Water is strong to \_\_\_\_.  
8                   Anyway it's good to look after the water for animals.  
9                   Good water, lots of animals. All people, they say  
10                  where's the good water, lets go there.

11 **Joanne Barnaby:** So animals know where there is good water and go  
12                  there.

13 **August Enzo:** As long as it's in the water where did the slurry come  
14                  from?

15 **Gord MacDonald:** When we mine the kimberlite out - that has the  
16                  diamonds in it - that rock and we take it through the  
17                  process plant and crush it and wash it with water,  
18                  it's the really fine material that when you crush the  
19                  kimberlite that's when it gets mixed with the water it  
20                  becomes that slime/slurry.

21 **August Enzo:** Right now it's sitting in that pond.

22 **Joanne Barnaby:** They keep adding to it.

23 **August Enzo:** I do understand now. In the future we talk more about  
24                  that.

25 **Louis Zoe:** Just a little concern that I have of the closure of  
26                  the mine the water being treated. They should still  
27                  have a monitoring program in place like check the  
28                  water, even the slime that we are talking about, and  
29                  even the Lac de Gras and how deep is it and maybe to  
30                  take the water out of that pond and that clean water  
31                  that goes in there, they should always be monitoring  
32                  the water around here.

33 **Gord MacDonald:** You were talking about monitoring and you were talking  
34                  about water contamination and I think you probably  
35                  talked about this more at the AEMP Camp, but if you  
36                  wanted to know more about the water that's in the PKC  
37                  at closure or even now, we measure it with chemistry  
38                  that we get from the lab. We sometimes measure it by

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

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

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

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

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

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- 1 **Alfred Lockhart:** This may not be the first diamond mine shut down. How  
2 did the other diamond mines shut and deal with the  
3 slurry?
- 4 **Gord MacDonald:** I am not aware of another diamond mine that has shut  
5 down and closed a tailings facility. They're either  
6 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 **Wayne Langenhan:** Is this the only place that is filled with this  
10 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 **Alfred Lockhart:** What would happen if you made the pond bigger then you  
15 would have the shallow slurry?
- 16 **Gord MacDonald:** I think we would have a bigger problem because it  
17 would be in more places. I think we want a smaller  
18 area as oppose to a larger area would be my first  
19 answer but nobody actually asked that question before.
- 20 **Wayne Langenhan:** Along the road sides you see these tall tube type  
21 things (thermosyphons) and they don't need anyone to  
22 operate them so why can't you ring that pond with  
23 these things, freeze it right tight and cap it with  
24 the water that's already there and then it would stay  
25 hard all year round?
- 26 **Gord MacDonald:** Freezing that material is one option, but you can't  
27 freeze it and put water on top because if you put  
28 water on top it'll keep it thawed. So it would be very  
29 difficult to keep it frozen with water on top. You  
30 could keep it frozen without water on top, you might  
31 be able to keep it frozen without water on top but not  
32 with water on top.
- 33 **Wayne Langenhan:** Keeping it frozen with water on top is not viable but  
34 if you freeze the sludge without the water then it  
35 will never have time to change composition and dry out  
36 so that it hardens up in so many years but what I'm

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1                   trying to say is if you just freeze the water on top  
2                   and let the sludge go its own way just to freeze the  
3                   water keep the water frozen year round not the sludge.

4   **Gord MacDonald:** Don't know.

5   **Natasha Thorpe:** Gord, I wanted to clarify something with the PKC area  
6                   that we drove around the perimeter today. You were  
7                   saying something yesterday about trying to concentrate  
8                   or focus the slimes towards the center. In the  
9                   closure plan, would the pond be in the center - with  
10                  the slimes concentrated in the center - and you'd have  
11                  this perimeter that wouldn't be slimy?

12 **Gord MacDonald:** Yes so that's exactly right. (Picture on board) The  
13                   slimes will stay where they are in the middle and the  
14                   beaches would get longer and thicker.

15 **Natasha Thorpe:** So at the end of the day, if you were to imagine a  
16                   caribou or a person or something walking in from the  
17                   shoreline to the point at which the slime is going to  
18                   be a problem, is it right at the shoreline or is it  
19                   going to be concentrated at the center?

20 **Gord MacDonald:** So a caribou first they would have to get up, then  
21                   he'd have to want to walk all the way down to the  
22                   middle and then this is about how you design the  
23                   shoreline. The water would have to be there and be  
24                   deep enough.

25 **Joanne Barnaby:** How much space? If we don't want caribou or other  
26                   animals there and we do things to try and keep them  
27                   away do we also want to make sure that between the  
28                   edge of the water and where they would actually step  
29                   into slurry it's going to be too deep for them to get  
30                   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 **Bobby Algona:** Even though how deep you put that pond right now  
34                   sometimes ponds do tend to evaporate at times because  
35                   it's not going to be a settled bottom maybe. What I  
36                   am thinking is probably going to always be a way for  
37                   water to either seep out or evaporate into the air and  
38                   the water level's going to be very low again and if



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1 for some reason it gets low enough the animals will be  
2 going in there maybe they will get stuck because it's  
3 a slurry and mud and they won't be able to get out.

4 **Gord MacDonald:** Yes I think your boot would come out, but it is very  
5 reasonable that a caribou could get stuck.

6 **Bobby Algona:** And when it is warm out, that water will evaporate and  
7 then they can get stuck in there and maybe that water  
8 will not come back and when that water gets out of  
9 that pond and it's going to be gone. What I am worried  
10 about is, no matter how deep you put it, what if it  
11 evaporates because that ground is not settled? The  
12 ground, may drain and then maybe the animals will get  
13 stuck.

14 **Gord MacDonald:** If the pond won't stay, yes that will be a problem,  
15 but we are working on if it will stay.

16 **Alfred Lockhart:** You said all that slurry will go to the middle. Once  
17 you take the water out and then like Wayne was saying  
18 something about freezing it and capping it then there  
19 will be no water there so I don't think animals will  
20 ever get in there.

21 **Gord MacDonald:** If there is just a hole there the water will go back  
22 in there so rain and the snow will fill it up with  
23 water. Fill the whole hole up with rocks??

24 **Alfred Lockhart:** Just fill that whole hole there with rocks then there  
25 would be water.

26 **Gord MacDonald:** I mean you have think of it like a bowl and you make  
27 the bowl fill to the top so I don't think the pingos  
28 would come up to the surface of that.

29 **Alfred Lockhart:** You've got a lot of rock in that pile. Put the rock in  
30 there then there will be no water and the slurry will  
31 be under the rock.

32 **Alfred Baillargeon:** Yes there for two days now and we seem to be  
33 talking about one item for two days and we seem to  
34 keep repeating ourselves. Underground, how deep or how  
35 far how long the life of the mine underground? How  
36 long will it be there, we want to know as well. Also,  
37 how about the tunnels? There's two underground I think  
38 that you got and how they going to deal with how they

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

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

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

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

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

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

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

## Appendix B

### DDMI Day 2 – Session Notes

1 I know sometimes you feel frustrated about talking  
2 about the same things over and over again.

3 **Natasha Thorpe:** We need to hear from you over and over again.

4 **Ed Jones:** How many times do we have to repeat ourselves for you  
5 to get it?

6 My question to the facilitators about this meeting and  
7 all previous meetings in the last few years, are our  
8 suggestions and recommendations going to be put on  
9 file or record somewhere so nothing gets supposedly  
10 lost or stolen or something else and we don't have to  
11 go over and over? Well not us, we won't be going over  
12 because we will probably all be dead, but the thing is  
13 the next generation coming into these positions will  
14 have something to work with and I know the previous  
15 records have already been lost and the elders that  
16 came before us their suggestions are no longer around  
17 so I'd like to make sure that this all being recorded  
18 and kept.

19 **Joanne Barnaby:** Your other recommendations were not lost, it was just  
20 not passed on to Diavik and we are going ensure that  
21 is done.

22 One thing that we would like to ensure that you are  
23 comfortable with is that we started with the terms of  
24 reference and we want to confirm that everyone is  
25 comfortable with the terms of reference and the  
26 mandate.

27 **Natasha Thorpe:** We recognize that you have spent a lot of time with  
28 your terms of reference and your mandate which is why  
29 we have gone through the previous reports to pull out  
30 what you have already said so that you don't feel like  
31 you are repeating yourselves. We've got a starting  
32 point and we've already taken several steps along that  
33 path.

34 **Joanne Barnaby:** We just want to confirm, make sure everybody is okay  
35 with the terms of reference, the mandate that we  
36 reviewed yesterday.

37 **Natasha Thorpe:** We recognize that you've spent a lot of time  
38 discussing your terms of reference and your mandate  
39 and how reports should be reviewed when the panel was

## Appendix B

### DDMI Day 2 – Session Notes

1 under EMAB so we're continuing those onwards - or are  
2 hoping to continue those on - and it's just a matter  
3 of getting your official okay that you don't have any  
4 problems with the existing approach that you have  
5 worked so hard on pulling together, that was in that  
6 checking nets report and in the working together  
7 report.

8 **August Enzo:** The last three years having this workshop we did a lot  
9 of talking about closure for the future and we put  
10 lots of words in there so knowing those words never  
11 went to Diavik yet, that's a problem we got, so sounds  
12 like for me we are starting over. And some, what did  
13 we mention 2 or 3 years ago. They are saying it that's  
14 why I mean.

15 **Joanne Barnaby:** Yes they are going to get it.

16 **Natasha Thorpe:** And same thing with all the questions you asked today  
17 on the site tour and all the questions that you've  
18 asked throughout the course of the last couple of  
19 days. Diavik has been able to respond to all your  
20 questions because they are here this time.

21 **Wayne Langenhan:** So what time is start time tomorrow morning?

22 **Joanne Barnaby:** Make it a shorter day and to respect their spiritual  
23 and religious beliefs and so how about we start at 10  
24 instead and have time for your prayers in the morning.

25 **Alfred Lockhart:** What would happen if you start filling up the rocks  
26 like you did with those cloth and all the perimeter  
27 stuff there around the pond and keep filling it with  
28 rocks and then at closing time you will have quite a  
29 big mound.

30 **Unknown:** Why can't you just take the rock in the rock pile and  
31 keep pushing it in the slurry until you've eventually  
32 filled it all in?

33 **Alfred Lockhart:** Yeah because you are going to have slurry coming in  
34 from the process plant that you keep dumping in there  
35 put a little bit of rocks with it and keep on doing it  
36 not filling it right up right now.

37

## Appendix B DDMI Day 2 – Session Notes

- 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  
3 hard part is still the middle. How do you get the rock  
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  
10 the dome bigger.
- 11 **Alfred Lockhart:** Well you better set some money aside for that there.
- 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  
16 area, once you fill that up. Another reason maybe you  
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.

**Appendix B**  
**DDMI Day 2 – Session Notes**

- 1 **Alfred Lockhart:** The steel sounds okay but the rusting, I think  
2 concrete would work better a dome concrete will have  
3 all the iron mesh in there and tie it up together and  
4 then you'll have a good dome there.
- 5 **Mark Taletok:** Closing Prayer



## Appendix B DDMI Day 3 – Session Notes

1 **August Enzoë:** Opening prayer

2 **Natasha Thorpe:** Welcome back everyone. Review of housekeeping items.

3 **Gord MacDonald:** Spent last night working with the metric system.  
4 Seepage from the PKC is about ~ means about.  
5 ~0.5 Mgal/day (million gallons per day) seepage  
6 collection from north inlet/PKC

7 **Alfred Lockhart:** How many gallons? Was it 500,000 gallons? Is that  
8 water from Lac de Gras?

9 **Gord MacDonald:** Water coming out of PKC that we collect and put back  
10 in again. Standing on the barge yesterday and you saw  
11 the big pipeline going back to the process plant:  
12 ~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 -800 million gallons (3 million cubic meters) of slime  
17 in the PKC  
18 -90 feet deep (2012)  
19 -120 feet deep (2023)

20 **Natasha Thorpe:** I am going to mess you up by asking what that is in  
21 terms of cubic metres?

22 **Joanne Barnaby:** If we use the fuel tanks, again how many would that  
23 fill up?

24 **Gord MacDonald:** 800 million gallons = 226 fuel tanks to fill with  
25 slime

26 **Colleen English:** Fresh water do we use every year to both run the camp  
27 and in the process plant.  
28 Drinking water 20 million gallons per year  
29 Processing 140 million gallons per year  
30 Maximum is 338 million gallons per year with water  
31 license.

## Appendix B

### DDMI Day 3 – Session Notes

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.

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

15 **Gord MacDonald:** Yes.

16 Shows pictures of island from 2000.

17 **Jonas Lafferty:** We have an interpreter here. Even though I am an  
18 interpreter, I was here in 1994 when I was here with  
19 the elder Eddie Camille with an archaeologist. Before  
20 anything was ever done when they did the feasibility  
21 study and it's on 1994 (Aboriginal Language) at camp.  
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 time. 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  
30 there. Lots of cloud berries and lots around that  
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

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### DDMI Day 3 – Session Notes

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

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

## Appendix B

### DDMI Day 3 – Session Notes

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

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

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

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

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

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

## Appendix B DDMI Day 3 – Session Notes

1 **Gord MacDonald:** This is the drawing we can work too. This is what the  
2 engineers have produced that shows how the PKC should  
3 look at closure. This is the pond is and the red lines  
4 are the slimes. This is what it looks like from the  
5 top.

6 Fine kimberlite at the top at closure, pond in the  
7 middle.

8 Talking about pushing the rocks on top of the slimes  
9 at the edge so that caribou don't get stuck in the  
10 slimes and it makes the edges more stable.

11 They think that if we freeze some of the slimes first  
12 that they can then push this carpet (geogrid) out on  
13 top of it and then it would be able to support a two  
14 meter rock layer over top of it.

15 **Joanne Barnaby:** That wouldn't be the whole pond, it just be at the  
16 edge.

17 **Gord MacDonald:** That's right we don't want it covering everything but  
18 enough for if the water moves up and down.

19 **Joanne Barnaby:** Could you answer the question about the hill being  
20 blasted?

