

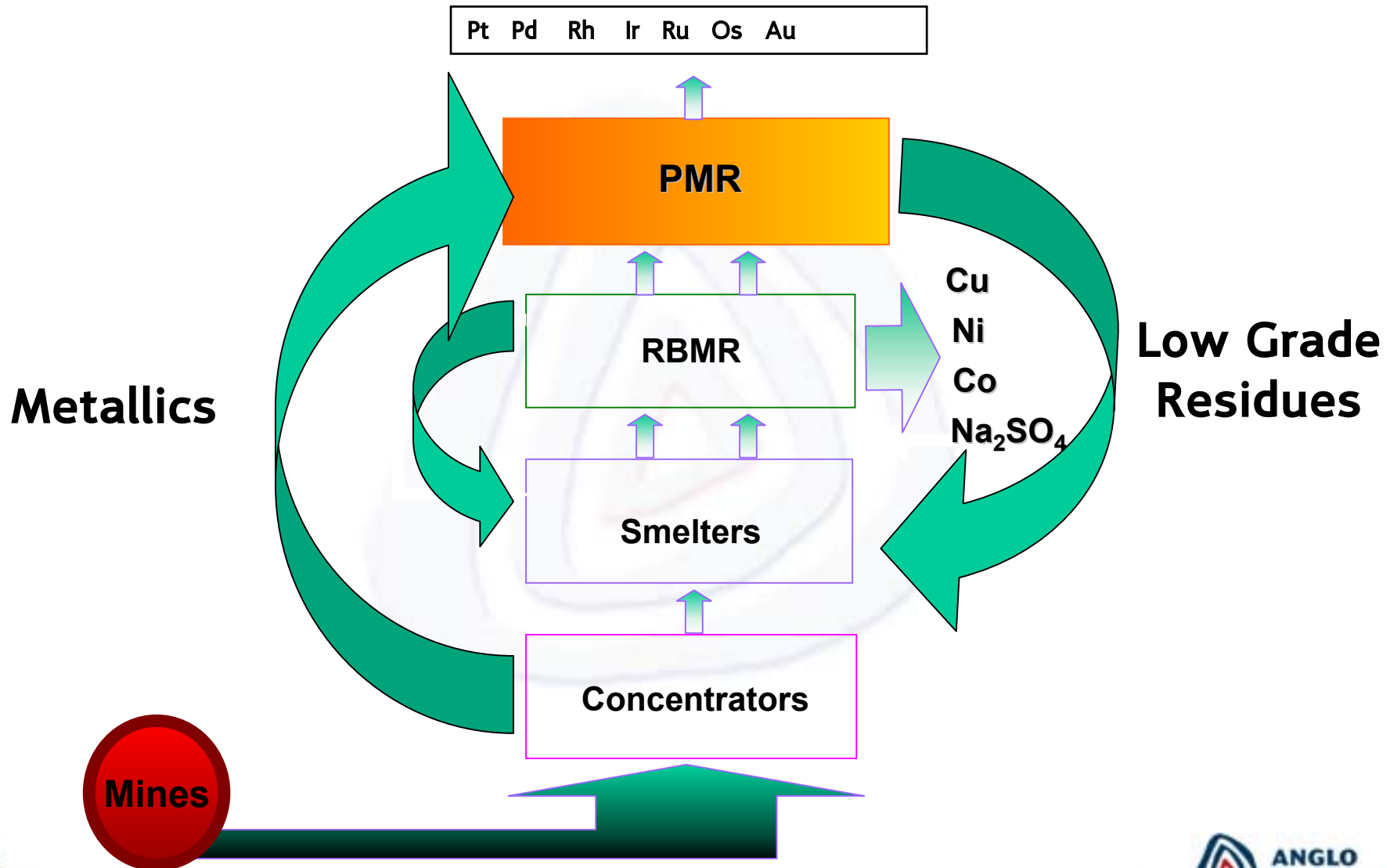
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