Creating Value Through Operational Excellence

Northgate Exploration Limited
Kemess North Project
Minerals North April 2004
Northgate Exploration Limited is a BRITISH COLUMBIA-based gold mining company. Its principal asset is the Kemess South mine and the adjacent Kemess North deposit, which is currently the subject of a feasibility study. In 2003, production was 294,117 ounces of gold and 76.2 million pounds of copper. The company is listed on the TSX (NGX) and AMEX (NXG) and has a market capitalization of approximately $600 million (was $30 million in 2000).
Northgate Exploration Limited

- A brief overview …
Kemess South Mine

- Located in north-central British Columbia
- BC’s second largest metal mine
- **Mining rate**
  - 150,000 tonnes/day
- **Mill throughput**
  - 50,000 tonnes/day
- **Life of mine profile**
  - 300,000 oz/y gold
  - 75 million lbs/y copper
  - ore depleted 2008
- **Economics**
  - 500 workers on site, 1,000 further indirect jobs
  - $150 million in yearly direct expenditures
  - original investment $800 million +
Aerial View of the Kemess South mine with Mill Complex in the Foreground
History of the Kemess South Mine

- Deposit known for 15 years
- Kemess South acquired in 1996 by Royal Oak Mines
- Construction – 1996
- Production – 1998
- Financial problems led Royal Oak into receivership
- Northgate Exploration acquired the mine in February 2000
Kemess South

Operational Improvements

Mill throughput and mining efficiencies have steadily increased.

Mill Throughput

Mining Efficiency
**Kemess South**

**Metallurgical Improvements**

- Recoveries have increased even as grades have declined.

### Gold
- Target: 73.5%

### Copper
- Target: 85%
The Northgate Advantage

Strong operating team with a proven track record.

Metal production has increased dramatically since 2000.

**Gold Production**

- 2000: 226,000 Ounces
- 2001: 277,000 Ounces
- 2002: 282,000 Ounces
- 2003: 294,117 Ounces

**Copper Production**

- 2000: 50.4 Millions lbs
- 2001: 66.3 Millions lbs
- 2002: 72.9 Millions lbs
- 2003: 76.2 Millions lbs

+30%  
+51%
Northgate Overview

Historic Trading Summary

Volume (millions of shares)

Price per share ($Cdn)

$3.00
$2.50
$2.00
$1.50
$1.00
$0.50
$-

2001 2002 2003 2004
Kemess North

**Location Map**
5.5 kilometers north of the Kemess South mine
Background: Kemess North

- Placer mining 1890
- Prospecting 1930’s
- Copper-boom 1966
  - Kennco (’66-’71)
  - Getty (’75-’76)
  - El Condor (’86-’92)
  - Northgate (’00->)
Plan for Mine Life Extension - Kemess North

2000  Northgate began an extensive exploration program at Kemess North (the original area discovery) – $600,000

2001  Exploration program defined high grade – $1.5 million

2002  $5.4 million spent on drilling confirmed sizeable ore body – the largest drilling program in BC in many years

2003  $5 million invested in pre-feasibility and feasibility studies

KEMESS NORTH COULD ADD 20 YEARS TO MINE LIFE
## Exploration Success – Kemess North

- Resource increased and upgraded.

<table>
<thead>
<tr>
<th>Year End</th>
<th>Resource Category</th>
<th>Au (ounces)</th>
<th>Cu (millions lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>Inferred</td>
<td>5,700,000</td>
<td>2,200</td>
</tr>
<tr>
<td>2002</td>
<td>Indicated</td>
<td>5,400,000</td>
<td>2,000</td>
</tr>
<tr>
<td></td>
<td>Inferred</td>
<td>1,200,000</td>
<td>400</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>6,600,000</td>
<td>2,400</td>
</tr>
</tbody>
</table>
Kemess North Project

Pit Cross-Section Running 16300N East to West
**Exploration**

**Kemess Claims**

- Excellent potential to host
  - Additional Gold/Copper porphyry deposits
  - Higher grade gold epithermal deposits
  - Skarn deposits

**2004 Program ($1M)**

- Geophysical surveying
- Diamond drilling
- Trenching and prospecting

87,000 acres of claims surrounding existing infrastructure.
Kemess North Project

Pre-feasibility Study Mine Plan

- Mineable Resource: 370 million tonnes @ Au 0.34 gr/mt, Cu 0.18 %
  - Containing 4.0 million ounces of gold and 1.4 billion pounds of copper
- Waste/Ore Strip Ratio 0.6:1
## Kemess North Project

