

10th Board of Directors Meeting

Summary of Discussion and Decisions October 30th to November 1st, 1998

Directors Present:

Red Pedersen	Tony Pearse
Kevin O'Reilly	Peter McCart
François Messier	Bill Ross

Staff Present:

Hal Mills
Matt Bender
Alan Ehrlich

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FRIDAY, OCT. 30TH (YELLOWKNIFE, LUTSEL K'E)

REVIEW OF AGENDA

The Agenda was changed so that the item "Annual Report" was expanded to include "communications".

BUSINESS ARISING FROM THE LAST MEETING

Regarding action items from the previous meeting:

- **Action Item One:** Staff to compile list of key dates of relevant community events for next few months, including Diavik's visit plans. *Done via consultation with Murray Swyripa. See Diavik's Public Involvement Plan in section 3 of briefing binder.*
- **Action Item Two:** Staff will obtain DIAND exploration reports regularly and mark new explorations on a map of the BHP claim block. *Done. Agency met John Armstrong, exploration geologist with DIAND. Kimberlite explorations sites marked on new wall map.*
- **Action Item Three:** Staff to get information on regional mining exploration from the Chamber of Mines. *Done. The Chamber of Mines is compiling a report primarily on economic information by geographic region.*
- **Action Item Four:** Staff to obtain DiaMet's Annual Report. *Done.*
- **Action Item Five:** Appointees of Aboriginal organizations to get names of representatives for planning TK workshop. *Done.*
- **Action Item Six:** Hal to meet with representatives of Aboriginal organizations and plan TK Workshop Agenda. *Done.*
- **Action Item Seven:** François to talk to Ray Case regarding their circulation of information on wildlife problems to Aboriginal organizations. François also to send to Sangris a copy of the letter about the recent wolverine incident.
- **Action Item Eight:** Agency staff to collect existing information on the winter road to Ekati and current monitoring efforts. *Done.*
- **Action Item Nine:** If no funds have arrived from GNWT by mid-September, staff should remind GNWT of its commitment. *Done.*

INFORMATION UPDATES AND CONSULTATIONS

The Chair, Directors and Staff all presented updates on recent happenings.

Red Pedersen has attended the Kitikmeot Inuit Association (KIA) Annual General Meeting, and distributed the Agency's Annual Report, Aboriginal Issues Report, newsletters and brochures. The KIA has expressed their appreciation of the Agency's Aboriginal Issues Report, and has invited the Agency to hold a meeting in Kugluktuk.

Red also attended a Diavik information session where Diavik and DIAND met with the community to discuss the Diavik environmental assessment.

Kevin O'Reilly chaired the initial Traditional Knowledge (TK) workshop planning meeting with representatives of Aboriginal organizations. Kevin and Agency staff also

met with BHP representatives to discuss funding options for the TK workshop. Kevin has been informed that Chief Darrel Beaulieu is the official point of contact for Akaitcho Treaty 8, and that Chief Beaulieu plans to make Agency updates an agenda item at monthly Akaitcho meetings. Kevin will attend these meetings.

Peter McCart has been reviewing the BHP fish-out studies. He has also started to review the Diavik Environmental Assessment in terms of aquatic cumulative effects that may compound those of Ekati. (Details are presented below- see "Diavik Cumulative Effects Assessment").

Tony Pearse attended the Dogrib Treaty 11 Annual General Meeting, and gave a short presentation describing current issues that the Agency is involved in. Tony also wrote a letter updating the Dogrib Treaty 11 on the status of issues identified in the Aboriginal and Community Issues report. Two significant points were that 1) there is still no regional monitoring program for the Bathurst caribou herd that is comprehensive enough to look at all long term effects of development on the herd, and 2) nor is there any monitoring of fish populations in Lac de Gras. Two recent letters from the Dogrib reminded government that these issues continue to be high priorities to them.

Tony also briefly summarized the results of Chris Mills' review of the Tailings Characterization Study and the Tailings management plan, and identified key issues associated with those studies. (Details are presented under the "Long Lake Issues").

