

Amandelbult



Investment Analysts and Fund Managers Visit

Amandelbult Platinum Mine

**“We at Amandelbult will consistently
improve on our superior performance and
enhance our value driven business culture”.**

26 MAY 2004

Amandelbult's Values



- **Safety**
 - **Our people**
 - **The environment**
 - **Stakeholder relationships**
 - **Innovation**
 - **Business success**
-

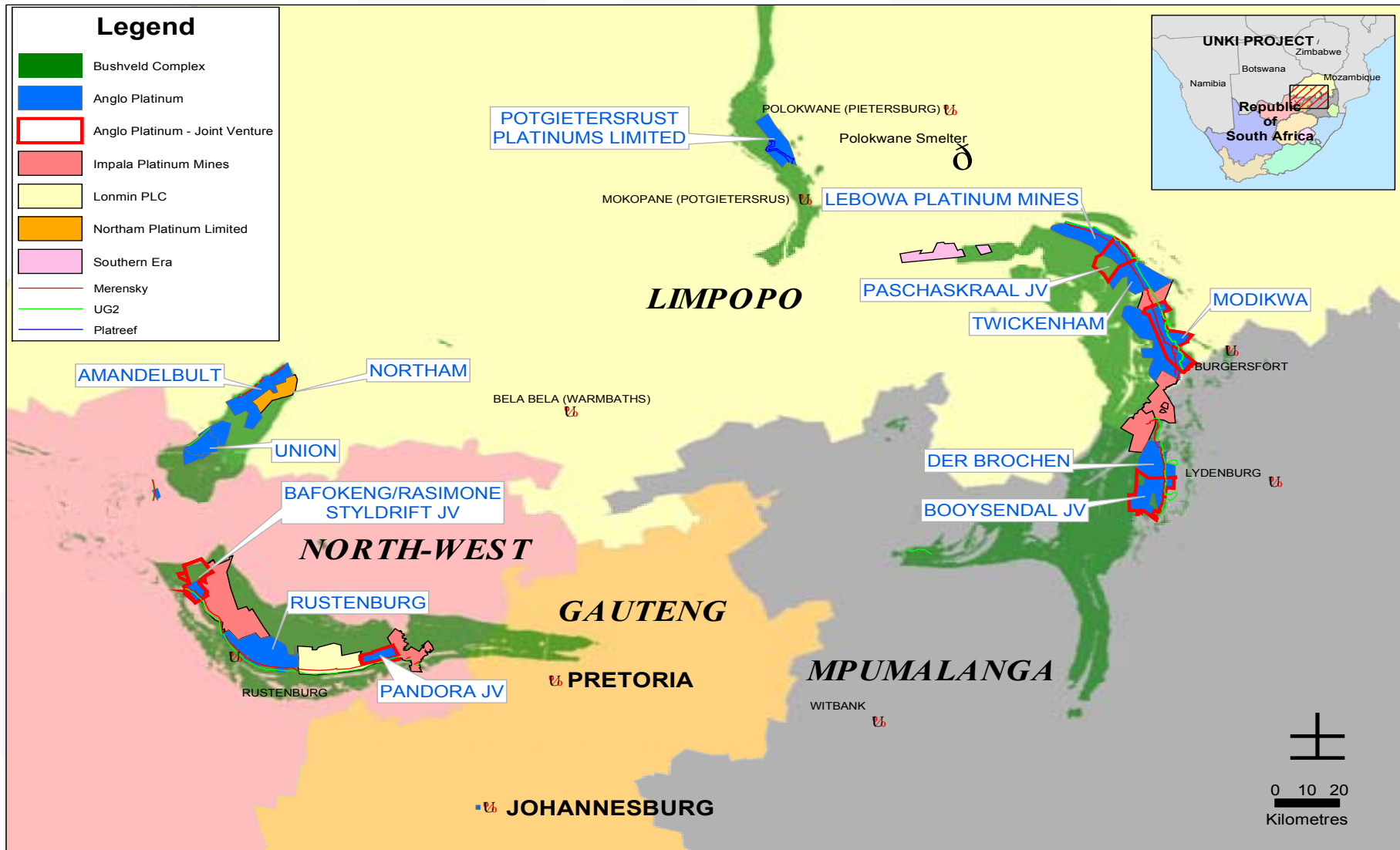
Agenda



- Location & Mine infrastructure layout
 - Safety and Environment
 - Resources and Reserves
 - Mining Method
 - Production
 - Operating Cost
 - Capital Programme
 - Human Resources
 - Key Business Issues
-

Location & Mine Infrastructure Layout

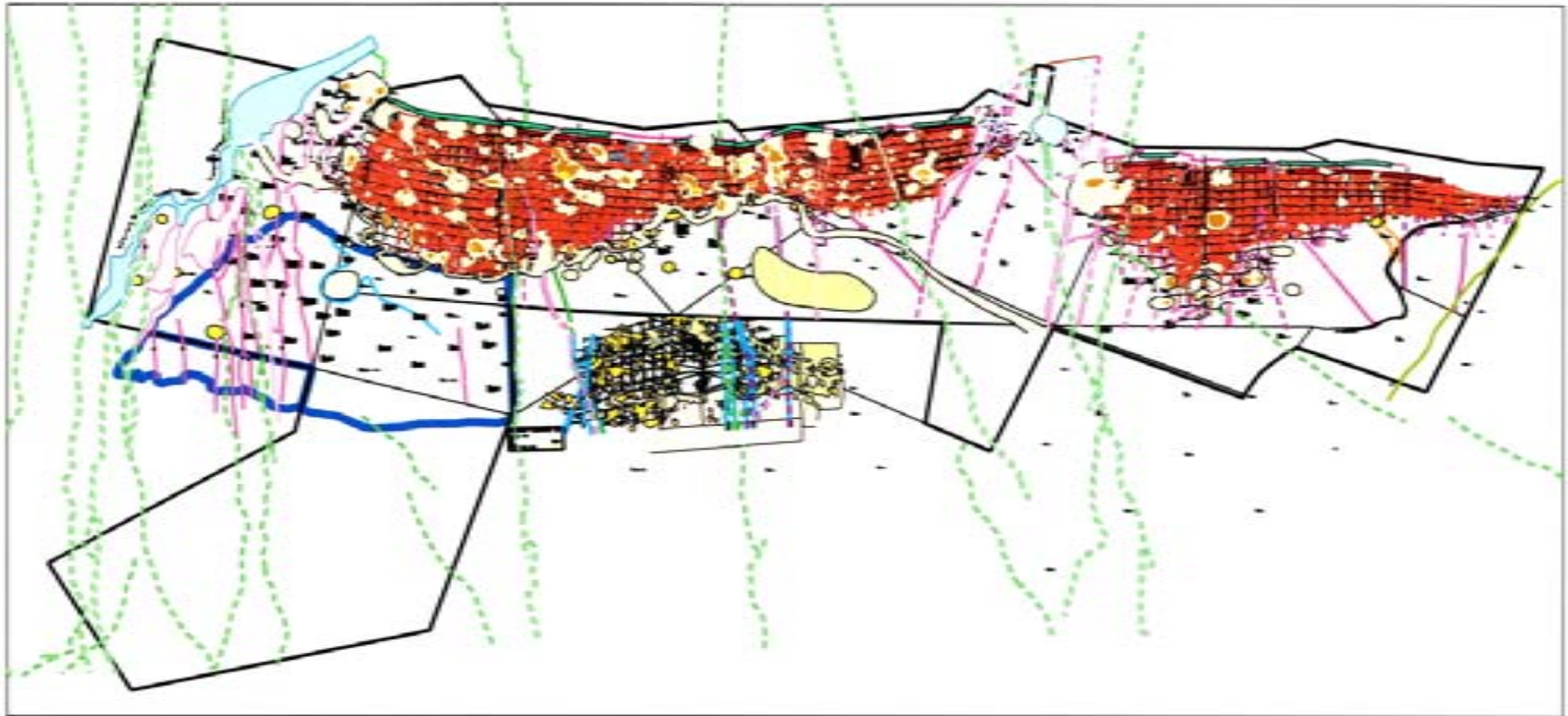
Location



Surface Layout



Mining operations



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SHE Strategy

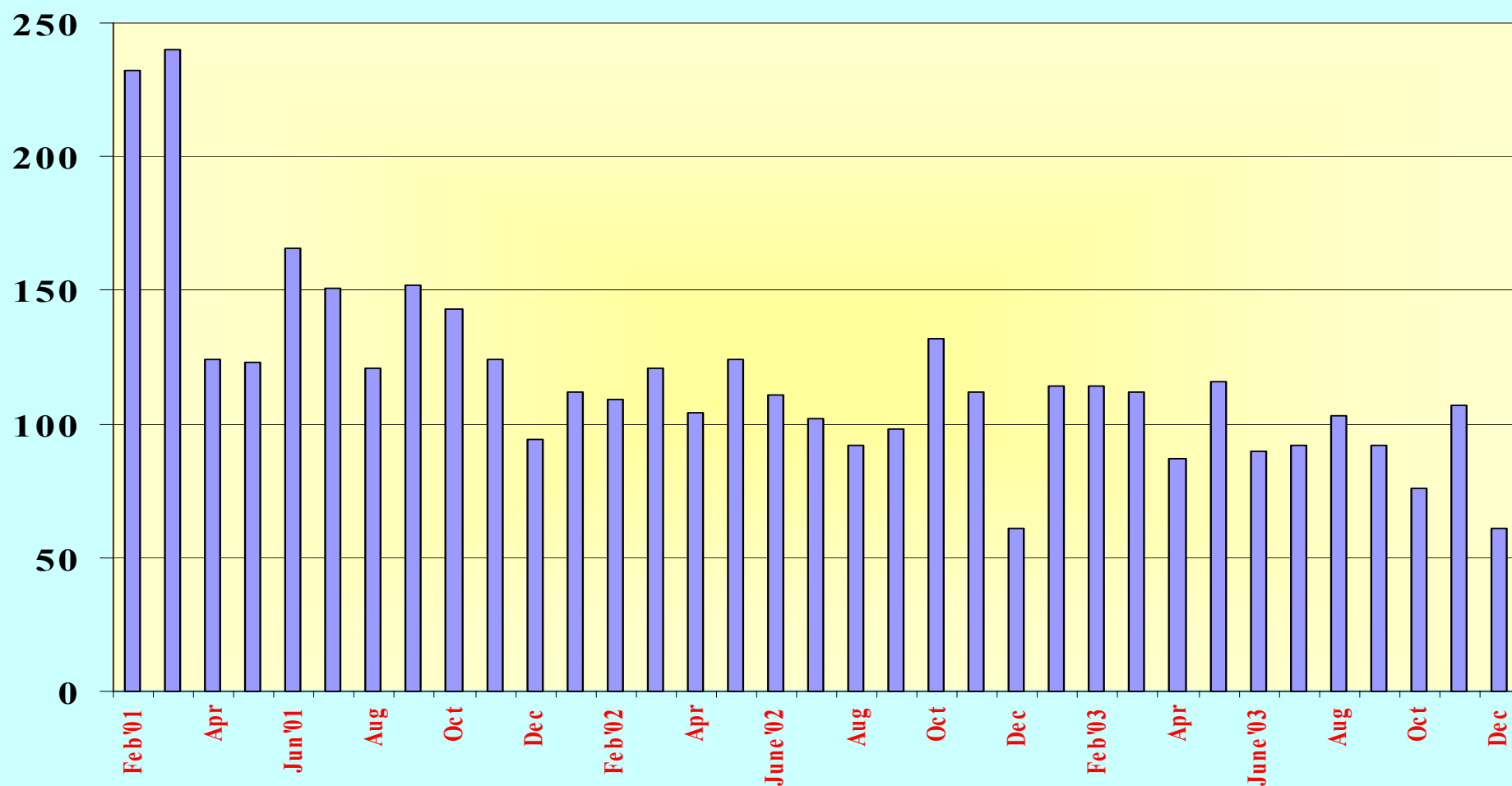
Continuous reduction of at risk behavior, sub standard conditions, health hazards and environmental incidents.



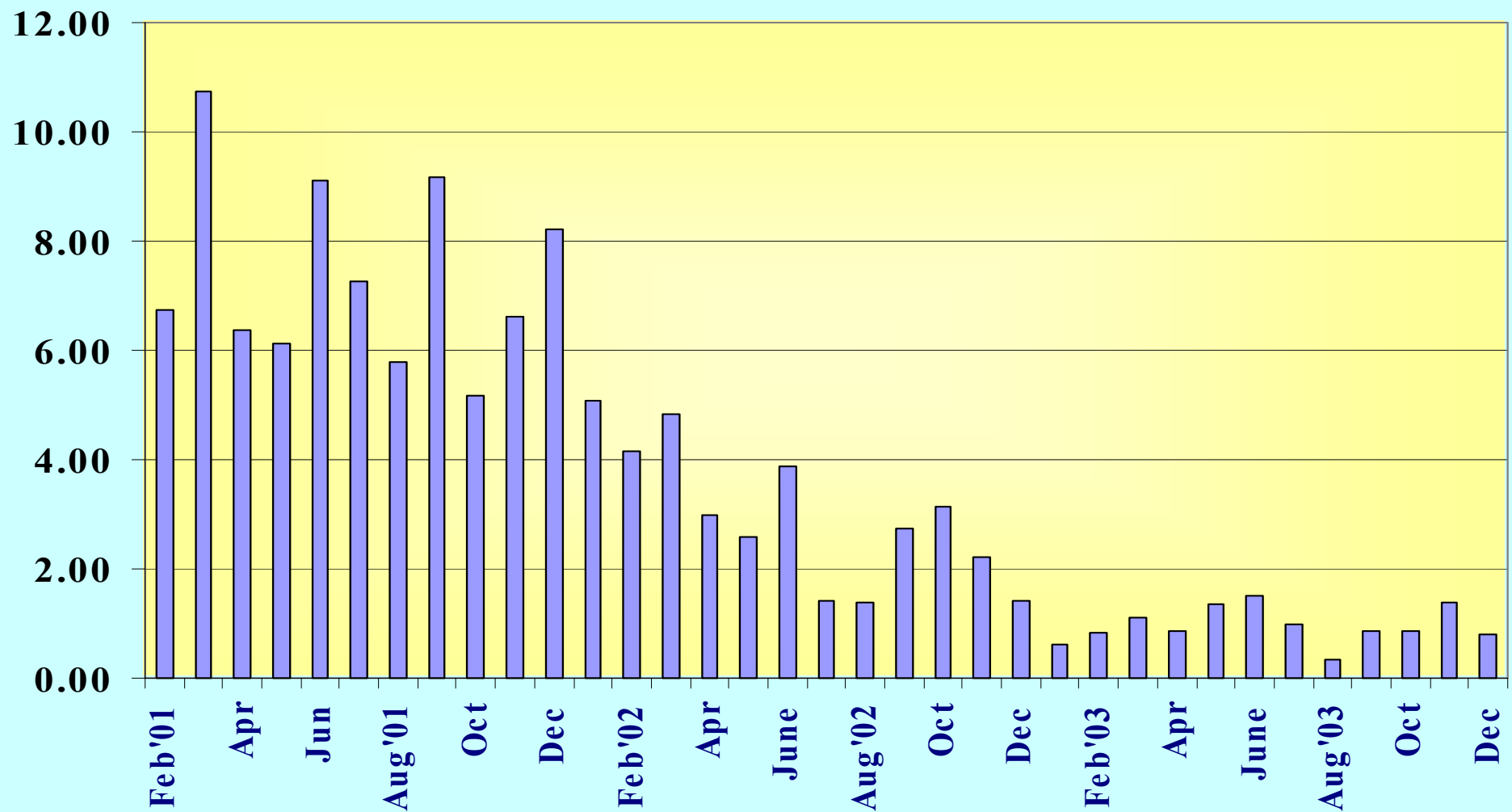
Amandelbult 4 LIFE

- **4 Pillars of Safety system**
 - Planned inspections
 - PTO's
 - Accident/Incident investigation
 - Group Meetings
 - **Lead by example**
 - **Implement OTTO**
 - **Friendly and Practicable standards**
 - **Eliminate at risk behavior**
-

