Certain statements in this report constitute forward looking statements that are neither reported financial results nor other historical information, include but are not limited to statements that are predictions of or indicate future earnings, savings, synergies, events, trends, plans or objectives. Such forward looking statements involve known and unknown risks, uncertainties and other important factors that could cause the actual results, performance or achievements of the Company to be materially different from the future results, performance or achievements expressed or implied by such forward looking statements. Such risks, uncertainties and other important factors include among others: economic, business and political conditions in South Africa; decreases in the market price of commodities; hazards associated with underground and surface mining; labour disruptions; changes in government regulations, particularly environmental regulations; changes in exchange rates; currency devaluations; inflation and other macro-economic factors; and the impact of the AIDS crisis in South Africa. These forward looking statements speak only as of the date of publication of these pages.

The Company undertakes no obligation to update publicly or release any revisions to these forward looking statements to reflect events or circumstances after the date of publication of these pages or to reflect the occurrence of unanticipated events.
Contents

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• ARM Overview  Andre Wilkens  7
• Market Review  Stompie Shiels  17
• ARM Platinum Overview  Mike Schmidt  31
• Nkomati Nickel & Chrome Mine  Horst Jäger  52
• Modikwa Platinum  Sean O’Connor
• Two Rivers
ARM Platinum Overview

- Construction of Modikwa, Two Rivers and Nkomati completed – no immediate capital requirements, only ongoing/sustaining capex

- During F2008, all operations obtained 90% of necessary power supply from Eskom – all operations achieved ± 100% production

- At current commodity prices, approximately 15 out of 27 local PGM explorers will not go into production

- Only profitable companies will continue producing

- Two Rivers repaid its bank debt well ahead of schedule

Outlook

- Recent slowdown in global economic growth does not in our opinion imply the cessation of growth

- Massive industrialisation of China is expected to continue albeit at a slightly slower rate

- Nevertheless, commodities have come under pressure underlining the importance for high margin operations

- We remain confident that the company will continue to be well positioned in terms of;
  - our commodity mix,
  - our excellent long-life low-cost operations,
  - our future projects and expansion prospects,
  - as well as access to resources in a region of the world which is renowned for its dominance in a number of these commodities
ARM Overview

Andre Wilkens
Chief Executive Officer

100% Platinum
- PGMs: 50% Modikwa*, 55% Two Rivers
- Nickel, PGMs, and Chrome: 50% Nkomati
- PGM Exploration: 90% Kayapans*

100% Ferrous
- Iron Ore: 50% Beeshoek, 50% Khumani
- Manganese Ore: 50% Nchwaning, 50% Glina
- Manganese Alloys: 50% Cato Ridge (CR) 25% CR Alloys
- Chrome Ore: 50% Dwarainiar
- Ferronchrome: 50% Machadodorp

51% Coal
- 20% Xiufata Coal, South Africa
- 51% Goedgevonden

51% Exploration
- TEAL (primary listing on TSX)
- Gold Harmony (primary listing on JSE)

100% Gold
- Zambia: 100% Konkola North**, 70% Meambasha, 51% Katue JV, 79% Copperbelt JV
- DRC: 60% Kalumines
- Namibia: 92% Otjikoto

80% Platinum Ferrous Exploration

70% Platinum Coal Exploration

60% Platinum Gold Exploration

50% Platinum Gold

* Assets held through the ARM Mining Consortium effective interest at 41.5%, the balance held by the local communities
** Konkola North is subject to a buy-in right up to 20% (5% carried) by state-owned ZCCM Investment Holdings plc
*** Assets held through a 50% shareholding in Assmang Limited
**** Platinum Australia will earn up to 49% on completion of a bankable feasibility study and owns 95% of the Kajapan Extended Area
Growing diversified commodity business

Attributable EBIT split between commodities (excluding corporate and exploration costs)

Continuous focus on reducing costs

ARM target for operations on the respective global cost curves by 2012 (benchmarked at steady state)
No significant impact due to electricity cutbacks

**ARM Ferrous**
- Most operations at 90% of steady-state demand
- Some offset between operations possible, ensuring limited impact on operations
- Khumani has committed supply from Eskom

**ARM Platinum**
- All operations operating at 90% of steady-state demand
- No significant impact on operations
- Nikomati has committed supply from Eskom – but 12 to 18 months late
- Projects in ramp-up not expected to be negatively impacted due to contingency plans

**ARM Coal**
- All operations at 100% as Eskom requires uninterrupted coal supply from the mines
- GGV presently installing new electrical supply

**Approximate on mine and smelter cash cost split**

```
<table>
<thead>
<tr>
<th>Category</th>
<th>Electricity</th>
<th>Labour</th>
<th>Consumables</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARM Ferrous</td>
<td>9</td>
<td>29</td>
<td>45</td>
<td>17</td>
</tr>
<tr>
<td>ARM Platinum</td>
<td>3</td>
<td>47</td>
<td>33</td>
<td>17</td>
</tr>
<tr>
<td>ARM Coal</td>
<td>2</td>
<td>31</td>
<td>36</td>
<td>31</td>
</tr>
</tbody>
</table>
```

Investing in our future

**Exploration (Feasibility)**
- Copper (Africa)
- Kalplats
- Brownfield expansions
  - Khumani
  - Modikwa

**Project Development**
- Goedgevonden
- Two Rivers
- Manganese and Chrome smelters
- Manganese Ore mines
- Chrome mine

**Steady state (> 20yrs LoM)**
- Nikomati Chrome
- Nikomati Coal
- Nikomati MSB
- Bochoeke
- Nkomati Large Expansion

**Declining operations**
- Kalplats
- Brownfield expansions
- Copper (Africa)

More matured portfolio with lower risk profile and stronger balance sheet
• Strong EBITDA of R7.2 billion generated for the 12 months under review
• All projects fully funded

<table>
<thead>
<tr>
<th>R million</th>
<th>Per balance sheet</th>
<th>Net debt calculation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2008</td>
<td>2007</td>
</tr>
<tr>
<td>Long term interest bearing borrowings</td>
<td>2 254</td>
<td>2 374</td>
</tr>
<tr>
<td>Short term interest bearing borrowings</td>
<td>1 724</td>
<td>1 745</td>
</tr>
<tr>
<td>Total interest bearing borrowings</td>
<td>3 978</td>
<td>4 119</td>
</tr>
<tr>
<td>Asmang (50%)</td>
<td>270</td>
<td>270</td>
</tr>
<tr>
<td>ARM Company*</td>
<td>1 286</td>
<td>1 616</td>
</tr>
<tr>
<td>Modikwa</td>
<td>256</td>
<td>256</td>
</tr>
<tr>
<td>TEAL</td>
<td>450</td>
<td>450</td>
</tr>
<tr>
<td>Two Rivers</td>
<td>224</td>
<td>224</td>
</tr>
<tr>
<td>Two Rivers (loan from Impala)</td>
<td>635</td>
<td>(635)</td>
</tr>
<tr>
<td>ARM Coal (loan from Xstrata)</td>
<td>857</td>
<td>(857)</td>
</tr>
<tr>
<td>ARM attributable total debt</td>
<td>2 486</td>
<td>2 918</td>
</tr>
<tr>
<td>Cash and cash equivalents</td>
<td>(2 660)</td>
<td>(1 063)</td>
</tr>
<tr>
<td>Net (cash)/debt (excluding partner loans)</td>
<td>(174)</td>
<td>1 855</td>
</tr>
</tbody>
</table>

*Utilised primarily for investments into ARM Coal and Two Rivers
## Safety

- Absolute focus on safety over the past four years – ARM has performed significantly better than the industry.

- ARM’s performance over past financial year has however been mixed: progress was made in certain areas, but opportunities for improvement exist in others.

- Modikwa achieved 3 million consecutive fatality free shifts on 14 February 2008.

- Safety, Health and Environment Department restructured, Group Safety, Health and Environment Manager appointed.

- Number of ARM employees (including contractors) have increased from 13,632 to 17,936 over past year.