21 **Gord MacDonald:** The hill itself was not blasted.

22 **Bobby Algona:** That pond that you have built all this over was it at  
23 the level of the Lac de Gras or did you build it to  
24 that level was it any higher. Or in the same level as  
25 Lac de Gras?

26 **Gord MacDonald:** The pond would have been about half a meter higher  
27 than Lac de Gras so it drained into Lac de Gras.

28 **Bobby Algona:** It's only a few feet difference from Lac de Gras and  
29 in that pond how deep was that pond?

30 **Gord MacDonald:** In the middle it was 35 feet. There was one deep hole  
31 in it.

32 **Bobby Algona:** You have permafrost under that pond. That is what you  
33 are building over and what I am really worried about  
34 is under that pond is that permafrost warming up and  
35 going further down? Who knows what is under that  
36 permafrost? There's probably fractures all around the  
37 pond which we've always come to see around the lake

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### DDMI Day 3 – Session Notes

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

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

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

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

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

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

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



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### DDMI Day 3 – Session Notes

1 overlying the slimes might be a way to prevent the  
2 wildlife from coming in contact with the slimes.

3 **Colleen English:** So the idea behind it is to try to simplify this and  
4 we will through some key areas. If everybody is  
5 supportive of a pond then there are a few things that  
6 can be done with that pond. What are some features  
7 that you want around the pond to keep the animals  
8 safe? The shoreline options, the water depth, the  
9 slimes.

10 It will be Diavik's challenge to keep it at that depth  
11 but you can help us figure out what that depth should  
12 be.

13 **August Enzo:** Does it move around or does it stay still the slimes  
14 with the wind?

15 **Colleen English:** They do move around but under the water. If the water  
16 was too shallow then yes it could be a problem.

17 **August Enzo:** Your drawing from the top to the bottom, how deep is  
18 that right now.

19 **Colleen English:** Water is 15 feet deep right now.

20 **Natasha Thorpe:** The line with red is the slime. The deepest point in  
21 the pond is where the slimes are. What we recommend  
22 to Diavik is option A slimes stay, or B slimes go.  
23 Then we can talk about how the shoreline should be  
24 designed for you.

25 **Gord MacDonald:** I would just like to show one more thing. (Picture on  
26 the board) Describing Bobby's reasoning for not  
27 putting rocks on top. (Like a bowl)

28 **Ed Jones:** I just want to mention or bring back what Bobby was  
29 talking about. I don't think we need to worry about  
30 anything seeping into Lac de Gras because the sludge  
31 at the bottom of the PKC would be quite heavy to seal  
32 any fractures beneath that PKC. Between now and  
33 closure which is about 5 years away, there will be a  
34 lot of runoff from the snow rains and everything so  
35 the level of freshwater will rise above that center  
36 and at that time you could check and see if you had  
37 enough freshwater covering the center pond. Further  
38 to that,, after stabilizing the beach all the way  
39 around, we could probably deter the wildlife from

## Appendix B DDMI Day 3 – Session Notes

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

11 **Mike Francis:** I just wonder about the water going back to the lake  
12 again. What about the sewer line water, what do they  
13 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  
18 water in the PKC which would have some sewage in it a  
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.

27 **Joanne Barnaby:** Follow up on Ed's comment and ask whether you've done  
28 any testing to determine if any slime would actually  
29 fill in any cracks and whether that would actually  
30 create any blockage which is I think what Ed is  
31 assuming in terms of the water preventing the water  
32 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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1 it's frozen so nothing can move down. If you believe  
 2 global warming is going to thaw all the way down into  
 3 the permafrost so this would be hundreds of feet and  
 4 more hundreds of feet yeah then we have a concern if  
 5 this is going to thaw. I don't think it's going to  
 6 thaw and if it does thaw I think we've got much bigger  
 7 problems in the north than this facility.

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

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

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

33 The differences between EMAB and Diavik

EMAB	DIAMIK
-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

34

## Appendix B

### DDMI Day 3 – Session Notes

- 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  
6 have also been in the room during the sessions. The  
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  
11 back-up.
- 12 **Natasha Thorpe:** Yes we are. When you double check and maybe don't like  
13 a word you used, you can change it to make it sound  
14 better.
- 15 In terms of 2 meetings or 3-4?
- 16 **Wayne Langenhan:** I see where we are changing it from 3-4 meetings per  
17 year to 2 meetings a year and its flexible about the  
18 timing on those 2 meetings per year, I think we should  
19 have a little bit of flexibility as to if something  
20 else comes up then there could be if need be a third  
21 meeting in winter or something.
- 22 **Natasha Thorpe:** Any other comments.
- 23 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  
31 knew all of our concerns and can really answer all of  
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  
36 Diavik: we are here to help Diavik do the job, that we  
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  
40 evaluate all what we have said. It'll be a good future  
41 maybe in next year or so, might be changed again.

## Appendix B DDMI Day 3 – Session Notes

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

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

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

17 **Alfred Baillargeon:** Yes you wanted to have our caucus meeting but  
18 there isn't that many of us here to have our own  
19 caucus meeting. So we can just have an open meeting  
20 instead of having a caucus meeting. It seems we are  
21 all here for each other. We all have one voice. If  
22 we are going to have a caucus meeting, you might not  
23 agree with some of the things because we all don't  
24 think alike, we all don't. That's what I personally  
25 think, that talking about the meetings that we usually  
26 have. You said when we were under EMAB 3 or 4 meetings  
27 per year but now under DDMI now we should have 3  
28 meetings a year on site then also we should have a  
29 meeting in Yellowknife for the 4<sup>th</sup> time, also have a  
30 meeting in Yellowknife as well. Don't make too much of  
31 a gap in between. There are some things ...  
32 sometimes you lose a few things so we should have a 4<sup>th</sup>  
33 meeting in Yellowknife. Have a meeting 3 times a year  
34 on site and also we also have an office in  
35 Yellowknife. DDMI have an office in Yellowknife but  
36 also we should have the 4<sup>th</sup> meeting in Yellowknife so  
37 with the room. But today now it's cold now. The  
38 weather could be very unpredictable at this time of  
39 year but have a meeting here in the summer when the  
40 scenery is good and everything is visible from the  
41 time for the closure of the mine. We are here for  
42 each other on how to make a really good plan for the  
43 closure of the mine, also to do a proper reclamation

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1 from now until the closure. Let's make a good plan  
2 but I know it's very it's pretty close to lunch time  
3 and I really need to go to the washroom.

4 **Natasha Thorpe:** 3 days vs. 4 days?

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.

10 **Louis Zoe:** The meeting . . . would be nice to come here in the  
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. 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. We are  
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.

35 **Joanne Barnaby:** If there are no more comments that we outlined. We  
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  
39 to know if DDMI could go to the communities to present



## Appendix B DDMI Day 3 – Session Notes

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

3    **Colleen English:** So within each of your different nations we have set  
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?

14

15   **LUNCH**

16

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.

28   **(Presentation)**

29   **Alfred Baillargeon:** What you just had mentioned, today what are  
30                  peoples' thoughts? We would agree to it and we put down  
31                  some recommendations, so we will have the feedback from  
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  
39                  are the kinds of things that once discussion we agree to

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### DDMI Day 3 – Session Notes

1 one thing is good and we make some kind of recommendation  
2 to Diavik and we will have the feedback. We need to  
3 discuss this until they agree to it.

4 **Joanne Barnaby:** It will take time you are right, but we also want to  
5 give direction, so that if they agree that the slime can be  
6 removed what else do we want to see happen there? Should we  
7 keep the animals away because we were worried about animals  
8 getting stuck in it? If it is taken away do we want to  
9 encourage animals to return here or discourage them even if  
10 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  
13 limit weight, and there is no problem with trucks shipping.  
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. That's  
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?

27 **Natasha Thorpe:** We can't answer those questions. DDMI people will be  
28 back later today and tomorrow.

29 **Joanne Barnaby:** We can't answer those questions so there is no use  
30 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  
35 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

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### DDMI Day 3 – Session Notes

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  
4 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  
8 means sand or crushed rock mixed with water so that it can  
9 be moved through the pipes using special types of pumps  
10 that are rubber lined.

11 **Mona Himiak:** Maybe they should try and plant some vegetation in the  
12 ponds and then test the plants to see if there is any  
13 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?

23 Everyone voted in favour of only giving the one option of  
24 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  
33 really the option we really wanted in the first place, to  
34 encourage animals to be around the whole island and plus  
35 the vegetation, we wanted it to come as closely as we  
36 wanted in the first place.

37

## Appendix B DDMI Day 3 – Session Notes

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

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

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

34 **Alfred Baillargeon:** Is there more to discuss and what is the agenda?

35 **Joanne Barnaby:** Break now?

36

37 **BREAK**

38

39

## Appendix B 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.

6 **Joanne Barnaby:** Maybe one thing that we haven't got any ideas on so  
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  
16 bottom of the pond). So if they still have it. It should be  
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.

21 Once all the stuff is gone, the slime, it will be purified  
22 again and then when the water flows in, there will be new  
23 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  
33 supposed to have saved it.

34 **Joanne Barnaby:** So right now there is the larger processed kimberlite.  
35 So you are saying on top of that you would want the  
36 original ground cover on top of that?

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

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

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

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

34 **Natasha Thorpe:** I think what I heard from Bobby is that caribou will  
35 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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1            deep on both sides. Along as they have that footing, they  
2            can really climb those hills.

3 **Joanne Barnaby:** I think some were concerned that maybe they could make  
4            it up there but should we make it safer and how would we do  
5            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?

14 **Jonas Lafferty:** (Aboriginal language) the slope is really deep down  
15            and we seeing and we find soil and they making a dam with  
16            it and some of the slope is really steep down how maybe we  
17            can smooth it down. Now if you look at it it's kind of  
18            scary for animals to climb even caribou it can get hurt and  
19            so that's the kind of thing that they are discussing. Louis  
20            you understand.

21 **Louis Zoe:** We know that in those rock piles there are really high and  
22            steep down maybe you can kind of slope it down to be easier  
23            for animals to get on top. Once there is a big snow bank so  
24            kind of slope it down but once there is lots of snow they  
25            get lots of snow and climb big piles of rocks and have it a  
26            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  
39            caribou will never go to that place until after many years  
40            of closure.



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

7 Muskox hair if we put it up maybe the wolverines would take  
8 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?

17 Look at both open pits they had used ammonia nitrate for  
18 the blasting and that's not good for the fish. Leave it  
19 with just water.

20 They are saying that the liner is goo but after so many  
21 years it will rot and there will be a seepage in there.

22 Every water no matter of good of a dam there will always be  
23 a leakage so tell the closure of the mine just leave it as  
24 it is and just continue to meet with them the way the white  
25 people do things the way they destroy our land. We are  
26 working with you guys and try to come up with proper  
27 recommendations try to come up with good words and  
28 recommendations. If it's a good suggestion and work from  
29 there.

30 **Joanne Barnaby:** Everybody is in agreement that they shouldn't do the  
31 re-vegetation until after the mine is finished.

32 What kinds of plants should grow or be planted after  
33 closure?

34 **Alfred Lockhart:** Kind of vegetation would be things that grow in the  
35 barren land. Moss, lichen, no carrots.

36 **Natasha Thorpe:** I know there was a lot of really rich discussion  
37 around this at the aquatic effects monitoring camp, about  
38 how the land makes fresh water. I am wondering about when  
39 you are collecting drinking water, what is it that you look

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

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

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

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

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

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

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

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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,  
12 is there anything we want to say about how? They are going  
13 to be continuing to fill in the slopes with more gravel  
14 texture and the bigger processed kimberlite and so we could  
15 make recommendations on how steep that should be and  
16 therefore how high the water should be? Should it be deep  
17 or shallow? So that's another factor to think about.

18 So we are encouraging Diavik to make it as natural as  
19 possible and as it was before. So we need to identify what  
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  
32 area and start growing?

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  
37 the mine.

38 **Colleen English:** Wildlife mortality presentation.

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1 **Wayne Langenhan:** What is natural?

2 **Colleen English:** If we do find a dead carcass and we contact ENR and  
3 they decide if we ship them back to them for testing.

4 When we talk about natural we mean there is nothing related  
5 to the mine, like a grizzly bear got a caribou. Not natural  
6 is anything like being hit by a haul truck or ingested  
7 something.

8 **Mona Himiak:** Water intake is where?

9 **Colleen English:** Where we pull all of our fresh water in from the Lac  
10 de Gras.

11 **Alfred Baillargeon:**

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

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

35 **Colleen English:** We do send them to the communities but we don't send  
36 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

## Appendix B

### DDMI Day 3 – Session Notes

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

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

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

29 **Colleen English:** Housekeeping items, check out time.

30

31 **END**

## Appendix B DDMI Day 4 – Session Notes

1 **Janelle Nitsiza:** Opening Prayer

2 **Joanne Barnaby:** Review and discussion on draft recommendations.

3 **Bobby Algona:** The shoreline, I think with all that fine sand and  
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  
10 natural trees or water bound trees that are in the area.  
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  
14 put something in the bottom of that. It's going to become  
15 mud maybe later on the bottom of that shoreline just like  
16 mud. 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.

27 **Joanne Barnaby:** I thought we agreed yesterday about wanting animals to  
28 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.

37

## Appendix B

### DDMI Day 4 – Session Notes

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. It's not  
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  
11 can move it. So if they are putting it through a hose to  
12 pump it, I can't see where there is a risk involved. It  
13 shouldn't be a problem.

