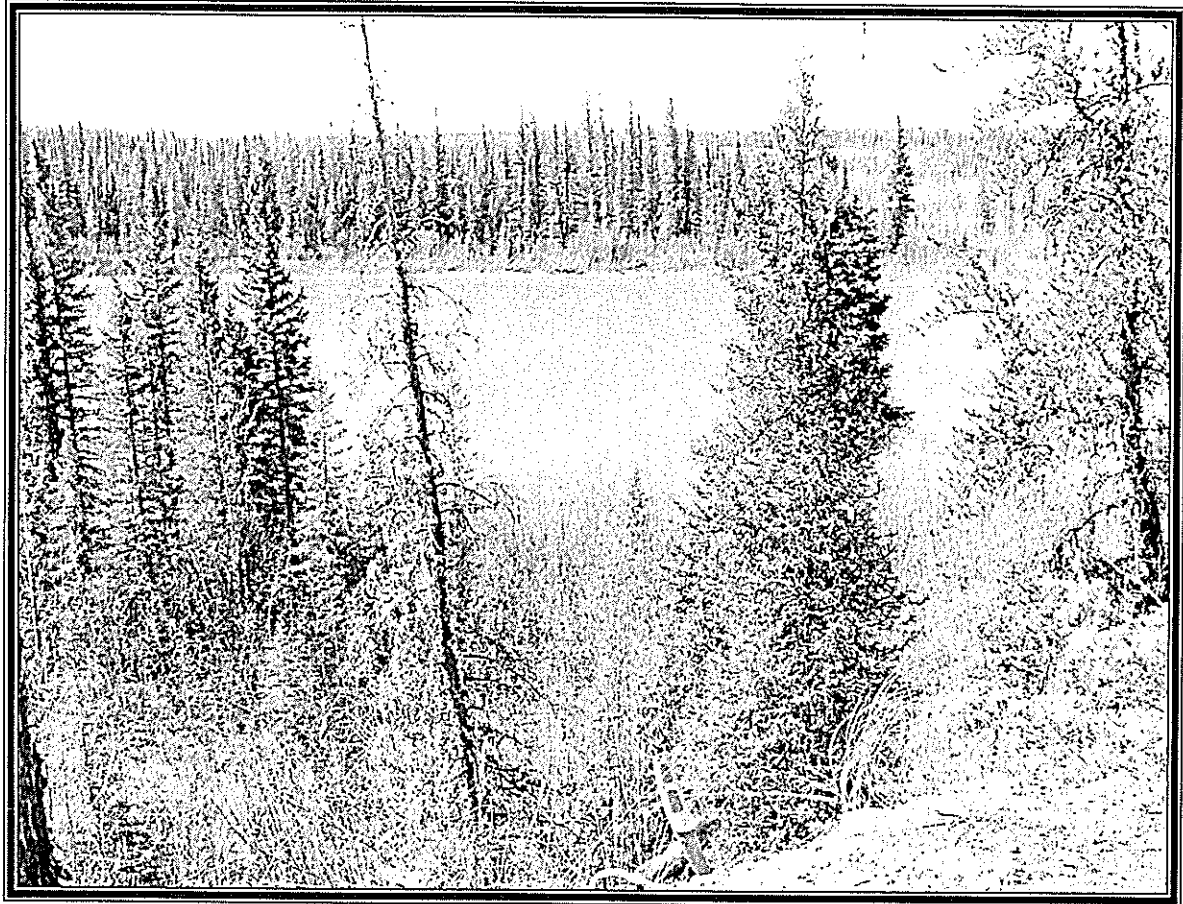


# Deninu Ku'e First Nation (Fort Resolution)



## **Tamerlane Ventures Inc.**

### **Pine Point Pilot Project**

### **Written Sub-mission**

Prepared for Chief and Council by:  
Interim Measures Agreement Committee  
Fort Resolution Environmental Working Committee  
Cross-Current Associates Ltd.  
Treaty Negotiations Office

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# Submission to Environmental Assessment of Tamerlane Ventures Inc.

## Protecting our Aboriginal and Treaty Rights

### 1. Introduction:

The Crown entered into treaty making with our ancestors at Deninu Ku'e in 1900; our ancestors entered into treaty making with the understanding that it was for as long as the sun shines, the rivers flow and the grass grows.

We gave industry the option you can operate with us, you can negotiate with us, you can negotiate the kind of relationship you feel we need to have with us, or the option is you stand to lose it all. No longer is it aboriginal participation in exploration activities and commercial mining; but industry proponents' participation in aboriginal communities. Today, there must be a focus in particular on the topic of consultation. In recent years consultation has become a hot topic in aboriginal and mainstream circles as one means of ensuring community input into decision-making about exploration and mining activities. Regardless of all recent developments there is a lack of understanding of aboriginal perspectives on consultation in relation to exploration and mining activities. What constitutes appropriate and meaningful consultation and participation mechanisms? DKFN have begun to articulate their perspectives to attempt to stop what many of our members regard as a looting of the wealth of our land. However these efforts have been far and few between and DKFN are often in a situation where we are in a reactive approach rather than a proactive approach.

Over the years DKFN have expressed a willingness to work with government, regulatory agencies and potential industry proponents in our traditional lands. However, for some reason or another DKFN has been put on the way side and our rights have not been respected or acknowledged

⊕ **To ensure that there a positive working relationship with DKFN and its members, a process of consultation must be put into place to deal with Tamerlane ventures Inc for the upcoming proposed advance exploration project.**

## 2. **Aboriginal and Treaty Rights:**

DKFN currently have existing aboriginal and treaty rights in the area of Tamerlane Ventures inc. advance exploration property. These include, among others, the right to hunt trap, fish and gather. These aboriginal and treaty rights have been exercised by DKFN members for generations and continue to be exercised today. The evidence by trappers, members and Elders commonly confirm the exercise of our rights our traditional territory.

- ⊕ Land is used for hunting trapping and gathering
- ⊕ Water is used for fishing on a regular basis today
- ⊕ Lands are also used for gathering of berries for food and plants for medicinal purposes.
- ⊕ Many different types of furbearing animals are trapped to sell.
- ⊕ Moose and wood caribou provide meat to subsist on and feed many community members.

The Treaty right to hunt, trap, fish and gather provided in the Treaty, in addition to other rights, do not exist on paper, but are in active use and an integral part of the tradition and existence of DKFN members.

