Introduction

• Tamerlane Ventures Inc. (TAM) is a publicly traded mining company engaged in exploration and development in North America and Internationally.
  — Ross Burns – President & CEO
  — David Swisher – Senior Project Manager
  — Graham Eacott – V.P. Investor Relations
  — Tom Thomson – Manager Investor Relations
  — Dan Broast – Senior Resource Geologist
  — Jerry DeMarco – Public Relations
Introduction

• TAM proposes to construct and operate a Pb-Zn pilot plant to economically confirm:
  – Full-Scale Underground Mining Potential
  – Extraction of 1 Million Tonne Bulk Sample
  – Perimeter Ground Freezing
  – Shaft Sinking
  – Vertical Conveyance
  – Dense Media Separation (DMS)
Property History

- 1898
  - Claims staked on oxidized sulfide outcrops

- 1929
  - Northern Lead Zinc Co. conducted work program

- 1948-1955
  - Cominco Ltd. conducted major exploration

- 1961-1964
  - Government constructed railway

- 1961-1964
  - Northern Canada Power builds 21 megawatt hydroelectric plant
Property History

• 1964-1987
  — Cominco Ltd. conducted mining & milling

• 1991
  — Mill, town site & railroad removed

• 2001
  — Karst Investments LLC staked claims

• 2004
  — Tamerlane Ventures Inc. acquired 60% interest

• 2006
  — Tamerlane Ventures Inc. acquired remaining 40% interest
Property History-Present

- 52 Deposits Mined
- 64,259,570 Tonnes of Ore
- 3.1% Lead, 7.0% Zinc

- 34 Defined Deposits
- 70 Million Tonnes* (historic resource)

*Taken from historic records believed to be accurate. No current NI 43-101 compliant resource calculation has been completed on these deposits.
Key Pilot Project Components

- No camp
- No winter road
- Temporary waste rock storage area
- Infiltration basin
  - Proposed as nearby quarry
- Freeze perimeter
- Dense Media Separation & Additives
- Sewage Treatment
- Water Quality from Backfill & Explosives
- Hazardous Wastes
Waste Rock Storage

- All volumes returned U/G
- No historical Acid Rock Drainage (ARD) issues
- Limestone and dolomite-dominated geology mitigate potential ARD

<table>
<thead>
<tr>
<th>Waste Generation</th>
<th>Estimated Tonnage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shaft Sinking</td>
<td>16,300</td>
</tr>
<tr>
<td>Development</td>
<td>32,430</td>
</tr>
<tr>
<td>Raisebore</td>
<td>2,000</td>
</tr>
<tr>
<td><strong>SUBTOTAL</strong></td>
<td><strong>50,730</strong></td>
</tr>
<tr>
<td>Bulk Sample Extracted</td>
<td>1,000,000</td>
</tr>
<tr>
<td>DMS Recovery @ 60%</td>
<td>600,000</td>
</tr>
<tr>
<td>DMS Gangue Reject @ 40%</td>
<td>400,000</td>
</tr>
<tr>
<td><strong>SUBTOTAL</strong></td>
<td><strong>400,000</strong></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>450,730</strong></td>
</tr>
<tr>
<td>Assume 100% swell factor</td>
<td>450,730</td>
</tr>
<tr>
<td><strong>Total Waste Returned U/G</strong></td>
<td><strong>901,460</strong></td>
</tr>
<tr>
<td><strong>Total Waste Required for fill</strong></td>
<td><strong>1,000,000</strong></td>
</tr>
<tr>
<td>Δ</td>
<td>(98,540)</td>
</tr>
</tbody>
</table>
Infiltration Basin

- Shallow Impoundment
- Natural filtering
- Gradual exfiltration
- Groundwater recharge

20 year old surface infiltration basin at Commerce Plaza, a business park near Allentown, Pennsylvania
Freezing