### Pre-feasibility Study Summary

<table>
<thead>
<tr>
<th></th>
<th>Annual Averages</th>
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<tbody>
<tr>
<td><strong>Production</strong></td>
<td></td>
</tr>
<tr>
<td>Gold – oz</td>
<td>283,000</td>
</tr>
<tr>
<td>Copper – mm lbs</td>
<td>77</td>
</tr>
<tr>
<td><strong>Operating Parameters</strong></td>
<td></td>
</tr>
<tr>
<td>Mining – mm tonnes</td>
<td>47.9</td>
</tr>
<tr>
<td>Milling – mm tonnes</td>
<td>22.0</td>
</tr>
<tr>
<td><strong>Operating Cost</strong> – Cdn$ / tonne milled</td>
<td>5.97</td>
</tr>
<tr>
<td><strong>Gold Cash Cost</strong> – US$ / oz (1)</td>
<td>173</td>
</tr>
</tbody>
</table>

(1) Cu – US$0.95/lb; Cdn/US F/X 0.67
Kemess North Development Plan

- The project must follow a very tight timeline to be viable
- Feasibility Study complete near end of Q1/2004
- Permitting process has commenced
- Permits needed by mid 2005, if project to proceed
- Construction begins summer 2005
- Kemess North ore processing starts late 2006
Kemess North Project

Development Plan

<table>
<thead>
<tr>
<th></th>
<th>2004-05</th>
<th>2006-09</th>
<th>2010-19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kemess South</td>
<td>52,000+</td>
<td>30,000</td>
<td>0</td>
</tr>
<tr>
<td>Kemess North</td>
<td>0</td>
<td>37,500</td>
<td>93,000+</td>
</tr>
<tr>
<td>Total</td>
<td>52,000</td>
<td>67,500</td>
<td>93,000+</td>
</tr>
</tbody>
</table>

When Kemess North ore is exhausted in 2019 a decision will be made on a push back to access additional higher grade ore resources at the bottom of the pit, based on prevailing metal prices.
Environment

Environmental Principles

- The Kemess life extension will be guided by Northgate’s proven commitment to the highest environmental standards.
- Kemess South Fisheries compensation program has been extremely successful.
- Minimize/eliminate acid generation and potential metal leaching.
- Minimize downstream water quality impacts.
- Minimize impact on fish and wildlife.
- Enhance fish and wildlife habitat.
Minimum of 600 million tonnes of potentially acid generating waste rock and tailings

Long-term exploration potential good with opportunity to significantly increase reserves in region

Present tailings impoundment will be essentially full by the end of Kemess South

Long-term waste management plan required for any future development in the area
Environmental Plan

Underwater Disposal of Mine Wastes is Best Environmental Option

- Eliminates acid mine drainage
- Minimizes metals in solution
- Generally accepted as technically superior method of mine waste and tailings disposal
Kemess North Project

Location Map
Exhaustive study to look at alternatives for waste disposal – 16 sites studied

Duncan Lake is the superior environmental alternative

Limited access, very low productivity alpine lake with no endangered species

Can handle all mine waste plus tailings

Comprehensive fisheries compensation program under development to provide for no net loss of habitat

Plan to restore Duncan Lake at the end of the Kemess North project
Cascadero Falls Hydro Project

- Kemess is BC Hydro’s eighth largest customer
- Northgate is evaluating a run-of-river hydroelectric generation project near the outlet of Thutade Lake, approximately 10 km from Kemess
- Application has been made to Land and Water BC for land tenures and water licenses which are currently under review
- Scoping study underway
- Benefits include regional hydro power which could displace costly and unreliable diesel power in local First Nations communities
- Supplement hydro grid power to Kemess
- More power for local industrial development
Kemess North

- The story continues …
Stewart-Omineca Road

- Approximately 150 kilometers required to complete connection
- Will encourage increased mineral exploration and other economic activity
- Would provide economic opportunities for First Nations
- Controlled access to minimize impacts on wildlife and local eco-tourism businesses
- Reduced shipping costs could extend Kemess North mine life and make deposits such as Sustut viable
Conclusion - Kemess North Project

1. The highest standards of environmental practice and responsibility will guide the Kemess North Project.

2. The Kemess North project will generate significant long-term economic benefits.

3. The people of Northern BC including First Nations will benefit particularly.

4. Kemess North has sparked a renewed interest in exploration and mine development in north-central BC.
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