- ⊕ **DKFN will be submitting statutory declarations of our members using the area that Tamerlane Ventures Inc is proposing the advance exploration of extracting a bulk sample.**
- ⊕ **DKFN is recommending a traditional knowledge study be conduct and Tamerlane Ventures Inc. funds the study.**

## 3. **Requirements of Consultation and Accommodation:**

The duty to consult with respect to Crown activities that may infringe aboriginal title or rights arises from the honour of the Crown and the goal of reconciling the Crown's rights with prior existing aboriginal rights, as evidenced by the 1982 entrenchment of aboriginal and treaty rights in s. 35(1) of the *Constitution Act, 1982*.

Pursuant to the s. 35 protection of aboriginal rights and treaty rights, any interference with these rights must be justified. Where the Crown has "knowledge, real or constructive, of the potential existence of the

Aboriginal right or title and contemplates conduct that might adversely affect it”,<sup>1</sup> the Crown has a duty to consult with the First Nation.

The concept of consultation as a means to reconcile prior existing aboriginal rights with Crown sovereignty finds its origins in the *Sparrow*<sup>2</sup> and *Delgamuukw*<sup>3</sup> decisions, in which the Supreme Court of Canada addressed the aboriginal right to fish and aboriginal title, respectively.

Supreme courts made it clear that where aboriginal and treaty rights are or may be affected First Nations must be consulted by the crown prior to any action being taken or authorized by government. The duty to consult is a constitutional duty.

The ultimate legal responsibility for consultation and accommodation rests with the crown. However, the crown may delegate procedural aspects of consultation to industry proponents like Tamerlane Ventures Inc. seeking this particular development. For practical reasons, the regulatory agency and Tamerlane Ventures Inc ought to take a prominent role in consultation and negotiations of accommodations with Deninu Ku'e First Nation.

The purpose of the duty to consult is to protect the land and resources critical to the exercise of our aboriginal and Treaty rights. Furthermore, consultation must be in good faith and the intention of substantially address the concerns of DKFN, whose lands traditional lands are at issue.

⊕ **First step in the consultation process is to discuss the process itself. It is not sufficient for the communication to be the same as the communication with other interested stakeholders. A process must be setup separately from this multi-stakeholders process to deal specifically with impact or infringement on our aboriginal and treaty rights.**

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<sup>1</sup> *Haida Nation v. British Columbia (Minister of Forests)*, [2004] 3 S.C.R. 511 at para. 35 [hereinafter *Haida*].

<sup>2</sup> *R. v. Sparrow*, [1990] 1 S.C.R. 1075 [hereinafter *Sparrow*].

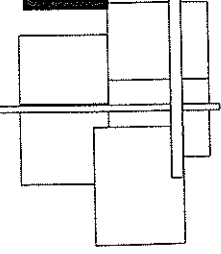
<sup>3</sup> *Delgamuukw v. British Columbia*, [1997] 3 S.C.R. 1010 [hereinafter *Delgamuukw*].

- ⊕ **A letter will be sent to the Department of Indian and northern affairs to start to setup a process to with possible infringement of our Aboriginal and Treaty Rights.**
- ⊕ **Respect of our rights requires meaningful consultation. A process of negotiations, is a two way street where DKFN direction and input is substantially incorporated in the planning process.**

#### **4. Proposed Consultation Process**

Consultation and accommodation between Tamerlane Venture's Inc including the crown should be undertaken with respect to all aspects of Tamerlane's operations that will or may affect our aboriginal and treaty rights.

- ⊕ **DKFN has prepared an exploration agreement and recommends that the Tamerlane enter into the exploration agreement in order to develop and foster a positive and cooperative relationship.**



# Deninu Kue First Nation

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## Presentation on Concerns and Recommendations for Tamerlane Ventures Inc. Environmental Assessment on Pine Point Pilot Project

As Long As the Sun Shines, The  
Grass Grows and the Rivers Flow



# Introduction

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- Deninu Kue First Nation entered into Treaty making with the Crown concluded on July 25, 1900.
- Deninu Kue First Nation is part of the Treaty Implementation negotiations with Yellowknives Dene First Nation and Lutsel Ke Dene First Nation.
- Our Treaty Rights among others include the Right to Hunt, Fish, Trap and Gather to sustain our livelihood in our Traditional Territory.





# Cont.

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- Recent Supreme Court decisions have raised the obligation in terms of consultation and accommodation. The present system in place now does not meet the obligation set by the court. Government regulatory agencies must change the way they consult and accommodate.
- Deninu Kue First Nation **supports responsible development** in our Traditional Land Use area.
- We have concerns and recommendations that need to be addressed to ensure that this development is not or has minimal infringement or affect our Aboriginal and Treaty Rights.



# Environment

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- The footprint and the location of the bulk sampling site as it relates to Deninu Kue and Hay River currently available in the documents to date need to be clearer on scales, distances, legends, infrastructures and locations.
- Require cross section diagram of the underground activities in relation to the hydrology of the area.
- Require better chemistry profile on all materials used and the general geology of the footprint.
- What is the Dense Media Separation (DMS) facility? Is there examples of this type of process operating elsewhere? What is the report card on these systems in current operations? ..



# Environment

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- What is Ferri-Silicon? What is it used for? How is it made? What is the health risk involved with using this material? What is the potential effects to the environment?
- Waste Rock is only an issue if it becomes associated with acid rock drainage which may create Ferro-magnesium oxide, how is this being prevented?
- What happens to the waste materials used in DMS? How is it transported, stored and disposed of? What is the potential risk to the environment and to human health? What would be the mitigated response if this occurs?
- What is the full description of the Ground Infiltration System and how does it actually work? Is there any such systems used elsewhere? What is their report card? Is there a Secondary Safety System?



# Environment

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- Need to fully examine and discuss the ground freezing methods proposed? Is there other examples in use? What is their report card? Has Climate Change/ Global Warming, earthquakes as well as blasting all being taken into account?
- Can the vibration from the explosives cause the freezing to crack? What frozen elements are we talking about?
- Is Ionizing radiation (from the release of naturally occurring radon gas) a possibility at this mine?
- The permafrost in this area is discontinued meaning it thaws out in the summer, except for areas with a lot of sand and moss covering, predominately it's discontinued. The limestone karsts is all cracked from the water above ground that seeps into karsts freezes, then effects the integrity of the mother rock, is this considered?
- What is the full description of the waste rock management facility and plan? Is there a secondary capture system for potential run off and leaching? What is the mitigated measures of any leaching or run off? Can a lined wall or brim be built around facility?



# Environment

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- Sewage-Effluent in and around a mining operation is usually treated and dumped into tailings ponds, will this be treated by the DMS?
- Baseline water quality and hydrology requires further research as well as an impact mitigation strategy must be developed (with specific corrective actions).
- Noise impact will require additional information and research, as this will be a 24/7, 365 days a year. (The estimate of decibels should be specified.
- Greater detail on the necessary power generation increase at the Taltson Dam is required.