## Market Review

**Stompie Shiebs**  
Executive Director: Business Development
Platinum

Historical ETF investment

Source: ETF Securities, ZKB, Macquarie Research, September 2008
Platinum supply versus demand

**Source:** Johnson Matthey, Macquarie Research, September 2008

### Platinum Supply versus Demand Analysis

<table>
<thead>
<tr>
<th>Year</th>
<th>South Africa</th>
<th>Russia</th>
<th>North America</th>
<th>Others</th>
<th>Total Producer Supply</th>
<th>Recycling</th>
<th>Total Supply</th>
<th>Demand</th>
<th>Surplus / (Deficit)</th>
<th>Price (US$ per oz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007a</td>
<td>5,030</td>
<td>910</td>
<td>325</td>
<td>280</td>
<td>6,550</td>
<td>890</td>
<td>7,440</td>
<td></td>
<td>-480</td>
<td>1,331</td>
</tr>
<tr>
<td>2008a</td>
<td>5,000</td>
<td>920</td>
<td>345</td>
<td>294</td>
<td>6,559</td>
<td>897</td>
<td>7,456</td>
<td></td>
<td>-228</td>
<td>1,675</td>
</tr>
<tr>
<td>2009a</td>
<td>5,250</td>
<td>918</td>
<td>346</td>
<td>309</td>
<td>6,823</td>
<td>959</td>
<td>7,781</td>
<td></td>
<td>-224</td>
<td>1,550</td>
</tr>
<tr>
<td>2010a</td>
<td>5,500</td>
<td>946</td>
<td>355</td>
<td>324</td>
<td>7,125</td>
<td>1,019</td>
<td>8,144</td>
<td></td>
<td>-244</td>
<td>1,625</td>
</tr>
<tr>
<td>2011a</td>
<td>5,775</td>
<td>974</td>
<td>385</td>
<td>340</td>
<td>7,600</td>
<td>1,041</td>
<td>8,496</td>
<td></td>
<td>-178</td>
<td>1,650</td>
</tr>
<tr>
<td>2012a</td>
<td>6,064</td>
<td>1,006</td>
<td>385</td>
<td>357</td>
<td>8,061</td>
<td>1,072</td>
<td>9,132</td>
<td>7,030</td>
<td>371</td>
<td>1,575</td>
</tr>
<tr>
<td>2013a</td>
<td>6,367</td>
<td>1,033</td>
<td>385</td>
<td>375</td>
<td>8,442</td>
<td>1,107</td>
<td>9,549</td>
<td>7,371</td>
<td></td>
<td>1,500</td>
</tr>
<tr>
<td>2014a</td>
<td>6,685</td>
<td>1,064</td>
<td>396</td>
<td>394</td>
<td>8,809</td>
<td>1,140</td>
<td>10,059</td>
<td>7,595</td>
<td></td>
<td>1,450</td>
</tr>
<tr>
<td>2015a</td>
<td>7,020</td>
<td>1,096</td>
<td>407</td>
<td>414</td>
<td>9,126</td>
<td>1,173</td>
<td>10,299</td>
<td>7,935</td>
<td></td>
<td>1,400</td>
</tr>
<tr>
<td>2016a</td>
<td>7,371</td>
<td>1,129</td>
<td>418</td>
<td>434</td>
<td>9,549</td>
<td>1,209</td>
<td>10,758</td>
<td>8,300</td>
<td></td>
<td>1,356</td>
</tr>
</tbody>
</table>

### Notes
- Platinum Price (US$ per oz): 1,331, 1,675, 1,550, 1,625, 1,650, 1,575, 1,500, 1,450, 1,520, 1,566

**Source:** Macquarie Research, September 2008

---

**Platinum Supply versus Demand**

**Source:** Macquarie Research, September 2008

### Supply and Demand Analysis

- **Supply**
  - South Africa
  - Russia
  - North America
  - Others
  - Total Producer Supply
  - Recycling
  - Total Supply

- **Demand**
  - Autocatalyst Gross
  - Autocatalyst Recovery
  - Autocatalyst Net
  - Jewellery
  - Chemical
  - Electrical
  - Fuel Cells
  - Glass
  - Investment
  - Inland Large Japan
  - Petroleum
  - Other
  - Total Demand
  - Surplus / (Deficit)

- **Price (US$ per oz):** 1,331, 1,675, 1,550, 1,625, 1,650, 1,575, 1,500, 1,450, 1,520, 1,566

**Source:** Macquarie Research, September 2008
PGM loadings over time

Source: Johnson Matthey, Macquarie Research, September 2008

Palladium supply versus demand

Source: Johnson Matthey, Macquarie Research, September 2008
The break-even price is rising – Will it encourage new production?

Source: RBC Capital Markets estimates

Current producers

Source: Company reports, RBC Capital Markets estimates
Supply trends – Nickel

- Nickel production growth lagged demand for much of this decade due to underinvestment, project delays and production disruptions.
- Production accelerated in 2007, and after a slower 2008 is expected to accelerate again in 2009 and 2010 as the result of a series of project start-ups.

Nickel market balance 2005 - 2012

- With the start-up of a number of new nickel projects predict from 2009 onwards, and no immediate recovery in austenitic ratios expected, the nickel market is expected to move into sustained surplus.
- As a consequence nickel prices are expected to remain under pressure for the foreseeable future.

Supply trends – High carbon ferrochrome

- HC Ferrochrome production grew rapidly in 2007, up 18.2% from 6.5 mt to 7.69 mt, driven by increases in South Africa, China and India.
- Production growth has slowed in 2008 largely due to production in South Africa being curtailed due to power shortages.
- China continues to build its ferrochrome industry, up an estimated 30.3% in 2008, but is highly dependent on chrome ore imports.

HC Ferrochrome market balance 2005 - 2012

- Power related constraints on South African HC ferrochrome production, combined with growing demand for ferrochrome from a resurgent stainless sector will push the market into deficit in 2009 and 2010.
Supply trends – Chrome ore

- Chrome ore production reached 22.75 mt in 2007. To meet the growing needs of the stainless steel and ferrochrome industries, ore production will need to rise to 36.59 mt by 2012.
- South Africa represents the largest single source of chrome ore, producing 8.8 mt in 2007.
- In 2008 South African chrome ore production is projected to reach 10.4 mt, and is forecast to reach 13.7 mt by 2012.

Chrome ore production, 2005 - 2012

- The development of China’s ferrochrome industry is wholly dependent on imports of ore.
- In 2008, China imported 6.1 mt of chrome ore, of which 2 mt was sourced from South Africa.
- By 2012, China is projected to require 13.5 mt of chrome ore of which 6 mt is expected to be sourced from South Africa.

Questions

www.arm.co.za
ARM Platinum Overview

Mike Schmidt
Executive: Platinum Operations

Location

Northern Limb
Bushveld Complex

Western Limb
Bushveld Complex

Eastern Limb
Bushveld Complex

Stella Layered Intrusion

Kopanong

Two Rivers

Skanendron

Kalplats

Nkomati

Modikwa

Two Rivers Intrusion

100km

30
**Ownership**

ARM Mining Consortium

- Modikwa Communities: 17%
  - Modikwa**: 50%
  - Two Rivers: 55%
    - Anglo Platinum: 50%
  - Nkomati: 50%
    - Impal: 50%
    - Norilsk Nickel: 50%
  - Kalplats*: 90%
    - Anglo American: 10%

Modikwa**

- Assets held through the ARM Mining Consortium, effective interest at 41.5%, the balance held by Modikwa local communities

* Platinum Australia will earn in up to 49% on completion of a bankable feasibility study and owns 50% of the Kalplats Extended Area

---

**Platinum division contributes significantly**

- ARM Platinum
  - Cash Operating Profit (Rands million, 100%)

- ARRI Platinum
  - Cash Operating Profit (Rands million, 100%)

- ARM Platinum
  - Cash Operating Profit (Rands million, 100%)