François Messier has been invited by the GeoScience Forum to present a talk on caribou and mining, entitled "Monitoring the Impacts of Mining and Road Infrastructures on Caribou Herds: The Need for a Multi-Scale Approach".

STAFF UPDATES

Hal Mills discussed the cooperation opportunities between the Agency and WKSS, based on common interests within the same region, and discussions with WKSS Study Director John McCullum. Hal also mentioned that recent Agency activities (TK workshop, Diavik CEA, preparations for Lutsel K'e) have led to high time demands on GeoNorth, and that it may not be feasible for this to continue as the status quo.

Environmental Monitoring

Matt Bender and **Alan Ehrlich** presented an update of recent events related to monitoring and the Agency. Directors were briefed on:

- new incoming documents;
- Matt and Alan's observations from recent site visits to Ekati with DIAND;
- the Diavik open house;

- communications updates (web page, brochure and newsletter);
- IACT meetings;
- winter road use levels, environmental issues and monitoring; and,
- discussions with the TK Round Table.

It was noted that no correspondence has been received to indicate any change of position from DIAND regarding Agency involvement in cumulative effects assessment aspects of the Diavik assessment.

Action Item: Invite Ken Hall (GNWT) to the next meeting to discuss the winter ice road to Ekati.

MEETING WITH BHP

Scott Williams and Denise Burlingame met with the Board. Scott presented an overview of current mine status and operations, a review of environmental programs and projects, and a review of TK programs. The subjects of tailings, development plans, and other issues were then discussed. Some noteworthy points arose as follows:

- ◆ BHP has approved the Tailing Characterizations Study and the Tailings Management Plan produced by their consultants.
- ◆ Directors told BHP that a technical specialist has been contracted to independently review BHP's recent tailings studies.
- ◆ Directors asked how tailings management responds to the results of new studies, and how BHP is monitoring to get the information needed to adjust management in time if need be.
- ◆ Scott indicated his willingness to have the Agency meet with Dave Tyson to discuss fish-out studies.
- ◆ Scott said that BHP's response to the recommendations of the Agency's last Annual Report will be ready by mid-November.
- ◆ The Kodiak sewage study by Rescan should be ready before December.
- ◆ Scott said he would look into why the Agency never received a copy of a proposed amendment to change Water License monitoring requirements.

In response to a question by the Board, Scott explained that the order of pit development to be followed by BHP is revised weekly, depending on many variables such as diamond quality and economics. Another variable is whether the material mined meets the physical requirements of processing equipment or needs to be blended with other material prior to processing.

In response to a question about the progression of pits to be mined and license requirements, Scott said that it appears that Misery will be developed within the current term of the Water Licence. Beartooth will be developed when hitches arise with other pipes, Sable is included in existing licenses. The license requirements surrounding Pigeon should be clear before the end of November.

Action Item: Determine Sable and Pigeon drainage.

MEETING WITH FEDERAL AUTHORITIES

The Board met with Federal Authorities from DIAND (Marie Adams, Darren Unrau), DFO (Julie Dahl) and Environment Canada (Carey Ogilvie).

Compliance inspections

Darren Unrau described recent developments at BHP from the perspective of Land Use Permit and Water License compliance. He described construction, the appearance of tailings, Long Lake sampling and the aeration of Kodiak Lake, and responded to detailed questions by the Board.

DIAND and Diavik

Marie Adams said that DIAND has seen the two Aboriginal resolutions supporting Agency involvement in Diavik cumulative effects assessment, and that a DIAND response is being prepared. She stated that the responsible authorities in the Diavik assessment appreciated Agency comments on the draft guidelines, and that DIAND is willing to accept the Agency taking a general look at CEA as it relates to Ekati effects.

The Board pointed out that it appears that DIAND's official position remains unchanged since the AGM. Marie was unable to comment further on the official stance of DIAND, but did indicate concern regarding two articles from the last Ekati Monitor. The Board responded that the articles accurately reflected events when the newsletter was written, and that if the official stance of DIAND changes, it will be reflected in future articles.

Marie also said that DIAND is preparing comments on the Agency's Annual Report, and she also briefly described the Coppermine River Cumulative Effects Monitoring Program. It is in its preliminary stages now, and is trying to identify suitable indicators of change. Marie will send the Agency a description of the study.