# Environment

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- This proposed area is healing itself from past mining activities, people are concerned with cumulative impacts from past and present mining activities; Was this considered in your planning of proposed project?
- What is the full description of the water monitoring mechanism and what is the timeline of this monitoring? What is the full description of the wildlife monitoring program and what is the timeline of this monitoring? What kind of community input (monitoring) are you considering for the duration of the pilot project?
- Once the water is moved it becomes mine water. The mine water must be regulated and tested on a regular basis?



# Environment

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- The Project description identifies **Species At Risk** ie; Whooping Crane, Woodland Caribou, Woodland Bison, and the Peregrine Falcon and how it has monitored each habitat to date. How you will be monitoring these species at risk for the duration of the project? Will Tamerlane Ventures Inc incorporate this into the project plan?
- Insects are a species of life form, what baseline studies have you done and is there a monitoring mechanism?
- Because of Climate Change and Global Warming we are getting non-indigenous species in this area, What kind of monitoring mechanism are you considering in the project plan?
- Is there baseline studies on fur-bearing animals, what is the monitoring mechanism?
- Further baseline studies on wildlife research is required.



# Environment

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- Deformities found in the fish in and around the Fort Resolution Bay and one of the causes is nitrates. Nitrates are lethal to all life forms. How will Tamerlane Ventures Inc. intend to keep the nitrate fines contained, so it doesn't contaminate more fish habitat?
- What is the estimated increase in mine traffic projected during transporting of the bulk samples to Hay River, as well as, the workers and contractors to the site and back to where they will be staying? What is the effects on the road system and how will it be mitigated? Why is using the old railway system not considered in transporting the bulk sample site to Hay River and beyond?





# Environment

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- Is there a reclamation deposit identified? How much is it? Is there any stipulations involved in the deposit commitment? If so, what is it? Who holds the ultimate responsibility of the deposit and the actual reclamation?



# Socio-Economics

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- How is Tamerlane Ventures Inc. going to assist our community with Socio-Economic impacts? ie; community wellness, community justice and economic opportunity.



# Spiritual

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- Agreement in respect of the conduct of Archeological Sites – An accredited archeologist must carry out a field examination of the property prior to commencement of any exploration or ground activity.
- The Archeologist will produce a final report to the community of the field examination



# Cultural

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- A Traditional Knowledge Study should be funded by Tamerlane Ventures.

As Long As the Sun Shines, The  
Grass Grows and the Rivers Flow

Deninu Kue First Nation  
Interim Measures Agreement  
Points of Questions  
For Tamerlane Ventures Inc.  
Pine Point Pilot Project  
July 31, 2006

Environment	Cultural	Spiritual	Economical	Social
<ul style="list-style-type: none"> <li>-The commute to and from the mine site location.</li> <li>-Health monitoring Programs for the duration of the project and after if a full production begins.</li> <li>-What kind of studies is going to be done to address the issue of Species at Risk in this area?</li> <li>-Are there going to be studies on other animals such as: Musktrats, Moose, Bears and other fur-bearing animals we as traditional land user use these animals for sustenance as part of our livelihood.</li> <li>-Federal Government made recommendations for Tamerlane to make amendments to the type B application and apply for a type A because of the amount of thresholds, are these amendments made?</li> <li>-Armonia could get back into the ground water.</li> <li>-A walled contaminant area for waste rock storage with a system like or leading to the Ground infiltration system, not just cement pad. We need to be ensured that seepage will not get into the land and water and harm human and animals health.</li> <li>-There should be an environmental program in place for the duration of this project.</li> <li>-Caps should be secure on all drill holes to ensure seepage doesn't get out</li> <li>-Dense Media Separation (DMS) what is it and how environmentally friendly is this, can we see a demonstration of how it works.</li> <li>-What impacts will the explosives have on the land, water, and air and wildlife quality?</li> <li>-More information required on the integrity of the underground mine as well as the popsicle plan, is there potential for cave-in from possible earthquakes?</li> </ul>	<ul style="list-style-type: none"> <li>-Dawson Landing, Paulette Bay, Buffalo River, Little Buffalo River along with various trap lines in the Pine Point area and the proposed areas are considered cultural area for traditional land use and could have potential for archeological artifacts.</li> <li>-Ernest Paulette trapped the Big Buffalo River area from 1978-1995.</li> </ul>	<ul style="list-style-type: none"> <li>-The mouth of Buffalo River is the burial site of the Late Chief Oliver Edjeticon.</li> </ul>	<ul style="list-style-type: none"> <li>-How will the hiring of employees be decided, DKFN membership should have first priority.</li> <li>-Exploration Agreement with Tamerlane, is this in place?</li> <li>-Deninu Kue should be first priority for any joint ventures, sub-contracts or any type of business development for the duration and post reclamation.</li> <li>-Trappers livelihoods will be impacted tremendously, what is in the agreement to compensate these trappers: Greg Balsillie, Sonny Balsillie, Eddy Lafferty, George Larocque.</li> <li>-Overlap issues need to be resolved between Katodeeche Dene and Deninu Kue First Nation.</li> <li>-We want to see a demonstration of the DMS and GIS, so we have on hands experience of what they will be doing.</li> <li>-Instead of using the highway, we would like for the plan to transport the lead zinc ore sample by railroad.</li> </ul>	<ul style="list-style-type: none"> <li>-Alcohol, Drug and Sexually transmitted diseases.</li> <li>-We need to be ensured that the consultation process in meaningful and in good faith.</li> <li>-On site camp, so we don't get a whole bunch of strangers come to our community.</li> <li>-More illicit drugs.</li> <li>-Alcohol use and abuse increase.</li> <li>-Family Violence and break-ups and divorce rate increase.</li> <li>-Youth pregnancy rate increase.</li> <li>-Loss of Identity, traditionally and spiritually.</li> <li>-Not enough child care to meet demand of workforce increase.</li> <li>-Loss of culture.</li> <li>-No socializing</li> <li>-Increase in disturbances</li> <li>-Increase rate in impaired driving, both alcohol and drugs, more accidents</li> <li>-Increase in violent crimes</li> <li>-Not enough law enforcement</li> </ul>

Deninu Kue First Nation  
 Interim Measures Agreement  
 Points of Questions  
 For Tamerlane Ventures Inc.  
 Pine Point Pilot Project  
 July 31, 2006