---
Revenue contribution per commodity

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chrome</td>
<td>16%</td>
</tr>
<tr>
<td>Other</td>
<td>1%</td>
</tr>
<tr>
<td>Platinum</td>
<td>34%</td>
</tr>
<tr>
<td>Palladium</td>
<td>6%</td>
</tr>
<tr>
<td>Rhodium</td>
<td>27%</td>
</tr>
<tr>
<td>Nickel</td>
<td>14%</td>
</tr>
<tr>
<td>Copper</td>
<td>2%</td>
</tr>
</tbody>
</table>

Modikwa overview

<table>
<thead>
<tr>
<th>F2008 objectives</th>
<th>F2008 performance</th>
<th>F2009 objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achieve steady-state production during F2008</td>
<td>Steady-state production level achieved on a monthly basis in the latter part of F2008</td>
<td>Achieving full year of steady state production at 330 000 PGM oz</td>
</tr>
<tr>
<td>Complete a conceptual study to increase the mine size in a modular and incremental manner</td>
<td>Conceptual study was completed</td>
<td>Take conceptual study to pre-feasibility level</td>
</tr>
<tr>
<td>South mine appears feasible, of similar size to existing operations</td>
<td>North mine constrained by water and power shortages</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>12 months ended 30 June</th>
<th>2008</th>
<th>2007</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tonnes milled (Mt)</td>
<td>2.46</td>
<td>2.32</td>
<td>6</td>
</tr>
<tr>
<td>Cash cost (R/tonne)</td>
<td>530</td>
<td>476</td>
<td>(13)</td>
</tr>
<tr>
<td>PGMs in concentrate (4E) (Ounces)</td>
<td>294 721</td>
<td>274 174</td>
<td>7</td>
</tr>
<tr>
<td>Cash operating margin (%)</td>
<td>58</td>
<td>47</td>
<td>24</td>
</tr>
</tbody>
</table>
## Two Rivers overview

<table>
<thead>
<tr>
<th>F2008 objectives</th>
<th>F2008 performance</th>
<th>F2009 objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achieve steady-state production in F2008</td>
<td>Steady-state production level achieved on a monthly basis</td>
<td>Achieving full year of steady state production at 220 000 PGM oz</td>
</tr>
<tr>
<td>Complete North Decline at a capital cost of R231 million</td>
<td>Construction and development scheduled to be completed in November 2008 at a final capital cost of R250 million</td>
<td></td>
</tr>
</tbody>
</table>

### 12 months ended 30 June

<table>
<thead>
<tr>
<th>100% Basis</th>
<th>2008</th>
<th>2007</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tonnes milled</td>
<td>Mt</td>
<td>2.37</td>
<td>2.04</td>
</tr>
<tr>
<td>Cash cost</td>
<td>R/tonne</td>
<td>340</td>
<td>246</td>
</tr>
<tr>
<td>PGMs in concentrate (6E)</td>
<td>Ounces</td>
<td>206 491</td>
<td>184 099</td>
</tr>
<tr>
<td>Cash operating margin</td>
<td>%</td>
<td>63</td>
<td>69</td>
</tr>
</tbody>
</table>

## Nkomati overview

<table>
<thead>
<tr>
<th>F2008 objectives</th>
<th>F2008 performance</th>
<th>F2009 objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commission the 100 000 tpm plant on schedule and within budget</td>
<td>Commissioned ahead of schedule and on budget</td>
<td>Achieve targeted production from 100 000 tpm plant</td>
</tr>
<tr>
<td>Produce 1 Mt of oxidized chrome ore in F2008</td>
<td>On target with more than 1.1 Mt produced during the year</td>
<td>Produce more than 1 Mt of chrome ore for F2009</td>
</tr>
<tr>
<td>Deliver the Large Scale Expansion Project on time and within budget</td>
<td>The Large Scale Expansion project is progressing on time and within budget</td>
<td>Commission the 375 000 tpm MMZ plant in Q4 2009</td>
</tr>
<tr>
<td>Complete a Feasibility Study in 2008 to examine the viability of building an Activox refinery</td>
<td>Feasibility study was completed and the decision was taken that Activox is not currently viable for the Nkomati Large Scale Expansion Project</td>
<td>Evaluate alternative smelting and refining arrangements</td>
</tr>
</tbody>
</table>

### 12 months ended 30 June

<table>
<thead>
<tr>
<th>100% Basis</th>
<th>2008</th>
<th>2007</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tonnes milled</td>
<td>Thousand</td>
<td>1 070</td>
<td>318</td>
</tr>
<tr>
<td>Nickel on-mine cash cost per tonne milled</td>
<td>R/tonne</td>
<td>339</td>
<td>503</td>
</tr>
<tr>
<td>Contained Nickel</td>
<td>Tonnes</td>
<td>5 136</td>
<td>4 418</td>
</tr>
<tr>
<td>Chrome ore sold</td>
<td>Tonnes</td>
<td>1 145 894</td>
<td>584 177</td>
</tr>
<tr>
<td>Cash operating margin</td>
<td>%</td>
<td>60</td>
<td>71</td>
</tr>
</tbody>
</table>
### Sensitivity

#### Commodity Prices

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Unit</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Platinum</td>
<td>$/oz</td>
<td>1 050</td>
</tr>
<tr>
<td>Palladium</td>
<td>$/oz</td>
<td>200</td>
</tr>
<tr>
<td>Rhodium</td>
<td>$/oz</td>
<td>4 000</td>
</tr>
<tr>
<td>Nickel ($/ton)</td>
<td>$/t</td>
<td>12 000</td>
</tr>
<tr>
<td>Chrome ($/ton)</td>
<td>$/t</td>
<td>200</td>
</tr>
</tbody>
</table>

#### Cash Operating Margin

<table>
<thead>
<tr>
<th>Exchange Rate (R/$)</th>
<th>8.50</th>
<th>9.50</th>
<th>10.50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modikwa</td>
<td>16%</td>
<td>25%</td>
<td>32%</td>
</tr>
<tr>
<td>Two Rivers</td>
<td>34%</td>
<td>40%</td>
<td>46%</td>
</tr>
<tr>
<td>Nkomati</td>
<td>24%</td>
<td>33%</td>
<td>39%</td>
</tr>
</tbody>
</table>

### Outlook

- **Supply**
  - Banks appetite for risk is very low
  - Venture capital will be expensive
  - New entrants, long lead times and most operations will be relatively deep (barrier to entry)
  - Power shortage – prohibitive costs of diesel generation

- **Demand**
  - Euro V emissions limits (September 2009 – diesel oxidation catalyst loadings)
  - Euro VI emission standard - more stringent emission legislation on diesel particulate emissions (DPF)
  - Computer hard disks
  - LCD glass monitoring
  - Fuel cells for fuel cell powered cars

- **Conclusion**
  - Substantial shortage of PGMs over the next 5 years
**ARM Platinum operating costs split**

**Two Rivers**
- R340/tonne milled
- Labour: 3%
- Consumables: 2%
- Power: 41%
- Other: 44%

**Modikwa**
- R538/tonne milled
- Labour: 3%
- Consumables: 18%
- Power: 25%
- Other: 44%

**Nkomati**
- R339/tonne milled
- Labour: 4%
- Consumables: 4%
- Power: 44%
- Other: 48%

**Average Contribution to Total Cost**

<table>
<thead>
<tr>
<th></th>
<th>Two Rivers</th>
<th>Modikwa</th>
<th>Nkomati</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diesel</td>
<td>5%</td>
<td>2%</td>
<td>14%</td>
</tr>
<tr>
<td>Explosives</td>
<td>5%</td>
<td>4%</td>
<td>3%</td>
</tr>
</tbody>
</table>

**Modikwa strategies**

- Operational Efficiencies
  - Layout transition
  - De-bottlenecking
  - Org structure and team composition

- Working costs (move from 85% to 75% quartile)
  - Volume growth
  - Increase in the price of diesel, electricity, steel and explosives
  - Cost of retaining skilled labour

- Social licence to practise
  - Land claims
  - Community expectations

- SHEQ Matters
  - Zero disabling injuries
  - Low environmental impact (carbon footprint)
Two Rivers strategies

- Plant Recoveries (72% - 78%)
  - R150m capex injection to improve grinding and floats (12 months)

