

**PLATINUM-GROUP METAL MINES
IN SOUTH AFRICA
2003**

DIRECTORATE: MINERAL ECONOMICS
(MINERALS BUREAU)



the dme

Department:
Minerals and Energy
REPUBLIC OF SOUTH AFRICA

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2003**

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(MINERALS BUREAU)

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FOREWORD

This sixth edition of the Platinum-group Metals Directory, like its predecessors, is intended to provide a complete coverage of the platinum-group metal mining industry in South Africa.

An account of South Africa's position in terms of world platinum-group metal resources is presented, followed by an overview of platinum-group metal occurrences with a locality map, current and historical production and sales within the Republic, a figure depicting South Africa's position in terms of world platinum-group metal supply, and an outline of the structure of the platinum-group metal mining industry. The main body of the Directory consists of an alphabetical list of the operating companies, and includes details of factors such as production, mineral reserves and financial results.

Information contained in the Directory was obtained from Mineral Economics Directorate statistics and company financial reports.

It is hoped that this compilation will provide a useful reference for all industry participants as well as prospective investors.

N Van Averbek
Director

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ABBREVIATIONS AND SYMBOLS

| | | |
|-------|---|---|
| Au | - | gold |
| cm | - | centimetre |
| C\$ | - | Canadian dollar |
| FOB | - | free on board |
| g/t | - | gram per ton |
| kg | - | kilogram |
| kt | - | kiloton |
| Mt | - | megaton (million tons) |
| na | - | not available |
| R | - | rand (RSA currency) |
| t | - | metric ton |
| \$ | - | US dollar |
| 3 PGE | - | Platinum, palladium and rhodium |
| 4E | - | Platinum, palladium, rhodium and gold |
| 5 PGM | - | Platinum, palladium, rhodium, ruthenium and iridium |
| Note: | | Totals in tables may not add up due to rounding |

1. THE OCCURRENCE AND PRODUCTION OF PLATINUM-GROUP METALS IN SOUTH AFRICA

A. INTRODUCTION

The platinum-group metals (PGMs) constitute a family of six chemically similar elements. They are divided according to their densities into a heavier category, comprising platinum, iridium and osmium, and a lighter group, consisting of palladium, rhodium and ruthenium. Their excellent catalytic qualities, resistance to corrosion, chemical inertness and high melting points render them most suitable for a number of specialist applications.

The three main PGMs, platinum, palladium and rhodium, are used primarily as catalytic converters in emission control equipment. However, they also have other important specialised applications in the high technology, electrical, chemical and petroleum refining industries. These include uses in fertiliser and glass manufacturing, in dental alloys and in fuel cells. Platinum, and to a lesser extent palladium, is also much in demand for jewellery and as bars and coins for investment purposes.

As early as June 1919 recovery of platinum-group metals in South Africa began in earnest at several of the large gold mines on the far East Rand. The discovery of platinum-bearing quartz bodies on a farm near Naboomspruit led to the opening of the first platinum mine in 1924. The mine was operated by Transvaal Platinum Ltd., but was forced to close down in December 1926 because of the patchy nature of the mineralisation. Unrelated to these discoveries, A.F. Lombaard panned native platinum from a dry watercourse of the Moopetsi River on his farm Maandagshoek in the Lydenburg district in 1924, marking the discovery of the Merensky Reef. The Merensky Reef has traditionally been the most important platinum-producing layer in the Bushveld Complex, exploitation having commenced in the Rustenburg area in 1929.

B. OCCURRENCES

In South Africa, platinum-group metals, together with the by-products gold, silver, nickel, copper and cobalt, occur in economic concentrations in three separate, extensive layered reefs associated with the mafic rocks of the Rustenburg Layered Suite of the Bushveld Complex. They are the Merensky Reef, the UG2 Chromitite Layer, and the Platreef. The PGMs occur as alloyed native metals, as platinoid minerals (e.g. sperrylite and braggite) and in copper, nickel, cobalt and iron-bearing sulphide minerals (e.g. pentlandite, pyrrhotite and chalcopyrite).

Small quantities of PGMs are also produced from the gold deposits of the Witwatersrand Basin and from the copper ores of the Phalaborwa Complex.

C. PRODUCTION

In 2002, South Africa's known reserve base of PGMs represented 87,7 per cent of the world total (Table 1). South Africa's PGM output is derived almost exclusively from the Bushveld Complex, with only about 0,5 per cent coming from the Evander Gold Field, the Uitkomst Complex and the Phalaborwa Igneous Complex.