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

16 **Alfred Baillargeon:** We talk about the recommendations - those are  
17 good recommendations. The tailings pond, the PKC, it's not  
18 going to be done tomorrow. In the future, when it comes to  
19 the closure of the mine, the chemical things in the PKC  
20 will be there for a long time I don't think in the pond  
21 there would be fish. It's going to be quite a while before  
22 the pond gets back to it's original state so maybe we have  
23 to think about ways in the future that maybe the fish can  
24 be put back in there. What Wayne has said is right. How  
25 are they are going to pump things out? They can't ever pump  
26 the slurry out - that PKC - without water. Everything that  
27 has to go in the water, it will maybe get sick and die and  
28 will get poisoned. I don't think we can ever use the pond  
29 once this has been mined, I don't think. Human beings will  
30 be afraid to have eaten anything from this island again. So  
31 after the closure, we still have to discuss this in further  
32 meetings. We don't know when there's going to be closure so  
33 we are just talking about the recommendations here. I  
34 prefer that no aquatic things be put back in the PKC pond.  
35 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  
37 containment at and I wanted to mention that most of the  
38 lake had been drained of water or evaporated. The edges  
39 had a lot of vegetation so I asked the environmentalist if  
40 they planted that vegetation and they said no it grew on  
41 its own. Also caribou were crossing quite a bit of that  
42 containment area because it was dry and was solid so I was



## Appendix B DDMI Day 4 – Session Notes

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

6 **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?

10 **Alfred Lockhart:** Ekati have 4 ponds right from the drain. They built a  
11 dike with rocks, not too big, so that the water will flow  
12 through and collect all the slimes and whatever is in the  
13 slime and then it goes to another lake and then another  
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.  
16 That's what they say so maybe that's something that they  
17 should look into?

18 **Joanne Barnaby:** That's kind of what we are saying because there were a  
19 few natural ponds.

20 **Wayne Langenhan:** I was just wondering if there was any word back about  
21 what Gord was saying yesterday about the pond where the  
22 slime is? Here is what we are talking about and he said it  
23 had been fished out but wasn't really sure because it was  
24 before he started working here at this mine. We would like  
25 to know for sure exactly what happened to the stock that  
26 was in that lake.

27 **Natasha Thorpe:** Diavik's coming back in the room at 10:30 so we can  
28 check then.

29 **Joanne Barnaby:** Where did they put all the original material that was  
30 removed? Can it be used for reclamation?

31 So are we happy with that? Good job. Very clear  
32 recommendations.

33 **Ed Jones:** In the event that Diavik doesn't accept this  
34 recommendation, what steps can we take and how soon will  
35 Diavik make final plans for the PKC or more time down the  
36 road?

## Appendix B

### DDMI Day 4 – Session Notes

1 **Natasha Thorpe:** Gord mentioned yesterday that some of the guidance  
2 from the TK Panel will help guide what they do with the  
3 slopes.

4 **Wayne Langenhan:** I am just wondering, like Ed said, what steps can we  
5 take to put more pressure on? Say they don't accept any  
6 recommendations, nothing is carved in stone here and they  
7 can just push us aside (maybe not roughly but discreetly).  
8 So we got to have some sort of leverage here. So I am just  
9 wondering if we cut their water off. We have to figure out  
10 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.

17 **Joanne Barnaby:** We can ask. Did we lose something? I thought we talked  
18 yesterday about a recommendation that they begin removing  
19 the new slurry that's produced from here on in so that they  
20 don't keep adding to the slurry in the pond?

21 **Ed Jones:** We could recommend to Diavik and they stop recycling the  
22 water from the PKC 2 or 3 years before they are done.

23 **Joanne Barnaby:** To begin drying out that pond so they can access the  
24 slurry to take it out?

25 **Ed Jones:** Once the water drains from the slurry, or evaporates, that  
26 dried stuff is not toxic and won't pose any danger to  
27 wildlife. I was thinking if they should go that route of  
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  
32 they removed in the first place. They might go that route  
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  
35 what I just described.

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.

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### DDMI Day 4 – Session Notes

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  
3 to the middle of the pond. They should try to clean it  
4 then, before more slurry comes in.

5 **Wayne Langenhan:** At the breakfast table this morning Alfred Lockhart,  
6 Ed Jones, August Enzo and I were talking about getting  
7 this slime off the mine site with the least amount to  
8 danger. We discussed that maybe the mine should start  
9 talking about get in touch with all the mines and the  
10 government and get a machine built to dry this stuff. This  
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  
20 favour.

21 We need to decide who is going to present these  
22 recommendations to Diavik when they come back in.

23

24 **BREAK**

25

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  
34 to leave under the ground? How about the oil? There has to  
35 be a certain amount of oil, hydraulic fluid, brake fluid  
36 stuff from the machinery due to break downs. I think we  
37 should talk about clean up from underground.

## Appendix B DDMI Day 4 – Session Notes

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

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

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

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

## Appendix B

### DDMI Day 4 – Session Notes

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

3 One time there was a blast and from that blast a lot of  
4 things can go even when it's windy and the wind can blow  
5 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  
9 but it rarely every comes the way of Ed and Wayne and the  
10 information is not passed and if they do get feedback from  
11 the mines. I remember that at one meeting Ed gave feedback  
12 on the air quality around the mines and how to put these  
13 devices on the exhaust to clear up the diesel and they  
14 weren't a very costly thing but I haven't see anything on  
15 those trucks so obviously that recommendation wasn't  
16 followed. And if they stop and have a coffee break and  
17 there are leaks, there should be one area where they park  
18 over top of a pan or something to catch any possible leaks  
19 and we have had no feedback as far as the other  
20 recommendations.

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

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

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

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

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

## Appendix B DDMI Day 4 – Session Notes

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

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

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

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

39 **Janelle Nitsiza:** PRESENTATION OF RECOMMENDATIONS

40

## Appendix B DDMI Day 4 – Session Notes

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

34



## Appendix B

### DDMI Day 4 – Session Notes

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 access. Otherwise there wouldn't have been any fish in  
5 that small lake. And so somehow that needs to be  
6 accommodated.

7 **Gord MacDonald:** I get the basis for that, having fish back in the  
8 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.

13 **Joanne Barnaby:** That was part of the point related to the last bullet,  
14 explore cost sharing with other mines for some of this  
15 technology that might make this more feasible. Wayne and Ed  
16 have had some ideas for equipment that could be used to  
17 perhaps dewater the slurry.

18 **Gord MacDonald:** Thanks for that. Removing the slimes from the PKC is  
19 included in most of the 16 ideas and probably 3 of the 5  
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  
22 silver bullet to help us deal with them. The best one was  
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. More  
26 than just for caribou, but fish as well.

27 I really like the idea of trying to simulate what was in  
28 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  
37 cover? Lake bottom? How accessible is it and what state is  
38 it in? Was the intention to bring that back after closure?

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### DDMI Day 4 – Session Notes

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

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

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

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

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

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### DDMI Day 4 – Session Notes

1           one of the suggestions we started to think about. Now we  
2           want to encourage wildlife and fish and habitat that was  
3           there before you started taking things out.

4   **Gord MacDonald:** Thank you Bobby. That's what we thought, but I wanted  
5           to be clear.

6   **Joanne Barnaby:** Your question about water and water quality and the  
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?

11   **Gord MacDonald:** I have to compliment you on absorbing the amount of  
12           information you have had to.

13   **Joanne Barnaby:** Preliminary view of the 16 options.

14   **Gord MacDonald:** Presentation of 16 ideas.

15           We will look at the slimes from the perspective of a  
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?

20   **Bobby Algona:** Like I said in the first place, why can't we deal  
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.

26   **Joanne Barnaby:** I think Wayne you are talking about how to achieve  
27           your recommendation.

28   **Wayne Langenhan:** This is sort of what we have come up with, we don't  
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  
37           of taking it out wet. Maybe we could get a kiln to dry

## Appendix B

### DDMI Day 4 – Session Notes

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

6 **Gord MacDonald:** The idea of drying it or treating it is about the same  
7 thing as what they are doing it but the question is if we  
8 could make it like a solid or soil why do we have to take  
9 it off site? If you could make it into a cake my question  
10 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.

15 **Gord MacDonald:** I get that the perfect solution is always to ship it  
16 off but it doesn't meet the same criteria as hazardous  
17 material.

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 **Bobby Algona:** All along I have been really leery of the contents of  
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 soon. 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 concerns. Saying we wanted to ship it out is because we  
30 don't know what is in that, the content. We don't want to  
31 get it into our waters.

32 **Natasha Thorpe:** As a facilitator, I've been incredibly impressed at  
33 the action oriented solutions that people in the panel have  
34 come forward with and I really see a genuine willingness to  
35 come up with the best solution as well as a genuine  
36 willingness to work together so it's great to see.

37

## Appendix B DDMI Day 4 – Session Notes

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.

5

6 **ROUND TABLE**

7

8 **August Enzo:** 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.

25 **Mark Taletok:** I would like to thank you too for the discussions that  
26 we have had. It was very informative and when we talk  
27 about what we know - as aboriginal people - it is very  
28 informative. For those that work in mining companies, it's  
29 very important too that we know. I thank you for allowing  
30 me to be a participant.

31 **Bobby Algona:** Thank you very much again for inviting us as well,  
32 Diavik, as we are making decisions here. It is very  
33 important. Not rushing into decisions that we have. If we  
34 work together and help each other in discussions for  
35 anything hazardous that we don't want in our environment,  
36 in the lakes, in the rivers and as well it's very important  
37 that we work together. Joanne and Natasha and they help us

## Appendix B DDMI Day 4 – Session Notes

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

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

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

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

## Appendix B

### DDMI Day 4 – Session Notes

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

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

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

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

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

34 **Mona Himiak:** This is my third meeting and I am learning a lot. I've  
35 been raised on the land so I am kind of getting to know  
36 what to think about and what the concerns and all that. I'd  
37 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.



## Appendix B

### DDMI Day 4 – Session Notes

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

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

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

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

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

## Appendix B DDMI Day 4 – Session Notes

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

14 **Alfred Baillargeon:** Closing prayer

15 **Mona Tiktalek:** Closing prayer.

16

17 **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:

1. 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

Signatures:

\_\_\_\_\_

**Participant**

\_\_\_\_\_

**Aboriginal Organization**

\_\_\_\_\_

**Diavik Diamond Mines Inc.**

\_\_\_\_\_

**DDMI Contractor**

## **Appendix D**

### **Presentations by Diavik**

# Diavik Diamond Mines

## TK/IQ Panel Session #6

### Panel Process & Content – DDMI Recommendations

25 October 2013, DDMI Mine Site



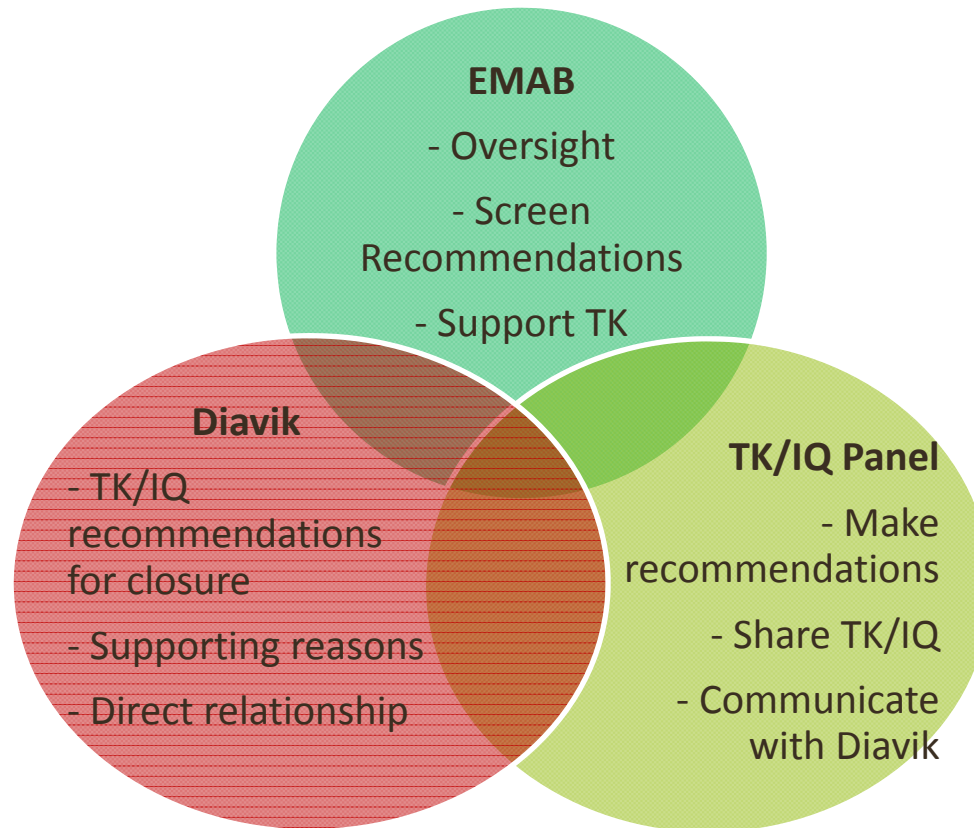
Document #:  
Template #: DCON-029-1010 R2





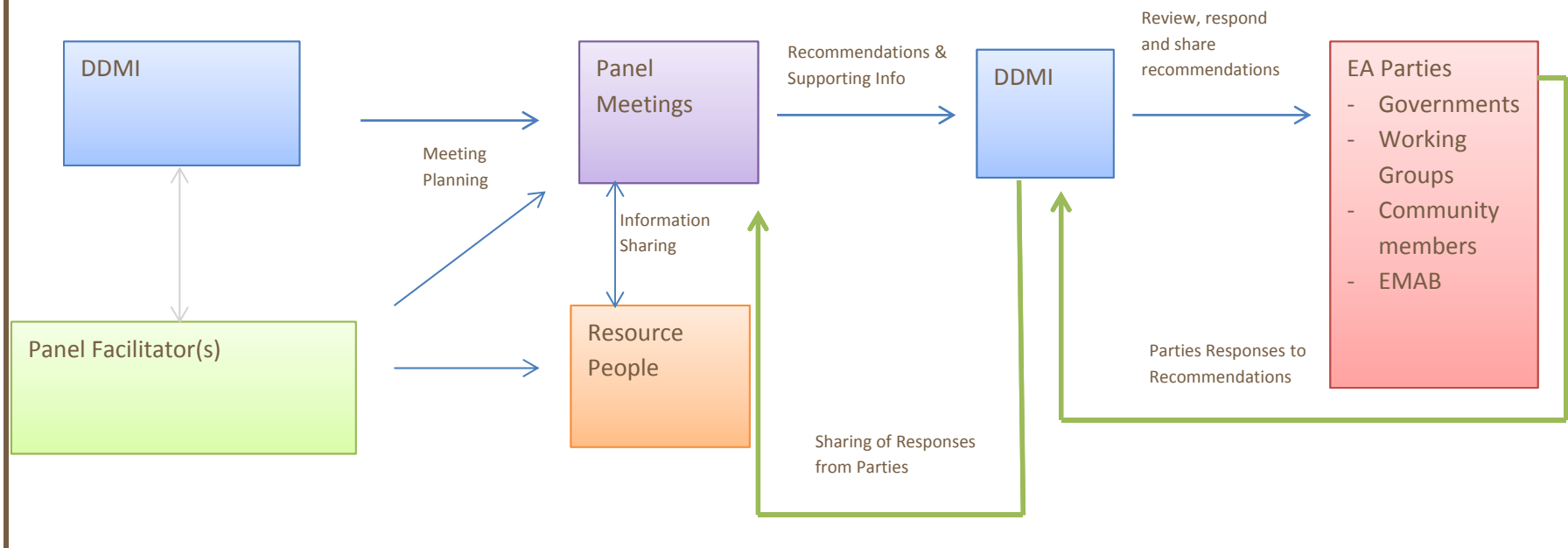
# TK/IQ Panel – From EMAB to Diavik – How did we get here?