- Grade
  - Split Reef causing dilution

- Working costs
  - Dependency on mechanisation
  - Imports
  - Increase in the price of diesel, electricity, steel and explosives
  - Cost of retaining skilled labour

- SHEQ Matters
  - Zero disabling injuries
  - Low environmental impact (carbon footprint)

Nkomati strategies

- Plant Recoveries (70% - 74%)
  - Capex and specialist interventions

- Grade
  - High sensitivity due to transforming from low volume high grade to high volume low grade operation

- Working costs
  - Volume and price sensitivity
  - Increase in the price of diesel, electricity, steel and explosives
  - Cost of retaining skilled labour

- SHEQ Matters
  - Zero disabling injuries
  - Eco sensitive area
Nkomati nickel project

- Nkomati Nickel is a 50:50 JV between ARM and Norilsk Nickel

**Total nickel in concentrate:** 20,500 tpa  
Average grade: 0.35% Ni; total plant capacity: 625 ktpm

**PCMZ Nickel in concentrate:** 5,000 tpa  
Average grade: 0.25% Ni; PCMZ plant: 250 ktpm

**MMZ Nickel in concentrate:** 15,500 tpa  
Average grade: 0.45% Ni; MMZ plant: 375 ktpm

**CHROME a significant value contributor**
- Oxidised lumpy chrome sales of 1.5 Mt
- Sustained Chrome Concentrate at 500,000 tons for 18 years

**Other by-products include:**
- 110,000 ounces of PGM (Pt : Pd 1:2.7)
- 8,000 tpa Copper
- 250 tpa Cobalt

**Project released September 2007**
- Open cast mine expected to produce at a steady state  
C1 cash cost of c.$3.50/lb
- Ramp-up: 2009
- Full production: 2011

Real capital cost of R3.2 billion (in 2007 terms), >50% committed, mainly funded from Nkomati cash flows
Kalplats overview

The Kalplats projects are located in the North West Province, 330 kilometers west of Johannesburg on the Kraaipan Greenstone Belt and comprises of two joint ventures with Platinum Australia (PLA)

- ARM Platinum’s current interest in the “Kalplats Platinum Project” is 90% and PLA can earn up to 49% in the project by:
  - completing a bankable feasibility study, expected during F2009m, and
  - making its proprietary Panton Metallurgical process available for the project at no cost.

- During F2008, PLA completed a total of 48 390 metres of drilling.

- The Kalplats “Extended Area Project” is a 50:50 joint venture and since April 2007, ARM Platinum has held a Prospecting Right over the Kalplats Extended Area covering an area approximately 20 kilometers to the north and 18 kilometers to the south of the Kalplats Joint Venture area. PLA and ARM Platinum each has a 50 percent contributing interest and PLA manages the exploration program which is targeting extensions of the known Kalplats style of PGM mineralisation.

- The first phase of exploration work on this extended area, comprising a detailed aeromagnetic survey over the entire strike length of the extended area was completed in August 2007. The second phase which involves extensive soil geochemical sampling was completed during 2008. This will be followed by drilling of targets identified during the initial phases of work.
### Kalplats platinum project

#### Updated mineral resources on 3 of 7 deposits

<table>
<thead>
<tr>
<th>Deposits</th>
<th>Mt</th>
<th>3E g/t</th>
<th>Moz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crater, Orion &amp; Crux</td>
<td>57.36</td>
<td>1.37</td>
<td>2.52</td>
</tr>
<tr>
<td>Previous (Harmony)</td>
<td>35.63</td>
<td>1.53</td>
<td>1.76</td>
</tr>
<tr>
<td>Difference</td>
<td>+61%</td>
<td>+43%</td>
<td></td>
</tr>
</tbody>
</table>

*3E = Pt+Pd+Au

---

### Questions

[www.arm.co.za](http://www.arm.co.za)
## Contents

- Overview
- History
- SHREQ
- Geology
- Current Operations
- Expansion Project
- Q & A
• Unincorporated JV
  • ARM – 50%
  • NNAf – 50%
• South Africa’s only primary nickel producer
• Substantial credits on by-products
• Low cash cost operator at -$4.45/lb (net of by-products)
• Rich poly-metallic ore body
  • Nickel
  • Copper
  • Cobalt
  • PGM’s
• Large nickel and chrome resource with great growth potential
• Major expansion project in progress
  • Nickel
  • Chrome

• Mine comprises
  • Nickel operation
    • Underground
    • Open pit
  • Chrome operation
    • Open pit
  • Concentrate Production Plants
    • MSB
    • 100kt
  • Chrome Screening and Crushing Plant
• Staffing (2 882)
  • Mine employees – 490
  • Contractors Operations - 780
  • Contractors Expansion – 1 612
Our vision and mission

- Nkomati –
  - a Significant Nickel Producer
  - creating Quality of Life
  - and Sustainable Growth

- Developing organization capability whilst caring for and growing our people

- Making innovative, efficient and responsible use of our resources

- Engaging with all stakeholders to achieve our common goals

Our values

INTEGRITY

COMMITMENT

ACCOUNTABILITY

RESPECT

EXCELLENCE
Our business goals 2009

- Commission Chrome Washing Plant
- Complete pre-strip open pits
- Grow chrome sales to 1.4 Mt

The Uitkomst Complex was discovered by Asbestos Prospectors in late 1800’s and early 1900’s

1929
- The Uitkomst Complex first described by Wagner in his book “Platinum Deposits and Mines of South Africa”

1990
- MSB discovered

1997
- Mine established
- 10kt per month
- Smelting/refinement off site

2005
- MMZ test pit and LionOre acquire 50%

2006
- Phase 1 Expansion approved
- 100kt concentrate plant & open pit
- Chrome operation

2007
- Norilsk Nickel acquire LionOre and Phase 2 released
## The future of Nkomati

### Calendar Years

<table>
<thead>
<tr>
<th>Phase</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSB (30kt/pm)</td>
<td>In Progress</td>
<td>Production</td>
<td>Production</td>
<td>Production</td>
<td>Production</td>
<td>Production</td>
</tr>
<tr>
<td>Phase 1 100ktpm (100 ktpm)</td>
<td>Construction</td>
<td>Production</td>
<td>Production</td>
<td>Production</td>
<td>Production</td>
<td>Production</td>
</tr>
<tr>
<td>Phase 2A 375 ktpm MMZ (475kt/pm)</td>
<td>Feasibility Study</td>
<td>Construction</td>
<td>Production</td>
<td>Production</td>
<td>Production</td>
<td>Production</td>
</tr>
<tr>
<td>Phase 2B PCR upgrade P1 to 250 ktpm (675 ktpm)</td>
<td>Feasibility Study</td>
<td>Construction</td>
<td>Production</td>
<td>Production</td>
<td>Production</td>
<td>Production</td>
</tr>
</tbody>
</table>

### Revenue analysis

#### F2007

- Nickel: 44%
- By-Products: 14%
- Chrome: 14%

#### F2008

- Nickel: 40%
- By-Products: 16%
- Chrome: 16%
SHREQ

- Ethical approach
  - Zero Harm Mindset
  - No Repeats
  - Standards

- Approved EMP in place
  - EIA’s in progress for full expansion

- WULA submitted

- Full participation in ARM Enterprise Risk Management System

SHREQ model

- Working SHREQ Policy
  - We will maintain and operate our equipment and our facilities to produce nickel concentrate responsibly, with a Zero Harm approach to ourselves, our environment and our facilities with NO repeats and to Nkomati standards

- Nkomati SHREQ Model

<table>
<thead>
<tr>
<th>SAFETY</th>
<th>HEALTH</th>
<th>ENVIRONMENT</th>
<th>QUALITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety Milestones</td>
<td>Health Milestones</td>
<td>Environmental Management</td>
<td>Quality Management</td>
</tr>
<tr>
<td>Safety Management Standards</td>
<td>Hearing Conservation</td>
<td>EMP Compliance</td>
<td>Customer Satisfaction</td>
</tr>
<tr>
<td>Airborne Pollution Management</td>
<td>Health Management</td>
<td>WULA Compliance</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Community Involvement</td>
<td></td>
</tr>
</tbody>
</table>