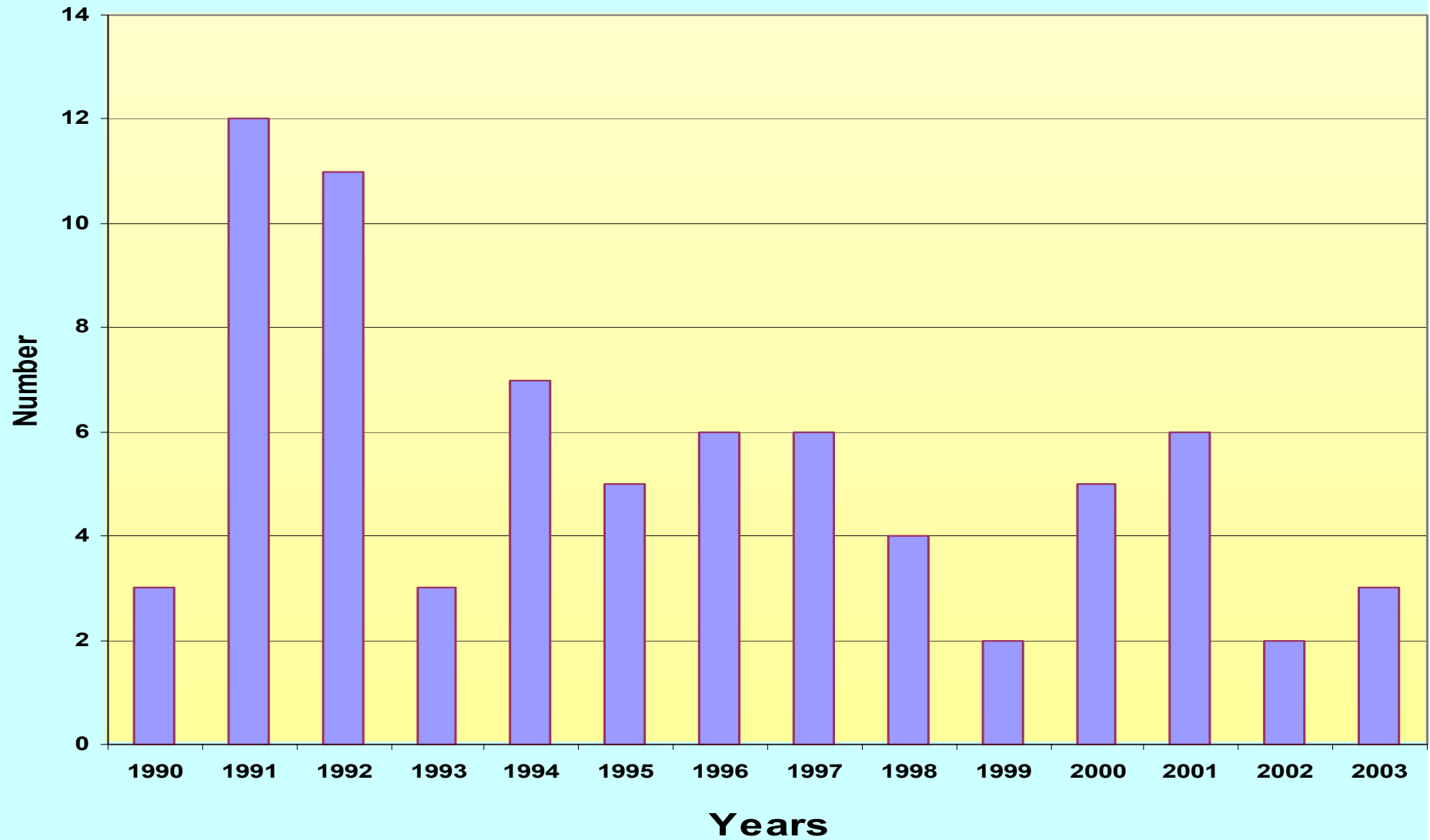
Total Injuries



Lost Time Injury Frequency Rate



Total Number of Fatalities



- **EMS Status**
 - ISO14001 Certification achieved in February 2004
 - **Water Consumption and Discharge**
 - Closed circuit water reticulation
 - Water balance implemented
 - **Waste management**
 - Effective system with permitted landfill site on mine
 - **Dust**
 - Dust fall out low
 - **Public Participation**
 - Bi-annual environmental committee meeting held
 - **Social Issues**
 - Transformation forum
 - Addicted to business program
 - Environmental awareness interventions at local schools
-