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# 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

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- 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

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- 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
- EMAB invited to observe



# Diavik's Role in the Process

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- 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 TK/IQ Panel Discussion – October 2013

Document #:  
Template #: DCON-029-1010 R2



# PKC Closure Planning

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## **Content**

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Closure Plan – How we got here

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The PKC – focus for TK Panel Session 6

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- What it is and where it is

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- Closure plan development

---

- Preferred closure option

---

- Key information requests from TK Panel

# 1998 Pre-feasibility





# Overview of Closure Plan by Area

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# Open pits

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# Rock Pile

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# North inlet

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# Infrastructure

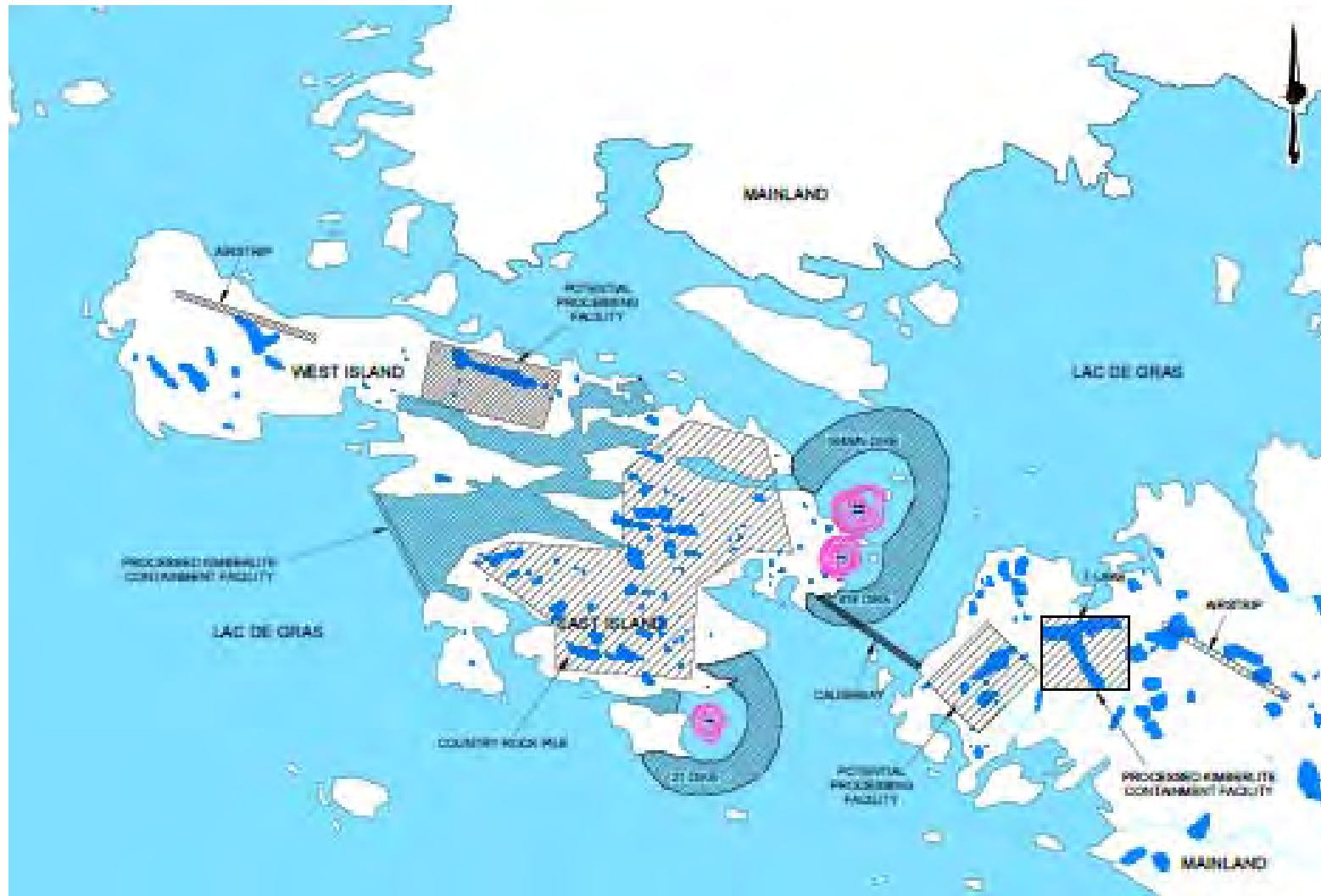




PKC



# PKC Site Selection



## 2001 Closure Option for PKC

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## PKC Closure - current objectives

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- 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

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- 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

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# 16 Options

**Table 2-1: Alternatives Attributes Summary**

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		X	X							X			
2	2011a closure concept (nominal cover, residual pond with outlet, PK slimes untreated)	X		X			X	X	X	X				
3	2011b closure concept (minimal thickness domed cover, PK slimes untreated)		X	X			X	X	X	X	X			
4	Do nothing	X		X										
5	Minimal intervention													
6	Dredge PK slimes to pit post-operations, backfill with rock		X			X	X				X			
7	Dredge PK slimes to pit in last year(s) of operations, backfill with rock		X			X	X	X	?	X				
8	Treat and deposit PK slimes to Pond 6		X		X	X	X	X	X		X		X	
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		X	X				X	X	X				
11	Filter fine PK and develop as dry stack		X	X			X	X	X	X				
12	Use paste plant to filter fine PK		X	X			X	X	X	X				
13	Use freeze/thaw cycling to consolidate fine PK						X	X	X		X		X	
14	Treat PK slimes in place (ground improvement)		X		X		X				X			
15	Engineered/floating cover or liner encapsulation over PK slimes	X		X							X			
16	Thermosiphons/tubes to enhance & accelerate freezing		X											X

# 5 Options

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

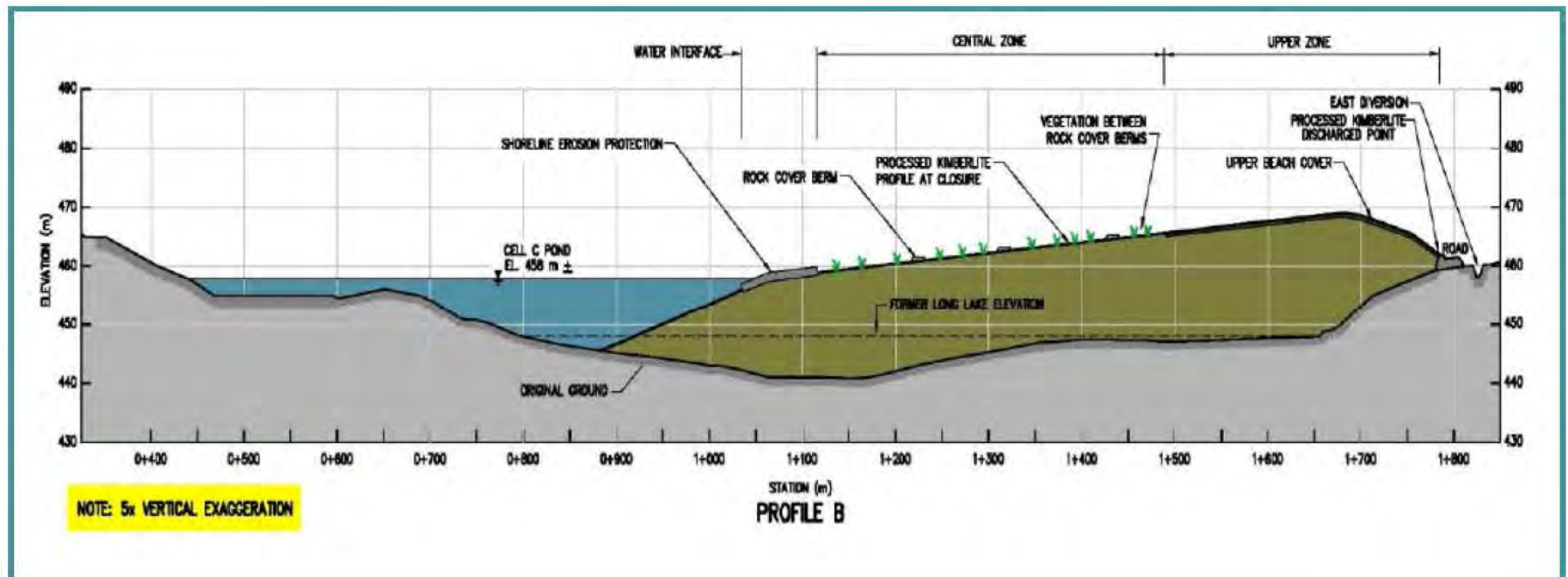
Option 1B – dry cover (rock) – semi-fluid PK removed by dredging to a pit/underground at end of operations.

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

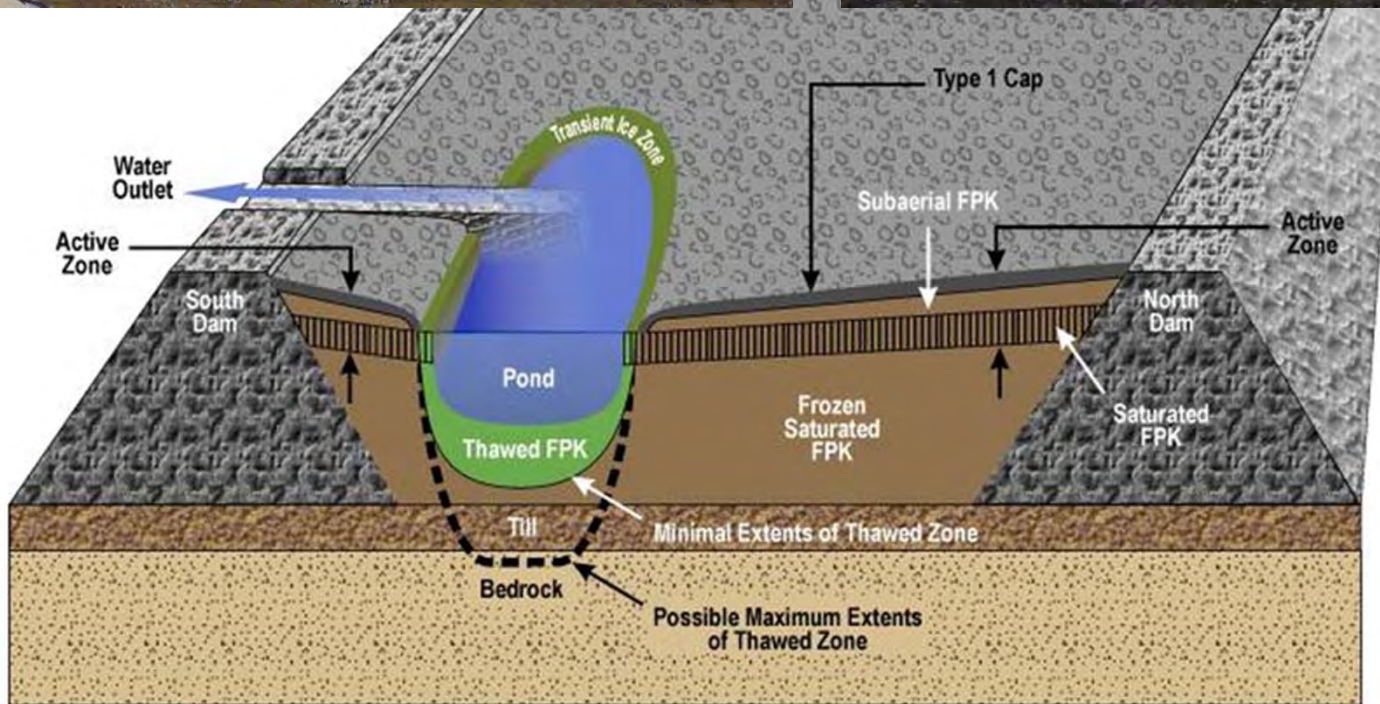
Option 3A – wet cover – semi-fluid PK - removed with treatment and re-beaching during operations.