OHSAS 18001 | ISO 14001 | ISO 9001
Regional geological setting

**BOTSWANA**

- Karoo
- Waterberg
- Lebowa Granite Suite
- Rustenburg Layered Suite
- Transvaal Sequence
- Archean Granite - Greenstone

**UITKOMST COMPLEX**

- Nkomati Mine

**UITKOMST**

- Witbank
- Rustenburg
- Witbank
- Uitkomst Complex
- Bela Bela
- Rustenburg

**VIEW**

- Nkomati Mine
Uitkomst complex extent

Idealised cross section of Uitkomst

**LEGEND**
- Diabase
- Upper Gabbro
- Gabbronite
- Upper Pyroxenite
- Chromitite
- Massive Chromitite
- Lower Pyroxenite
- Basalt/Gabbro
- Diabase Sills
- Timeball Hill Shales & Quartzites
- Oaktree & BR Qtzite
- Malmont Dolomite
- Nelshonge Granite

**UITKOMST COMPLEX**

**BASEMENT**

**TRANSVAAL SEQUENCE**
- Rooihoop Formation
- Malmont Subgroup
- Sablehoek Formation and Black Reef Formation
- Nelshonge Granite
Mineralised zones

- Chrome
- PCMZ
- MMZ
- BMZ
- MSB
- Sulphides

Nkomati down dip potential

- PIT 3
- PIT 2
- PIT 1B
- PIT 1A
- UG

Underground Workings
Nickel ore types

MSB  MMZ - Wherlite  PCMZ

BMZ  MMZ - Blebby  Minerals

- Pyrrhotite
- Pentlandite
- Chalcopyrite
- Pyrite
- Cobalt
- PGM's
- Gold
- Silver

Nickel resource statement
– 30 June 2008

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cut-off (Ni%)</td>
<td>1000 Tones</td>
<td>Ni%</td>
</tr>
<tr>
<td>Current Mine &amp; Phase 1 Expansion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BMZ (Underground)</td>
<td>0.35</td>
<td>30</td>
<td>0.6</td>
</tr>
<tr>
<td>BMZ (Underground)</td>
<td>0.35</td>
<td>970</td>
<td>0.54</td>
</tr>
<tr>
<td>BMZ (Open Pit) Ph 1</td>
<td>0.35</td>
<td>1 600</td>
<td>0.46</td>
</tr>
<tr>
<td>Phase 2 Expansion Project</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BMZ (Underground)</td>
<td>0.26</td>
<td>62 000</td>
<td>0.43</td>
</tr>
<tr>
<td>PCMZ (Open Pit) Phs 2 &amp; 3</td>
<td>0.26</td>
<td>63 000</td>
<td>0.28</td>
</tr>
<tr>
<td>TOTAL 2008 MINERAL RESOURCE</td>
<td>1 000</td>
<td>63</td>
<td>0.54</td>
</tr>
<tr>
<td>TOTAL 2007 MINERAL RESOURCE</td>
<td>1 193</td>
<td>0.67</td>
<td>0.30</td>
</tr>
</tbody>
</table>

4E means platinum+ palladium+ rhodium+ gold
Nickel reserve statement  
– 30 June 2008

### 2008 Mineral Resources, Nkomati Mine & Phase 2 Expansion Project (with depletion by production as at 30 June 2008)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cut-off (Ni%)</td>
<td>1000 Tonnes</td>
<td>N%</td>
</tr>
<tr>
<td><strong>Current Mine &amp; Phase 1 Expansion</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MMZ (Underground)</td>
<td>0.50</td>
<td>200</td>
<td>0.55</td>
</tr>
<tr>
<td>MMZ (Open Pit) Pit 1</td>
<td>0.35</td>
<td>694</td>
<td>0.55</td>
</tr>
<tr>
<td><strong>Phase 2 Expansion Project</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MMZ (Open Pit) Pits 2 &amp; 3</td>
<td>0.24</td>
<td>67,900</td>
<td>0.42</td>
</tr>
<tr>
<td>PCMZ (Open Pit) Pits 2 &amp; 3</td>
<td>0.16</td>
<td>86,200</td>
<td>0.22</td>
</tr>
<tr>
<td><strong>TOTAL 2008 MINERAL RESOURCE</strong></td>
<td>200</td>
<td>645,540</td>
<td>0.32</td>
</tr>
<tr>
<td><strong>TOTAL 2007 MINERAL RESOURCE</strong></td>
<td>392</td>
<td>165,476</td>
<td>0.32</td>
</tr>
</tbody>
</table>

4E means platinum + palladium + rhodium + gold

---

### Massive Chromitite Geology

- Massive Chromitite overlies the PCR
- Highly faulted and thrust in multiple events
- Chromitite is up to 20m thick in places as a result of structural duplication
- Nkomati is currently mining and producing oxidized low sulphide chrome
- Areas of highly weathered fines and lenses of internal waste complicate mining
### Chrome resources and reserves – 30 June 2008

#### Resource

**Oxidized Massive Chromitite Resource (with depletion by production as at 30 June 2008)**

<table>
<thead>
<tr>
<th>Indicated Mineral Resource</th>
<th>Tonnnes</th>
<th>Cr2O3%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chromitite (at 30% Cr2O3 cut-off)</td>
<td>4,600,000</td>
<td>31.04</td>
</tr>
</tbody>
</table>

#### Reserve

<table>
<thead>
<tr>
<th>Chromitite</th>
<th>Tonnnes</th>
<th>Cr2O3%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Probable Mineral Reserve (30% Cr2O3 Cut-off)</td>
<td>2,900,000</td>
<td>31.00</td>
</tr>
</tbody>
</table>

---

### PCR Chrome resources and reserves – 30 June 2008

#### Resource

**Oxidized Chromitiferous Peridotite (with depletion by production as at 30 June 2008)**

<table>
<thead>
<tr>
<th>Indicated Mineral Resource</th>
<th>Tonnnes</th>
<th>Cr2O3%</th>
<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxidised PCR</td>
<td>5,200,000</td>
<td>16.41</td>
<td>0.04</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Inferred Resources</th>
<th>Tonnnes</th>
<th>Cr2O3%</th>
<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxidised PCR</td>
<td>8,700,000</td>
<td>16.94</td>
<td>0.12</td>
</tr>
</tbody>
</table>

#### Reserve

<table>
<thead>
<tr>
<th>Oxidised PCR</th>
<th>Tonnnes</th>
<th>Cr2O3%</th>
<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td>Probable Mineral Reserve (10% Cr2O3 Cut-off)</td>
<td>5,000,000</td>
<td>17.50</td>
<td>0.04</td>
</tr>
</tbody>
</table>
Delineation and exploration

- MSB
  - Down dip extension

- MMZ
  - Open pit infill drilling complete
  - Modeling in progress

- Nickel & Chrome
  - Exploration permits for surrounding farms (Doornhoek JV)
  - Drilling has commenced

Current operation

- Total 811 holes 161 300m

- Drilling has commenced
**Current mine – phase 1 interim**

- Disconnect between MSB closure in 2007 & commissioning of the main expansion project
- Objective of the Phase 1 project
  - Financially self-sustaining
  - Sustain metal output
  - Maintain skill set
  - Trial mining opportunity, e.g. grade control
  - Tax implications
  - Rehabilitation implications
  - South African Mineral Rights retention
- Project incorporated as strategic part of main expansion

**Current operation – Ore production**

**Underground**
- Mechanized mining methodology
  - Bord & Pillar
  - Retreat open stoping
- Infrastructure upgrade
- Tonnage – 47kt/month

**Open Pit (Nickel & Chrome)**
- Drill & Blast – owner operated
- Load & Haul – contracted
- Mobile crushing and screening
- Tonnage
  - Nickel - 78kt/month
  - Chrome - 220kt/month
# Current mine - Concentrate production