Opencast Mining Operations



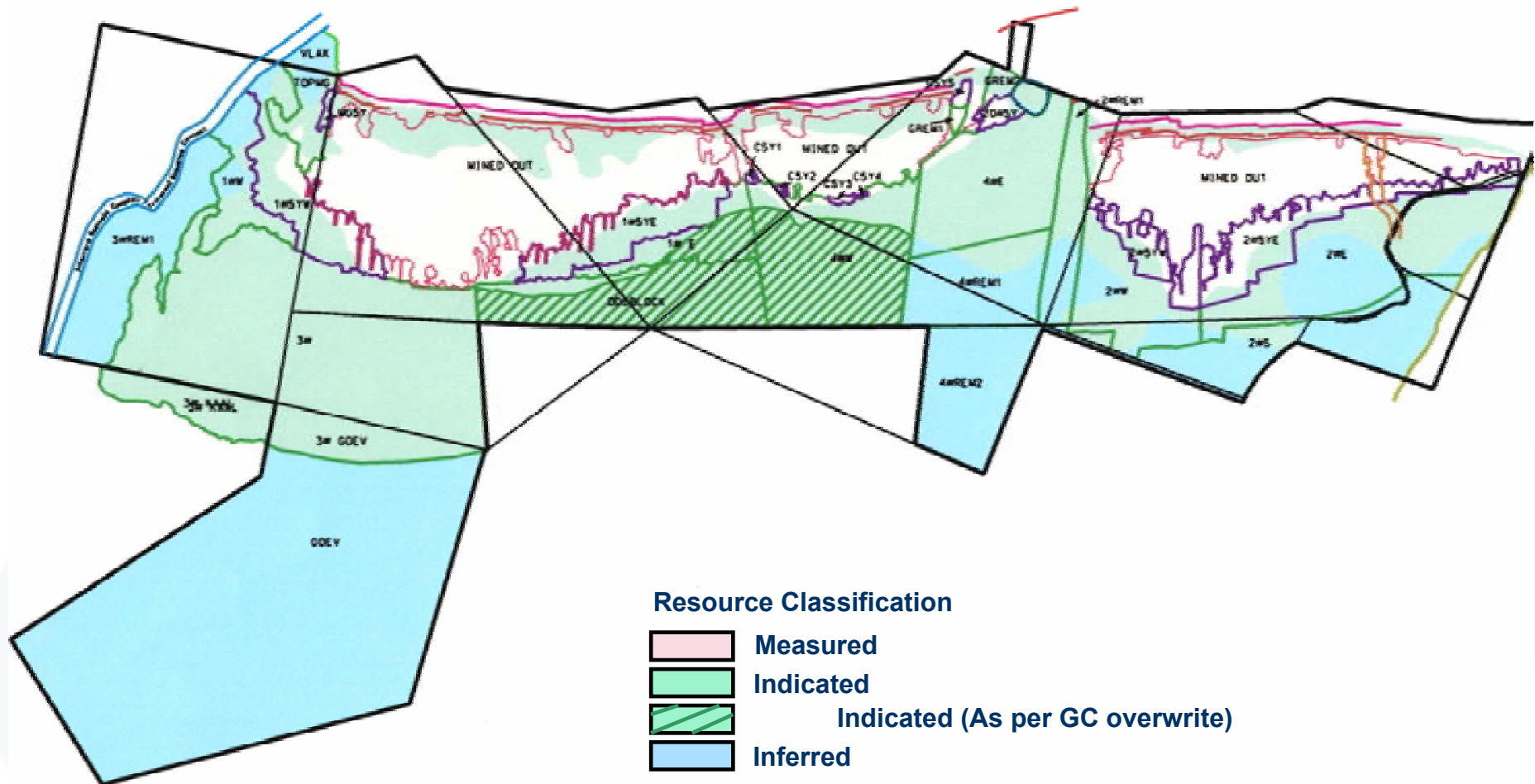
Opencast Rehabilitation

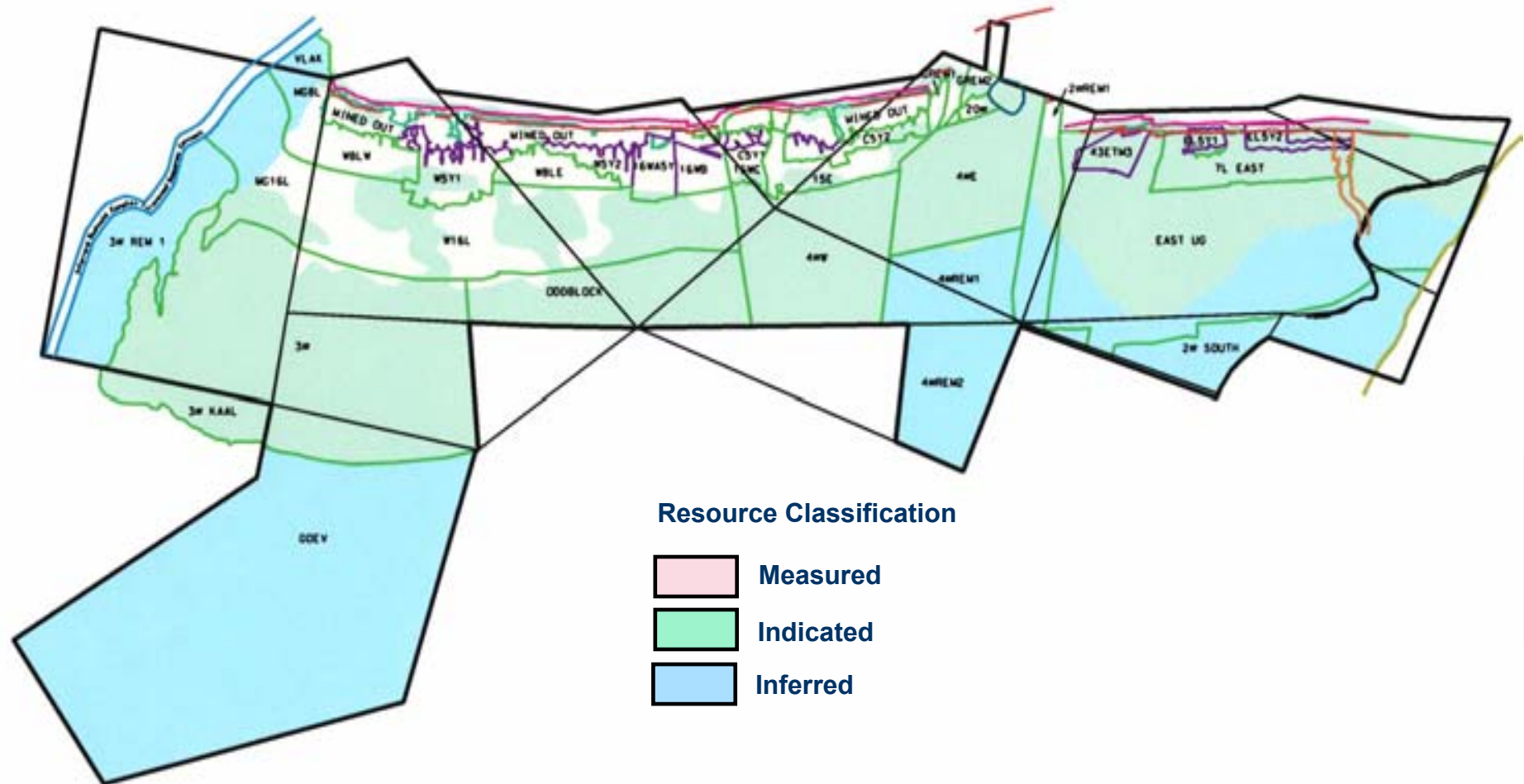


Mineral Reserves and Resources

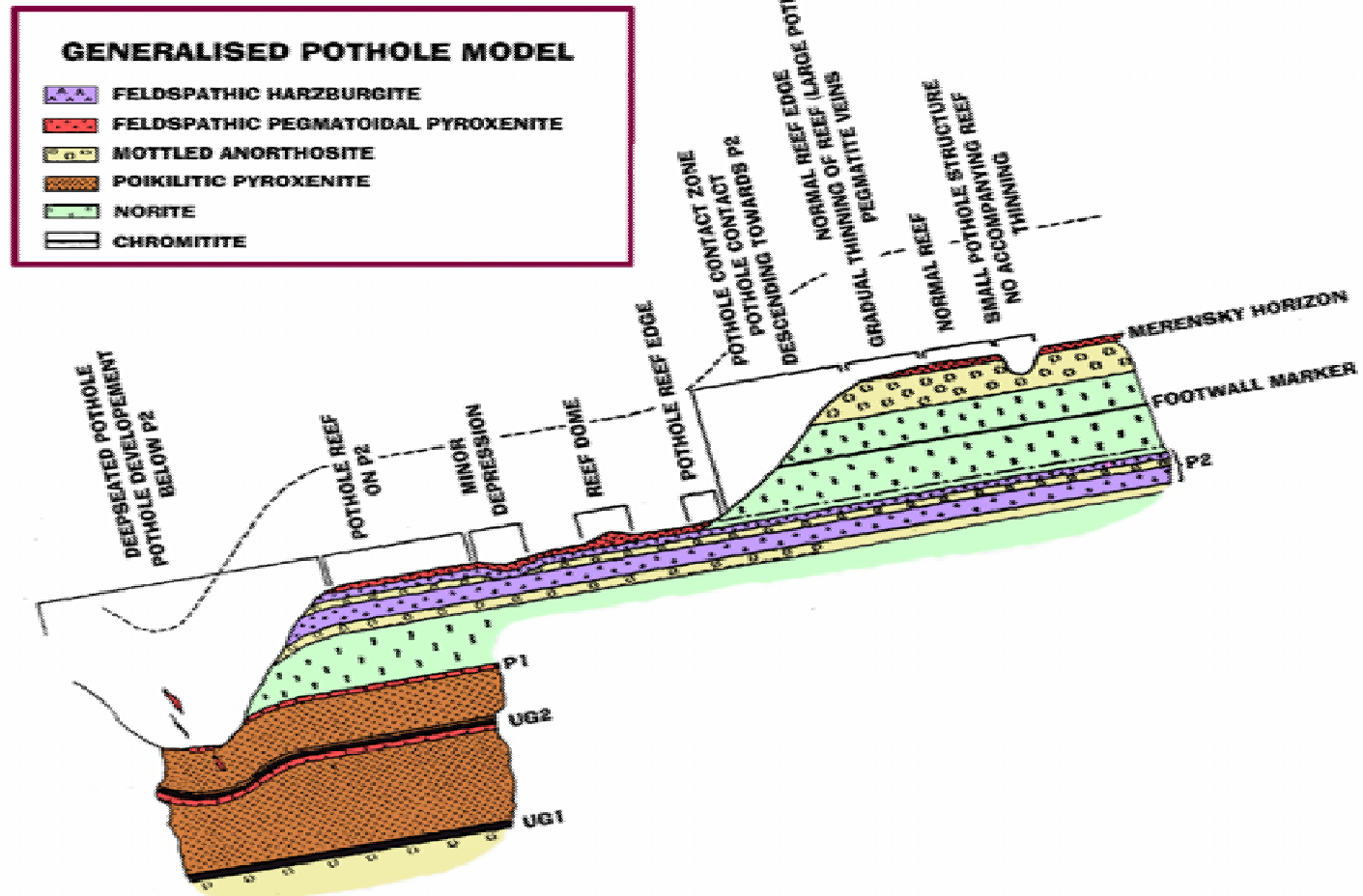


Mineral Reserves							
		Merensky		UG2		UG2 Opencast	
		Reserves	Grade	Reserves	Grade	Reserve	Grade
		Mt	g/t 4E	Mt	g/t 4E	Mt	g/t 4E
<i>Proved</i>		22.9	6.42	82.1	4.61	1.4	6
<i>Probable</i>		90	6.59	249.5	4.65		
<i>Total</i>		112.9	6.56	331.5	4.64	1.4	6
Mineral Resources							
		Merensky		UG2			
		Resources	Grade	Resources	Grade		
		Mt	g/t 4E	Mt	g/t 4E		
<i>Measured</i>							
<i>Indicated</i>		20.8	7.81	26.4	5.03		
<i>Inferred</i>		92.3	7.84	233.5	4.75		
<i>Total</i>		113	7.83	259.9	4.78		

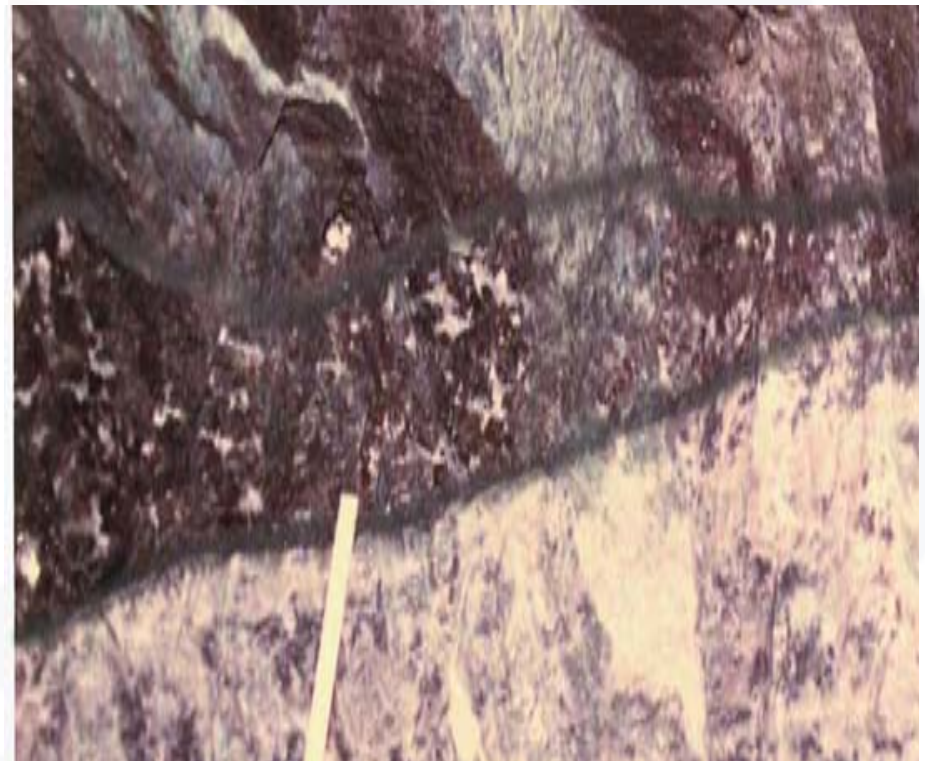
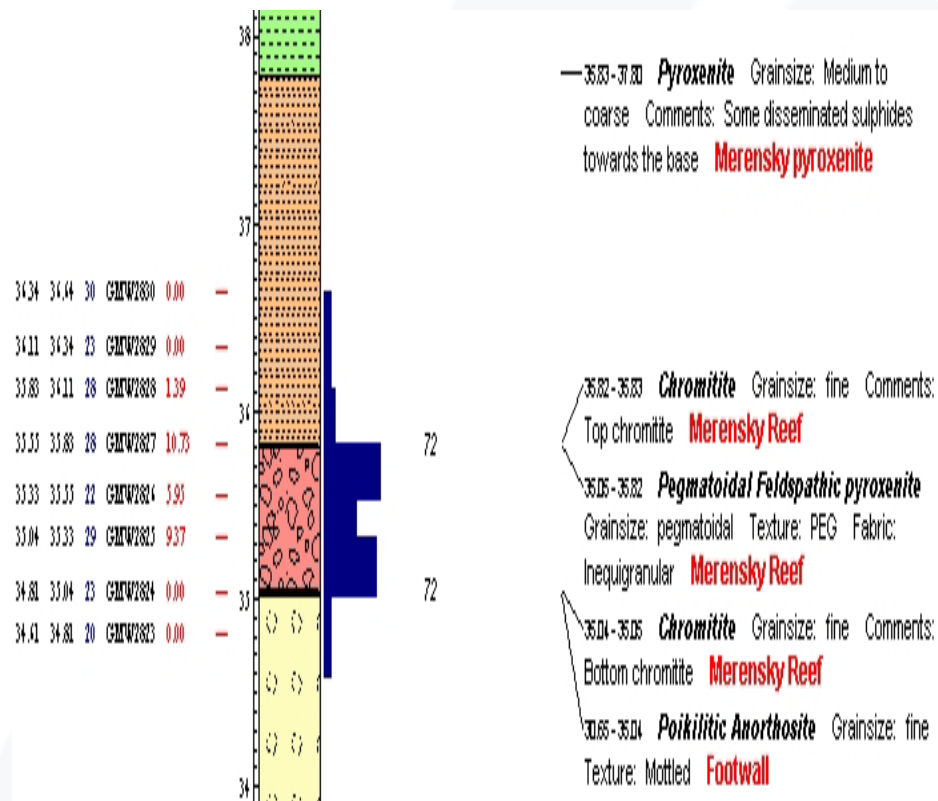




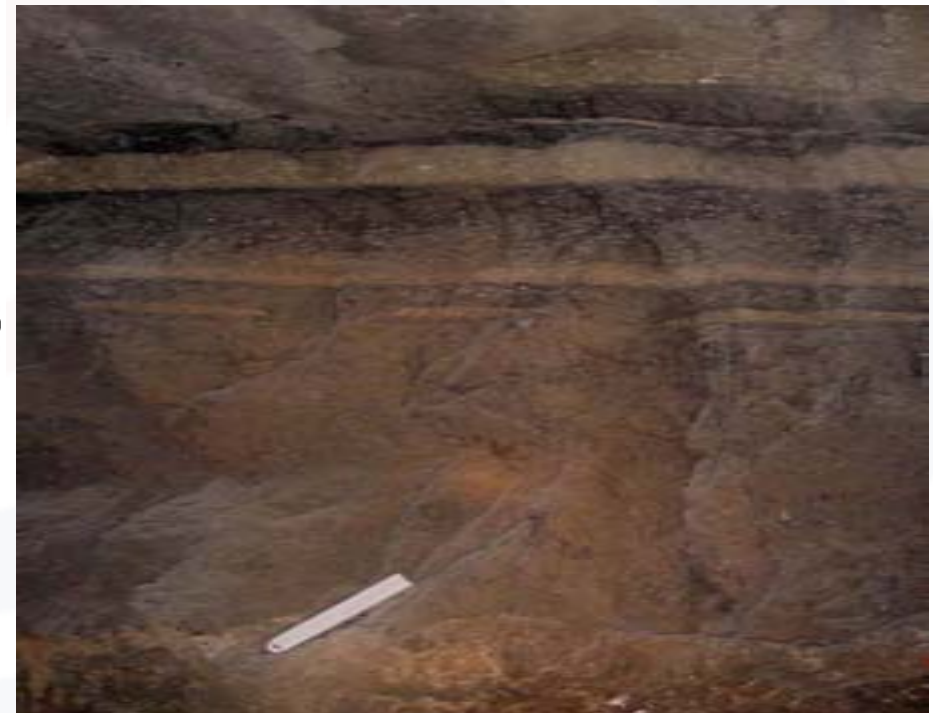
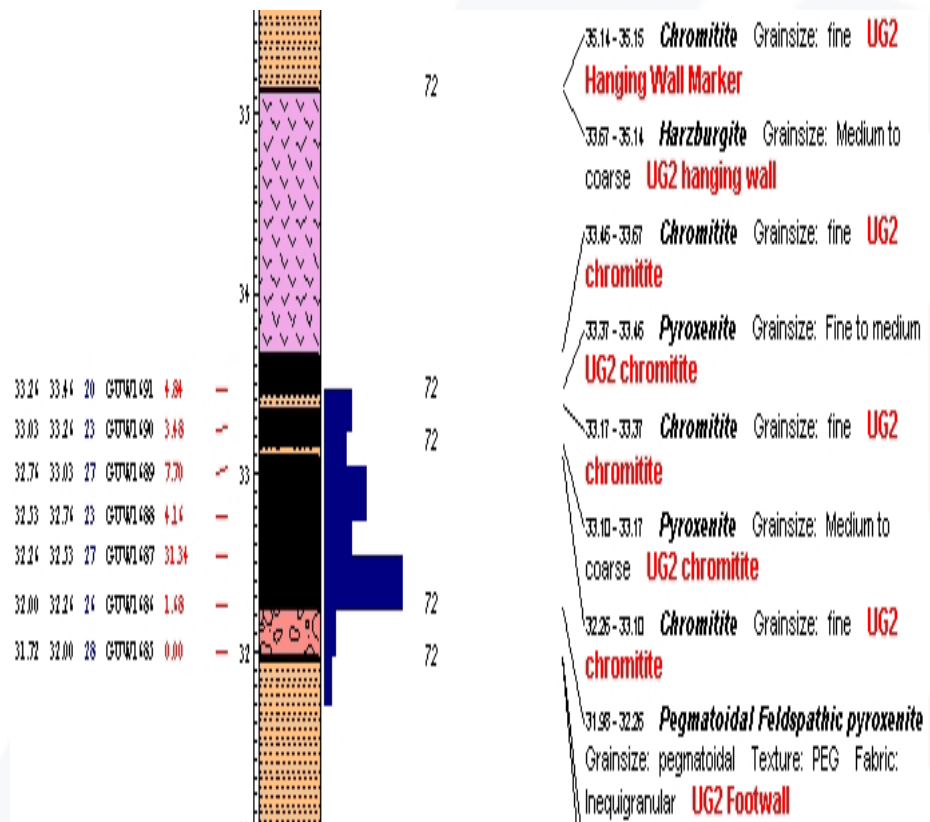
Merensky reef facies