Freeze Perimeter wall

2” & 4” diameter Freeze Pipes

Ore Zone

Section through Freeze Wall
DMS Preliminary Layout

Primary Crusher

Vertical Conveyor

Stockpile

Secondary crushing

Dense Media Circuit

Waste

Bulk Concentrate

100,000 tonnes

Coarse Ore Screens

Secondary Crushers

Lead

DMS Cyclone Feed Pump

DMS Cyclone

Heavy Media settlers

Cartridge

150 tpd modular

Coarse Ore Bin

Sieve Bends

Centrifuge

Floor Sump

Magnetic Separator

Coarse Ore Screens

150 tpd modular

DMS Preliminary Layout

Tamerlane Ventures Inc.
DMS Defined

Pine Point Pilot Project

Milling
DMS Additives

Ferrosilicon

- Only known additive (Inert)
- Derived from natural ores (MSDS)
- No known adverse environmental effects (MSDS)
- Recycled through the DMS circuit
Sewage Treatment

Options Considered

• RBC sewage treatment facility
  – Biodisk Corporation
  – Used throughout Canada
    • Snap Lake, Travco, NWT
    • Diamond Mine, BHP, NWT
    • CNR, Alberta
    • Yellowknife, Barrick, NWT

• Self-contained mini-sewage treatment toilets U/G

• Port-a-Potties
Water Quality

• Underground water will be monitored at the infiltration basin throughout the life of the project
• Historical groundwater reports and assays completed

• Existing groundwater quality strongly influenced by local geological conditions
  – sulfurous springs
  – salts-enriched hard water

• Tamerlane Ventures Inc. will continue groundwater monitoring until Regulators are satisfied
Hazardous Wastes

- Hazardous Wastes and Disposal
  - Fuels (diesel and diesel additives)
    - Will be consumed.
  - Used oils (motor and hydraulic)
    - Reuse in oil heaters.
  - Used Batteries
    - Dispose at Hay River hazardous waste disposal area.
  - Stored fuels and lubricants
    - Contain in separate catchments.

- Spills
  - Containment and Clean-Up Process
    - Hazardous Materials Spill Contingency Plan
    - Appendix D in Project Description Report.
## Estimated Schedule

<table>
<thead>
<tr>
<th>Task</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freeze Perimeter Drilling</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Power Infrastructure</td>
<td></td>
<td></td>
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<tr>
<td>Freeze Infrastructure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Freeze Operation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Main Infrastructure</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Shaft Infrastructure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shaft Sinking</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>U/G Drift Development</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vertical Conveyor Installation</td>
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<td></td>
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<tr>
<td>U/G Ramp Development</td>
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<td></td>
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<tr>
<td>Raisbor Development</td>
<td></td>
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<tr>
<td>U/G Utilities</td>
<td></td>
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<tr>
<td>DMS &amp; Support Infrastructure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Backfill Plant</td>
<td></td>
<td></td>
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<tr>
<td>U/G Stope Development</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Bulk Sample Extraction</td>
<td></td>
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</tbody>
</table>
Questions?
Environmental Assessment

Pilot Plant Project Area

Great Slave Lake
Past Mining Area
R-190
Railhead at Hay River
G03
To Fort Resolution
N-204
Pilot Plant Project Area

Tamerlane Ventures Inc.
Environmental Baseline Work

Initial EBA Baseline Studies

- Wildlife
  - Conducted: September, 2005

- Stream Assessment and Water Quality
  - Conducted: September, 2005

- Vegetation
  - Conducted: September, 2005
Environmental Baseline Work

EBA R190 Follow-Up Studies

- Owl Surveys
  • Conducted: April, May, 2006
- Amphibian Surveys
  • Conducted: May & June, 2006
- Breeding Bird Surveys
  • Conducted: June, 2006
- Rare Plant Surveys
  • Conducted: Late June/July & Early/Mid-August, 2006
- Water Quality Surveys
  • Conducted: May, June, July & August, 2006
## Valued Ecosystem Components