**NICKEL**
- Base metal process
  - Crush & Screen
  - Mill
  - Float
  - Filter
- Two Plants running in tandem on MMZ milling 112 ktpm
- Average head grade - 0.55% Ni
- Concentrate
  - 5,250 tpm @ 8.39% Ni
  - Shipped to BCL (Botswana)
- Tailings
  - High sulphide tailings dam
  - Co-disposal

**CHROME**
- Chrome processing
  - Crush & Screen
  - Wash
  - Mill
  - Spiral
- Commissioning plant – designed feed: 100 ktpm
- Products
  - Washed chips – 34%+
  - Concentrate – 43%
- Tailings
  - Placed in co-disposal with low sulphide MMZ tailings

---

# Phase 2 - expansion

Phase 2: Expansion includes the development of additional infrastructure and processes to increase the mine’s capacity. The expansion is focused on enhancing the efficiency of concentrating and processing nickel and chrome, thereby increasing the mine’s output. This phase includes the construction of new tailings disposal areas to accommodate the increased volumes of tailings generated from the increased production. The expansion project is designed to ensure sustainable and environmentally responsible disposal methods, reflecting the mine’s commitment to social and environmental responsibility.
Nkomati expansion phases

Cumulative plant capacity (tpm)

<table>
<thead>
<tr>
<th>Source of ore</th>
<th>MSB Plant Ore Depleted</th>
<th>Phase1 Current</th>
<th>Phase2a</th>
<th>Phase2b</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSB (ktspm)</td>
<td>30</td>
<td>-</td>
<td>375</td>
<td>375</td>
</tr>
<tr>
<td>MMZ (ktspm)</td>
<td>-</td>
<td>100</td>
<td>-</td>
<td>250</td>
</tr>
<tr>
<td>PCMZ (ktspm)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total (ktspm)</td>
<td>30</td>
<td>100</td>
<td>375</td>
<td>625</td>
</tr>
</tbody>
</table>

Conversion of 100 000 tpm MMZ plant to 250 000 tpm PCMZ plant

Pit 3 dimensions

Total Nkomati at Steady State

<table>
<thead>
<tr>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plant Capacity (MSB)</td>
<td>Plant Capacity (MMZ)</td>
<td>Plant Capacity (PCMZ)</td>
</tr>
<tr>
<td>30 000tpm</td>
<td>100 000tpm</td>
<td>250 000tpm</td>
</tr>
<tr>
<td>MSB Underground</td>
<td>MMZ Underground</td>
<td>PCMZ Processing</td>
</tr>
<tr>
<td>Ni: c. 5 500tpa</td>
<td>Ni: c. 15 000tpa</td>
<td>Ni: c. 5 000tpa</td>
</tr>
<tr>
<td>Ni grade 1.85%</td>
<td>Ni grade 0.60%</td>
<td>Ni grade 0.23%</td>
</tr>
</tbody>
</table>

Capex (in 2007 terms): R3.2 bn

Estimated capex: R 400 m

Conversion of 100 000 tpm MMZ plant to 250 000 tpm PCMZ plant

Capex (in 2007 terms): R3.2 bn

Source of ore

MSB Plant Ore

Depleted

Phase1 Current

Phase2a

Phase2b

MSB (ktspm)

30

- -

MMZ (ktspm)

- 100 375

PCMZ (ktspm)

- 250

Total (ktspm)

30 100 375 625

83

Pit 3 dimensions

2 800m

900m

240m

Pit 3

Pit 2

2 800m

900m

240m

Pit 3

Pit 2
Nickel production

C1 cash costs
(net of by-products)
Quarterly capital expenditure

Construction progress
Planning

Summary cash flows - Phase 2 and 2 B projects

EST ESCALATED PROG CASH FLOW
ACTUAL PROG COMMITMENTS
PROG MONTHLY EXP
Conclusion

• Phase 2A project on schedule for commissioning September ’09.

• Primary crusher and milling sections on critical path.

• All other projects (open pit pre-stripping, tailings and waste rock dump) on schedule.

• Phase 2A project currently within approved budget.

• Challenges
  • Eskom power supply (timing and reliability).
  • Abnormally high escalations (power, diesel & steel)
  • Availability of skills.

Questions

www.arm.co.za
Two Rivers Platinum Mine

Nico Muller – Business Leader
and team

Contents

• Overview
• Safety
• Geology
• Current Operations
• Q & A
Introduction

- Eastern Limb of Bushveld Complex

- Platinum Producer
  - 2.7 Mtpa (225 000 tpm)
  - 220 000 PGE oz pa (120 000 Pt oz pa)

- Joint Venture
  - ARM (55%) Management
  - Impala (45%) Smelting, Refining, Marketing

- Fundamentals
  - Ensure excellent shareholder returns
  - Operate responsibly in an environmentally sensitive area
  - Promote the socio-economic development and welfare of all South Africans;
# Resource & Reserve Statement

As at June 2008

## UG2 Resource

<table>
<thead>
<tr>
<th>Category</th>
<th>Mt</th>
<th>Pt</th>
<th>Pd</th>
<th>Rh</th>
<th>Au</th>
<th>(3E+Au)</th>
<th>(5E+Au)</th>
<th>Moz</th>
<th>Moz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measured</td>
<td>14.78</td>
<td>2.54</td>
<td>1.56</td>
<td>0.47</td>
<td>0.05</td>
<td>4.62</td>
<td>5.53</td>
<td>1.21</td>
<td>2.62</td>
</tr>
<tr>
<td>Indicated</td>
<td>41.69</td>
<td>2.05</td>
<td>1.23</td>
<td>0.38</td>
<td>0.04</td>
<td>3.70</td>
<td>4.46</td>
<td>2.75</td>
<td>5.98</td>
</tr>
<tr>
<td>Inferred</td>
<td>0.54</td>
<td>2.71</td>
<td>1.72</td>
<td>0.59</td>
<td>0.05</td>
<td>5.07</td>
<td>6.07</td>
<td>0.05</td>
<td>0.11</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>56.47</strong></td>
<td><strong>2.18</strong></td>
<td><strong>1.32</strong></td>
<td><strong>0.40</strong></td>
<td><strong>0.04</strong></td>
<td><strong>3.94</strong></td>
<td><strong>4.74</strong></td>
<td><strong>3.95</strong></td>
<td><strong>8.60</strong></td>
</tr>
</tbody>
</table>

## UG2 Reserves

<table>
<thead>
<tr>
<th>Category</th>
<th>Mt</th>
<th>Pt</th>
<th>Pd</th>
<th>Rh</th>
<th>Au</th>
<th>(3E+Au)</th>
<th>(5E+Au)</th>
<th>Moz</th>
<th>Moz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stockpile</td>
<td>0.13</td>
<td>1.88</td>
<td>1.19</td>
<td>0.35</td>
<td>0.04</td>
<td>3.46</td>
<td>4.13</td>
<td>0.01</td>
<td>0.02</td>
</tr>
<tr>
<td>Proven</td>
<td>10.57</td>
<td>2.03</td>
<td>1.22</td>
<td>0.36</td>
<td>0.04</td>
<td>3.65</td>
<td>4.43</td>
<td>0.68</td>
<td>1.47</td>
</tr>
<tr>
<td>Probable</td>
<td>28.85</td>
<td>1.78</td>
<td>1.05</td>
<td>0.34</td>
<td>0.03</td>
<td>3.20</td>
<td>3.86</td>
<td>1.60</td>
<td>3.46</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>39.55</strong></td>
<td><strong>1.85</strong></td>
<td><strong>1.10</strong></td>
<td><strong>0.34</strong></td>
<td><strong>0.03</strong></td>
<td><strong>3.32</strong></td>
<td><strong>4.01</strong></td>
<td><strong>2.29</strong></td>
<td><strong>4.95</strong></td>
</tr>
</tbody>
</table>