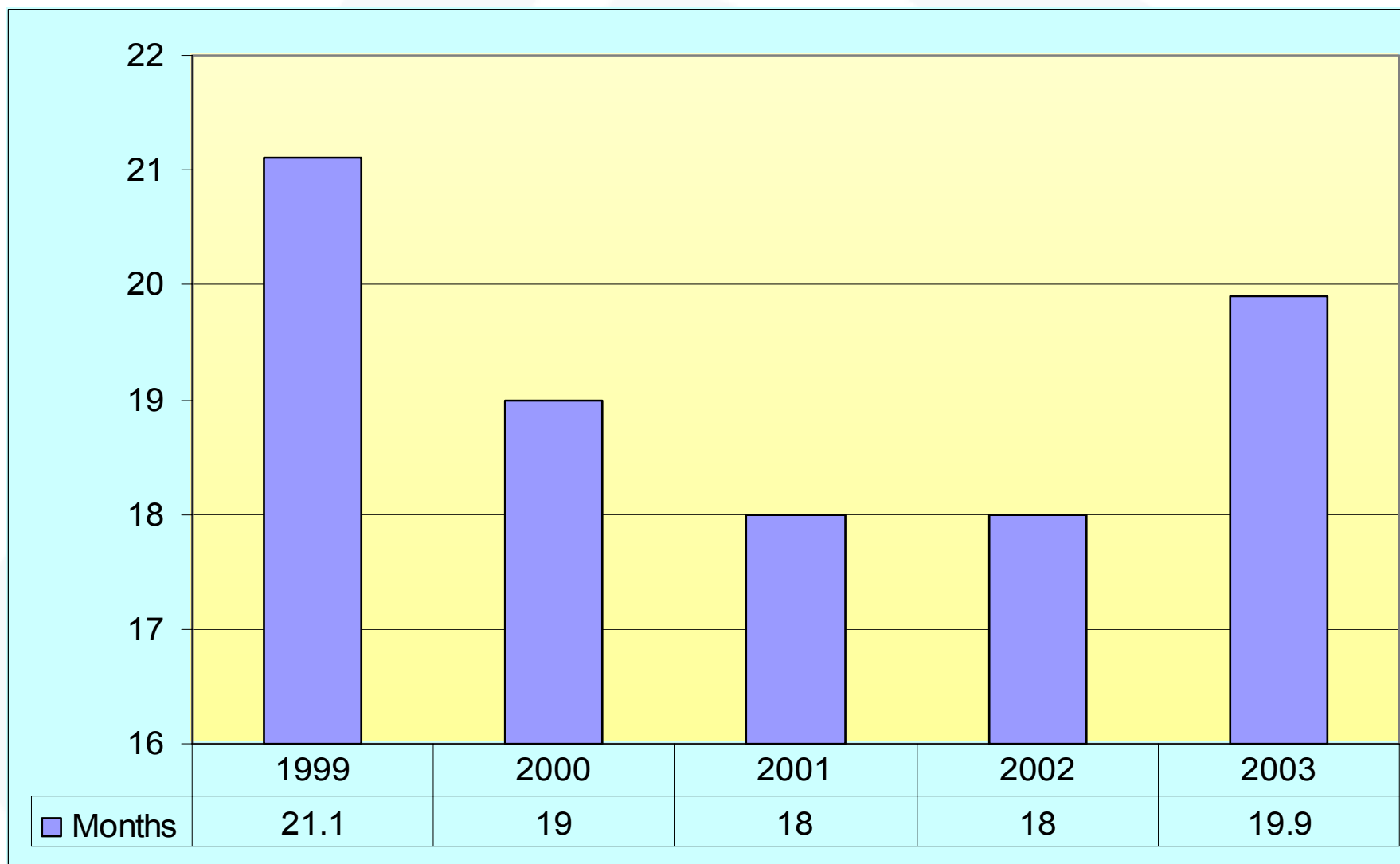
Merensky Reef Characteristics



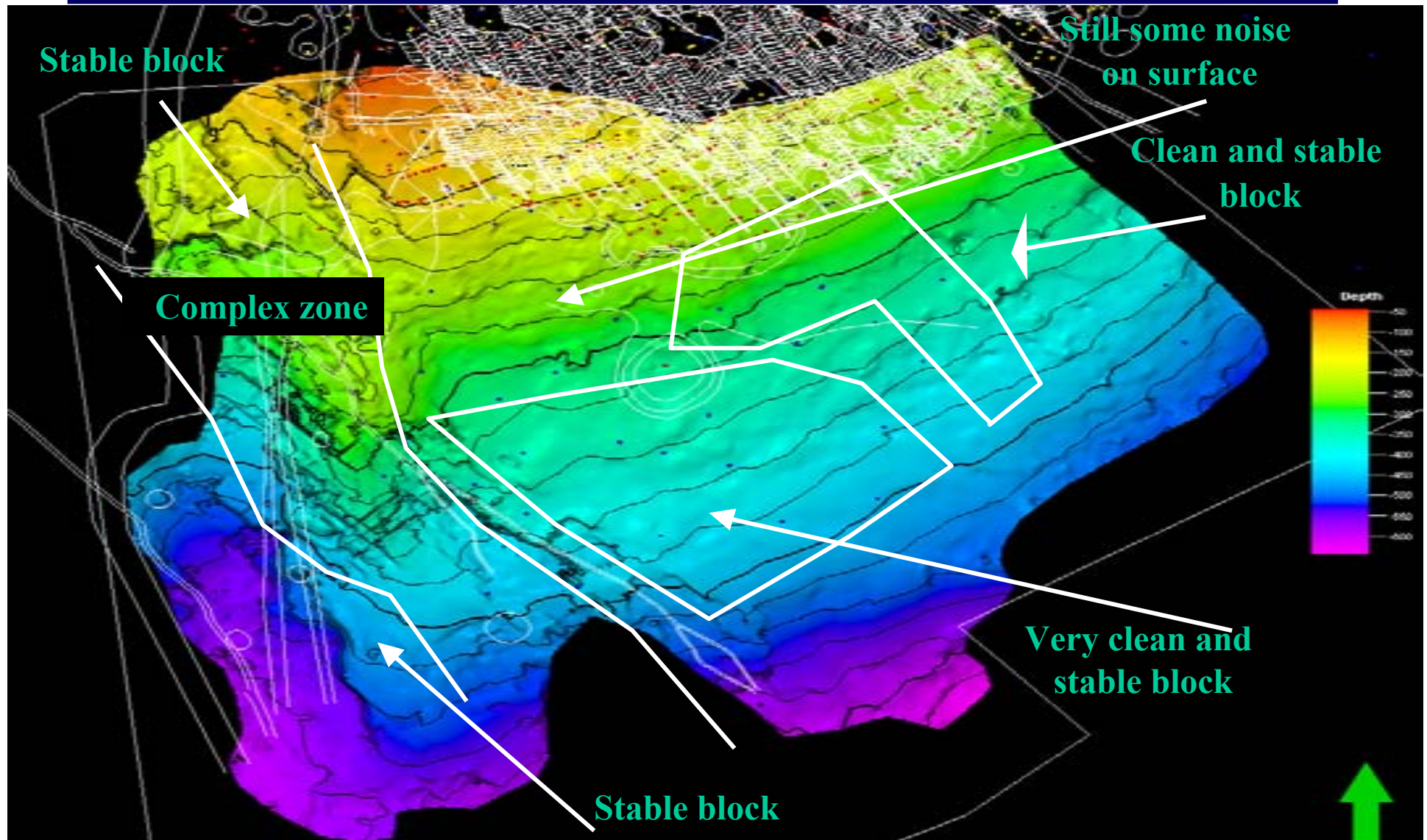
UG2 Reef Characteristics



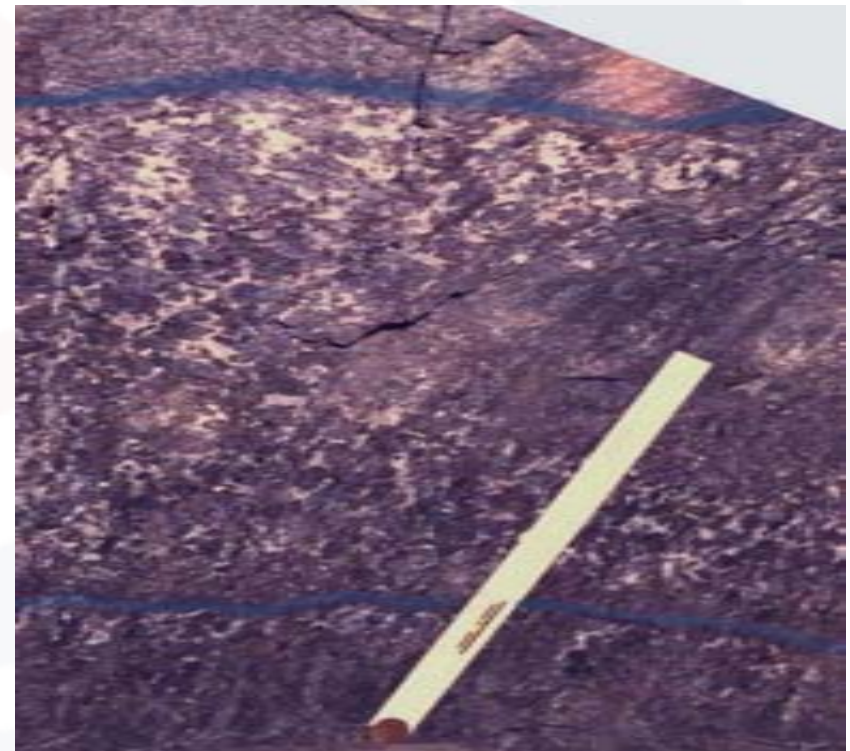
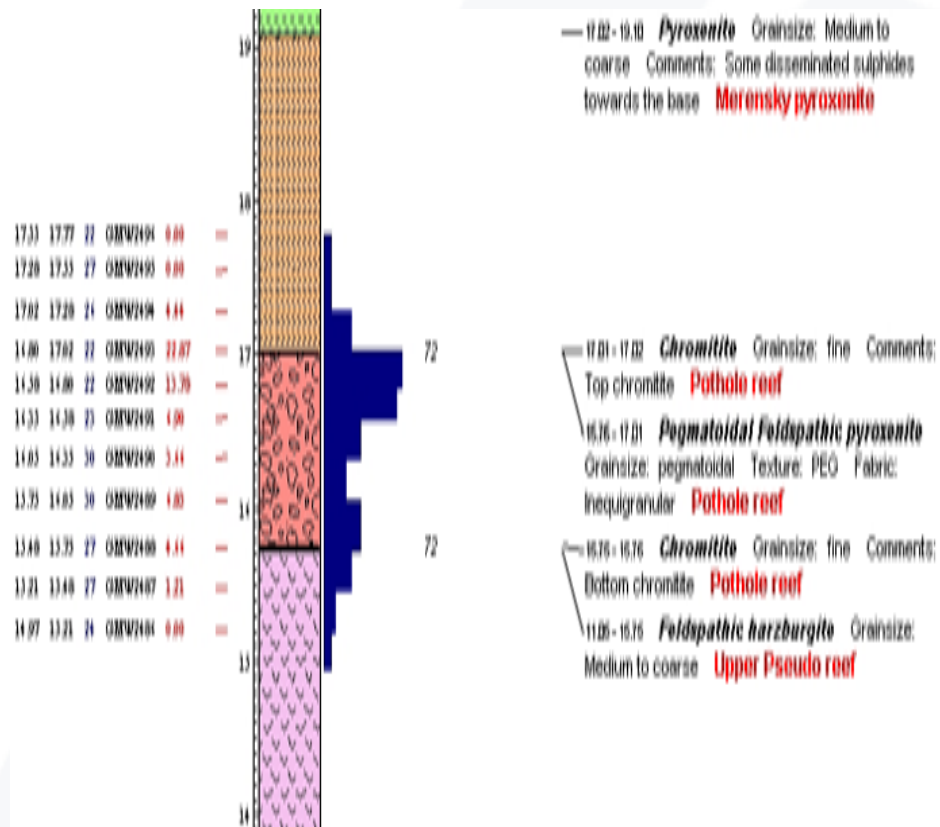
Immediately Available Ore Reserves



3 Shaft Seismic Survey



Pothole Reef Characteristics



Mining Method

Mining Method



- **West**
 - Designed as conventional breast mining
 - **Central**
 - Section 2 conventional breast mining
 - Section 7 fully mechanized room and pillar
 - **East**
 - Designed as conventional breast mining
-

Concentrator Capacities



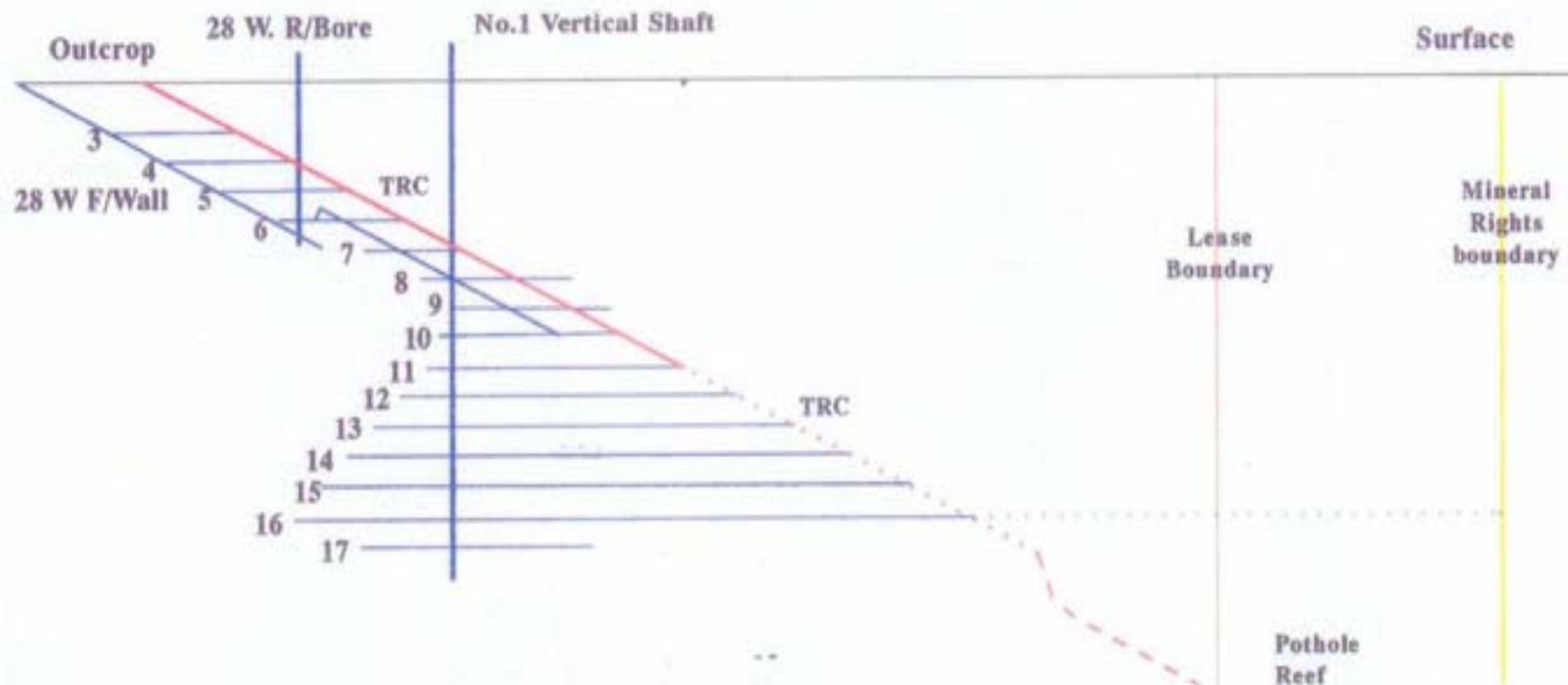
- **Merensky**
 - Original design 100ktpm, upgraded over time to current capacity of 320ktpm
 - **UG2**
 - Original design 100ktpm; 1st upgrade to 210ktpm and future proposed upgrade to 285ktpm
 - **Opencast (UG2)**
 - Original Merensky plant converted to 25ktpm UG2 unit
 - New 30ktpm plant erected
 - Total O/C capacity 55ktpm
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Mine Infrastructure Layout



Amandelbult Section

Section showing outcrop, Footwall Incline, Sub Incline and extent of property
down dip through No. 1 Vertical Shaft