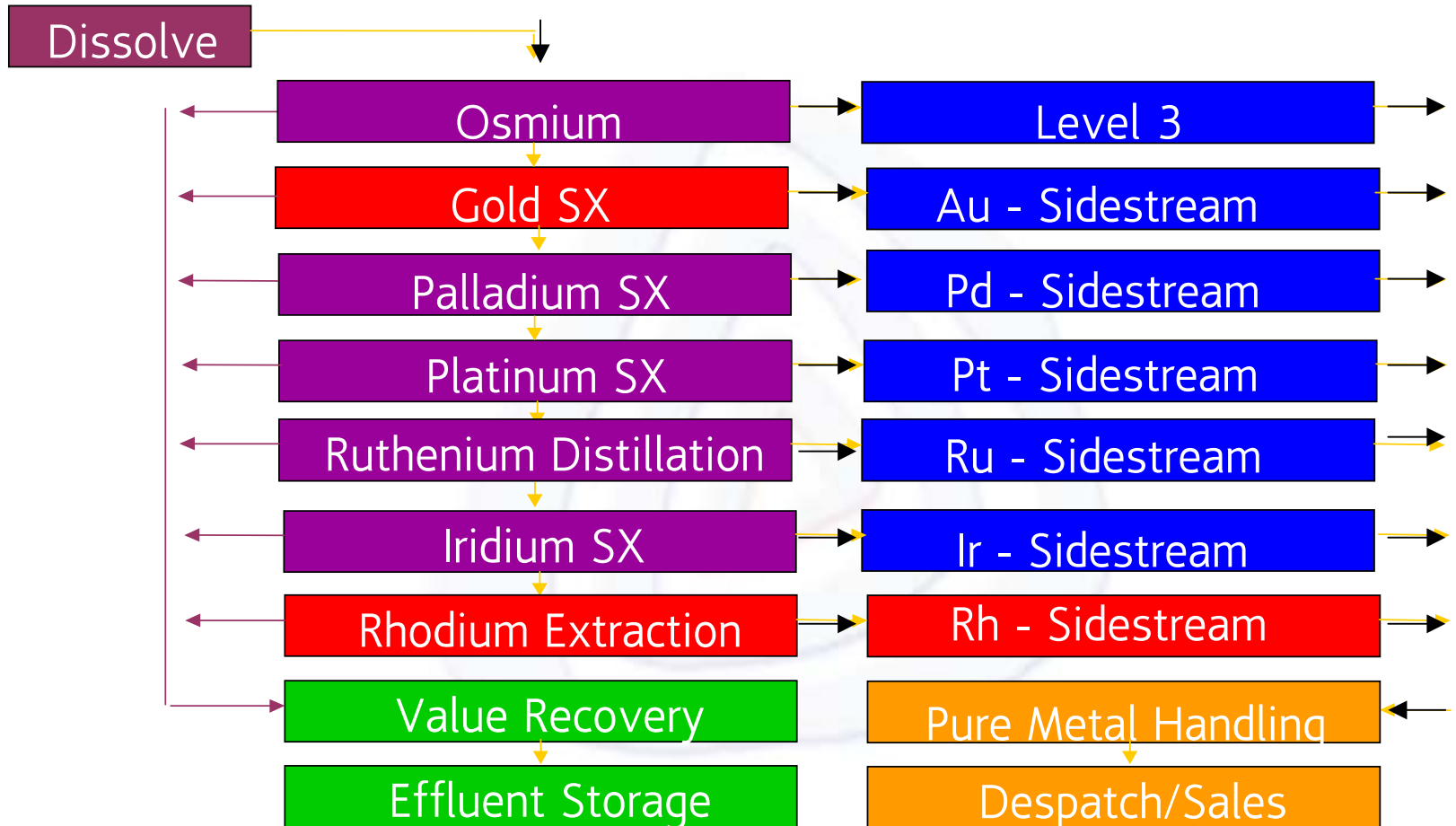
pmr