Kodiak Lake

Julie Dahl mentioned that she requested the Kodiak sewage study a while ago, because the water license was based on general guidelines that may not be appropriate for the actual lakes receiving effluents. She also said that BHP told her there were no possible sewage disposal alternatives, and that the Water Board is reluctant to have deficiencies in their guidelines identified.

DFO and the Fish Habitat Compensation Fund

Regarding a recent radio interview, Julie asked the Board if the Agency's stance has changed regarding the offer to help with the Fish Habitat Compensation Fund. The answer was "no", the Agency is still waiting until DFO consults with Aboriginal organizations to see if they support Agency involvement. Julie said that DFO is still looking for the right person to oversee consultation and fund administration.

Fish-Outs

Julie was asked how the information from BHP fish-outs would be used. She responded that the fish-outs would be used as controls to calibrate and verify conventional freshwater population and community structure study methods. By fishing-out lakes to see what was actually in the lake, and then comparing the results to what was predicted by standard sampling techniques, the limitations of conventional sampling would be identified.

Some of the fish-out studies are being looked at in Yellowknife, others sent to DFO in Winnipeg. Julie wants to know if DFO asked BHP to collect the right data, what could be improved in the future, and whether or not the results of these fish-outs will provide information that is useful to upcoming environmental assessments. Ideally, Julie hopes that DFO will publish reports and statements on the above, although she did not commit DFO to this.

OPEN HOUSE AND COMMUNITY FEAST (LUTSEL K'E)

The open house and community feast in Lutsel K'e was well attended and provided community members the opportunity to meet with Directors and informally discuss environmental aspects of Ekati.

Saturday, Oct. 31st (Lutsel K'e)

DISCUSSION- DIAVIK CUMULATIVE EFFECTS ASSESSMENT

The cumulative effects assessment of the Diavik environmental assessment document was discussed. Specific concerns regarding aquatic effects were described, as well as concerns regarding cumulative impact identification and assessment in general. It was decided that the Agency would submit a short letter dealing with the conformity of the Diavik assessment to the Guidelines. Following this, individual directors would review specific aspects of cumulative effects in a more detailed manner. These individual reviews will be submitted to the Agency by November 30th for integration into a single submission by an Agency committee. The final submission should be ready for the next Board meeting (in mid-December).

Action item: Agency to submit letter to DIAND regarding conformity of the Diavik assessment to Guidelines.

Action item: By November 30th, Directors are to have compiled their detailed comments on the quality of cumulative effects assessment in the Diavik assessment.

Action Item: Staff to confirm Diavik comment deadlines with DIAND.

TRADITIONAL KNOWLEDGE ISSUES

TK Workshop Planning

Kevin described the TK planning meeting that he facilitated for the Aboriginal organizations, and also described the meeting with Chris Hanks regarding BHP funding and involvement. It was re-affirmed that the workshop should follow the direction provided by Aboriginal organizations: to provide an opportunity to share experiences, understandings of how TK can be used in the environmental management of BHP. To do this, TK researchers would need to learn what BHP is doing now (as described by the OEMP), what TK studies have already been done, and how to organize the research. Finally, people want to look at possible future steps to follow the workshop.

It was made clear by Aboriginal organizations in the TK planning meeting that they would prefer a good example of how TK was applied to a development (preferably a mine) over case studies of academic applications of TK. Although the work of Gary Kofinas (taiga.net) is successful TK, it seemed unclear how it was directly applied to the

management of a specific development project. It was suggested that Fikret Berkes, as a TK specialist, would know if there is an example of TK being successfully integrated into the management of an industrial development project.

Action item: Check with Fikret if he knows of an example of TK being successfully integrated into the management of an industrial project.

It was suggested that a letter be drafted to invite Aboriginal organizations to the workshop, and describe the Agency's understanding of the goals of the workshop. The letter is also to propose December 9th and 10th as the dates of the workshop, and request two or three participants from each organization.

Action item: Hal to draft TK workshop invitation letter, and send out following approval by Red.

