Indian and Northern Affairs Canada
Affaires indiennes et du Nord Canada

3rd Floor Bellanca Building
PO Box 1500
Yellowknife, NT
X1A 2R3

File:MV2006C0014
MV2006L20003

Tamerlane Ventures Inc.

June 27, 2006

To: Lynn Carter
Regulatory Officer
Mackenzie Valley Land and Water Board
7th Floor - 4910-50th Ave.
PO Box 2130
Yellowknife, NT X1A 2P6

Re: Tamerlane Ventures Inc. application for land use permit (MV2006C0014) and Type B water license (MV2006L2-0003)

Dear Ms. Carter,

Indian and Northern Affairs Canada (INAC) has reviewed the land use permit application (MV2006C0014) and the class B water license application (MV2006L2-0003) submitted by Tamerlane Ventures Inc. (Tamerlane) for an advanced exploration project in the Pine Point area. INAC has several comments regarding the proposed development.

Tamerlane is applying for a Type B water license for the Pine Point Pilot Project (PPPP) to remove a bulk sample of 1 million tonnes over a 15 month period. Over the course of this 15 month period 2800 tonnes of mineralized material will be extracted per day and processed through a dense media separator (DMS) to produce a Pb-Zn concentrate. The use of water for milling and the depositing of waste from milling in an operation exceeding 100 tonnes of ore per day requires a Type A license. INAC considers processing ore in a DMS circuit to be milling, and therefore this application should be considered an application for a Type A water licence.

The Project Description Report submitted by Tamerlane Venture Inc. lacks sufficient detail to assess what impacts the proposed project may have. In particular:

- Tamerlane describes a Ground Infiltration System (GIS), which will be the receiving environment for approximately 300 000 m^3 of waste water and effluent at the site (DMS effluent, mine dewatering, treated sewage effluent), however there is no discussion regarding how the Ground Infiltration System will function, how waste will be restricted from leaving the system, how waste will be treated within the system, and contingency planning if the system does not function properly. In addition, it would be valuable to know the physical quality of the waste being deposited to the GIS prior to disposal and to have a mechanism to limit disposal if the effluent quality is of concern.

- No geochemistry information is provided regarding the ore or the waste rock to be extracted at the site. This information is required to assess the potential for ARD and metal leaching on site. While there is a wealth of knowledge from the old Pine Point site it is the proponents responsibility to demonstrate that the geochemistry of the ore and waste rock is not of concern or to describe methods that will be undertaken to appropriately mitigate effects. INAC mineral development would be pleased to assist Tamerlane in sourcing some of the historic data from the mine.

- It is stated that waste rock will temporarily be stockpiled at the surface on a concrete pad and covered. A plan for the collection and treatment of seepage should be included in the application. This plan should include monitoring adjacent to the storage pile to ensure that seepage does not migrate away from the storage area.

- The perimeter of the R190 ore body will be ice bonded using a ground freezing technique to reduce the flow of groundwater into the mined out areas. There is no information regarding the reclamation of the mined out shaft other than that the portal will be sealed with cement. What will become of the frozen perimeter?

- Tamerlane will be using explosives to blast large hole stopes in the underground workings. What is the size and frequency of the blasts that will be used? Will the integrity of the frozen perimeter be compromised by the blasting?

- It is likely that ammonia will be present in the underground workings as explosives will be used. There is no mention of the potential for ammonia to enter the waste stream, nor any mention of how the effects of ammonia will be mitigated. Once the frozen perimeter has been removed what is the potential for ammonia and other contaminants to migrate away from the site?

- It should be recognized that the modelling used in the feasibility study for the frozen perimeter is largely based on assumptions. While it is

recognized that modelling can be an effective economical method in determining the viability of a technology, modelling is most accurate when actual field data from the site is used. The integrity of the frozen perimeter depends on three primary parameters: ground temperature, groundwater quality/flow regime, and soil data. No field data was supplied for any of these parameters. It should be recognized that due to the large amount of assumptions used in the GEOTHERM model, there is a high degree of uncertainty in the results.

- A monitoring program should be developed for the site and should include water quality sampling and groundwater sampling in the areas around the frozen perimeter, the Ground Infiltration System, the waste rock storage pile and the mine adit.

- Tamerlane indicates that water quality sampling on site will continue for 6 months after operations have ended. Water quality sampling should be developed in conjunction with the environmental monitoring program mentioned in the point above, and should continue until INAC is satisfied.

- Tamerlane is proposing to run this project as a pilot project for a larger scale development of the remaining 34 Pb-Zn deposits on site. INAC would suggest consulting the *Mine Site Reclamation Guidelines for the Northwest Territories* for pre-mining planning options.

- As most of the information provided in the Project Description Report lacks sufficient detail, the project has a high degree of uncertainty associated with it. Consequently a high contingency value would be required within the security.

Thank you for the opportunity to review the aforementioned land use permit and water license applications. If you have any questions regarding these comments please contact Mike Palmer at (867) 669-2698 or PalmerM@inac-ainc.gc.ca.

Sincerely,

Original signed

David Livingstone
Director
Renewable Resources and Environment