<table>
<thead>
<tr>
<th>VEC Grouping</th>
<th>VEC’s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Quality</td>
<td>Air Quality (indicators)</td>
</tr>
<tr>
<td>Water Quality</td>
<td>Surface / Groundwater Quality (indicators)</td>
</tr>
<tr>
<td>Terrestrial Vegetation</td>
<td>Traditional Use Plants / Rare Plants</td>
</tr>
<tr>
<td>Wildlife (SARA listed species)</td>
<td>Whooping Crane</td>
</tr>
<tr>
<td></td>
<td>Peregrine Falcon</td>
</tr>
<tr>
<td></td>
<td>Short-Eared Owl</td>
</tr>
<tr>
<td></td>
<td>Wood Bison</td>
</tr>
<tr>
<td></td>
<td>Woodland Caribou</td>
</tr>
</tbody>
</table>
# Impact Matrix

<table>
<thead>
<tr>
<th>Project Component</th>
<th>Air Quality</th>
<th>Water Quality</th>
<th>Wildlife</th>
<th>Vegetation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site Preparation and Construction</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Pilot Plant Site</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Process Waste Storage (Temp)</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Underground Mining</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Air Quality
# Air Quality

<table>
<thead>
<tr>
<th>Project Component</th>
<th>Potential Impact</th>
<th>Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site Preparation and Construction</td>
<td>Temporary localized dust generation from clearing /surface construction activities</td>
<td>Dust suppression, GNWT Guideline for Dust Suppression</td>
</tr>
<tr>
<td>Underground Mining</td>
<td>Limited air emissions CO, SO$_2$, and NOx, particulates</td>
<td>GNWT, WCB standards for mine air quality</td>
</tr>
<tr>
<td>Processing</td>
<td>Negligible particulate emissions</td>
<td>Guideline for Ambient Air Quality Standards in the Northwest Territories</td>
</tr>
<tr>
<td>Other Infrastructure (e.g. access road)</td>
<td>Temporary localized dust generation</td>
<td>GNWT Guideline for Dust Suppression</td>
</tr>
</tbody>
</table>
Water Quality
Groundwater Flow
## Water Quality

<table>
<thead>
<tr>
<th>Project Component</th>
<th>Potential Impact</th>
<th>Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site Preparation and Construction</td>
<td>Localized sedimentation</td>
<td>Silt barriers in construction activities – no streams or lakes present in local study area</td>
</tr>
<tr>
<td>Underground Mining</td>
<td>Discharged mine water</td>
<td>Mine water used in DMS plant directed to infiltration basin</td>
</tr>
<tr>
<td>Processed Waste Water</td>
<td>Suspended solids</td>
<td>Inert process waste water directed to former gravel quarry (infiltration basin)</td>
</tr>
<tr>
<td>Sewage</td>
<td>Nutrients and bacteria to groundwater</td>
<td>Treated using a packaged RBC plant or port-a-potties. RBC will meet the Camp Sanitation Regulations, R.R. N.W.T. 1990, c. P-12, Public Health Act, R.S.N.W.T. 1998, c. P-12</td>
</tr>
<tr>
<td>Water Consumption</td>
<td>Process water sourced from groundwater. Potable water transported to site</td>
<td>Excess water directed to infiltration basin, returned to groundwater</td>
</tr>
<tr>
<td>Hazardous Materials</td>
<td>Impacts on water quality</td>
<td>Management Plan covering the transportation, use, disposal, and emergency response</td>
</tr>
</tbody>
</table>
Questions?
Vegetation
# Vegetation

<table>
<thead>
<tr>
<th>Project Component</th>
<th>Potential Impact</th>
<th>Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site Preparation and Construction</td>
<td>Minor loss of vegetation; increase in ecosystem fragmentation;</td>
<td>Minimize footprint – maximize use of existing disturbed terrain</td>
</tr>
<tr>
<td>Plant Site &amp; associated infrastructure</td>
<td>Localized soil compaction</td>
<td>Minimize off-site activities; implement erosion control measures</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Use of dust suppressants; Dispose of all hazardous wastes in approved manner.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Progressive site reclamation</td>
</tr>
</tbody>
</table>
Wildlife
Wildlife: Whooping Crane