It was stated that payment of honoraria regarding the TK workshop will have to be dealt with directly between BHP and participants. Due to budget constraints, the Agency is unable to pay honoraria that are not covered by BHP's financial policy.

Site Visits to Ekati by Elders

There was a brief discussion on the visits to Ekati by Aboriginal elders to observe the interactions between caribou and mine infrastructure. It was noted that while these visits are valuable in terms of increasing the comfort level of people with the mine, a few short visits should not be considered to be TK studies: TK is based in part on long-term and often inter-generational observations, as opposed to a small number of isolated observations.

LONG LAKE ISSUES

BHP's Water License required BHP to prepare both the Tailings Characterization Study and the Tailings Management Plan. Chris Mills has reviewed both of these documents for the Agency. His review found that much of the behaviour of tailings will have to be determined empirically, and that tailings management in Long Lake is still largely experimental. He also found that the Tailings Management Plan does not reflect the findings of the Revised Characterization Study, and that the two documents need to be read together to be meaningfully interpreted.

The new Tailings Characterization Study indicates that freeze thaw clarification and consolidation, originally only a marginal source of tailings treatment, is now much more important to treatment than originally thought, because earlier particle settling rates were underestimated. BHP's confidence in tailings treatment is based on flocculation, but according to the recent study the flocculated particles break up between the processing plant and the tailings containment cells in Long Lake.

By pumping water from Koala Lake into Long Lake, the storage capacity of Long Lake has been reduced by four years. Previously, in a worst-case scenario with no discharge, Long Lake was able to hold tailings from 13 years of operations, with the mined-out Panda pit becoming available in 11 years as a backup storage area if needed. Now, Long Lake will be full by year nine. If the tailings still do not meet discharge standards by then, Panda still will not be available for two more years. BHP has therefore lost the

back-up option they were able to originally count on, and therefore needs to be certain that their Tailings Management Plan is adequate. The revised Tailings Characterization Plan indicates that it may not be.

Also, the new study indicates that reclamation may not be feasible as planned, because for fox-like fines the remaining tailings may not be stable enough, after freezing and consolidation, to form the permafrost necessary to support the heavy equipment required for reclamation.

Other issues discussed included the long-term capacity of fine kimberlite tailings to raise pH levels and compensate for acidity in tailings, and BHP's freeze thaw clarification testing methods.

A list of proposed actions dealing with tailings was discussed and prioritized.

Action item: Tony Pearse will draft two letters (one to the Water Board and one to BHP) based on the above discussions.

Action item: Staff to check Water board registry for letter conditionally approving the Revised Tailing Characterization Study, Wastewater and Tailings Management Plan and the Waste Rock and Ore Storage Plan.

Action item: Tony Pearse to prepare brief on kimberlite and acidity in terms of cumulative effects of Diavik in conjunction with Misery schist.

Action item: Staff to ask John Witteman for the recent paper that he presented on tailings at a recent conference.

MEETING WITH COMMUNITY ORGANIZATIONS AND ELDERS

The following community members discussed their concerns with the Board:

Antoine Michel (former Chief)

Bernadette Lockhart

Maurice Lockhart (Elder)

Joe Michel (Elder)

Albert Boucher (Elder and member of Wildlife, Lands and Environment Committee)

Annie Catholique (Elder)

Lucy Sanderson (Wildlife, Lands and Environment Committee)

Alice Michel (Elder)

Gilbert Abel (member of council and of Wildlife, Lands and Environment Committee)

James Marlowe (Council member and translator)

Simultaneous translation was used as needed. People discussed ecological, social and cultural concerns of mining development based on past experiences. Discussions included the following topics:

- social, cultural, and spiritual costs of development and change;
- the value of Traditional Ecological Knowledge in identifying subtle ecological connections and predicting changes;
- concerns dealing with the effects of the Ekati mine on wildlife behaviour and health;
- concerns dealing with the effects of the Ekati mine on aquatic systems;
- the ecological persistence of toxins;

- the persistence of mining impacts and concerns related to reclamation;
- concerns of Ekati contributing to the impacts of current environmental problems;
- questions about the added problems that Diavik may cause and mechanisms for their management; and,
- the role of the Agency in promoting the use of Traditional Knowledge in the management of Ekati.