<ul style="list-style-type: none"> <li>-Trees in area are extremely small and frail.</li> <li>-Can the vibration from the explosives cause the freezing to crack?</li> <li>-We have concerns of cumulative impacts from past mining activities and present proposed mining activities, what is Tamerlane going to do address this issue?</li> <li>-This area is abundant in fur-bearing animals, what studies are being done to ensure the integrity of these animals?</li> <li>-Need more information on water license application.</li> <li>-No project description.</li> <li>-Sightings of deformities in aquatic species near Dawson Landing and Paulette Bay.</li> <li>-They need to refill and seal the pits properly, so that local harvester can use the roads in the future.</li> <li>-The Ground Infiltration System (GIS) requires more information.</li> <li>-What are the implication and mitigations of hauling the bulk sample ore from the site to rail road or highways?</li> <li>-How will the Popsicle Plan going to effect climate change in and around the environment?</li> <li>-We the Deninu Kue First Nation need be priority for any planning from post planning and post reclamation.</li> <li>-Geochemistry data, impacts and mitigations of waste rock.</li> <li>-Water management: DMS Discharge, recycled or stored.</li> </ul>				
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**Deninu Kue First Nation**  
**Interim Measures Agreement**  
**Points of Questions**  
**For Tamerlane Ventures Inc.**  
**Pine Point Pilot Project**  
**July 31, 2006**

<ul style="list-style-type: none"> <li>-Treatment- Handling, storage, what chemical will be used</li> <li>-Water releases- underground water</li> <li>-Nervous about the freeze wall- lack of available information and working on hypothesis</li> <li>-Sewage effluent-disposal process.</li> </ul>				
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Deninu Kue First Nation  
Interim Measures Agreement  
Points of Questions  
For Tamerlane Ventures Inc.  
Pine Point Pilot Project  
July 31, 2006

-Project Description, footprint					



**Deninu Kue First Nation  
Interim Measures Agreement  
Points of Questions  
For Tamerlane Ventures Inc.  
Pine Point Pilot Project  
July 31, 2006**

**Prepared by:  
Rosy Bjornson, IMA Coordinator, IMA Advisory Committee, Paul Boucher, Negotiations and Dollie Lafferty,  
Community Wellness**

**Technical Summary of Issues and Concerns to be Addressed  
through the Pine Point Pilot Project EA**

Prepared by Crosscurrent Associates Ltd.  
On behalf of the Deninu K'ue First Nation

Submitted to the Mackenzie Valley Environmental Impact Review Board  
August 17<sup>th</sup> 2006

## Pine Point Pilot Project Scoping Issues

Crosscurrent Associates Ltd. has been tasked by the Deninu K'ue First Nation to review the Pine Point Pilot Project (PPPP) Description Report prepared by Tamerlane Ventures Ltd., readily available historical documents related to mining in the Pine Point area and submissions from other interveners to identify the key issues, from a technical perspective, that need to be addressed through the environmental assessment of this project.

This document is intended to complement the presentation and submission by the Deninu K'ue First Nation regarding community issues and concerns. It is also intended to provide further direction and suggestions to the Mackenzie Valley Environmental Impact Review Board regarding the scoping of the environmental assessment of the PPPP.

The following topics should be considered in the environmental assessment of the PPPP. Examples of issues to be discussed under each topic are suggested.

### **Project Rationale**

- Need for the project
- Site / deposit selection criteria
- Sufficiency of baseline research and existing data
- Selection and use of specific techniques
  - Ground freezing – coolant type (calcium chloride solution), alternative coolants, volume of coolant needed, potential for leaks, remediation issues, experience in karst areas, performance record, assumptions made<sup>1</sup>, baseline data used, impact of global warming (in the case of a successful pilot project), potential impact of discrete environmental events (such as earthquakes or forest fires), mitigation of wall leakage and thermal erosion
  - DMS circuit – ferrosilicon and other chemicals used, possible bi-products, facility design, potential risks, safety, performance record, possible design changes<sup>2</sup>
  - Waste rock - management decisions, facility design, secondary capture system for seepage, control of acid rock drainage
  - Ground infiltration system – physical properties of abandoned pit related to infiltration, monitoring plans, pre-treatment of waste, possible modifications to the pit to improve performance and containment, performance record, implications of ice and spring freshet conditions<sup>3,4</sup>

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<sup>1</sup> As identified in: EBA Engineering Consultants Ltd., (May) 2006. Feasibility Assessment (Phase 1) of Pine Point Mine Ground Freezing Project. Prepared for Tamerlane Ventures Inc.

<sup>2</sup> As suggested by the July 18<sup>th</sup> 2006 email correspondence and attachment from D. Swisher to A. MacDonald.

<sup>3</sup> Stein and Miller (1972) note that winter ice conditions can lead to very high tailings levels and increase the risk of overflow (Pg. 44). Bérubé et al. (1972) state that "...it is evident that the tailing disposal system works very poorly during the melting period and that the outlet structures are not efficient enough..." (Pg. 44). *Full references are provided below.*

### Site-Specific Issues

- Karst landscape
- Previous development impacts and cumulative effects
- Exploration difficulties at the R190 deposit (noted on page 10 of the Project Description Report)

### Water

- Impact of freeze wall on local and regional subsurface hydrology
- Impacts of backfilling on subsurface hydrology (change in natural porosity of the site)
- Water consumption and disposal (volumes, timing, filtration of waste water)
- Independent environmental monitoring
- Existing water quality issues
- Impacts to the local aquifer
- Water management plan (should consider environmental impacts)

*Baseline water quality and hydrology requires further research.*<sup>5</sup>

*An impact mitigation strategy must be developed (with specific corrective actions).*

### Land and Vegetation

- Independent environmental monitoring
- Dust management
- Acid rock drainage
- Potential for bioaccumulation of contaminants in plant roots<sup>6</sup>
- Prevention and management of acid rock drainage
- Condition of backfill material (needs to be environmentally benign)
- Control of invasive species
- Waste disposal (solid, liquid, sewage)

*An impact mitigation strategy must be developed (with specific corrective actions).*

### Wildlife

- Noise impacts
- Impacts to migratory birds and aquatic furbearers
- Monitoring of down-drainage environment
- Potential for bioaccumulation of contaminants in fish<sup>7</sup>
- Control of invasive species

*Further baseline wildlife research is required.*<sup>8</sup>

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<sup>4</sup> Bérubé, Y., M. Frenette, C. Anctil, and R. Gilbert, (April) 1972. An Engineering Assessment of Waste Water Handling Procedures at the Cominco Pine Point Mine – Final Report. INAC, Yellowknife.

<sup>5</sup> The EBA report is described as “preliminary” and apparently did not include sampling of standing surface water (wetlands). EBA Engineering Consultants Ltd., (November) 2005. Tamerlane Pine Point Project Environmental Baseline Studies Water Quality and Stream Assessment. Prepared for Tamerlane Ventures Inc.