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

# Ekati's Preferred Option (an example)



# Preferred Closure Design

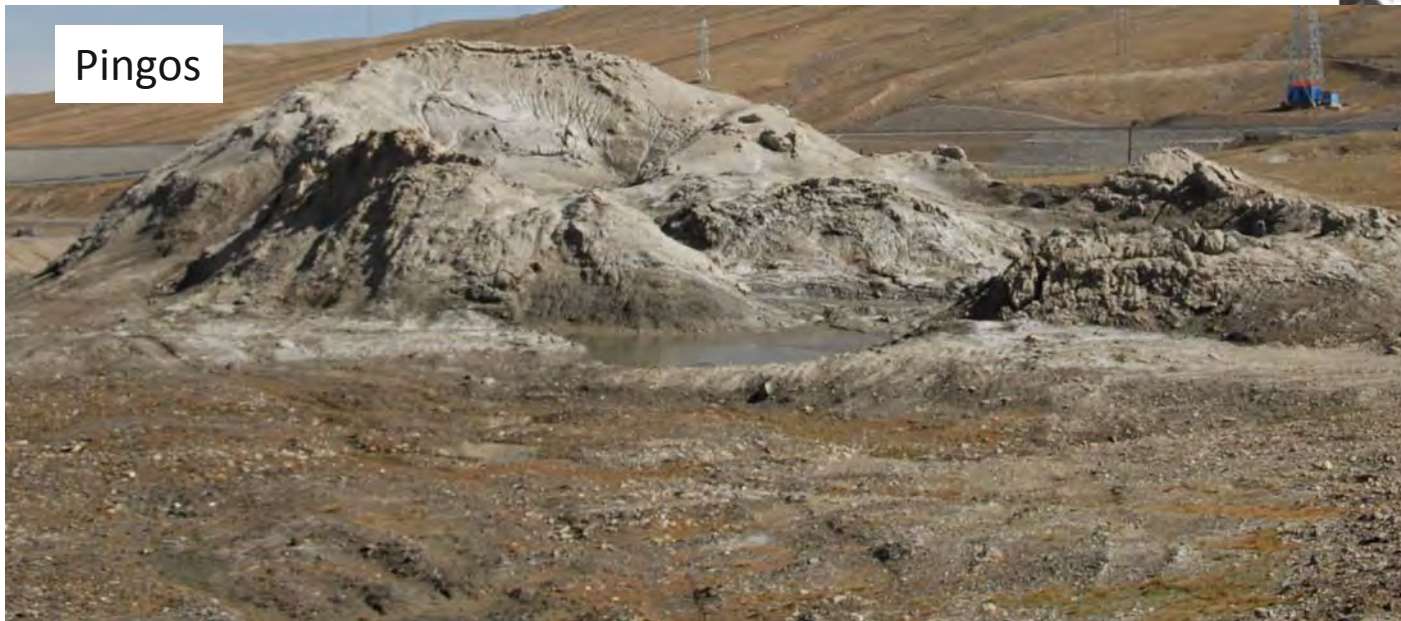
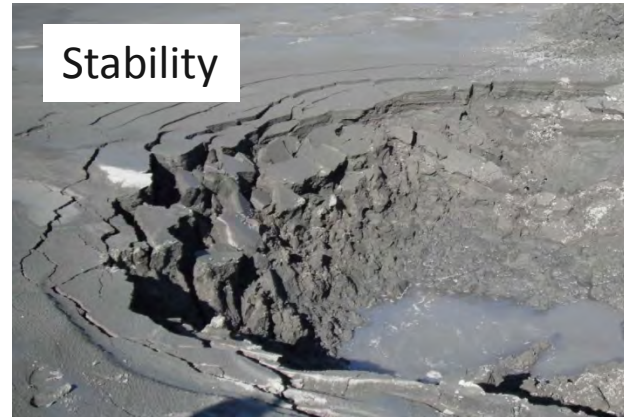




## PKC Closure – Requested Input from PK Panel

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

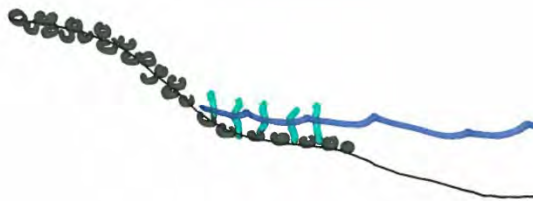
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Regular slope



Steep slope



Wetland slope



# Wildlife use





# Drainage paths

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## 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.

Rio Tinto



# Diavik Diamond Mine

TK Panel for PKC Closure  
October 24-28, 2013



Document #:  
Template #: DCON-029-1010 R5





# July 2006 Off Site

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Aerial  
Observation  
Off Site



# 2009 Activity Budget Off Site

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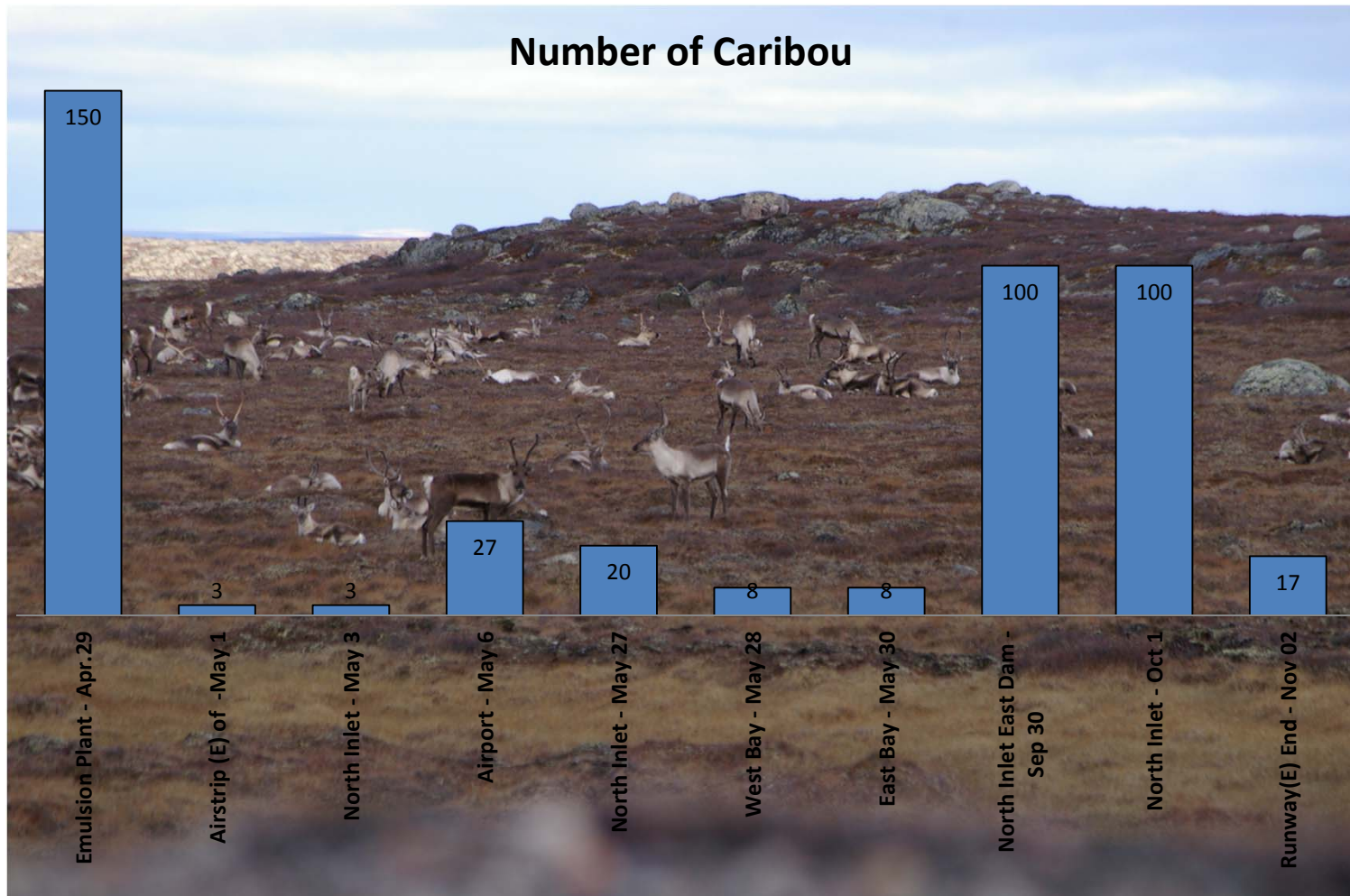
Sept. 25



Document #:  
Template #: DCON-029-1010 R5



# 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

---

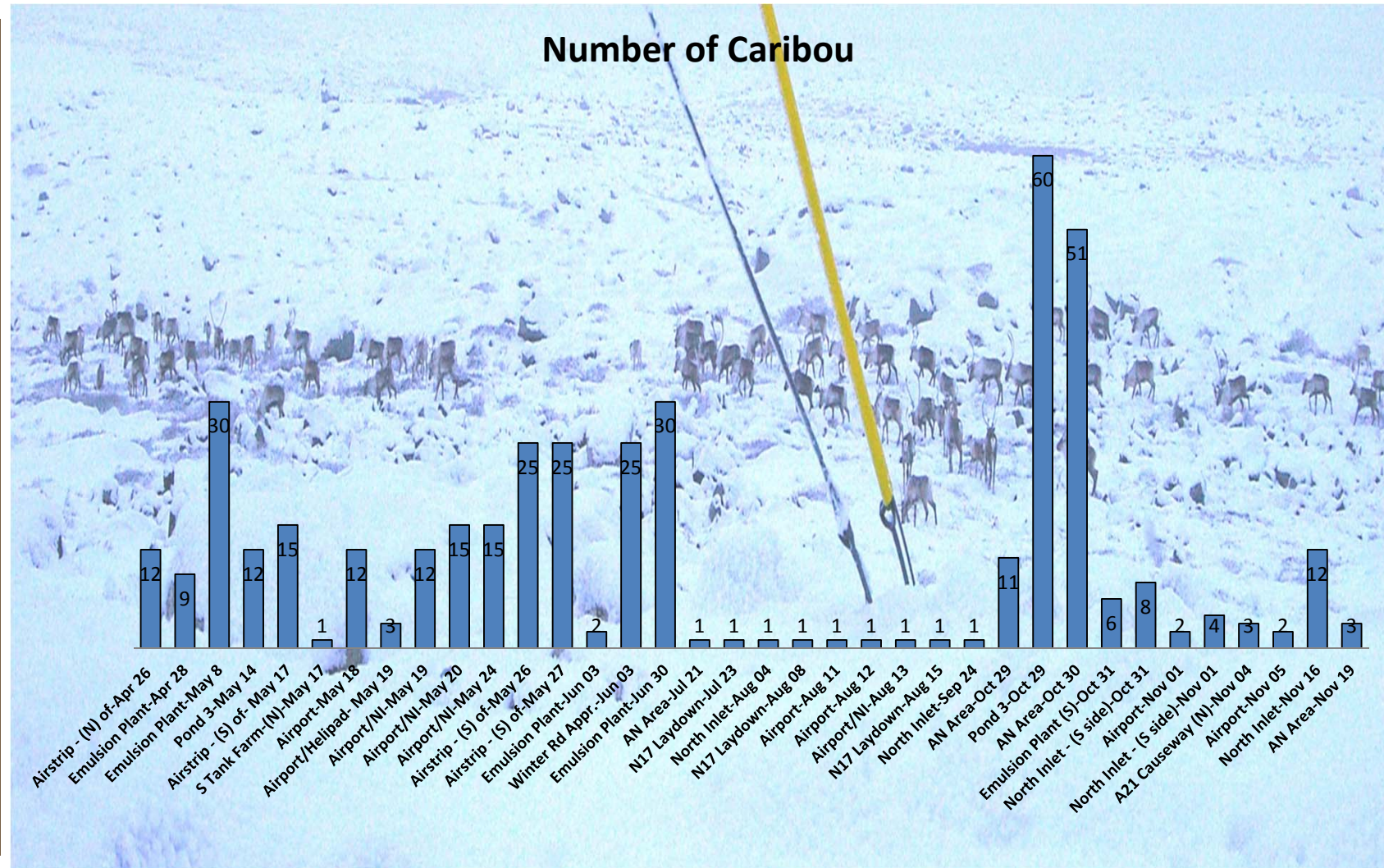
Oct. 14



Document #:  
Template #: DCON-029-1010 R5



# 2010 Caribou Observations on Site



Document #:  
 Template #: DCON-029-1010 R5

# 2010 Activity Budgets on Site

May 08

May 24

Aug 11

Oct 29





# 2010 Caribou Observation Locations

- Apr 26
- Apr 28
- May 8
- May 14/17
- May 17
- May 18
- May 19
- May 19/20
- May 24/26/27
- June 3
- June 3
- June 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
- Nov 16
- Nov 19