Nearest known Whooping Crane Nest Sites ~60 km

Proposed Pilot Project

Nearest known Whooping Crane Nest Sites ~60 km
Wildlife: Peregrine Falcon
Wildlife: Short-Eared Owl

- No suitable habitat in local study area
- None found in local study area
- Nearest suitable habitat for nesting ~3km south of highway
Wildlife: Wood Bison

Project Located in Bison Control Area

DISEASED HERDS *
- GR Garden River
- HL Hook Lake
- LBR Little Buffalo River
- NL Needle Lake
- PD Peace Athabasca Delta
- PL Central WBNP
- WA Wabasca
- WZ Wentzel Lake

DISEASE-FREE HERDS
- HZ Hay-Zama
- MB Mackenzie Bison
- NH Nahanni
- PM Pink Mountain

CAPTIVE HERDS
- HLRP Hook Lake Rec.Project
- SY Syncrude
Wildlife: Woodland Caribou

- Woodland Caribou occur in low numbers in Project area year-round

- Calve in upland wooded areas not present in Project area
## Wildlife

<table>
<thead>
<tr>
<th>Project Component</th>
<th>Potential Impact</th>
<th>Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site Preparation and</td>
<td>Disturbance and removal of wildlife habitat</td>
<td>Minimize footprint, maximize use of existing disturbed terrain, avoid sensitive areas</td>
</tr>
<tr>
<td>Construction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Site</td>
<td>Disturbance and removal of wildlife habitat</td>
<td>Minimize footprint, maximize use of existing disturbed terrain, avoid sensitive areas</td>
</tr>
<tr>
<td>Underground Mining</td>
<td>No impacts anticipated</td>
<td>None required</td>
</tr>
<tr>
<td>Process Waste Water</td>
<td>Potential consumption by local wildlife</td>
<td>Inert process waste water directed to former gravel quarry (infiltration basin)</td>
</tr>
<tr>
<td>Domestic Wastes</td>
<td>Domestic waste can attract wildlife, and become a safety hazard</td>
<td>Domestic will be temporarily contained on site &amp; disposed of in an approved local area landfill</td>
</tr>
<tr>
<td>Other Infrastructure</td>
<td>Temporary, rapidly reversible disturbance</td>
<td>Traffic controls – wildlife has the right-of-way</td>
</tr>
</tbody>
</table>
Questions?
Environmental Considerations

• The general area has experienced major exploration and mining activities for more than 100 years.
• The R-190 area has already been disturbed by historical exploration activities.
• The R-190 area is located immediately adjacent to an existing highway and power line infrastructure.
• The R-190 area has already and continues to experience quarrying activities.
• No significant effects on wildlife, including SARA-listed species are expected to occur.
Mitigation Measures

• Application of Least Intrusive Method for Stabilizing Wet Ground
  — Freeze Curtain
  — Primarily Underground Operation

• Project Footprint Minimization
  — Installation of Project Infrastructure on Previously Altered Terrain

• No Streams or Lakes in Immediate Project Area
  — No Potential to Affect Streams, Lakes or Fisheries Resources

• Compliance with Water License Criteria
  — Process Waste Water Recycling, Treatment (if necessary) and Discharge to Ground / Groundwater
Mitigation Measures Cont.

• Airborne Noise Minimization
  — Minimal Airborne Noise Due to Primarily Underground Operation

• Access Road Dust Suppression

• Access Road Traffic Controls
  — Wildlife will have the Right-of-Way

• Effective Waste Management and Spill Prevention / Response
Cumulative Impacts

No Significant Cumulative Impacts Expected to Occur*

- Pine Point 1965 – 1987
- Limited Scope and Scale
- Current Operating Quarries
- Minimal Intervention – Freeze Curtain - Underground
- No Nearby Waterways
- Progressive Reclamation

*Review sections 5.0 & 6.0 pgs 65-66, project description report
Summary

• Confirm Viability and Economics for Underground Mining
• Obtain Bulk Sample
• Adhere to High Level of Environmental and Safety Standards
• Compliance with Regulatory Requirements and Conditions
• Create Jobs and Business Opportunities
• Improve Local Economy
Questions?