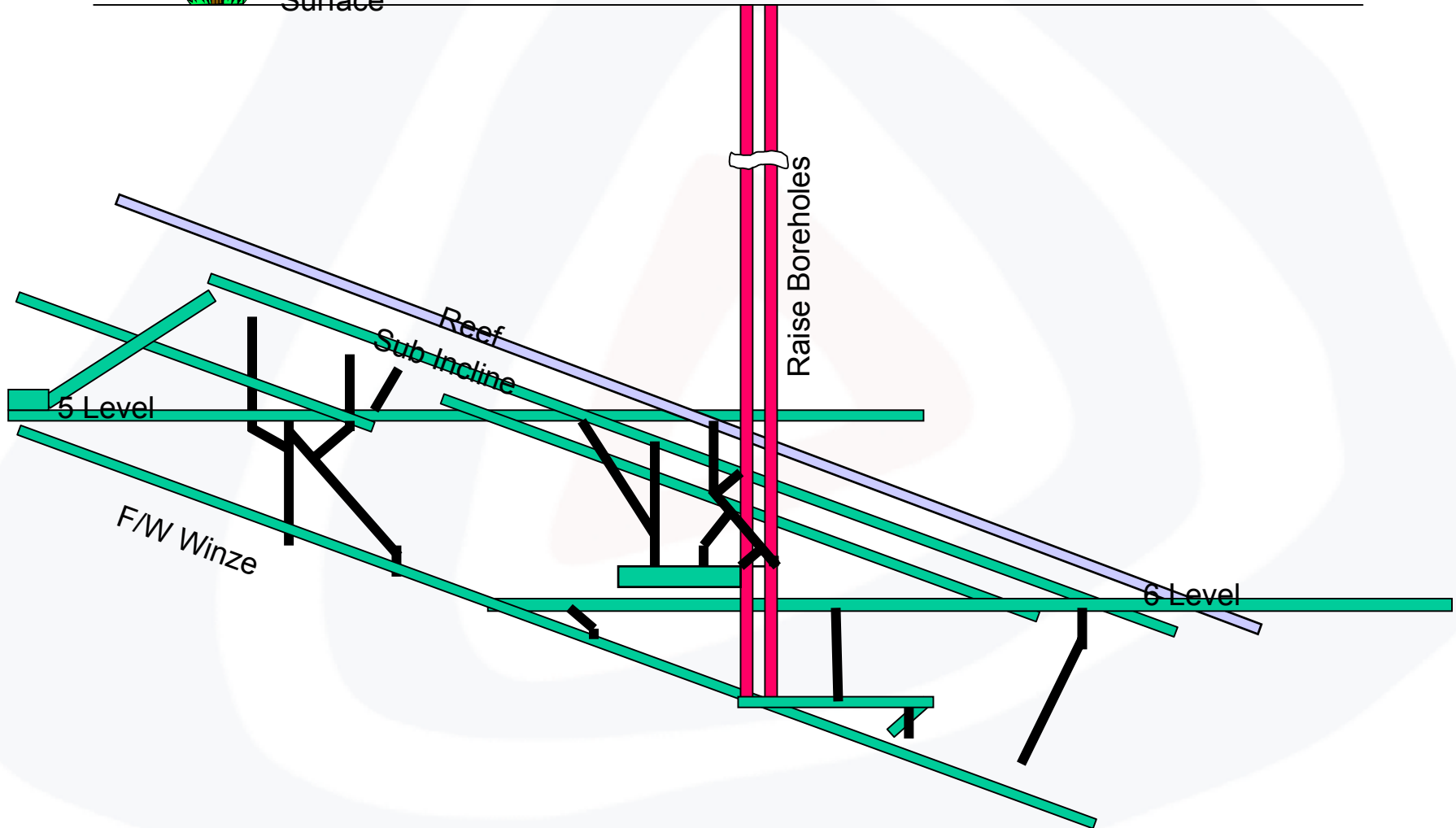


Mine Infrastructure Layout



Surface

28 West Twin Raise Bore

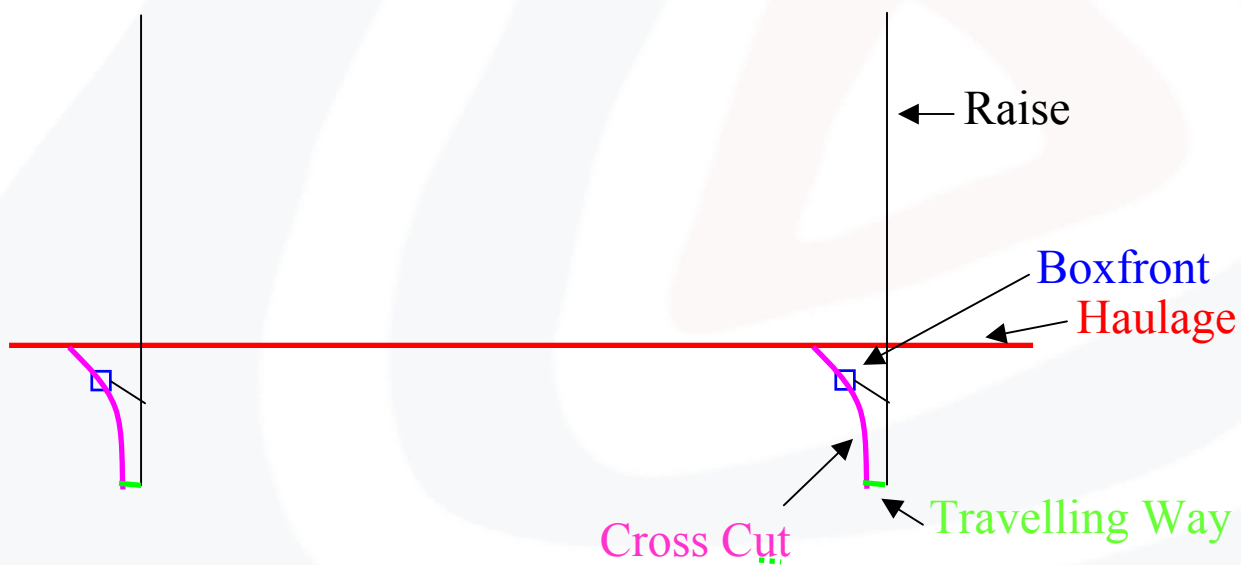


Breast Layout - Schematic

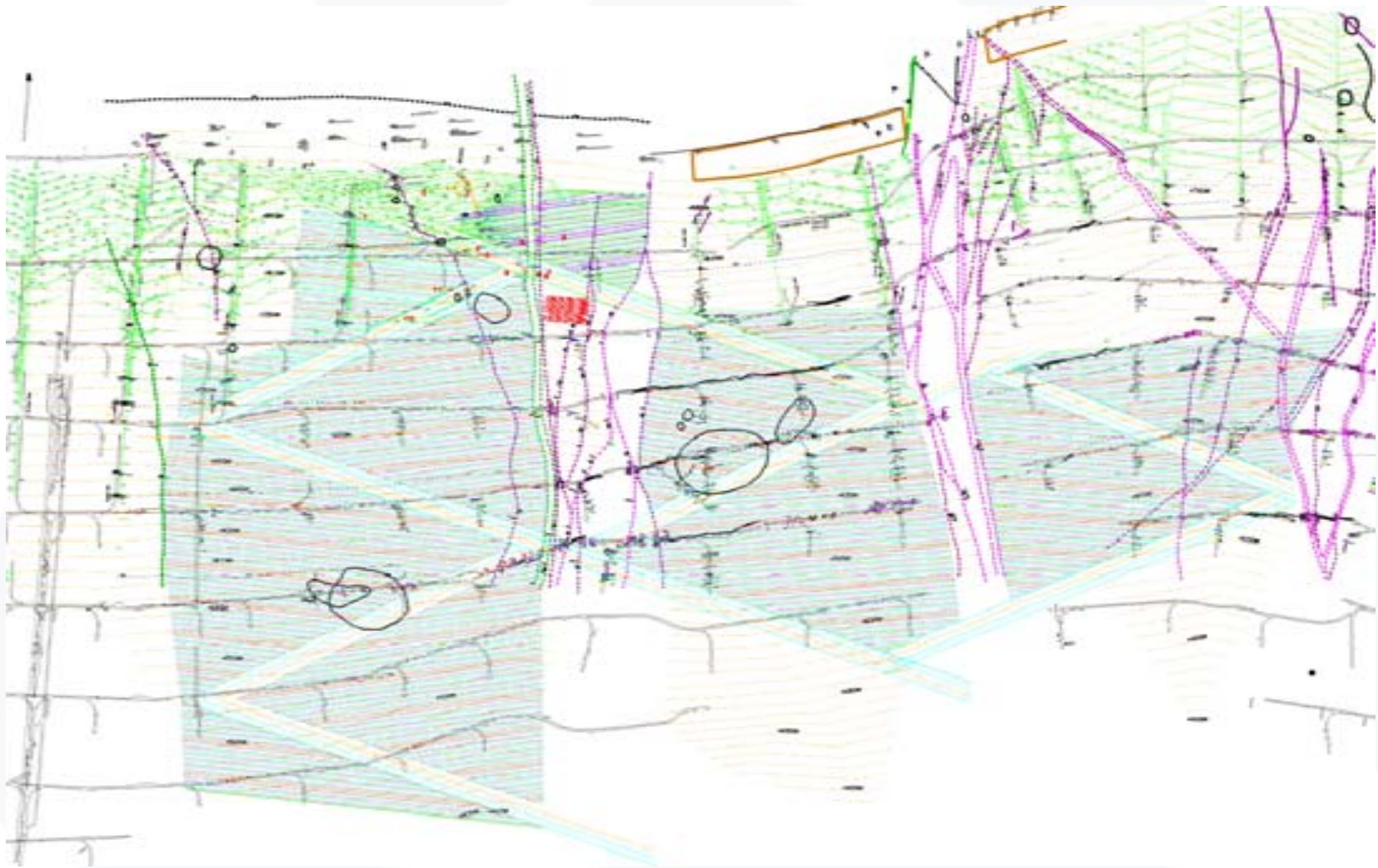


BREAST LAYOUT

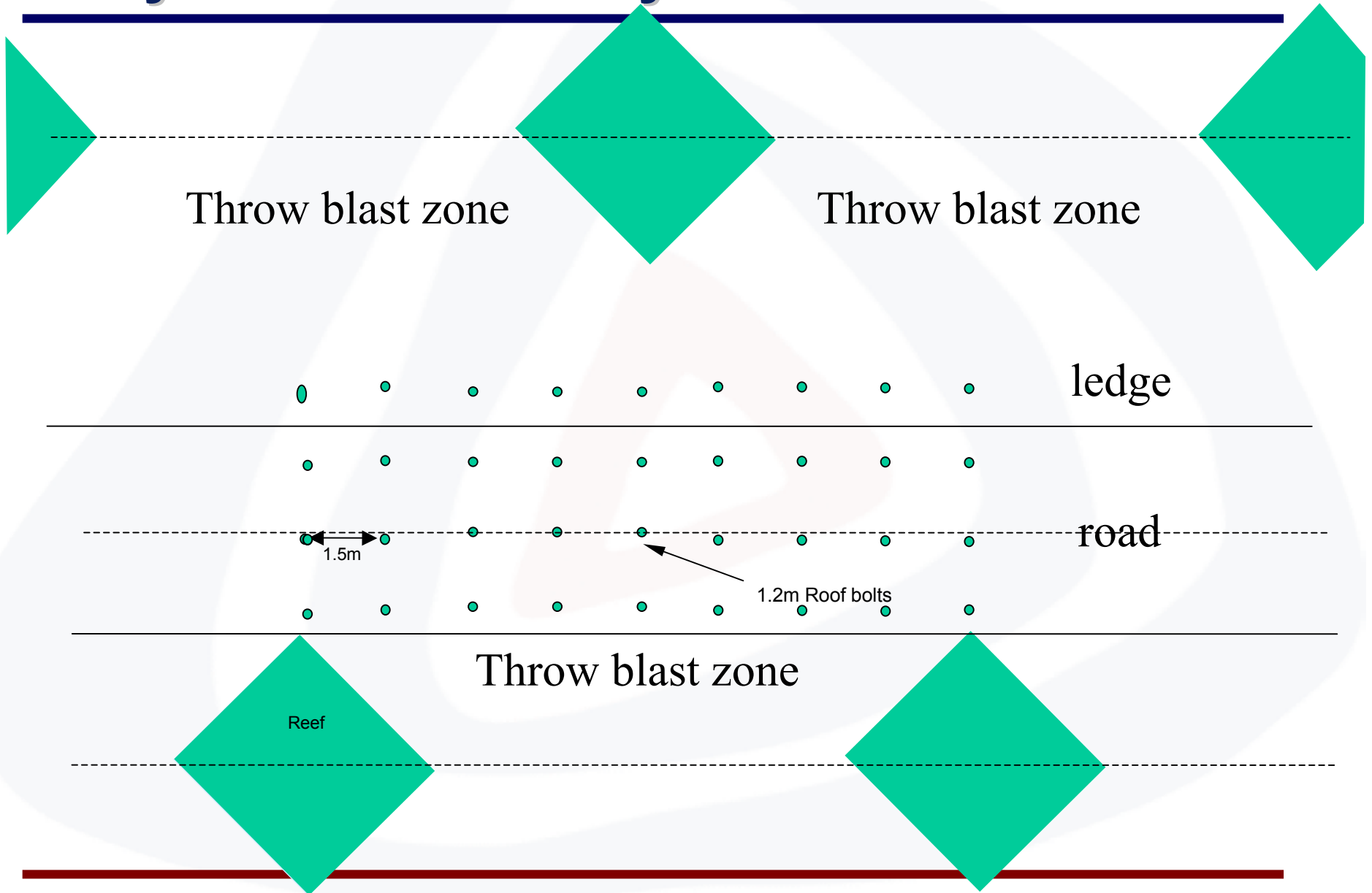
- X/Cuts 200m apart
- Raise on reef to upper level (200m)
- Orepasses to X/Cut and Hlge