Document #:  
Template #: DCON-029-1010 R5

# 2011 Off Site Observation

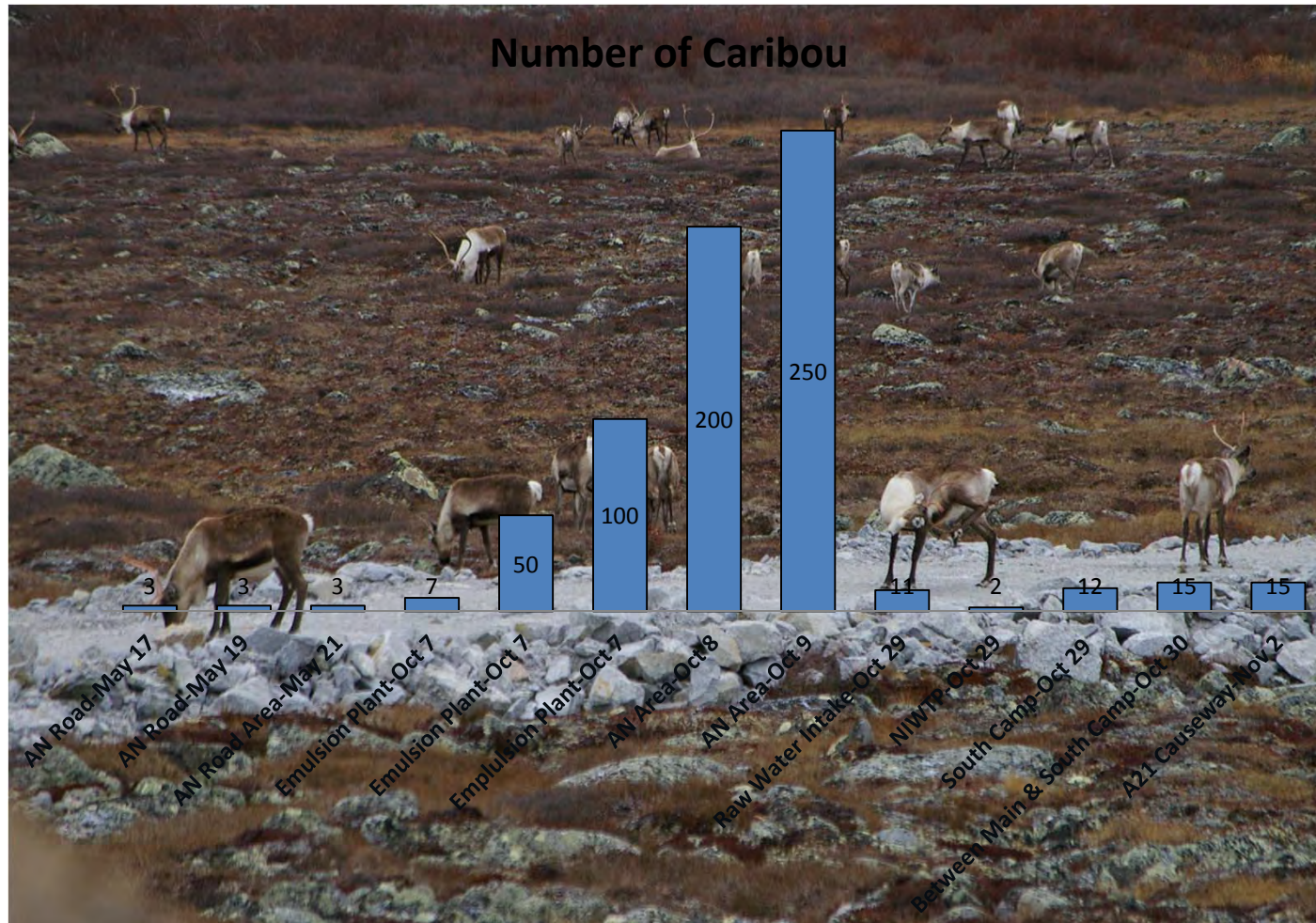
---

Oct. 12





# 2011 Caribou Observations on Site



# 2011 Caribou on Site

May 17

Oct 9

Nov. 2





# 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

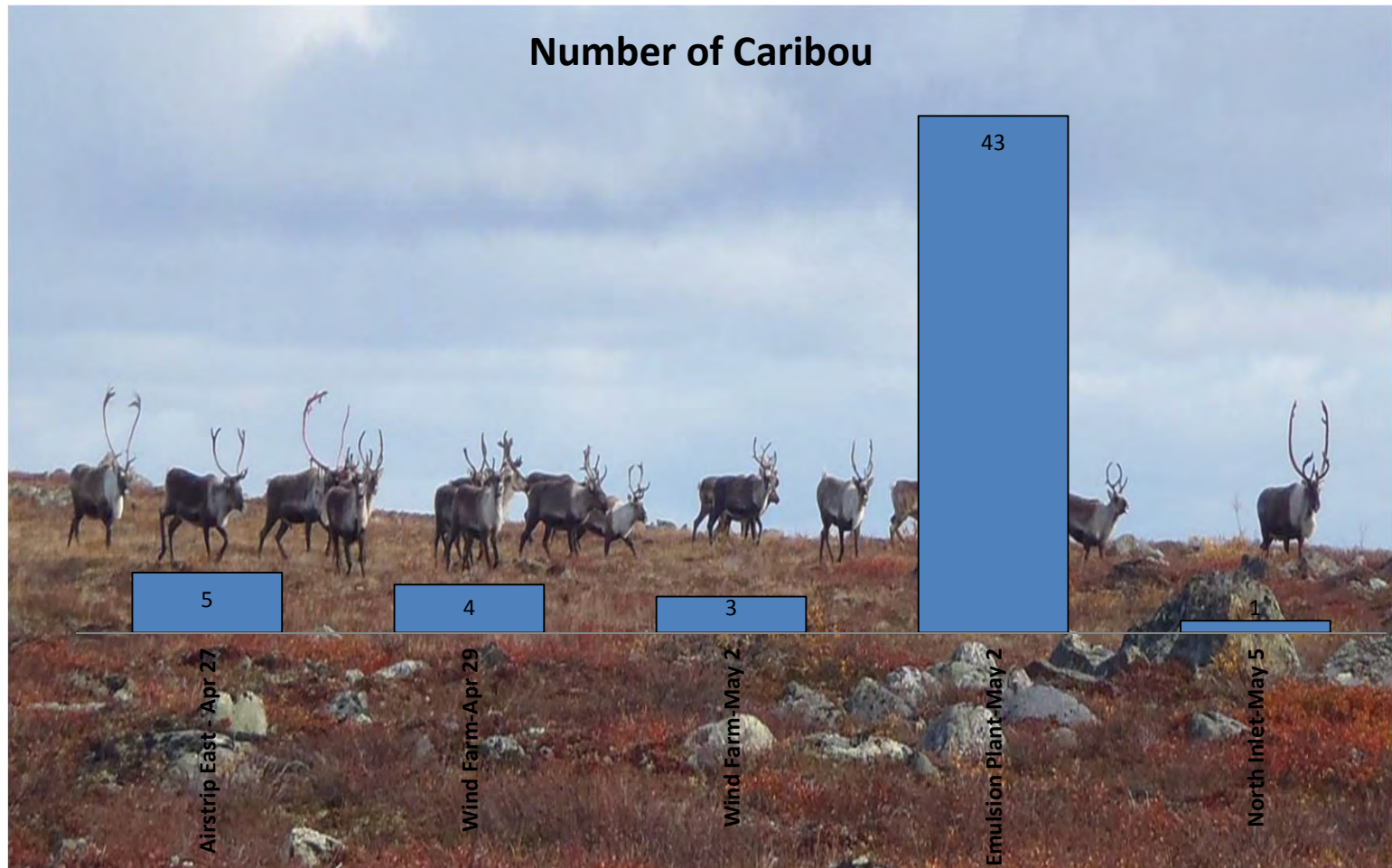
---

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

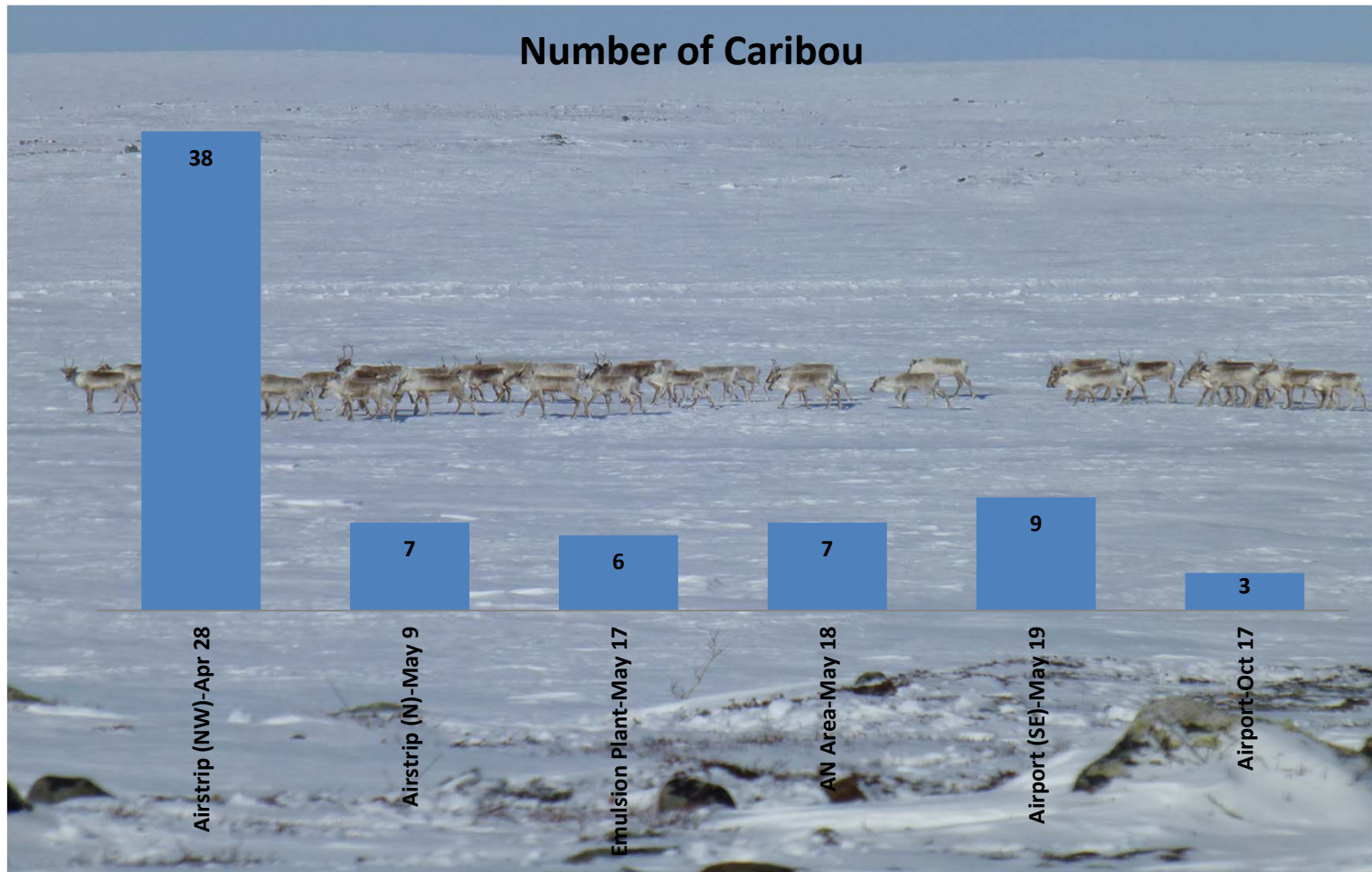
---

Sep. 16





# 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

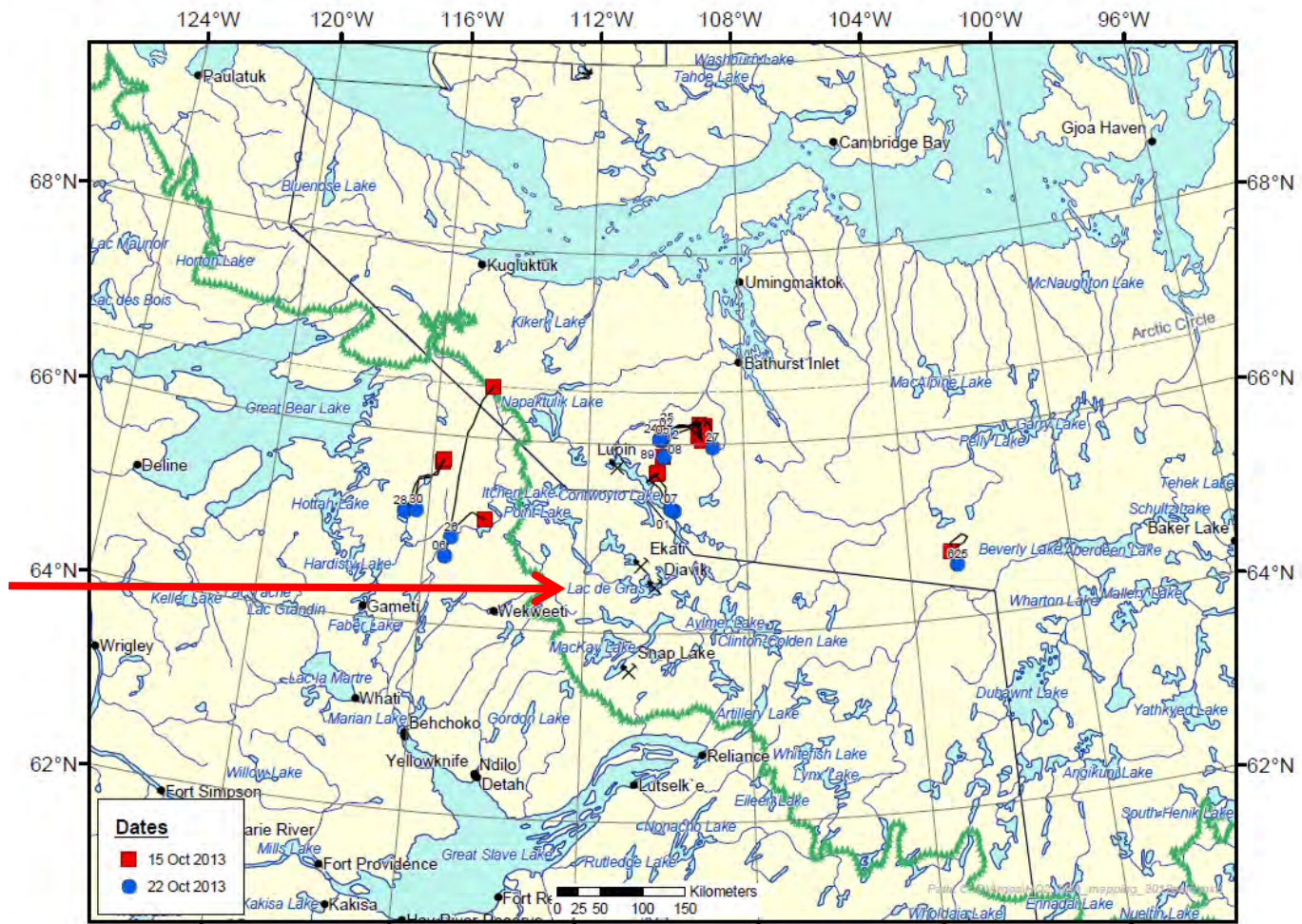
- 2009
- 2010
- 2011
- 2012
- 2013





# Collared Caribou Location Map

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



The caribou are still North & West of Lac de Gras

Rio Tinto



# Diavik Diamond Mine

[Click here to add subtitle](#)

Enter date – September 10, 2013 (use this format)