<sup>6</sup> Stein, J.N. and M.D. Miller, 1972. An Investigation into the Effects of a Lead-Zinc Mine on the Aquatic Environment of Great Slave Lake. Resource Development Branch, Fisheries Service, Department of the Environment. Winnipeg, Manitoba. Pg. 48.

<sup>7</sup> Stein and Miller, 1972. Pg. 49.

### **Noise**

- Continuous noise levels generated by operations 24/7 and 365 days a year (estimate of decibels must be specified)
- Impacts to wildlife and harvesters
- Worker safety
- Non-routine noise (from back-up generator, explosives)

*Additional information and research is required.*

### **Transportation**

- Traffic volumes and frequencies
- Heavy loads and transport of "Direct Shipment Ore"
- Dangerous goods
- Impacts to road surface
- Impacts to neighbouring communities (employee parking lots, transfer to rail network)
- On-site movement of materials
- Accident prevention and response (including 'medi-vac' options)
- Alternative access routes (re-activation of the old rail bed as an access road)

### **Reclamation / Restoration**

- Reclamation goals
- Previous development impacts
- Schedule and timing
- Implications of the success or failure of the pilot project
- Monitoring of operations and after decommissioning
- Accountability (remediation bond)

### **Energy**

- Impacts of new infrastructure (power substation)
- Operations during a blackout situation or other power shortage
- Impacts to existing consumers
- Alternatives to diesel generator for backup-power (possible use of 'clean energy' to supplement)

*Greater detail on the necessary power generation increase at the Taltson Dam is required.*

### **Fuel**

- Safety and handling protocols
- Independent environmental monitoring
- Potential need for aviation fuel

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<sup>8</sup> The EBA report is described as "preliminary" and was limited in scope. EBA Engineering Consultants Ltd., (December) 2005. Wildlife Baseline Studies - Pine Point Project. Prepared for Tamerlane Ventures Inc.

- Spills contingency plan – should include all potential contaminants (aviation fuel, coolant for ground freezing, waste water from infiltration basin), risk of subsurface spills?
- Emissions

### **Explosives**

- Frequency of use, quantities used per detonation
- Integrity of freeze wall
- Disruption of environment (dust, vibrations)
- Potential long-term impacts to the environment (nitrate contamination)
- Temporary surface and underground explosive facilities

### **Personnel**

- Need for basic environmental training for all employees
- Number of on-site environmental personnel during operations
- Local and independent environmental monitors
- Accountability for reporting incidents
- Mobilisation of mine rescue crews
- On-site work camp as an alternative

### **Cultural and Heritage Resources**

- Protocols for identifying and avoiding heritage and cultural sites
- Incorporation of traditional knowledge into project planning

### **Other Issues of Concern**

- Is ionizing radiation (from the release of naturally occurring radon gas) a possibility at this mine?

Appendix A (Table of “Areas of Concern for PPPP Interveners”) has been created in an effort to link the topic areas proposed by the MVEIRB and the concerns raised by various interveners.

The following information gaps were identified during a review of the Permit Applications and the Project Description Report (PDR):

- The Land Use Permit Application indicated that the “size and scooping of specific equipment is unknown at this time”. This should be determined and reported before the EA commences.
- Tamerlane should identify contractor and subcontractor information (noted in the Land Use Permit Application) before the EA commences.
- Tamerlane should provide geospatial data (shapefiles and associated metadata) of project area and proposed infrastructure sites so that interveners can assess specific impacts to the land, environment and people.

- Tamerlane should provide maps related to previous activity (by Western Mines in particular) at the R-190 site so that interveners can better assess the impact of previous development and cumulative effects associated with this project. If possible, an overlay of a simplified PPPP footprint would aid in the interpretation of the maps.
- Is all research at the Pine Point / R190 site publicly available? Tamerlane should provide a list of all research done at this site (by the proponent, contractors and others), indicate if it is publicly available at this time and if possible post it to the registry.
- Work to generate a modern resource calculation for the area is ongoing (discussed on Pg. 15 of the PDR). This should be completed before the EA, as it is relevant to the need for the project and potential future development in the area.
- “Tamerlane has no knowledge of adverse impacts resulting from Cominco’s previous waste rock stockpiling” (PDR Pg. 20). “The historic Pine Point Mine operated from 1964 to 1984 without significant environmental impact.” (PDR Pg. 66). What efforts did Tamerlane make to identify any adverse impacts? Was there ever an independent assessment of the impact of Cominco’s operations in the Pine Point area? *Further justification is required.*
- “Waste rock will be temporarily stored in an appropriate engineered storage area” (PDR Pg. 20). What legislation or standards apply to this and other aspects of the project design? Who approves design? Who monitors compliance and performance? *Greater detail is required.*
- “...additional engineering and feasibility studies will be completed by the third quarter of 2006” (PDR Pg. 32). *These are necessary before the EA begins.*
- During the summer of 2006 “follow-up studies will further characterize existing baseline environmental conditions” (PDR Pg. 40). These should be provided as soon as possible.
- Tamerlane should provide research supporting the conclusion that “noise is anticipated to be no greater than the local quarry’s noise levels” (PDR Pg. 64) and proving that PPPP operations occurring 24/7 and 365 days a year will not generate noise impacts beyond existing levels. *Justification of conclusions and additional noise impact research is needed.*
- On page 13 of the Project Description Report, Tamerlane notes that “By the end of 2002, all MVT mines in Canada were closed”. Tamerlane does not identify/suggest any possible reasons for the decline of MVT mines. *Greater regional, national and international context should be provided for the PPPP and the techniques proposed.*

- The Hazardous Materials Spills Contingency Plan should be more comprehensive and include mitigation measures for any substance that might impact the environment.
- A field assessment of archaeological potential on the project site should be made to support the conclusions based on the absence of information noted by the Prince of Wales Northern Heritage Centre.
- Greater detail on the presence of key personnel at the project site during 24/7 operations should be provided (only 1 Environmental Manager is indicated).
- Greater detail on possible full-scale mining operations (after the pilot project) should be provided.