Fully Mechanized Layout



Fully Mechanized Layout

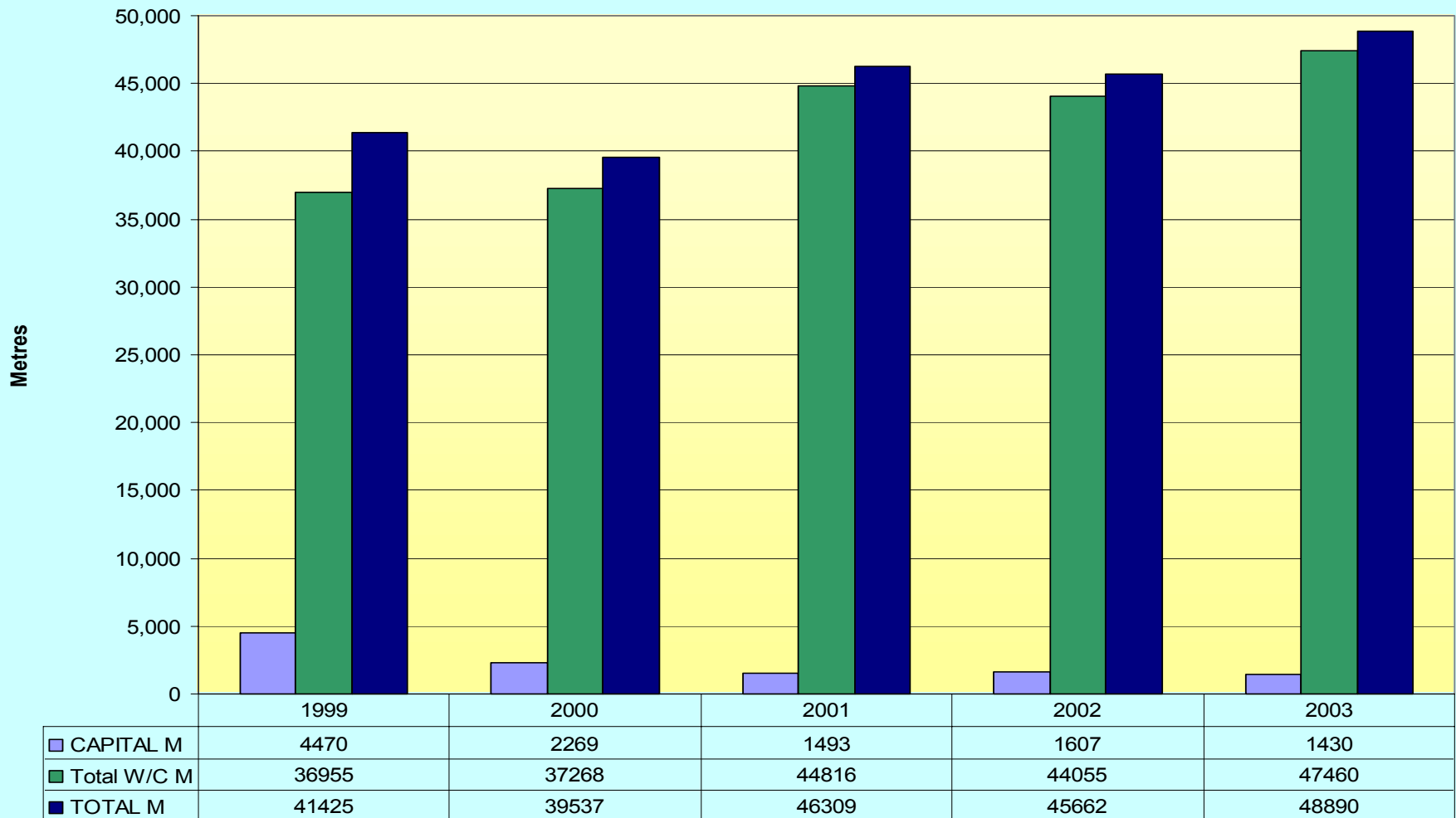


Production

Development



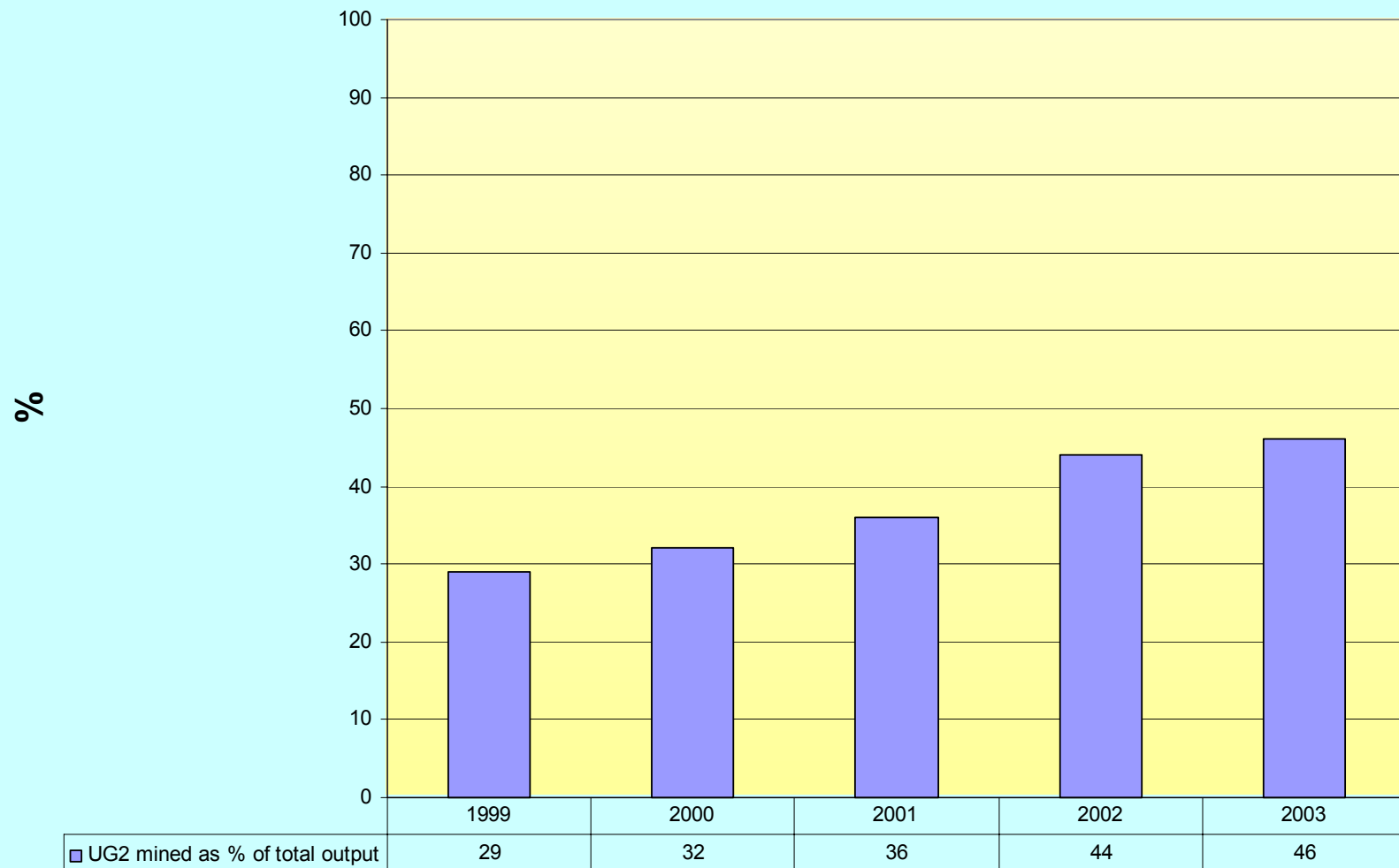
Development Meters



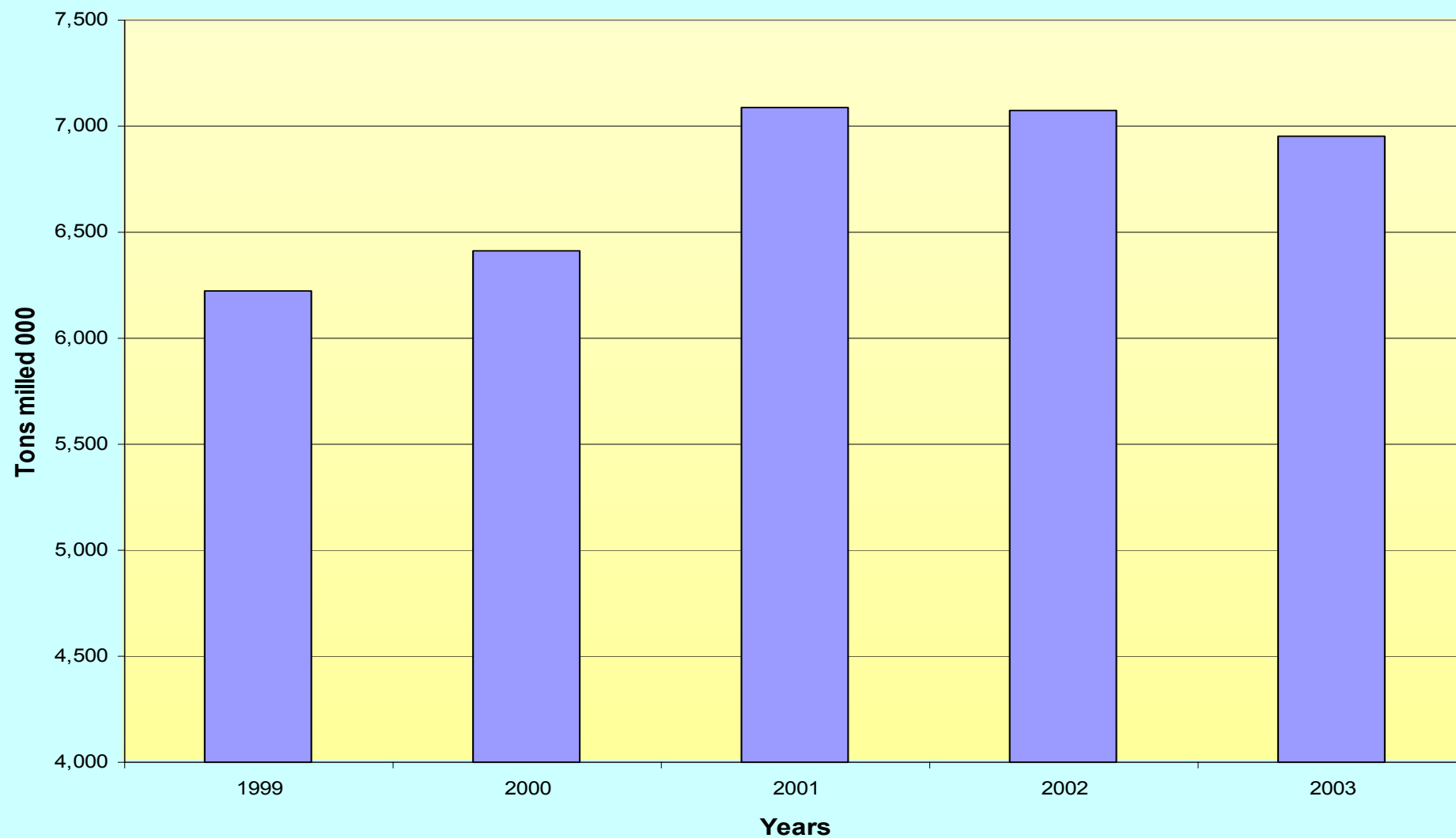
%UG2 Production



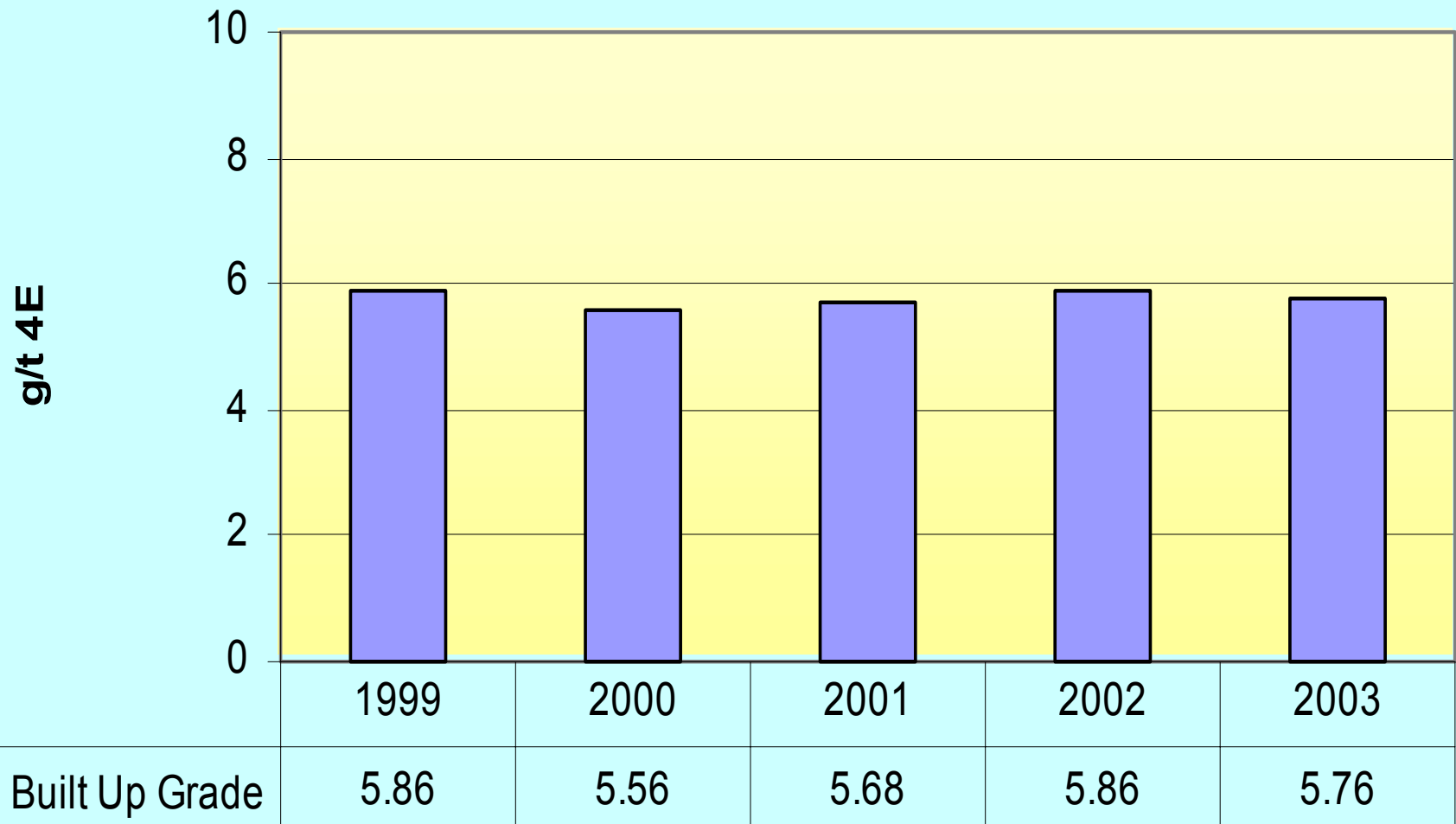
UG2 mined as % of total output



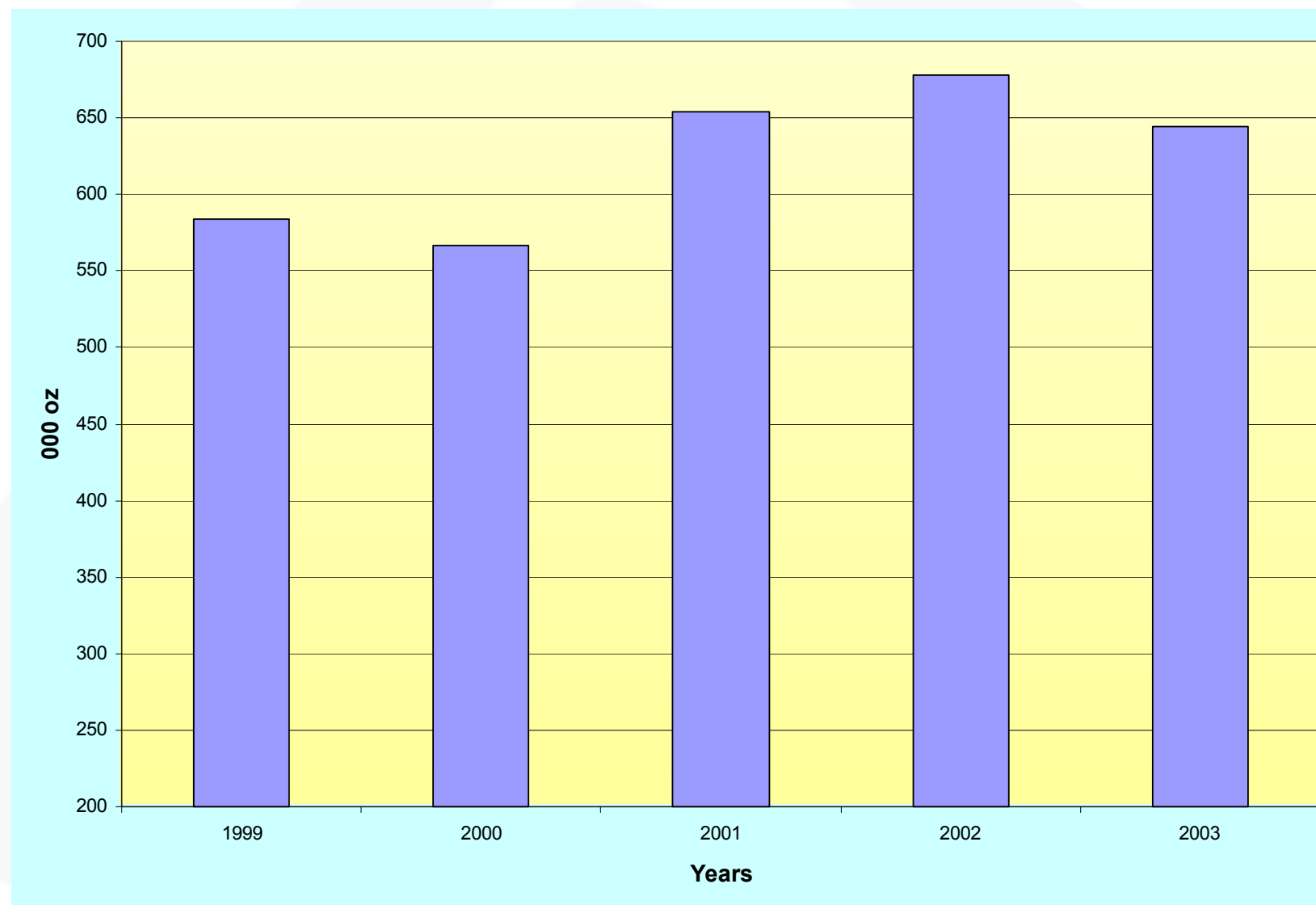
Tons Milled



Grade 4E g/t



Equivalent refined Pt oz



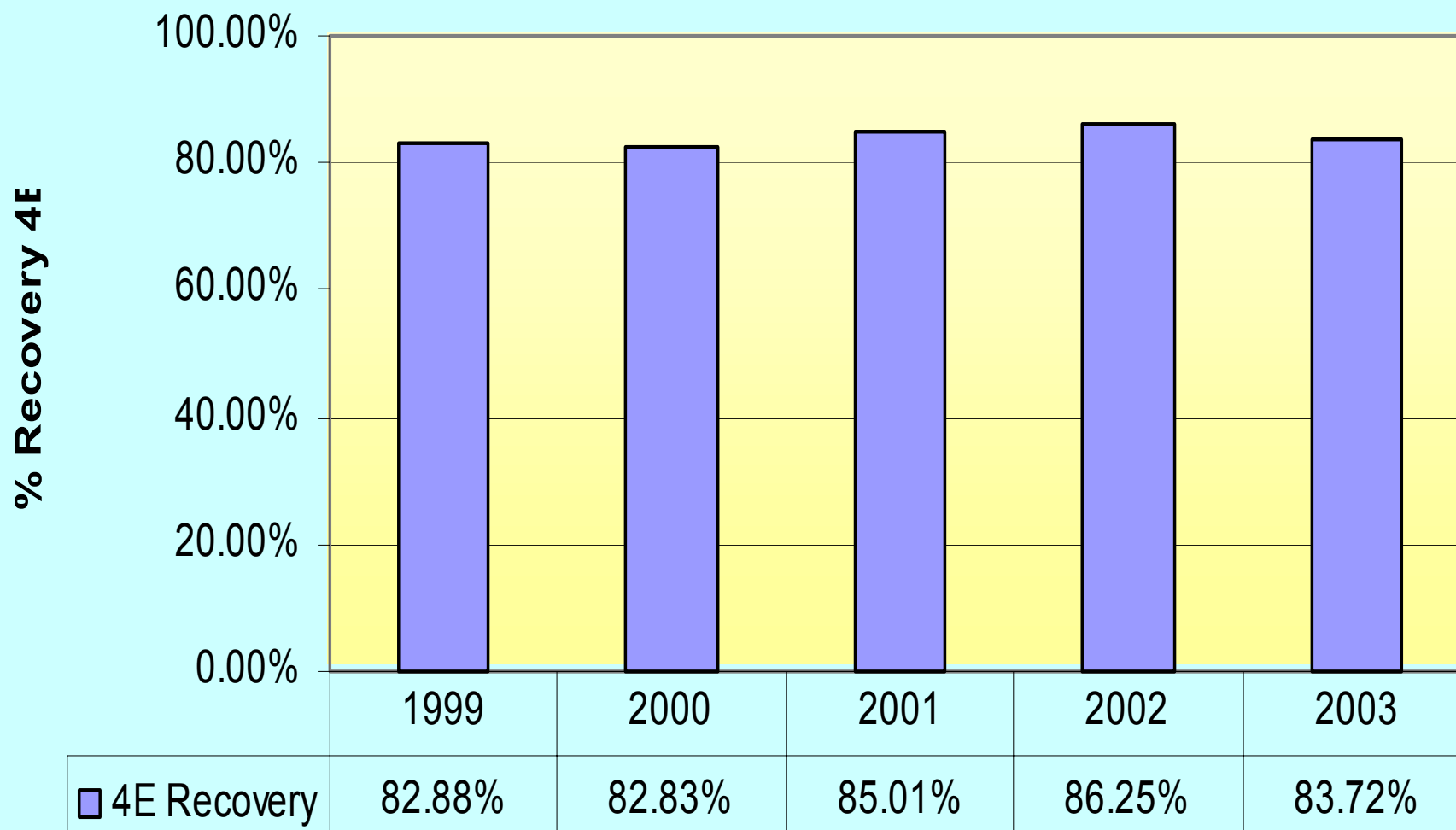
4E Prill Splits



Current Concentrator 4E Prill Splits

