Kansanshi - 2004

Process plant

Main Pit  North West Pit
Site overview - 2015

- North West Pit
- Main Pit
- New workshop
- Smelter
- 14 mtpa upgrade
Pit locations

Main Pit

North West Pit
Mining
Mining Volumes – 400 million bcm

Life to date Strip Ratio: 2.16
Optimised pit shell

Shell 36
- Measured
- Indicated
- Inferred

±0.13 km
±0.45 km
±0.31 km

±2.3 km
±4.4 km
±6.9 km

*Optimization @ $3/lb Cu

SE Dome (M+I+I)
# Kansanshi Mineral Resource

## Combined MAIN, NW and SE Dome deposits – as at December 31st, 2014 using a 0.3% Cu cut-off.

<table>
<thead>
<tr>
<th>Pit areas</th>
<th>Classification</th>
<th>Tonnes (Mt)</th>
<th>Cu (%)</th>
<th>AsCu (%)</th>
<th>Au (g/t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main, NW pits &amp; SE Dome</td>
<td>Measured</td>
<td>84.30</td>
<td>0.87</td>
<td>0.27</td>
<td>0.14</td>
</tr>
<tr>
<td>Main, NW pits &amp; SE Dome</td>
<td>Indicated</td>
<td>529.80</td>
<td>0.92</td>
<td>0.20</td>
<td>0.15</td>
</tr>
<tr>
<td>Main, NW pits &amp; SE Dome</td>
<td>Total Measured and Indicated</td>
<td>614.10</td>
<td>0.91</td>
<td>0.21</td>
<td>0.15</td>
</tr>
<tr>
<td>Main, NW pits &amp; SE Dome</td>
<td>Inferred</td>
<td>427.30</td>
<td>0.80</td>
<td>0.06</td>
<td>0.13</td>
</tr>
<tr>
<td>Main, NW pits &amp; SE Dome</td>
<td>Total Inferred Resource</td>
<td>427.30</td>
<td>0.80</td>
<td>0.06</td>
<td>0.13</td>
</tr>
</tbody>
</table>
Main production fleet
Trolley Assist

Hitachi 3500

• Electric power.
• 23kph on a 10% slope.
Process plant overview
Process – crushers
Process - mills
Process – Flotation
Process – Electrowinning
Overview

- **Capacity:**
  - Nominal: 1.2 Mtpa concentrate

- **Production:**
  - Copper: 300,000 (net copper)
  - Acid: 1.1 (98.5% H₂SO₄)
Smelter Cost

Smelter Cash Cost

- Labour: 28%
- Electricity: 26%
- Fuel: 14%
- Maintenance: 9%
- Refractory: 5%
- Consumables: 12%
- Other: 6%
Smelter – KMP sales profile

2014

- Concentrate: 48%
- Cathode: 52%

2016

- Concentrate: 13%
- Cathode: 40%
- Anode: 47%
Products

**Copper**
- LME ‘A’ equivalent Cathode
- Cu Concentrate
- Anode (2015)

**Gold**
- Gold Dore
- Gold in Copper concentrate
- Gold in Anode
10 years copper production – 2.1 million tons
Quarterly performance - Mining

- Q3 2013
- Q4 2013
- Q1 2014
- Q2 2014
- Q3 2014
- Q4 2014
- Q1 2015
- Q2 2015

BCM - million

- Waste
- Ore
Quarterly performance - Milling

![Bar chart showing quarterly performance in million tonnes for different categories of material: Oxide, Mixed, Sulphide for Q3 2013 to Q2 2015.](chart.png)
Quarterly changes in cash cost
Quarterly performance – Copper sales

- Cathode
- Trolled cathode
- Anode
- Concentrate
Quarterly performance - C1 movement
C0 composition

- Employee Costs: 23%
- Consumables: 16%
- Maintenance: 15%
- Contractors: 14%
- Fuel: 9%
- Electricity: 8%
- Equipment Hire: 5%
- Reagents: 4%
- Other: 6%
2015 cash & cost saving measurements

**Employee costs**
- Reduced personnel including contractors
- 20% salary reduction
- 60% overtime reduction

**Consumable costs**
- Reagents including NaHS
- Explosives and explosive services

**Capital**
- Reduced capital programs
- Eliminate most discretionary capital spent

**Current cost saving program**
- Dedicated team
- Renegotiate prices and contracts
- Reduction in working capital incl. consignment inventory
Kabitaka Housing Development

- 642 Houses
- 100 Stands with foundations
- 250 Empty stands
- Commercial and other plots

- 360 Desk Primary School
- 360 Desk Middle School
2015 / 2016 Challenges - Internal

**Mining**
- Changing orebody
- Mine development for plant expansion

**Plant**
- Plant recoveries
- Optimise copper output based on smelter acid

**Smelter**
- Optimise smelter performance

**Cost**
- Cost reduction
- Productivity improvements
2015 / 2016 Challenges - External

- Electricity supply
- Commodity prices
- Strength of Zambian Kwacha
- VAT refunds
Kansanshi Mining Plc