# RUSTENBURG PLATINUM CIRCUIT

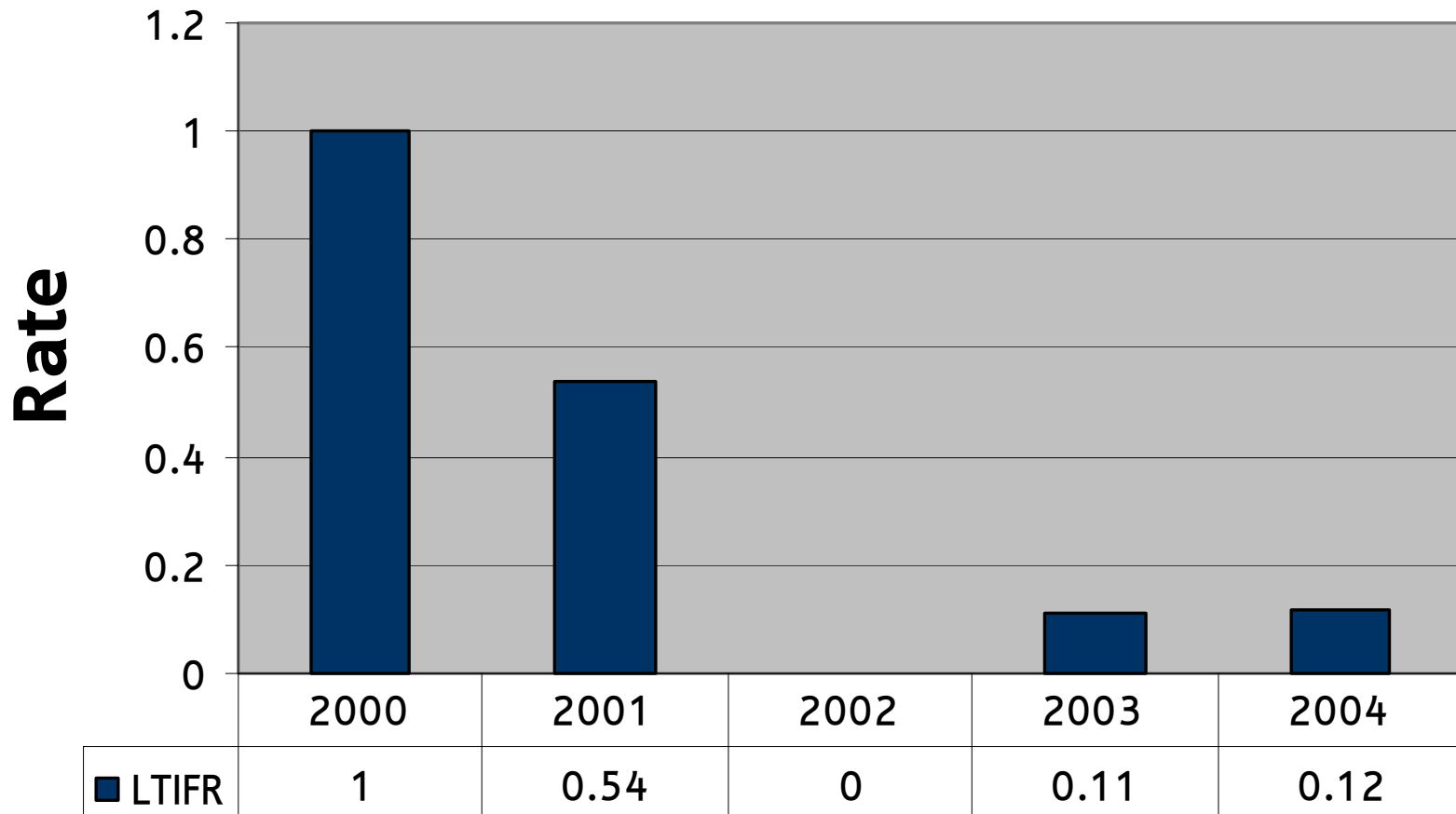


# PMR FLOWSHEET



# SAFETY

## LTIFR 2000 - 2004



# SHE STRATEGY

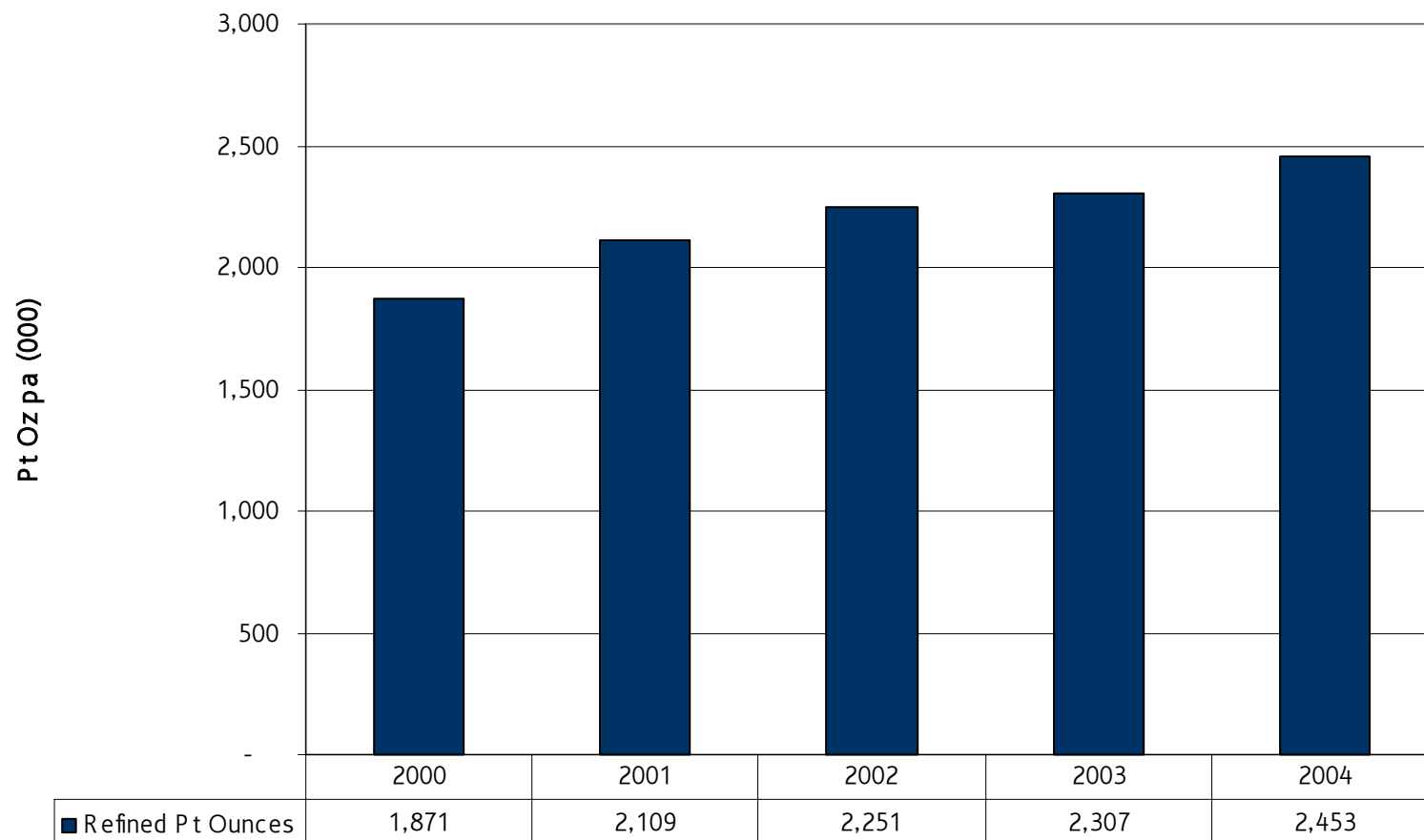
- Total integration of Safety, Health, Environment and Quality.
- Maintain existing NOSA five star, NOSCAR, ISO 14 001:2004, OHSAS 18 001:1999 and ISO 9001:2000 status.
- Maintain focus on visible felt leadership.
- Enforce OTTO (ZERO TOLERANCE,TARGET ZERO) and adherence of the six Platinum rules.
- Empowerment of people through SHEQ training.
- Promote SHEQ awareness.
- Ensure legal compliance (audits).