The following issue was omitted from the Project Description Report:

- Traditional knowledge (TK) is not mentioned in the Project Description Report. TK could add value to the proponent's baseline research, specifically the aquatic, wildlife and archaeological studies. *Further research in this area is essential for a comprehensive review.*



Appendix A: Areas of Concern for PPPP Interveners

MVEIRB Topics	DKFN Technical Issues	Historical Concerns / Issues (references indicated below)	INAC – Water Resources	INAC – Renewable Resources and Environment	EC – Environmental Assessment North	GNWT - ENR <sub>1</sub>	NWTMN
Water	Impact of freeze wall on surface and subsurface hydrology		Concerns with integrity of freeze wall	Modelling assumptions for the frozen perimeter and lack of field data	Lack of contingency plan if freeze wall fails	Freeze wall failure contingency plan	Impacts of freeze perimeter
	Water contamination (ammonia in particular)	Wastewater handling <sup>1</sup>	Nitrate contamination from explosives	Nitrate (ammonia) contamination			
	Impacts to aquifer	Porous rocks increase risk of contamination to potable water supply <sup>1</sup> R190 is in an area of regional groundwater discharge. <sup>4</sup> No climate station in the Caribou Hills, where regional groundwater recharge flows are expected to originate. <sup>2</sup>	Groundwater contamination (aquifer)		Groundwater contamination	*	
	Impact of project footprint to surface drainage	Surface drainage in the area is poorly integrated. <sup>3</sup>					
	Water consumption and disposal	Disposal of treated water can cause localized flooding. <sup>4</sup>	Water balance – treatment of DMS discharge				Water use in the DMS process
	Independent environmental monitoring	Monitoring effluent discharge (hardness, sulphate content, solids) and impacts to GSL <sup>1</sup>	Water releases – monitoring and treatment of water in the infiltration basin	Water quality sampling and groundwater sampling  Need for a monitoring, collection and treatment plan for waste rock seepage	Baseline information, monitoring	Post-project water sampling	
	Existing water quality issues	Muskeg was found to be contaminated <sup>5</sup> Compounding effects of multiple contaminants <sup>2</sup>					
	Fuel spills						
	Potential acid rock drainage			Potential for acid rock drainage			
Infiltration Basin	Need for further examination of pit mines as tailings ponds <sup>1</sup> Uncontrolled flow during spring thaw <sup>1</sup>	Water balance – need for more information on infiltration basin	Ground Infiltration System – need for more information	Lack of detail in infiltration basin design and quality of wastewater	Infiltration basin design	Infiltration basin, Possible draining of quarries?	

MVEIRB Topics	DKFN Technical Issues	Historical Concerns / Issues (references indicated below)	INAC – Water Resources	INAC – Renewable Resources and Environment	EC – Environmental Assessment North	GNWT - ENR	NWTMN
Wildlife	Continuous and non-routine noise					Noise	
	Vibrations from blasting						
	Habitat disturbance - Project footprint - Water quality concerns - Fuel spills - Migratory Birds - Health of aquatic species and furbearers	Fluctuations in effluent discharge may have raised contamination to levels lethal to aquatic life <sup>2</sup>  Contaminant impacts to specific fish cohorts <sup>2</sup>  Evidence of fish kill and bioaccumulation <sup>2</sup>  Need for further study on aquatic furbearers <sup>4</sup>				Cumulative impacts of development requires further study  Buffer zones around sensitive wildlife habitat  *	Waterfowl
					Species at risk	Species at risk	
					Proper food and general waste management		
Land and Vegetation	Reclamation and restoration	Contaminants concentrated in plant roots <sup>2</sup>  Need for further studies on soils <sup>3</sup>  Organic matter amendments to promote regeneration <sup>3</sup>		Reclamation and restoration (frozen perimeter in particular)	Reclamation and restoration		Reclamation (including freeze wall)
	Site-specific issues	Sinkholes larger and more abundant in south part of "Pine Point Concession" <sup>1</sup>				Project footprint and impacts to vegetation	Site security, project footprint, tree removal
	Use of explosives			Use of explosives			Explosives
	Impact of backfill on karst landscape (loss of porosity)	Interruption of natural drainage pathways <sup>3</sup>  Waste rock is not the best reclamation material. <sup>4</sup>					
	Waste rock storage	Possible nutrient deficiencies and salt accumulation in soils (from waste rock) <sup>3</sup>	Waste rock storage		Waste rock storage		
	Fuel spills				Hazardous wastes Sewage treatment plant	Spills Hazardous materials	Hazardous waste handling and transportation

MVEIRB Topics	DKFN Technical Issues	Historical Concerns / Issues (references indicated below)	INAC – Water Resources	INAC – Renewable Resources and Environment	EC – Environmental Assessment North	GNWT - ENR	NWTMN
Land and Vegetation	Dust generation and management						
			DMS discharge				Seepage from DMS circuit
Socio-Economics	Transportation						Job opportunities and local hiring
	Project Rationale Personnel Energy						Emergency response plan  Power consumption  Transportation and use of railway
Cultural and Heritage Resources	Traditional Knowledge Need for field assessment of archaeological potential						

<sup>1</sup> Bérubé, Y., M. Frenette, C. Anctil, and R. Gilbert, (April) 1972. An Engineering Assessment of Waste Water Handling Procedures at the Cominco Pine Point Mine – Final Report. INAC, Yellowknife.

<sup>2</sup> NWT Water Board, (November) 1984. Assessment of the Possible Environmental Impacts from Pine Point Mines Limited Dewatering. Report of the Technical Advisory Committee Working Group.

<sup>3</sup> Stevenson International Groundwater Consultants Ltd., (November) 1983. Hydrology of R190 Mineralized Region, Great Slave Reef Project, prepared for Westmin Resources Ltd.

<sup>4</sup> B.C. Research, (May) 1977. Environmental Survey and Assessment, Pine Point, NWT. Prepared for Cominco Ltd.

<sup>5</sup> Stein, J.N. and M.D. Miller, 1972. An Investigation into the Effects of a Lead-Zinc Mine on the Aquatic Environment of Great Slave Lake. Resource Development Branch, Fisheries Service, Department of the Environment. Winnipeg, Manitoba.

**Tamerlanes Ventures Incorporated**  
**Bulk Sampling project MV2006C014/MV2006L2-0003**  
**MVEIRB Technical Session**  
**Deninu Ku'e First Nation, August 17, 2006**  
**Comments, Issues and Concerns**

1. The maps of the footprint and the location of the bulking sampling site as it relates to Deninu Kue and Hay River currently available in the documents to-date need to be clearer on scales, distances, legends, infrastructures and locations.
2. What is the current state of the environment (water, air, vegetation, aquatics, wildlife, land, activity, and noise) in the footprint? What is the expected state it should be returned to?
3. What is the chemistry profile on all materials used and the general geology of the footprint.
4. What types of baseline data do we currently have? What more is needed?
5. What is the Dense Media Separation (DMS) facility? Is there examples of this type (used to extract lead/zinc) of process operating somewhere else? What is the report card on these systems in current operations?
6. What type of chemicals would be used in the DMS? What is the health risk involved with using this material? What is the potential effects to the environment if it is introduce to it?
7. What is Ferri-Silicon? What is it used for? How is it made? What is the health risk involved with using this material? What is the potential effects to the environment if it is introduce to it?
8. What is the full description of the waste rock management facility and plan? Is there a secondary capture system for potential run off and leaching? What is the mitigated measures of any leaching or run off? Can a lined wall or berm be built around the facility?