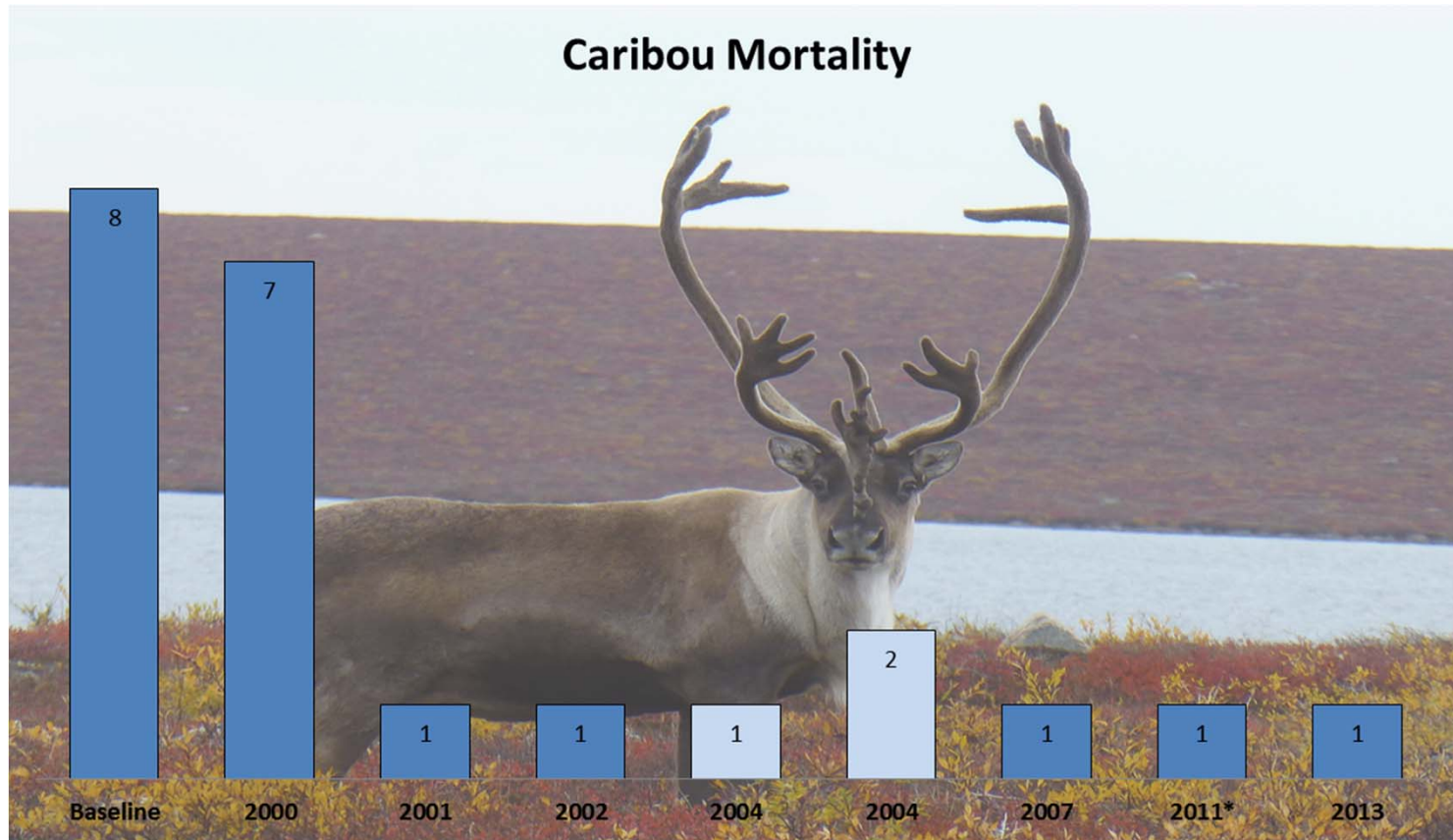


Document #:  
Template #: DCON-029-1010 R5





# Caribou Baseline - 2013



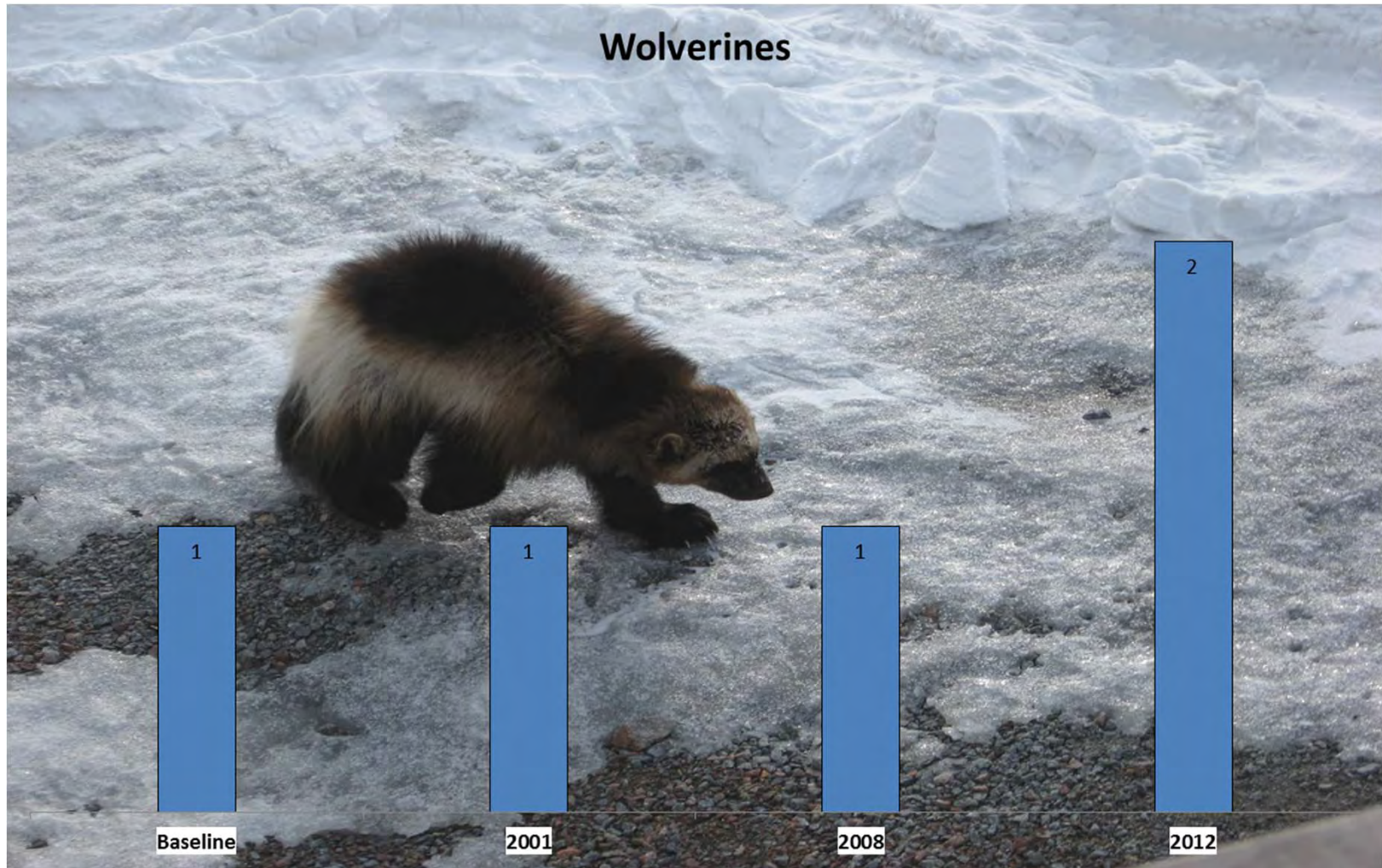
\*Two other caribou carcasses were seen off-site during 2011, but were not located on East Island and were not able to be visited by DDMI staff due to ice conditions and the presence of wolves in the area. 1 was 200 m (600 ft) off A154 dike in June, the other was 400 m (1200 ft) off A21 causeway in November