	Merensky	UG2
Platinum	62.09	58.44
Palladium	29.66	29.06
Rhodium	4.96	11.76
Gold	3.27	0.74

Recovery (Concentrator)

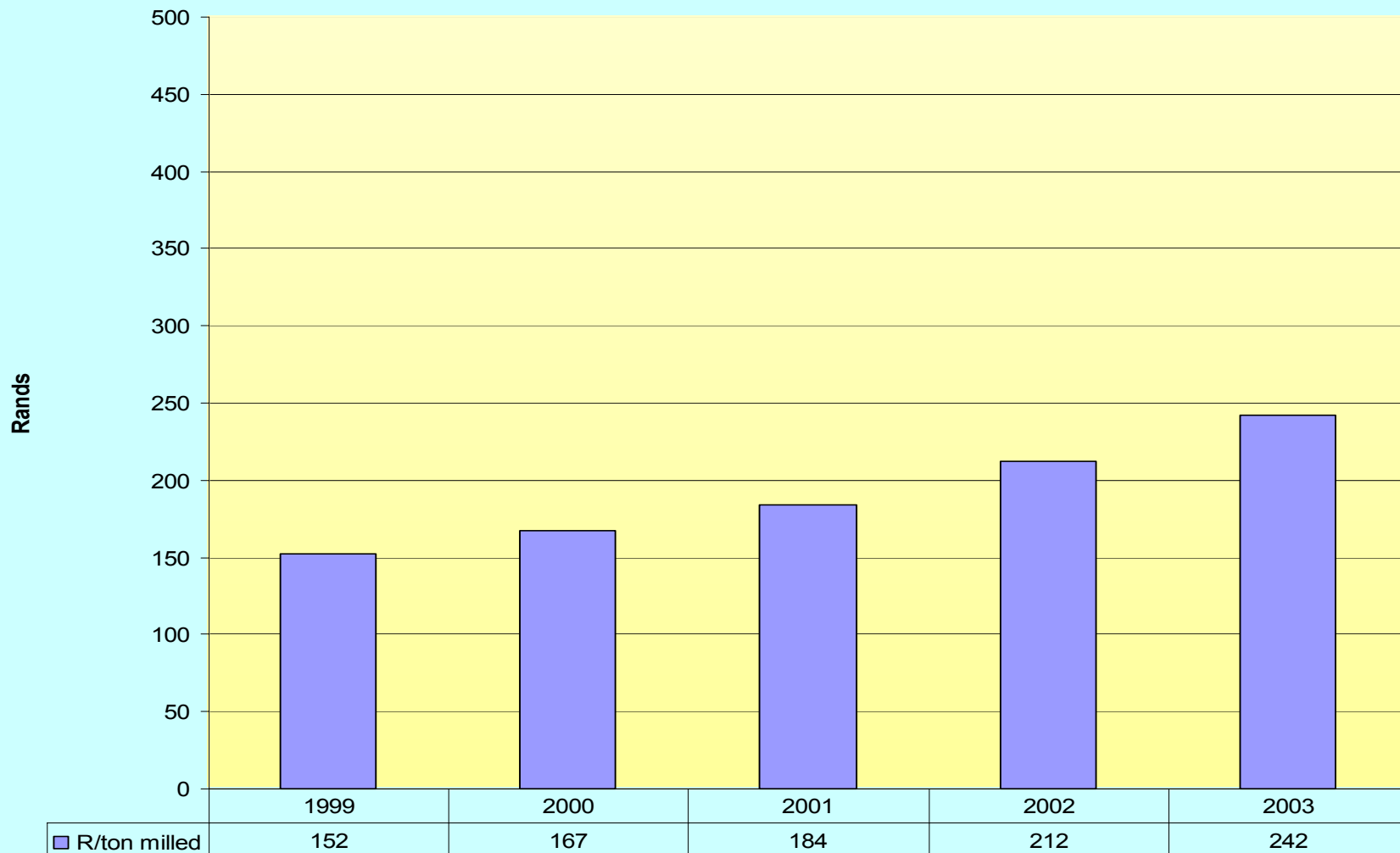


Operating Costs

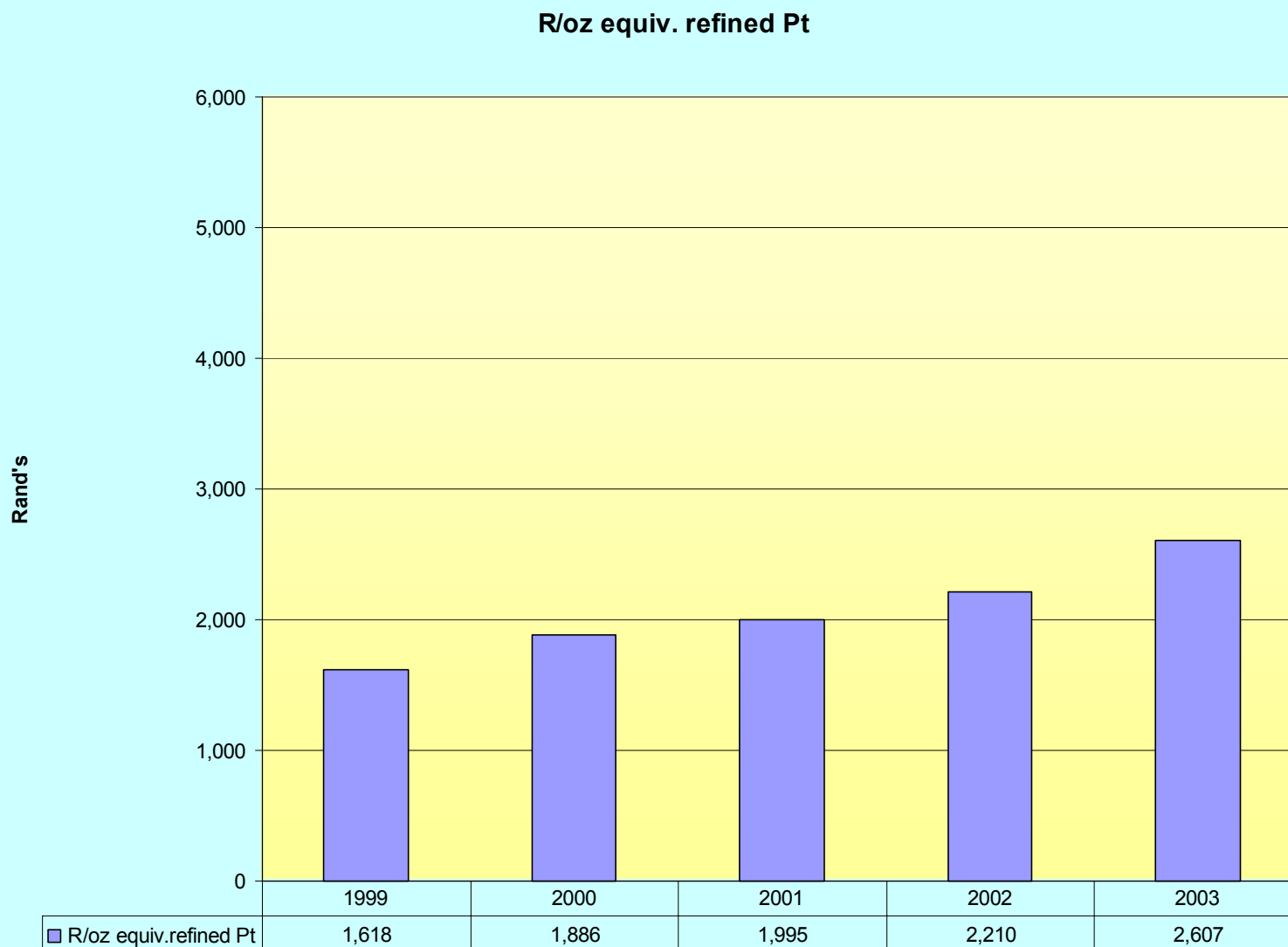
Cash on-mine costs



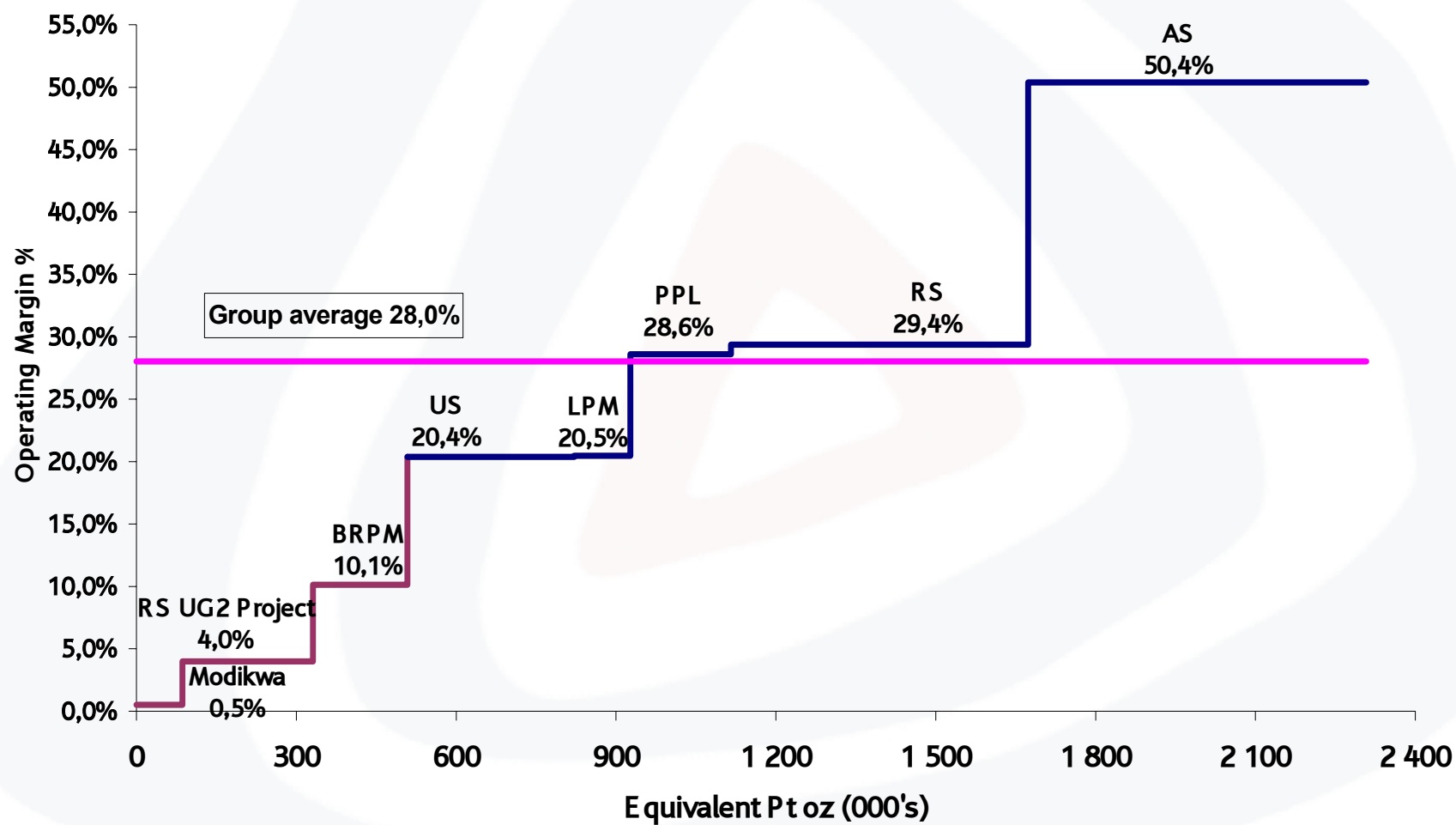
Rand/ ton milled



Cash on-mine costs



Profitability and Volume per Mine 2003



Unit Costs



Cash on-mine cost per equiv. Pt oz refined

- **Planned increase 12% above 2003**
 - **Cost Optimization Target 9% above 2003**
-