9. What happens to the Direct Shipment Ore (DSO) extracted from the DMS? How is it stored and transported? What is the potential risk to the environment and to human health? What would be the mitigated response to this?
10. What is the full description of the Ground Infiltration System (GIS) and how does it actually work? Is there any such systems used elsewhere? What is their report card? Is there a secondary safety system?
11. Need to fully look at and discuss the ground freezing method proposed! Is there other examples in use? What is their report card? Has climate change/global warming being taken into account? Has earthquakes been taken into account? Has blasting been taken into account? Has the combination of two or more of these scenarios been also taken into account?
12. What is the full description of the waste rock management facility and plan? Is there a secondary capture system for potential run off and leaching? What is the mitigated measures of any leaching or run off? Can a lined wall or berm be built around the facility?
13. How much water will be used throughout the life of the project? How much will be displaced? How much would not be recovered?
14. What is the full description of the water monitoring program and what is the timeline of this monitoring? What is the full description of the wildlife monitoring program and what is the timeline of this monitoring? Can there be a Deninu Kue' monitor/liaison on staff throughout the entire process?
15. Is there any current heritage sites and cultural areas in the footprint? What is the process if some where discovered or identified during the life of the project?
16. What is the estimated increase in traffic projected during transporting of the bulk samples to Hay River, as well as, the workers and contractors to the site and back to where they will be staying? What is the effects on the road system and how will it be mitigated? Why is using the old railway system not considered in transporting the bulk samples from the sampling site to Hay River. Why is having a camp on site not considered?

17. Is there a reclamation deposit identified? How much is it? Is there any stipulations involved in the deposit commitment? If so, what is it? Who holds the ultimate responsibility of the deposit and the actual reclamation?
18. What is the rationale and qualifiers for stating that there will be no cumulative effects? Do we need to look at a cumulative effects study and a monitoring program for cumulative effects?
19. Is Traditional knowledge (TK) incorporated in this process to-date? What other TK is needed and what is the plan to acquire this data?

**Patrick Simon**  
**Environment Manager**  
**Deninu Kue' First Nation**

**Points of Question from IMA Advisory Committee**  
**Tommy Unka reviewed all the questions and clarified**  
**them**  
**August 1, 2006**

Pits are not normally filled,

GIS? Ground infiltration system?

- Implication & mitigations of landing the bulk sample shouldn't it be the pros and cons rail head would mean putting in a rail road to accommodate bulk sampling is not realistic, the highway was resurfaced on the Hay River side to accommodate the bulk sampling haul by truck?
- DKFN – planning post planning & post reclamation?

Shouldn't this be predevelopment and the pending reclamation plan for the affected area? This information can be obtained from Tamerlane or MVLWB. You the DKFN want to be part of the predevelopment on the start and every phase of the bulk sampling operation.

Popsicle plan is this CO2 frozen core, expensive.

- Geochemistry data can be obtained from the company or MVLWB also data on waste rock storage.
- Water management will be covered by the SNP AEMP
- Treatment handling storage will all be regulated by federal Government the NWT, The NWT mining act, WCB should be concern with the effluent or discharge.
- Mining Water, once the water is moved it becomes mine water and as such it will be regulated & tested on regular basis
- Freeze Wall; find out where they had used this method before and what the effects of such an operation can cause

- Sewage- effluent in & around a mining operation is usually treated and dumped into the tailings pond.
- Species at risk, raptors nesting in the high walls
- Fur bearing animals
  - Studies on martens 1988, 1989 GNWT Ron Gruf
  - Trapping records
  - Moose survey 1988-89 Ron Gruf
- Ammonia could get back into the ground water? Ammonia is not a concern, the nitrates associated with the ammonia is a health risk to humans, water and every thing that lives in it.
- Waste rock is not a big concern other than the fact they take up a large foot print, it could be a threat if it is associated with ARD (Acid, rock, drainage) and the Ferro magnesium oxides.
- Environmental Programs. The Federal government will request the federally legislative SNP, Surveillance Network program AEMP (Aquatic Effect Monitoring Programs) WEMP (Wildlife effect monitoring Programs) we have to push for these.

Artisan Wells definitely has to be addressed

Dense Media Separation (DMS)

Explosive:

- There will be emission into the air, that will precipitate onto the land and water and the noise is loud.
- Underground mining will not be feasible, the rock is lime stone, not granite, and why go underground for lead or zinc, its very expensive to go under ground you will require specialized equipment, crew etc.
- \*” Trees in area are extremely small and frail.”
- I agree! The small spruce trees referred to are black spruce, these species unlike their cousin the white spruce stay small and do look frail, a small black spruce 4” in diameter will age over a hundred years old.
- “Can the vibration from the explosive cause the freezing to crack”
- What frozen element are we talking about here? The permafrost in this area is discontinued meaning it thaws out in the summer, except for areas with a lot of sand and moss covering, predominately its discontinued. The limestone karst is all cracked from the water above ground that seeps



into the Karst freezes, then affects the integrity of the mother rock.

- "Abundant in furbearing animals"
- Past studies will show you that this statement is not true, the area is in recovery state from past development. The habitat is limited and there is still on going activities such as drilling, line cutting etc that are all disturbances.
- Information on the water licenses can be obtained verbatim from MVLWB, in Yellowknife.
- "No project description" This can also be obtaining from the MVLWB.

Fish deformities in the bay, this is a big one. 1996 Marlene Evans (Dr.) studies in the Fort Res bay had identified nitrates in the fish, nitrates are lethal to all life forms, Pops, poly-organic Pollutants from the south were also present high levels of other metals were also present.

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Tommy Unka

# TAMERLANE ECONOMIC IMPACT

**COMMUNITY ECONOMICS:** The local economy in Fort Resolution will be greatly affected by Tamerlane moving in next door to us and starting up a mine. Whether the mine is there for a short time, or long-term, the effects will be extensive and very long-lasting.

To ensure we start off on the right foot with this mining company, a protocol agreement between Tamerlane and the DKFN must be put in place which would:

- focus primarily on open dialogue (consultation) with each other,
- enable both parties to be aware of new developments in order to work together to provide the best information for the rights and benefits of each group, and
- provide an avenue which encourages economic development and growth.