## Merensky Resources

<table>
<thead>
<tr>
<th>Category</th>
<th>Mt</th>
<th>Pt</th>
<th>Pd</th>
<th>Rh</th>
<th>Au</th>
<th>(3E+Au)</th>
<th>(5E+Au)</th>
<th>Moz</th>
<th>Moz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measured</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Indicated</td>
<td>18.7</td>
<td>2.06</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3.34</td>
<td>3.55</td>
<td>1.20</td>
<td>2.06</td>
</tr>
<tr>
<td>Inferred</td>
<td>3.9</td>
<td>1.95</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3.16</td>
<td>3.36</td>
<td>0.24</td>
<td>0.41</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>22.6</strong></td>
<td><strong>2.04</strong></td>
<td><strong>-</strong></td>
<td><strong>-</strong></td>
<td><strong>-</strong></td>
<td><strong>3.31</strong></td>
<td><strong>3.52</strong></td>
<td><strong>1.43</strong></td>
<td><strong>2.47</strong></td>
</tr>
</tbody>
</table>

---

## UG2 Resource Prill Split

3 PGE + Gold

![UG2 Resource Prill Split](https://via.placeholder.com/150)

- Pd: 34%
- Au: 1%
- Pt: 62%

---

99

100
Milestones

- Initial Capital Project completed 1 month ahead of schedule
- 10% below budget
- 13 Year LOM

Main Decline Infrastructure
TRP Visit – 29 May 2008

Concentrating Cells
Filtration House
Thickener

Mills
Overland Belt
Mill Feed Silos

Filtration House
Concentrating Cells
Thickener
Mills
2008 Executive Summary

• Transition from Project to Operation

• 1 Fatality, LTIFR 3.20 per million man hours

• ROM Tonnage
  • Deficit in first 6 months
  • Ramp up to 250 ktpm in 2nd half of 2008

• Oz Output Shortfall
  • Throughput and Recovery, 230 ktpm Q4
  • Optimisation Program

• Loan Repayment - (R616 million in May 08)

• Profit - R190 million (33%) higher than budget
### Safety

**Description**

<table>
<thead>
<tr>
<th>Description</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labour</td>
<td>887</td>
<td>2,077</td>
<td>1,513</td>
<td>2,511</td>
</tr>
<tr>
<td>Dressing Cases</td>
<td>36</td>
<td>85</td>
<td>60</td>
<td>52</td>
</tr>
<tr>
<td>Lost Time Injuries</td>
<td>1</td>
<td>5</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Reportables</td>
<td>1</td>
<td>5</td>
<td>8</td>
<td>11</td>
</tr>
<tr>
<td>Fata l</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>LTIFR</td>
<td>3.50</td>
<td>2.83</td>
<td>3.52</td>
<td>3.20</td>
</tr>
<tr>
<td>Severity Rate</td>
<td>54</td>
<td>175</td>
<td>213</td>
<td>146</td>
</tr>
</tbody>
</table>

- Fatality (05 July 2007) : Mudrush, Level 7 Orepass
- Fatality Free Shifts : 638,767 shifts (390 days)

**LTIFR (per million)**

![Graph showing LTIFR (per million) from 2004 to 2008]
## Environment and permitting

<table>
<thead>
<tr>
<th>Description</th>
<th>Status</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chrome Recovery Plant</td>
<td>Finalised</td>
<td>May 2008</td>
</tr>
<tr>
<td>Rehabilitation Trust Fund</td>
<td>Finalised</td>
<td>June 2008 (R562,952 contribution)</td>
</tr>
<tr>
<td>North Decline Fuel &amp; Emulsion facilities</td>
<td>Finalised</td>
<td>June 2008</td>
</tr>
<tr>
<td>Mining License Conversion</td>
<td>Pending</td>
<td>Submitted July 2007</td>
</tr>
<tr>
<td>Concentrator Plant Upgrade</td>
<td>Pending</td>
<td>Submitted July 2008</td>
</tr>
<tr>
<td>NOP EMPR Addendum</td>
<td>Preparation</td>
<td>Four season impact assessment - Dec 2008.</td>
</tr>
</tbody>
</table>

![Map of ARM Implats](image)
Run of mine grade

<table>
<thead>
<tr>
<th>Year</th>
<th>Actual</th>
<th>Future</th>
<th>History</th>
<th>Estimate</th>
<th>Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>3.5</td>
<td>4.0</td>
<td>3.8</td>
<td>4.2</td>
<td>4.5</td>
</tr>
<tr>
<td>2005</td>
<td>3.7</td>
<td>4.4</td>
<td>4.0</td>
<td>4.6</td>
<td>4.8</td>
</tr>
<tr>
<td>2006</td>
<td>3.9</td>
<td>4.5</td>
<td>4.1</td>
<td>4.7</td>
<td>5.0</td>
</tr>
<tr>
<td>2007</td>
<td>4.1</td>
<td>4.7</td>
<td>4.2</td>
<td>4.9</td>
<td>5.1</td>
</tr>
<tr>
<td>2008</td>
<td>4.3</td>
<td>5.0</td>
<td>4.4</td>
<td>5.2</td>
<td>5.4</td>
</tr>
<tr>
<td>2009</td>
<td>4.5</td>
<td>5.2</td>
<td>4.6</td>
<td>5.4</td>
<td>5.6</td>
</tr>
<tr>
<td>2010</td>
<td>4.7</td>
<td>5.5</td>
<td>4.8</td>
<td>5.6</td>
<td>5.8</td>
</tr>
<tr>
<td>2011</td>
<td>4.9</td>
<td>5.7</td>
<td>4.9</td>
<td>5.8</td>
<td>6.0</td>
</tr>
<tr>
<td>2012</td>
<td>5.1</td>
<td>5.9</td>
<td>5.0</td>
<td>6.0</td>
<td>6.2</td>
</tr>
<tr>
<td>2013</td>
<td>5.3</td>
<td>6.1</td>
<td>5.1</td>
<td>6.2</td>
<td>6.4</td>
</tr>
</tbody>
</table>

Mill feed

2008 Average 193 ktpm (225 ktpm)

<table>
<thead>
<tr>
<th>Year</th>
<th>Actual</th>
<th>History</th>
<th>Future Plan</th>
<th>Estimate</th>
<th>Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>165</td>
<td>200</td>
<td>210</td>
<td>225</td>
<td>230</td>
</tr>
<tr>
<td>2008</td>
<td>170</td>
<td>205</td>
<td>220</td>
<td>235</td>
<td>240</td>
</tr>
<tr>
<td>2009</td>
<td>175</td>
<td>210</td>
<td>225</td>
<td>240</td>
<td>245</td>
</tr>
<tr>
<td>2010</td>
<td>180</td>
<td>215</td>
<td>230</td>
<td>245</td>
<td>250</td>
</tr>
<tr>
<td>2011</td>
<td>185</td>
<td>220</td>
<td>235</td>
<td>250</td>
<td>255</td>
</tr>
<tr>
<td>2012</td>
<td>190</td>
<td>225</td>
<td>240</td>
<td>255</td>
<td>260</td>
</tr>
<tr>
<td>2013</td>
<td>195</td>
<td>230</td>
<td>245</td>
<td>260</td>
<td>265</td>
</tr>
</tbody>
</table>
6E ounces produced

2008 Average 17,208 oz (18,715 oz)

Ounces

- concentrator

- Concentrator Throughput
  - Primary Crushing Plant inefficiency
  - Material hardness
  - Mill availability
    - Gearbox failures
    - High lubrication temperatures
    - Unscheduled load shedding
  - Excessive Larox filtration cycles

- Recovery
  - Low Feed grades during the first quarter of 2008
  - Insufficient flotation residence times
  - Depressant efficiency
Concentrator optimisation strategy

• Increase mill throughput
  • Improve primary crushing capacity
  • Introduce secondary crushing
  • Improve mill availability
    • Upgrade mill lubrication coolant system
    • Increased engineering operating and maintenance capacity

• Improve recoveries
  • Increase cleaner capacity (100%)
  • Ongoing training of operators
  • R&D testwork through Mintek