# Grizzly Bears Baseline - 2013

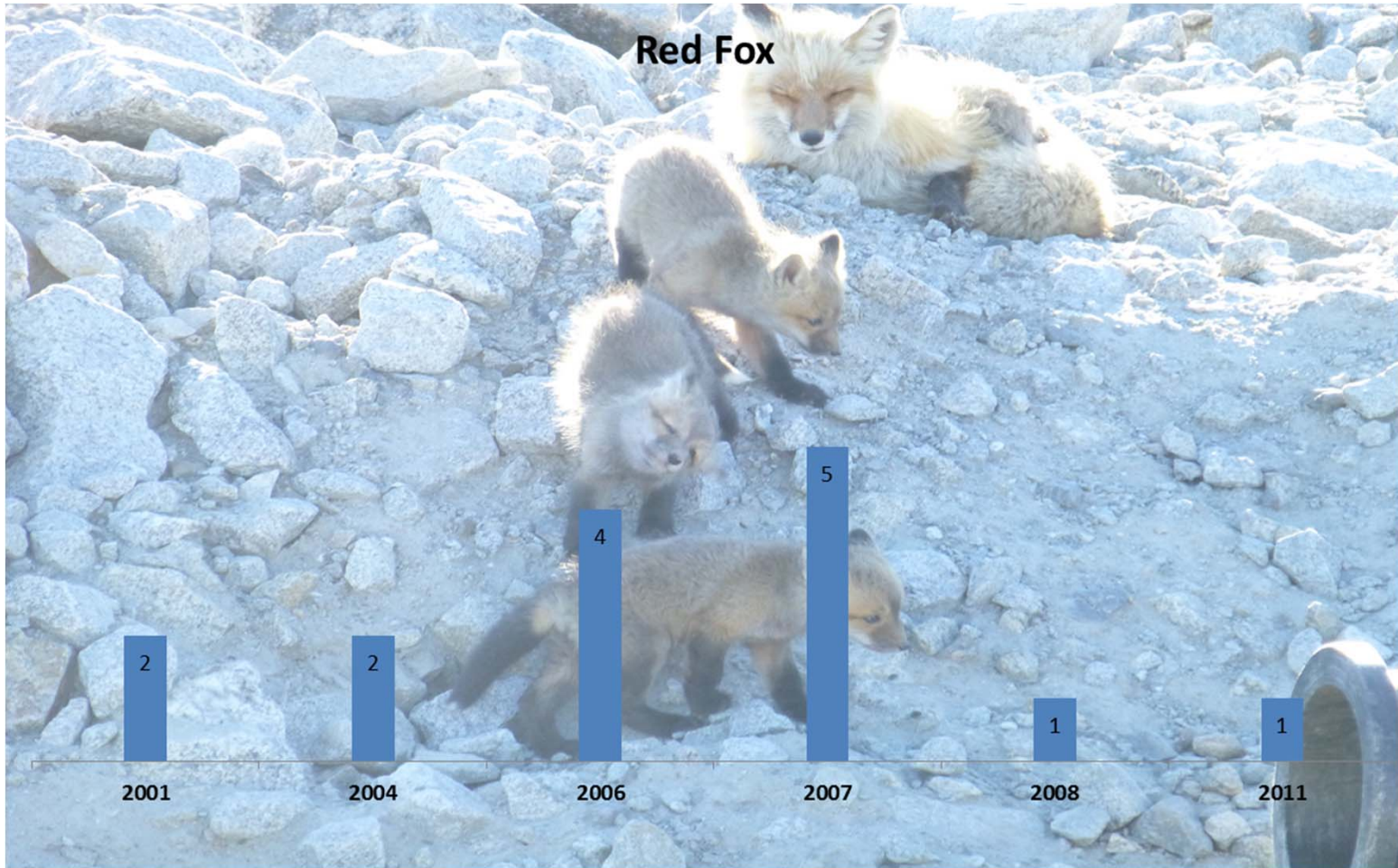




# Wolverine Baseline - 2013



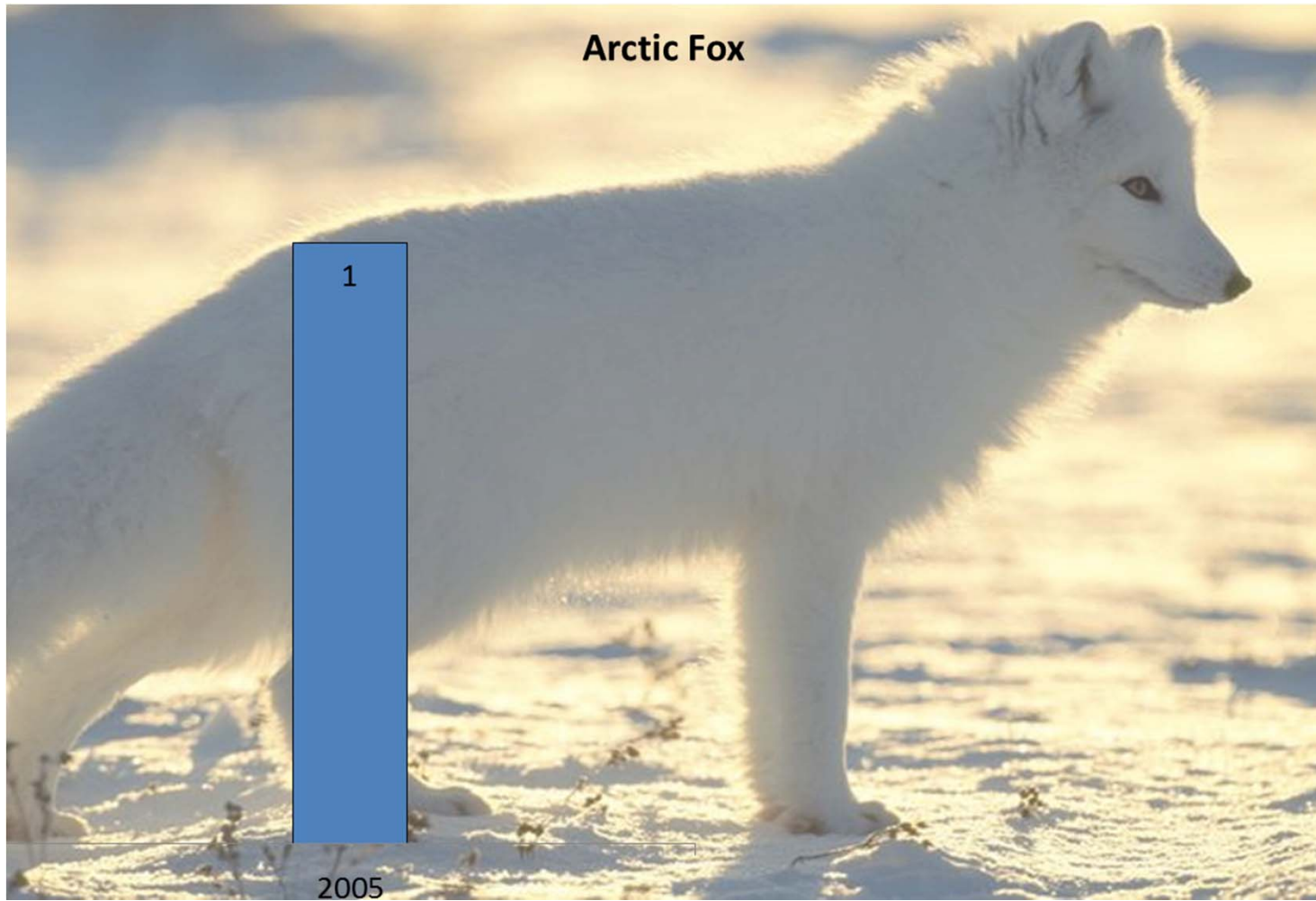
# Red Fox Baseline - 2013



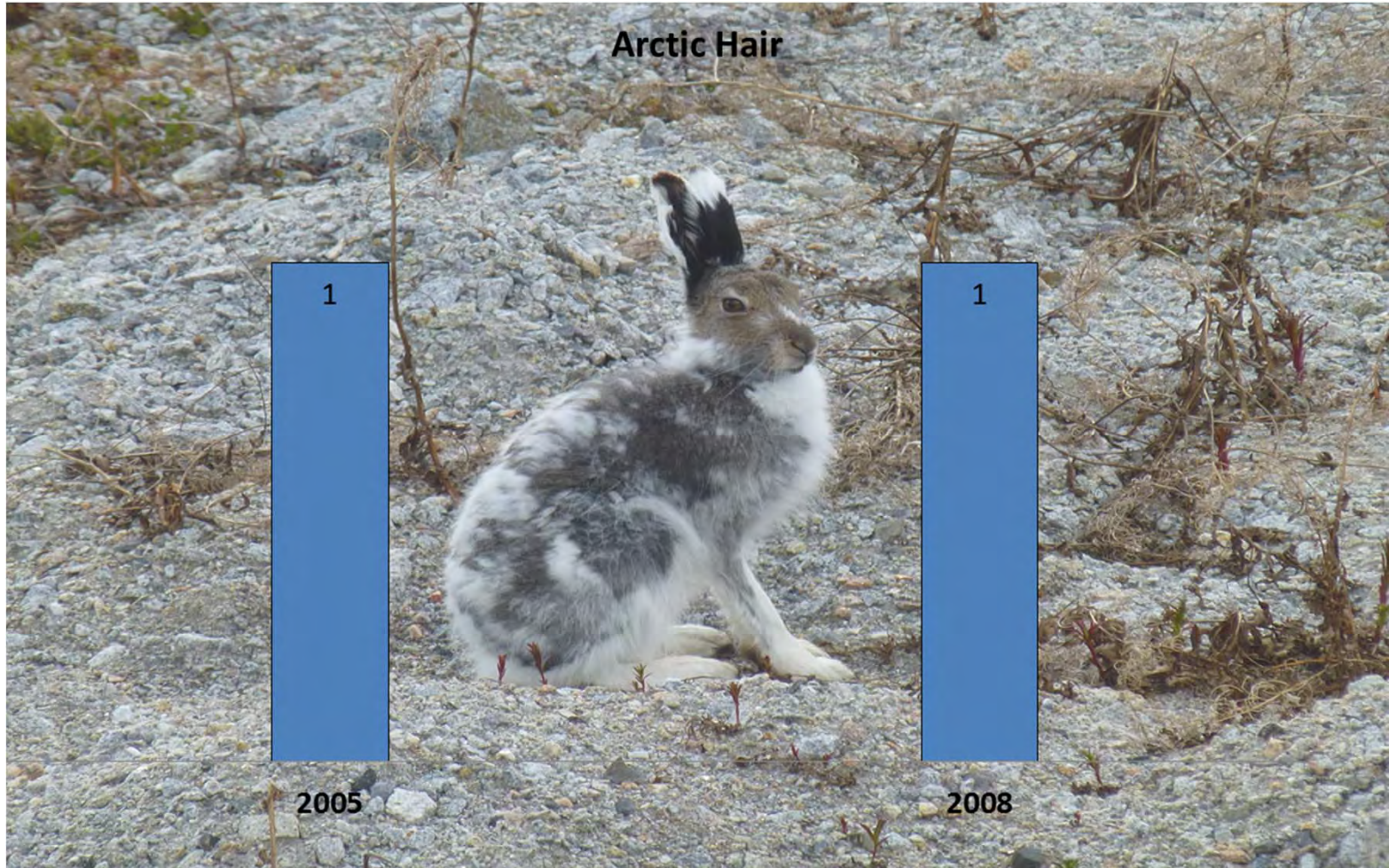


# Arctic Fox Baseline - 2013

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# Arctic Hair Baseline - 2013





# Birds Baseline - 2013

Blue - Peregrine

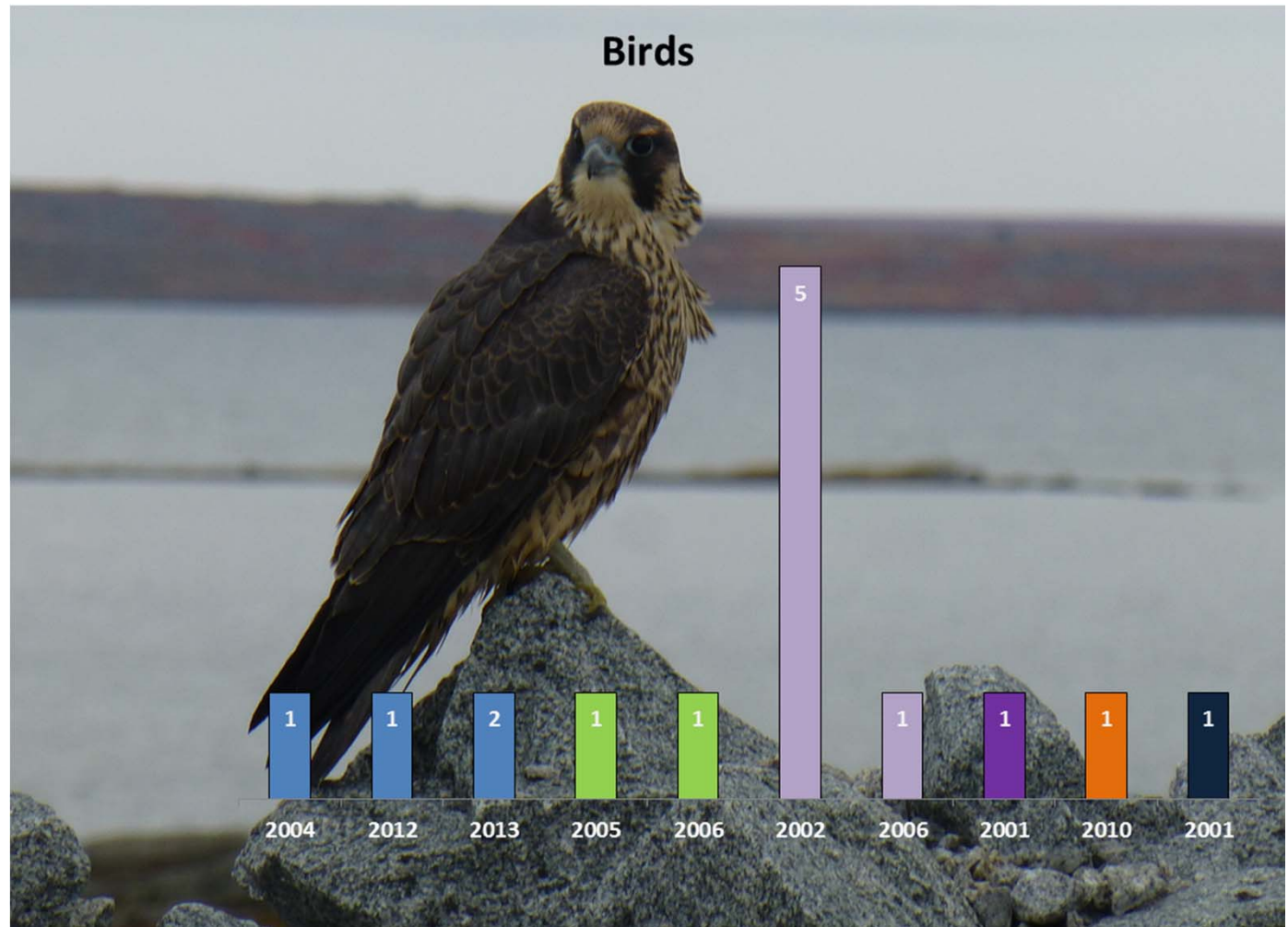
Green - Ravens

Violet - Red Throated Loon

Purple – Scaup Duck

Orange - Short Eared Owl

Dark Green - Canvas Back Duck

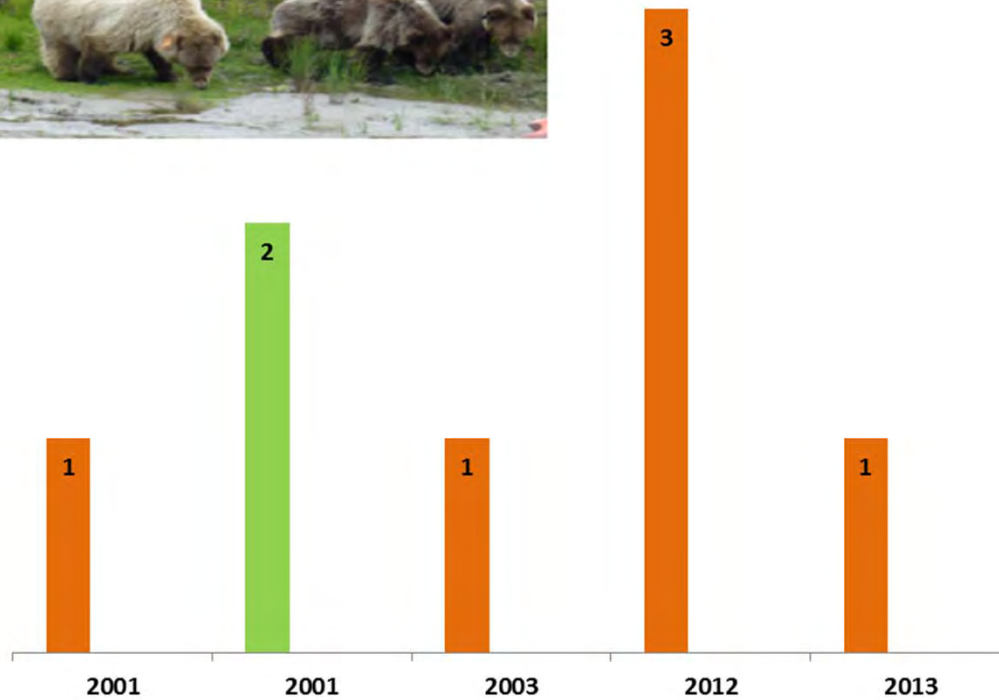


# Relocations Baseline - 2013



■ Grizzly Bear

■ Wolverine



## **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

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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 **informed about your role** for the Panel workshop?

- Very good
- Good
- Neither good nor poor
- Poor
- Very Poor

2. How would you rate the workshop for **working and communicating together?**

- Very good
- Good
- Neither good nor poor
- Poor
- Very Poor

3. How would you rate the workshop for **mutual respect among participants?**

- Very good
- Good
- Neither good nor poor
- Poor
- Very Poor

4. How would you rate the opportunities for you to **share your knowledge and experiences?**

- Too many opportunities
- Enough opportunities
- Too few opportunities

5. How would you rate the **documenting of TK during the workshop?**

- Very good
- Good
- Neither good nor poor
- Poor
- Very Poor

6. How would you rate the **facilitation of the workshop?**
- Very good
  - Good
  - Neither good nor poor
  - Poor
  - Very Poor
7. How would you rate the **outcomes and findings of the workshop?**
- Very good
  - Good
  - Neither good nor poor
  - Poor
  - Very Poor
8. How would you rate the **amount of time** to discuss the topic(s) during the workshop?
- Too much time
  - Enough time
  - Too little time
9. How would you rate the **venue and food** for the workshop?
- Very good
  - Good
  - Neither good nor poor
  - Poor
  - Very Poor
10. How useful was **the site tour** for understanding the area?
- Useful
  - Neither useful nor not useful
  - Not useful
11. How would you rate the **logistics** for the workshop (e.g., hotel, travel, and honoraria)?
- Very good
  - Good
  - Neither good nor poor
  - Poor
  - Very Poor
12. **Overall**, how would you rate the workshop?
- Very good
  - Good
  - Neither good nor poor
  - Poor
  - Very Poor

Would you prefer to have **future meetings** at the Diavik mine site or in Yellowknife?

- Mine site
- Yellowknife

13. What were the strengths of the workshop? What did you enjoy about the workshop?

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14. How could the workshop be improved?

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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
<b>Totals</b>	<b>87</b>	<b>67</b>	<b>6</b>	<b>1</b>	<b>1</b>

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
<b>Total</b>	<b>15</b>	<b>32</b>	<b>2</b>

\*1 person did not respond

	Site	Yk
<b>Preferred location for future meetings*</b>	15	9

\*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	