Production Initiatives

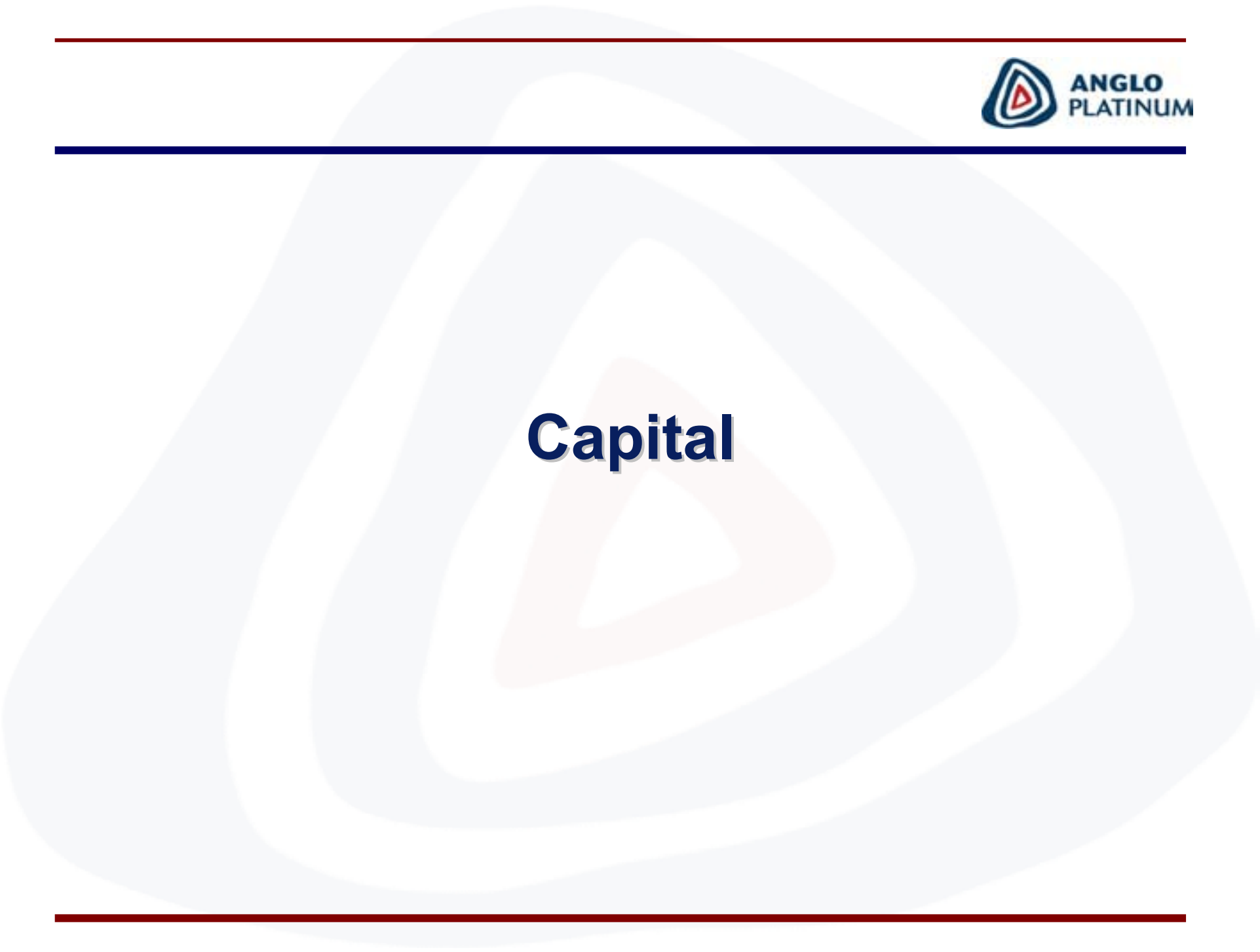


- **Grade Improvement**
 - **Recovery Improvement**
 - **Opencast Mining**
-

Cost Initiatives

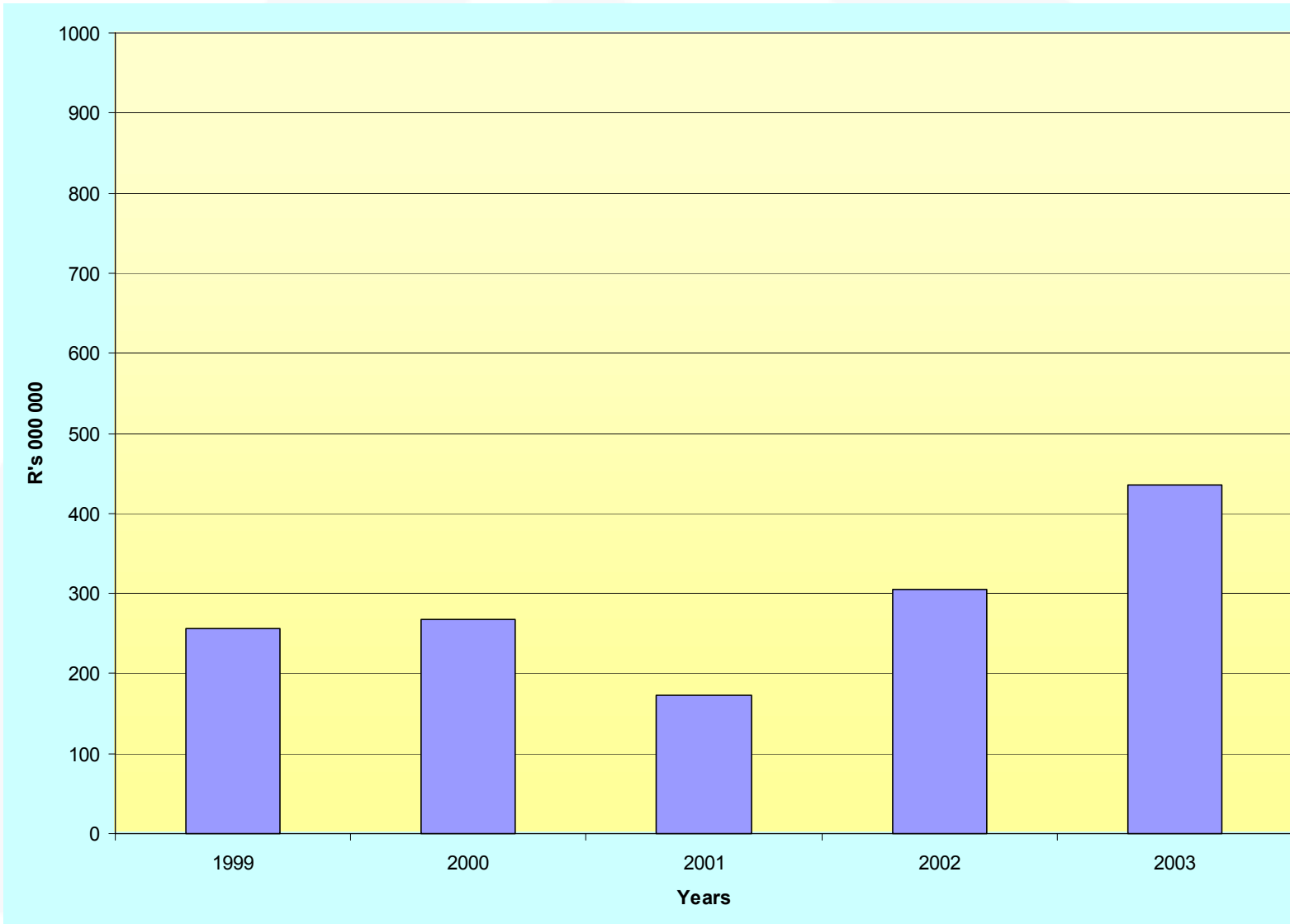


- **Labour – Numbers, efficiencies, overtime etc.**
 - **Stores – Steel balls and chemicals**
 - **Utilities – Electricity management.**
 - **Contractors – Rate increases.**
 - **Sundries – Telephones, printing etc.**
-



Capital

Capital Expenditure



Key current capital projects



- **2# Capital development**
- **Tailings dam extension**

Key future capital projects



- Possible plant expansion to process incremental UG2 production
- Additional ore pass system at 1 Shaft

Ongoing Capex level +/- R400m pa

- No3 Vertical Shaft
-

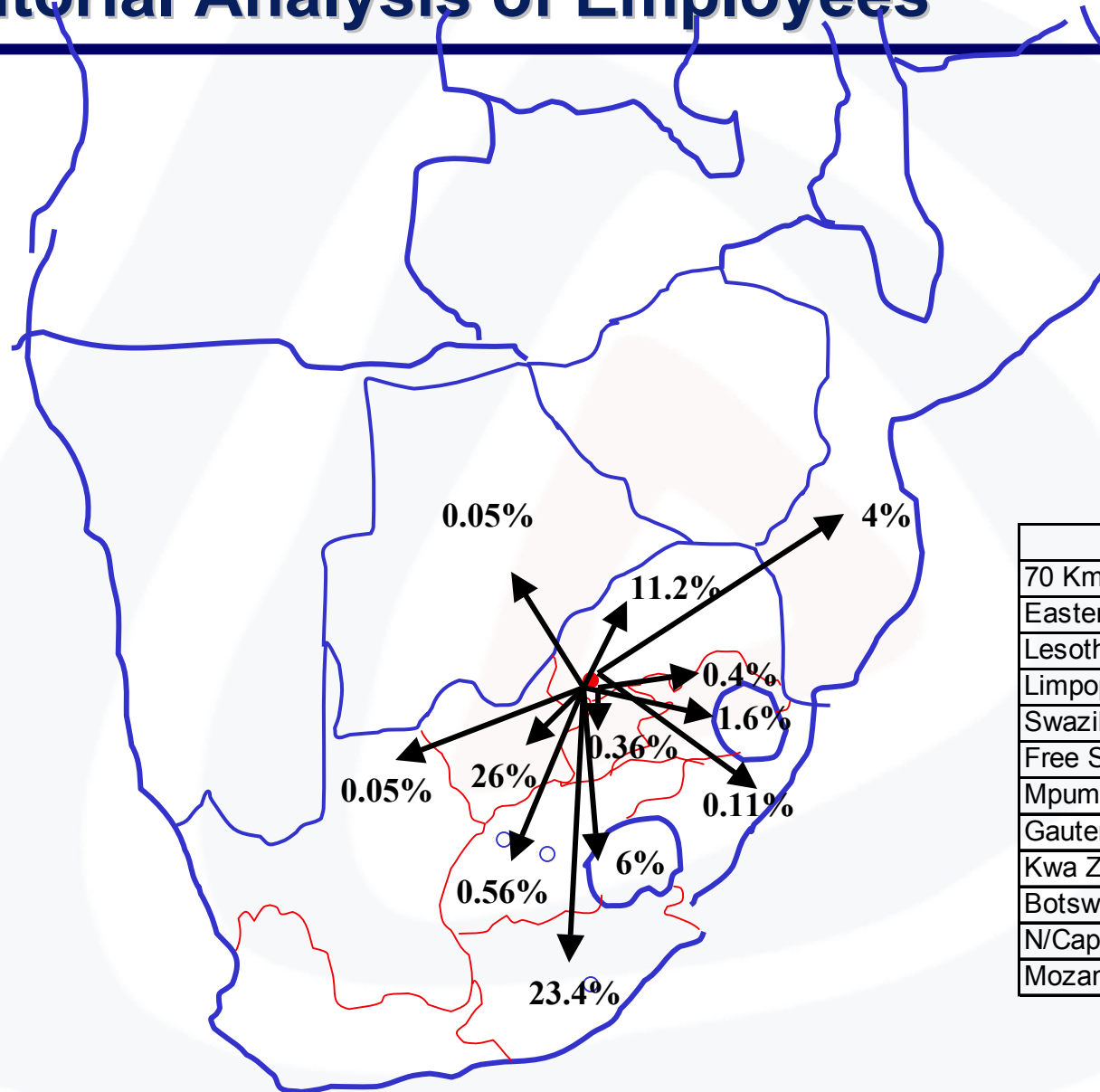
Human Resources

In Service Employees



UMO	1002
Operators	8745
Total	9747
Contractors	2663
Grand Total	12410

Territorial Analysis of Employees



70 Km Raduis	26.27%
Eastern Cape	23.40%
Lesotho	6.00%
Limpopo	11.20%
Swaziland	1.60%
Free State	0.56%
Mpumalanga	0.40%
Gauteng	0.36%
Kwa Zulu Natal	0.11%
Botswana	0.05%
N/Cape	0.05%
Mozambique	4.00%

Accommodation



<u>Hostels</u>	<u>Capacity</u>	<u>De-densifying</u>
Dishaba	1 989	1352
Mlanje	1782	1440
Tumela	3250	2380

Hostel Residents	5204
Rent Subsidy	4433
Housing Bonds subsidy	197

Dedensification of Hostels

Displacements over 5 Years = ± 1500

Focus of SED Spending



- **Health**
 - **Education Infrastructure**
 - **Education Capacity Building**
 - **Basic Services**
 - **Job Creation**
-

Employee Relations



Operators bargaining Unit

		Representatives	Full Time	Regional
NUM	54.1%	51	2	1
BEMWU	15.1%	30		

Supervisory Bargaining Unit

UASA	67.9%	23	2	1
NUM	12.7%			

Key Business Issues

Key Business Issues



- **Maintain Merensky volumes during move from 1Shift to 2 Shaft**
 - **Mining efficiencies**
 - **Cost optimisation**
 - **Charter compliance**
-