## EXISTING BUSINESSES:

- Construction of roads & road maintenance – grading, snow removal, sanding, culvert and ditch maintenance and other related work.
- Clean-up, reclamation of contaminated sites, etc.
- Construction of buildings
- 

## NEW BUSINESSES & OPPORTUNITIES:

DKFN/DKDC or Individuals can joint venture with other companies, or other First Nations to invest in different areas of opportunity:

- Remote camp site services – catering, cleaning, maintenance, etc
- Road building and other construction services
- Explosives – supply and distribution
- Hauling Contracts
- Tourism (golf course)
- Communication
- Airport services (include weather station)
- Lumber supplier (special projects)
- Retail sales
-

## **ECONOMIC DEVELOPMENT MODEL BEING FORMULATED**

The Deninu Kue Development Corporation's purpose is to conduct business and make investments on behalf of the DKFN;

The DevCorp will be divided into two divisions;

- Economic Development
  - concerned with the growth and development of the economy of the Band and its members
  - arranges funds for various economic, business, and capital projects and also provides business training and advice for Band members
- Business Development
  - purpose is the establishment of business ventures
  - establish joint ventures with industry, other First Nations, individuals to undertake specific market segments.

As leaders of our Nation, it is our duty to ensure we leave a solid foundation for our people to build upon. This quote I once heard sums up all our responsibilities and activities into one complete thought and if practiced will ensure a positive outcome from the future development of the lands and territory of our Nation.

**“MAKE SURE THE FOOTPRINTS WE LEAVE BEHIND  
ARE THE ONES OUR CHILDREN WILL BE PROUD TO WALK IN”**

Community Justice  
Fort Resolution, NT

For:  
Tamerlane Pine Point Project  
Scoping Sessions  
August 17, 2006

Submitted by:  
Faye Aviugana,  
Community Justice Coordinator

## Socio-Economics

### Community Justice:

Currently our committee operates with four elder's which suits the size of our community. Elder's Justice committee is generally selected by First Nations and approved by the Minister of Justice.

### Mandate:

To assist to develop an alternative system of justice that meets their unique needs and promote a safer community.

### Community Involvement:

The involvement of the community is what makes community justice, if you don't have support from the community, it is very difficult to have success with alternative justice. Communities must be willing to invest their time and expertise, and their leaders must mobilize a full range of partners to deal with the issues of crime and victimization. It is recognized that justice is best carried out when community members are involved.

Today, things are changing again. There is a change in attitudes, and a change in approaches. There are two reasons for the changes. The first reason is that aboriginal people are rediscovering the important aspects of their culture. This includes the need to deal with their own problems, in their own communities, in their own ways. And so they are trying to put in place some traditional ways of dealing with problems in their communities. The second reason is that non-aboriginal people are also recognizing the strengths of the traditional aboriginal justice systems. They are adapting certain practices to help with problems in their own communities.

Our committee knows that we have the support of our community and this is something that we would like to stress, especially among our youth.

#### Working with RCMP:

The relationship with the RCMP and the community justice is workable. We receive support from the RCMP and can meet and come to understanding on many issues which affect our community.

Most if not all our crime is alcohol related and have to do with violence or property damage. Some residents might be thinking that youth crime rate is on the rise in our community. We don't believe it is, most youth crime are committed are committed by the same individuals.

There are three members based here in Fort Resolution, annually. During the summer months there is usually one member gone for holidays. This is an issue already in our community if there is more employment there may be more calls for assistance. All calls are answered in Yellowknife through a dispatch, and personally using this is not effective. If an elder calls for assistance and doesn't speak very good english, what is the next step for assistance.

#### Working with Heath & Social Services

The community justice committee sees a real problem, because there is no social workers stationed in our community. If we begin to have more social problems with more employment, then our community is in no position to address this issue. The community has stepped up many times to address the issue and there has been no resolution for the issue. We have visiting workers, who come in to our community but personally I think there needs to be a full-time worker for our community.

## Working with Community Wellness Program:

We have two workers in our community and they are of aboriginal decent, and is a bonus for the community. The workers have organized many community and social events which surround wellness; meaning alcohol & drug free events, cultural programs, youth programs.

## Recommendations:

The justice committee met on August 9, 2006 to discuss the Tamerlane Pine Point Project and here are some of their comments.

-The mine is going to open sooner or later there are already indications, if there is employment it will be good for the community. What kind of employment will be available for the community of Fort Resolution?

-The committee is in support of the project and would like to be invited for any further discussions. Will the committee be included for further community input?

-The youth have a very different upbringing, then when Pine Point was a community and the last mine was there. If we wanted to prevent crime from happening then it will need to be a community initiative and not just certain agencies. What can Tamerlane do to ensure we have money to assist with crime prevention if this is necessary at the time?

-The crime is not as violent as it used to be in 70's or 80's, because the laws have changed to protect and not to just prevent. The community would like this to continue to protect will Tamerlane be able to provide money to train and hire a by-law officer to assist with more safety?

-Maybe a full-time person answering the phones at the RCMP will help if the mine goes ahead. This will allow a person to be in contact for immediate assistance. How are you willing to work with the RCMP to ensure this position is created to assist with communication and emergencies?

## Acknowledgements

### Chief & Council

- ⊕ Chief Robert Sayine
- ⊕ Sub-Chief Louis Balsillie
- ⊕ Councilor Ray Simon
- ⊕ Councilor Jim Villeneuve
- ⊕ Councilor Dave Pierrot
- ⊕ Councilor Frank (Rocky) Lafferty

### Elder Senate

- ⊕ Edward McKay
- ⊕ Marcel Norn
- ⊕ Mary Pierrot

### IMA Committee

- ⊕ Tommy Beaulieu
- ⊕ Henry Calumet
- ⊕ Carol Collins
- ⊕ Eddy Lafferty
- ⊕ Keith Fabien
- ⊕ Arthur Sanderson

### FREWC

- ⊕ Lloyd Norn
- ⊕ Eddy McKay Jr.

### Consultants

- ⊕ Crosscurrent Associates  
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### Staff

- ⊕ Paul Boucher, Negotiator
- ⊕ Rosy Bjornson, IMA Coordinator
- ⊕ Patrick Simon, Environment Manger
- ⊕ Gord Beaulieu, Economic Development Officer
- ⊕ Ron Boucher, Lands Coordinator
- ⊕ Irvin Norn, Senior Administrator
- ⊕ Therese ( Dollie) Simon , DDAP
- ⊕ Faye Aviugana, Community Justice
- ⊕ Kirsten Fabien, Youth
- ⊕ Larrissa Rymer, Youth
- ⊕ Alexander Boucher, Youth