# SHE ACHIEVEMENTS

- NOSA five star for 14 consecutive years
- NOSCAR status for 10 consecutive years
- OHSAS 18 001:1999 certified company
- ISO 14 001:2004 certified company
- ISO 9001:2000 certified company
- NOSA top 20 company- SHE integrated system

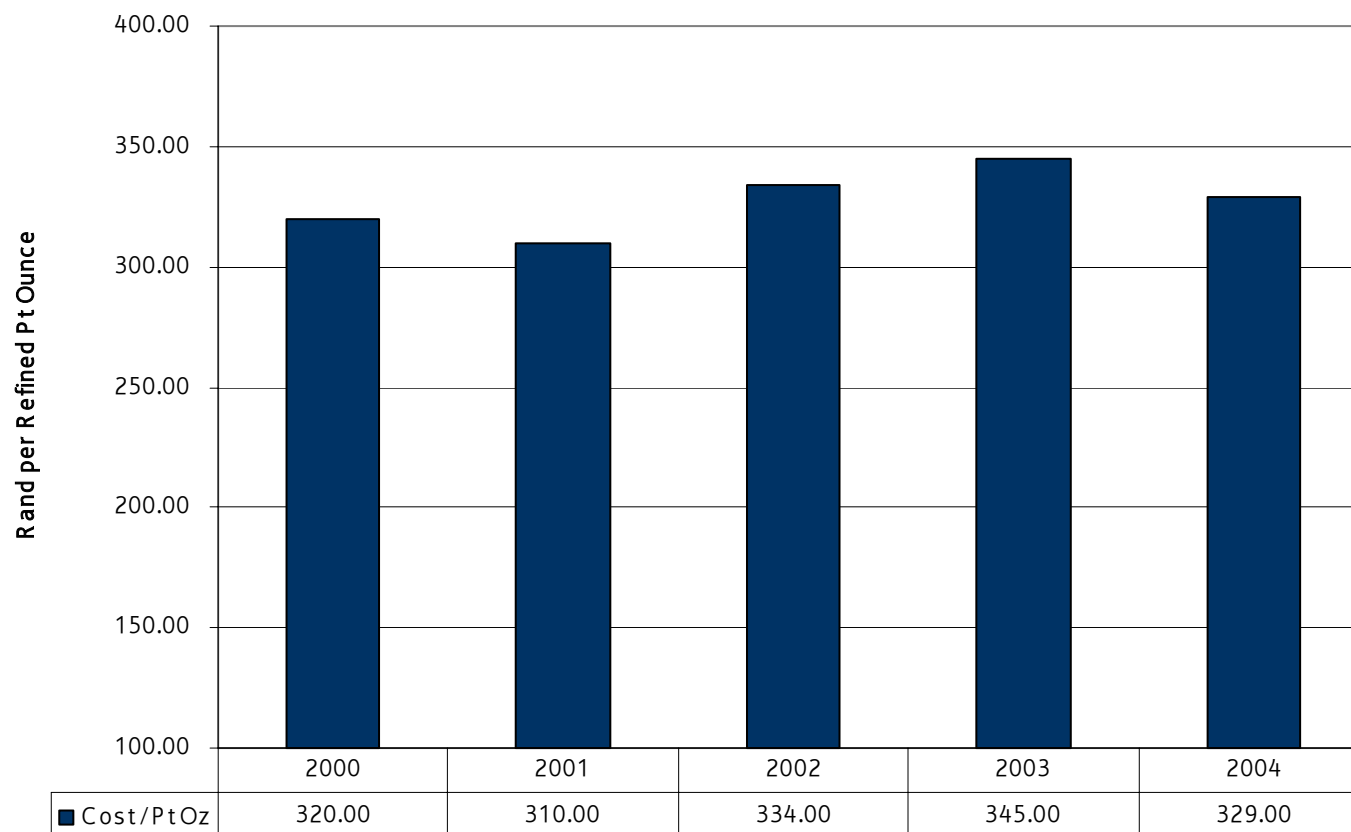
# PRODUCTION

# REFINED PLATINUM OUNCES

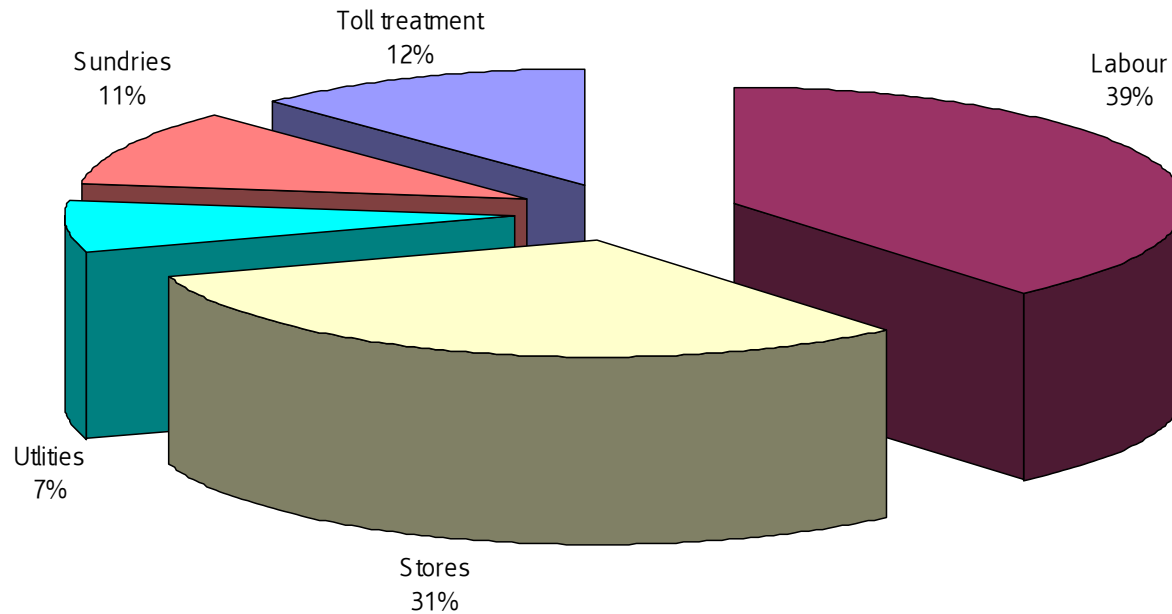


# **OPERATING COSTS**

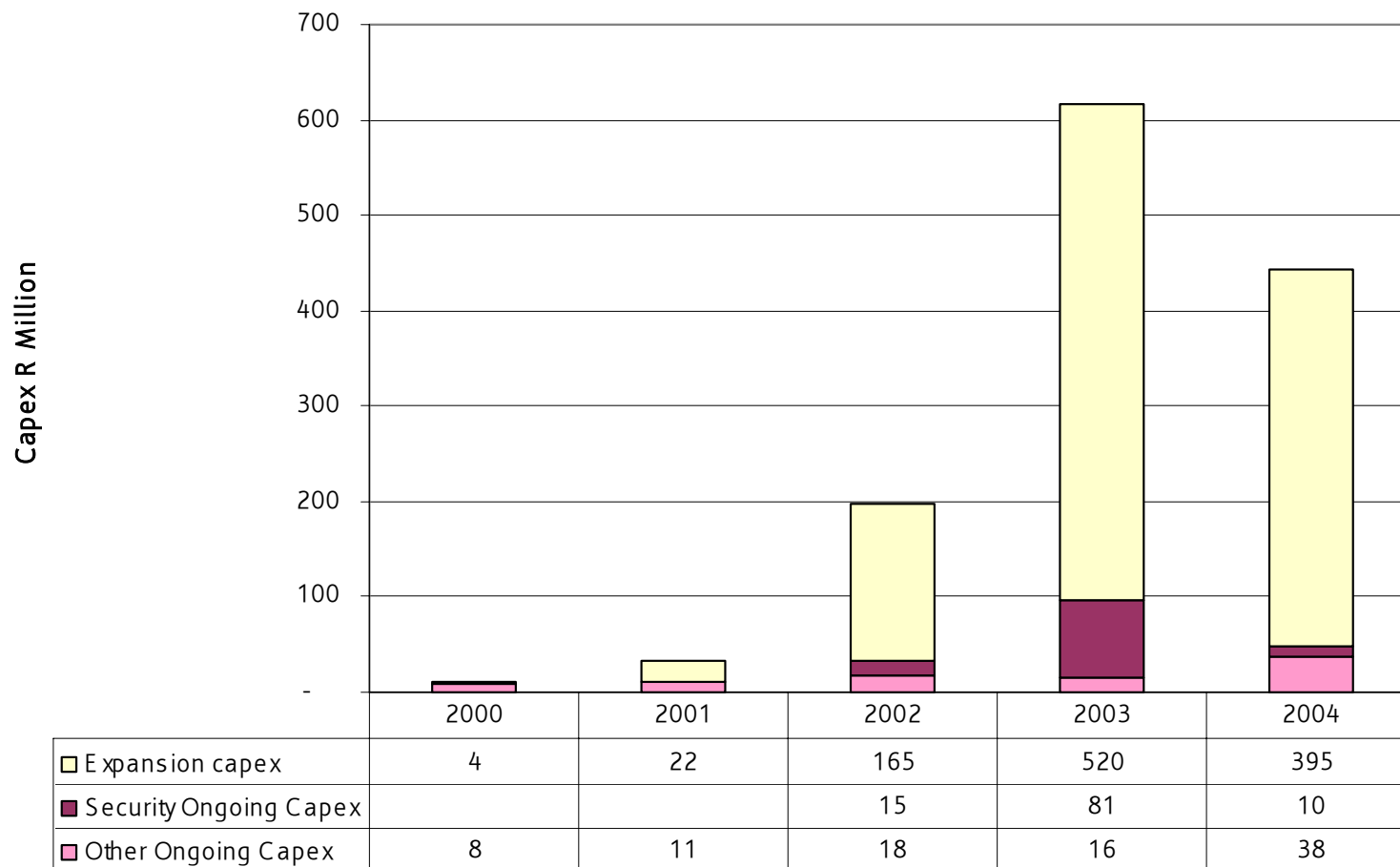
## CASH COST PER REFINED Pt OUNCE



# CASH COSTS 2004



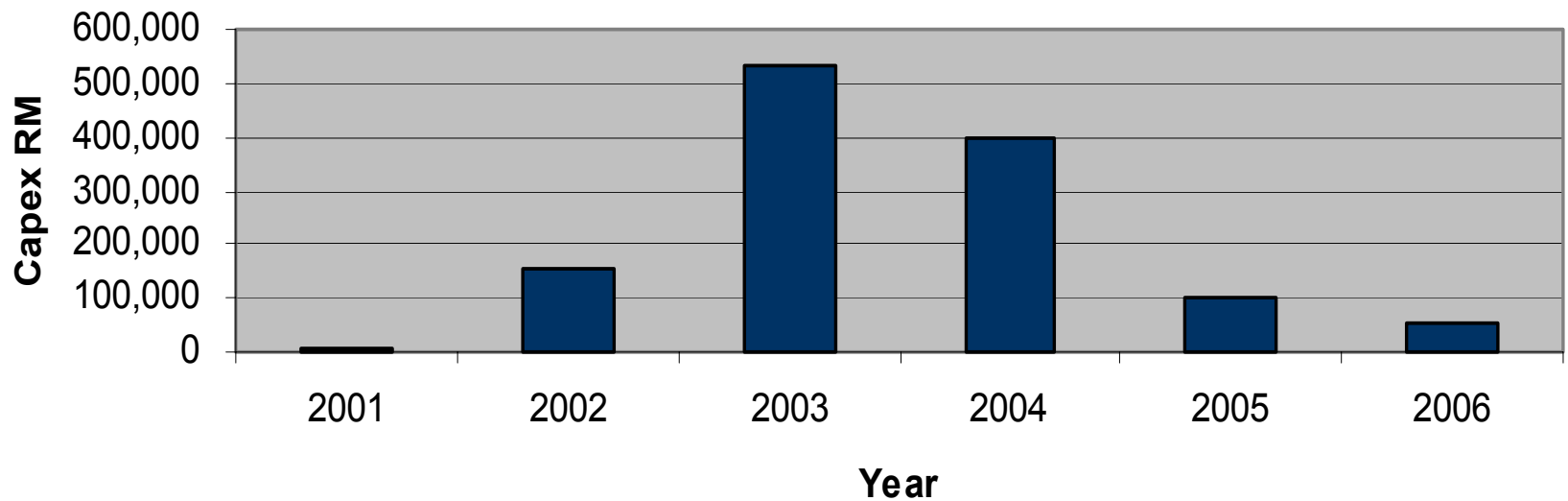
# PMR TOTAL CAPITAL PROFILE



# CAPITAL EXPENDITURE

Latest Cost Forecast to completion: R1 238 319

**PMR Capacity Increase Project  
Capex Profile**



■ 2001 ■ 2002 ■ 2003 ■ 2004 ■ 2005 ■ 2006

# **CAPACITY INCREASE PROJECT**

# PROJECT SAFETY RECORD

- **As of the end of April 2005:**
  - Two Restricted Work Cases (RWC) and 11 Lost Time Injuries (LTI) to date.
  - Total hours worked on site: 6 215 604
  - Total hours since last LTI: 1 204 064
  - LTIFR (incl. RWC): 0.35
  - Number of contractors on site: 235

# ORIGINAL PROJECT APPROACH - Y2000

- Original expansion strategy for PMR was to expand production from 2 million oz T Pt in 2000 to 3.5 million oz T Pt in 2006.