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Status</th>
<th>Value</th>
<th>Estimated Completion</th>
<th>Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upgrade Primary Crusher Feeder</td>
<td>Complete</td>
<td>R 2 million</td>
<td>February 2008</td>
<td>Improved Primary Crusher throughput</td>
</tr>
<tr>
<td>Upgrade Mill Lubrication</td>
<td>Complete</td>
<td>R 1 Million</td>
<td>May 2008</td>
<td>Reduced M1 lubrication temperatures, reducing unplanned M1 trips.</td>
</tr>
<tr>
<td>Increase Engineering Capacity</td>
<td>Complete</td>
<td>Increase in Opex</td>
<td>June 2008</td>
<td>Improved maintenance and operational coverage, resulting in reduced unplanned downtime.</td>
</tr>
<tr>
<td>Larox Filter</td>
<td>In progress</td>
<td>R 3 million</td>
<td>Aug 2008</td>
<td>Improved filtration cycle times</td>
</tr>
</tbody>
</table>
| Secondary Crusher                     | Design In Progress, | R72 million | Apr 2009 | Improved Mill Throughput:  
  • Reduced relining times  
  • Reduced mill feed size  
  • Operating cost benefits (liners) |
| Increased Cleaner Capacity            | Design In Progress, | R 96 million | Sept 2009 | Improved recoveries, reduced chrome in concentrate                       |
| Mintek R&D work                       | In Progress  | R 12 million| Jul 2008             | Improved understanding of flotation dynamics resulting in improved recoveries |
| Total                                 | Capex        | R184 million| Sept 2009            | Increase throughput to 225ktpm, Improve recoveries to design of 82%       |
Run of mine total 2009 year to date

Grade - 2009 year to date
## Human resources development

<table>
<thead>
<tr>
<th>Description</th>
<th>2008 Plan</th>
<th>2008 Actual</th>
<th>2009 Plan</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABET</td>
<td>82</td>
<td>29</td>
<td>128</td>
<td>Conclude an agreement with union on ABET classes</td>
</tr>
<tr>
<td>Learnerships</td>
<td>10</td>
<td>11</td>
<td>16</td>
<td>11 Engineering Learnerships (8 advanced, 3 basic). 5 Mining Learnerships to commence in September 2008.</td>
</tr>
<tr>
<td>Portable Skills Training</td>
<td>252</td>
<td>202</td>
<td>272</td>
<td>Basic computer training, Business Skills, HIV/AIDS, Gas torch cutting</td>
</tr>
<tr>
<td>Mentorship</td>
<td>13</td>
<td>0</td>
<td>23</td>
<td>TRP in the process of finalising the &quot;talent pool&quot; requirements. Mentorship programme to commence in October 2008.</td>
</tr>
<tr>
<td>Bursaries and Internships</td>
<td>2</td>
<td>0</td>
<td>4</td>
<td>Bursaries will be awarded in November 2008.</td>
</tr>
<tr>
<td>HDISA in management</td>
<td>35%</td>
<td>23%</td>
<td>36%</td>
<td>Difficulty to attract and retain HDISA managers</td>
</tr>
<tr>
<td>Women in Mining</td>
<td>9%</td>
<td>14%</td>
<td>10%</td>
<td>Further development of WIM programmes</td>
</tr>
</tbody>
</table>

## Local economic development projects

<table>
<thead>
<tr>
<th>Description</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spatial Development</td>
<td>Conduct land use management survey.</td>
</tr>
<tr>
<td>SPF Initiatives</td>
<td>Assist. in implementation of GTM LED projects (road development project).</td>
</tr>
<tr>
<td>Lifecycle Systems</td>
<td>Create capacity in Technical Department in GTM (Project Management Unit).</td>
</tr>
<tr>
<td>Transport Study</td>
<td>Determine solution for TRP employees transport needs.</td>
</tr>
<tr>
<td>Local Procurement (SMME)</td>
<td>Assistance and training given to emerging SMME’s.</td>
</tr>
<tr>
<td>Community Projects</td>
<td>Together with local communities identify community projects.</td>
</tr>
</tbody>
</table>
Opportunities

- Operational
  - Concentrator throughput – secondary crushing
  - Plant recovery – additional cleaner capacity
  - Optimise operating costs
  - Tolling

- Strategic
  - Mining method optimisation
  - Merensky reef
  - Opencast – North open pit
  - Other

Questions

www.arm.co.za
Modikwa Platinum Mine

Sean O’Connor - Business Leader and team

Contents

- Safety
- Ore body
- Mining methods
- Production
- Operating costs
- Capital expenditure
- Human resources
- Key business issues
Fatalities

Achieved 4 Million Fatality Free Shifts on
26 August 2008

Lease area

Mpumalanga Province

Total lease area 14 278 ha
Mine average planned at 101.4 cm – currently 101.6 cm

Vertical grade distribution in UG2

Total Average g/t 4E 5.71

North Shaft
Average g/t 4E: 5.76

South Shaft
Average g/t 4E: 5.82
Resource classification
Tonnage discounted (millions)

<table>
<thead>
<tr>
<th></th>
<th>Merensky</th>
<th>UG2</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measured</td>
<td>18.7 (8.6%)</td>
<td>50.7 (24.8%)</td>
<td>69.4 (16.4%)</td>
</tr>
<tr>
<td>Indicated</td>
<td>46.8 (21.5%)</td>
<td>64.4 (31.5%)</td>
<td>111.2 (26.3%)</td>
</tr>
<tr>
<td>Inferred</td>
<td>152.0 (69.9%)</td>
<td>89.6 (43.8%)</td>
<td>241.6 (57.2%)</td>
</tr>
</tbody>
</table>

Total 217.5 204.7 422.2
Excluding Reserve
Breast footwall layout

Final layout

Modikwa – Lev 1 LOM
Large Ends – Reef drive vs Fwall drive
Conversion to footwall strike development & breast stoping

Development required to generate ore reserves

<table>
<thead>
<tr>
<th></th>
<th>Breast mining</th>
<th>Dip mining</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Footwall drives</td>
<td>Twin raise &amp; reef drives</td>
</tr>
<tr>
<td>m² / metre</td>
<td>Required to replace 50 000 m²</td>
<td>m² / metre</td>
</tr>
<tr>
<td>m² / Total Dev</td>
<td>52</td>
<td>17</td>
</tr>
<tr>
<td>m² / Prim – R/W, T/W, B/H, Diag</td>
<td>107</td>
<td>22</td>
</tr>
<tr>
<td>m² / Prim – Large Ends</td>
<td>103</td>
<td>83</td>
</tr>
</tbody>
</table>

Mining Right plan – UG2 design
2008 Merensky resource categories (Data Mine model)

131 boreholes
242 reef cuts

Measured Resource
Indicated Resource
Inferred Resource

Total primary development metres / month (Excludes shaft sinking)

At steady state breast requires less development than dip to generate the same ore reserves
Immediately available reserves (Raises holed)

18 month reserve achieved by 2010
Includes depletion of Hill and Midshaft
Transition to 100% production from North and South Shafts

Monthly area mined (m²) (UG2 & Merensky)
Lower Platinum content of Modikwa ore results in higher unit cost per Platinum ounce, comparable cost per PGM ounce.
Cash cost per 4E ounce

Operating cost

- Current cash costs per ton milled and Pt oz high as build up continues to 50 000 m²
- Drivers of cost reduction
  - Volume increase
  - 4 mining areas to 2
  - 1.5m of equipped face per metre face blasted
  - Novice workforce moving up learning curve
  - TM3 Efficiencies
  - Cost reduction initiatives
Capital expenditure

Main Items for 2008:

- Replacement or refurbishment of mechanised fleet
  - R103.6 million

- Modikwa Phase 2 Replacement
  - R211.2 million for 2008 only

Employee and community relations

- Relationships with communities steady
  - Estimating R11 million spend on Community Development Initiatives

- Secured a two year wage agreement with both Unions

- Talent pool for Mining and Engineering disciplines very successful

- Already achieved 41% of the HDSA in management positions

- Experiencing challenges with the percentage of women in core positions.
Key business issues

- Improved safety performance
- Achieve planned volume increase
- Smooth transition from down dip to breast stoping and moving drives into footwall
- Further improve efficiency of the mechanised development and tramming
- Improve efficiencies of stoping teams

Questions

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