Directors described some of BHP's current environmental programs and the activities of the Agency. Elders and members of community organizations expressed their gratitude and hopes for the Agency ensuring that BHP keep its environmental promises. The Board was asked about whether or not the Agency would play a similar role in independently monitoring Diavik, and responded that the only involvement with Diavik that the Agency has is in terms of the cumulative effects that may compound those of Ekati.

Detailed notes are on file at the Agency.

Sunday, Nov. 1st (Lutsel K'e)

MEETING WITH CHIEF CATHOLIQUE

Chief Catholique met with the Board, and suggested that the Agency form a long-term committee to deal with TK integration into management at Ekati following the upcoming TK Workshop. The Board responded that it is a possibility, and that the identification of next steps is an important goal of the workshop.

Chief Catholique raised various points related to the workshop, including her interest in applying TK to the areas of wildlife and aquatics and her interest in seeing the formation of a management board for the Bathurst caribou herd. She also stated that Lutsel K'e has recently overcome a turbulent period and is now in a position to provide useful input into studies.

The Board mentioned that BHP has indicated its interest in receiving TK study proposals dealing with wildlife and aquatics.

Concerns were expressed by Chief Catholique regarding the Diavik process, particularly a lack of trust in technical experts supplied by government. She also was concerned about the lack of funding for Lutsel K'e to hire its own independent experts.

Chief Catholique expressed interest in the Agency becoming more involved with Diavik. The Board replied that it is involved with in cumulative effects aspects of the Diavik environmental assessment. However, the mandate of the Agency is to deal specifically with environmental aspects of the Ekati mine, and the Agency does not feel it is appropriate to try and expand its own mandate to include other aspects of the proposed Diavik project.

ABORIGINAL ISSUES FOLLOW-UP

Recent resolutions and correspondence from Dogrib Treaty 11 have raised the concern that there is no comprehensive monitoring of the effects of development on the Bathurst

caribou herd. This was identified by Anne Gunn during the BHP hearings. At the AGM of the Agency, Joe Handley asked the Agency to point out if it felt that more research into this was necessary.

The cumulative effects of Ekati in conjunction with other projects on aquatic systems are also of concern to Aboriginal organizations. There is a project looking at cumulative effects on the Coppermine River. It would be helpful to know more about this project.

Action item: Staff to invite Anne Gunn and Ray Case to next board meeting to discuss opportunities to improve monitoring of the Bathurst caribou herd, and David Milburn to discuss Coppermine monitoring.

1998-1999 ANNUAL REPORT AND COMMUNICATIONS

Hal Mills described details of the production of the next Annual Report, in accordance with the decisions of the 9th Board Meeting. It was decided that \$2000 will be allocated to hire a professional writer and editor to take a preliminary look at producing the Annual Report. This will be done before the next meeting.

Action item: By next meeting, Hal will consult with a professional writer and editor regarding the next annual report.

It was noted that no response to recommendations of the previous report has yet been received.

The new brochure, newsletter and web site were discussed. The web site will need to be periodically updated, and new articles for the newsletter are presently under consideration. It was agreed that staff would provide story lines for approval by directors, and that staff would then draft stories. The next newsletter will come out in January.

The Directors commended staff on the high quality of work on the brochure, newsletter and web site.

TREASURER'S PRESENTATION

Secretary-Treasurer François Messier presented a budget update. He noted that 56% of the Agency's operating budget has been spent.

There was some discussion as to whether or not future budgets should include monthly expenditures from the previous year or the annual totals spent by that point in the previous year.

The Agency budget for the next year has to be submitted before January 1st, 1999. This budget must be driven by a workplan. The workplan will be based partially on the workplan from the previous year, updated to include the new undertaking of the Agency.

Action item: Hal will work with François and other directors to prepare a first draft of the workplan and budget.

NEXT MEETING AND ADJOURNMENT

It was decided that the next meeting of the Agency would be on the 11th and 12th of December in Yellowknife. The meeting was adjourned at approximately 2:30 PM.