- Approach selected for providing additional capacity was sequential expansion that addressed, in order of priority, identified constraints. Various areas of PMR would become constrained at different times between 2000 and 2006.
- Regarded as a low cost, high capital efficiency approach, as only constrained areas were expanded and were to be addressed in time to meet the constraint.
- The Project was also to ensure that any possibility of expanding beyond 3.5 million oz T Pt equivalent production if ever required was not compromised. Modular approach to be taken where possible.
- Project started at the beginning of Y2001.

# CHANGED BUSINESS SCENARIO – Y2003

- **Revised Project Drivers:**
  - Group-wide initiative to rationalize capital expenditure on all projects.
  - 2.9 M oz T Pt equivalent production pa the next milestone (Y2006).
- **However:**
  - Business benefits could be derived immediately from new / enhanced process areas e.g. new Rhodium treatment processes.

# UNIQUE PROJECT FEATURES

- **Health & Safety:**
  - Live plant containing flammable, corrosive and / or explosive chemicals.
  - Hazards present in areas dictated timing and scopes of work.
- **Security:**
  - Construction / engineering more difficult and time consuming inside higher security areas of PMR due to security requirements.
  - Major new plant areas (utilities, new process areas) built outside security areas then incorporated into existing PMR at hot commissioning stages.
- **Phasing:**
  - Major study & scoping phase of project initiated first to identify capacity constraints.
  - Process / utility areas of PMR sub-divided into 32 sub-projects, all of which were constrained or affected at different times leading up to 2006.
  - 32 separate sub-projects, at different project phases, running concurrently.
- **Confidentiality:**
  - Security of process and commercial information a project priority.

# CHANGE IN PROJECT COSTS – Y2003

|                | Constant mid 2002<br>Money Terms<br>(ZAR millions) | Nominal Money Terms<br>(ZAR millions) |
|----------------|----------------------------------------------------|---------------------------------------|
| Approved       | 1 320                                              | 1 560                                 |
| LCF            | 1 098                                              | 1 264                                 |
| Variance (ZAR) | (222)                                              | (296)                                 |
| Variance       | (16.82%)                                           | (18.97%)                              |

# HOW WAS THIS ACHIEVED?

- All studies on PMR areas completed, with bottlenecks and operational issues identified.
- R & D work, pilot plant and plant based test work, carried out since start of project in Y2001, reached successful conclusion of first major phase.
- Operational work arounds identified and implemented.
- Change in Project drivers.

# CURRENT STATUS OF THE PMR EXPANSION PROJECT

- 88% of the sub-projects are complete and in production.
- New Rhodium plant commissioned and operating well.
- First half of new gold processing areas has been commissioned and is currently being optimised. Commissioning of the second half is to start in July 2005.
- Remaining sub-projects to complete the PMR capacity increase will be completed in 2006.

**THANK YOU  
QUESTIONS ?**

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