Currently, there are thirteen producing platinum mines (Lonmin owns three) operating in the Bushveld Complex (Fig. 1). Of these, twelve exploit the Merensky Reef and UG2 Chromitite Layer, with one, Potgietersrust Platinums Mine – an opencast operation – exploiting the Platreef, on the northern limb of the Complex. Eleven of the mines are located on the western limb of the Bushveld Complex; Lebowa Platinum Mine is the only current producer on the eastern limb.

Rustenburg Platinum Mines (RPM), which belongs to the Anglo American Platinum Corporation Limited (Anglo Platinum), is the largest single producer, and operates three geographically separate sections: Rustenburg, Union and Amandelbult Sections, all on the western limb. The other mines on the western limb are: Impala Platinum Holdings Limited's Impala Platinum and Crocodile River (through Barplats Investments Limited) mines; Lonmin Platinum's mines: Eastern Platinum, Western Platinum and Karee; Northam Platinum Limited's Northam Mine and Aquarius Platinum's Kroondal and Marikana mines.

Beneficiation of the ore through milling, flotation and smelting, to form a matte containing the PGMs, gold, silver and the base metals nickel, copper and cobalt, is undertaken at the various mines. Further refining of the matte, including extraction of the base metals and recovery of the constituent precious metals, takes place at RPM's refineries near Rustenburg, Western Platinum's refineries on the mine property as well as near Brakpan, and Implats' refinery in Springs. Some toll refining is also undertaken at overseas facilities.

TABLE 1 – WORLD RESERVES OF PLATINUM-GROUP METALS, 2002

| COUNTRY | RESERVE BASE | | |
|--------------|---------------|------------|------|
| | t | % | Rank |
| South Africa | 70 000 | 87,7 | 1 |
| Russia | 6 600 | 8,3 | 2 |
| Canada | 390 | 0,5 | 4 |
| USA | 2 000 | 2,5 | 3 |
| Other | 850 | 1,1 | - |
| TOTAL | 79 840 | 100 | |

Source: USGS, 2003, pp 126 - 127

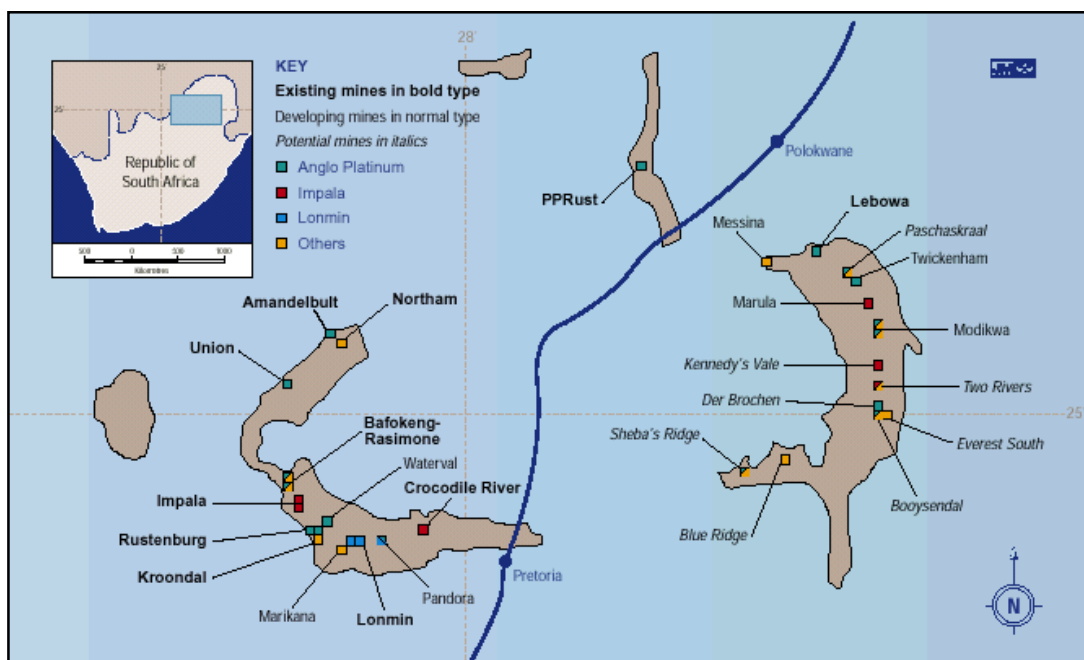
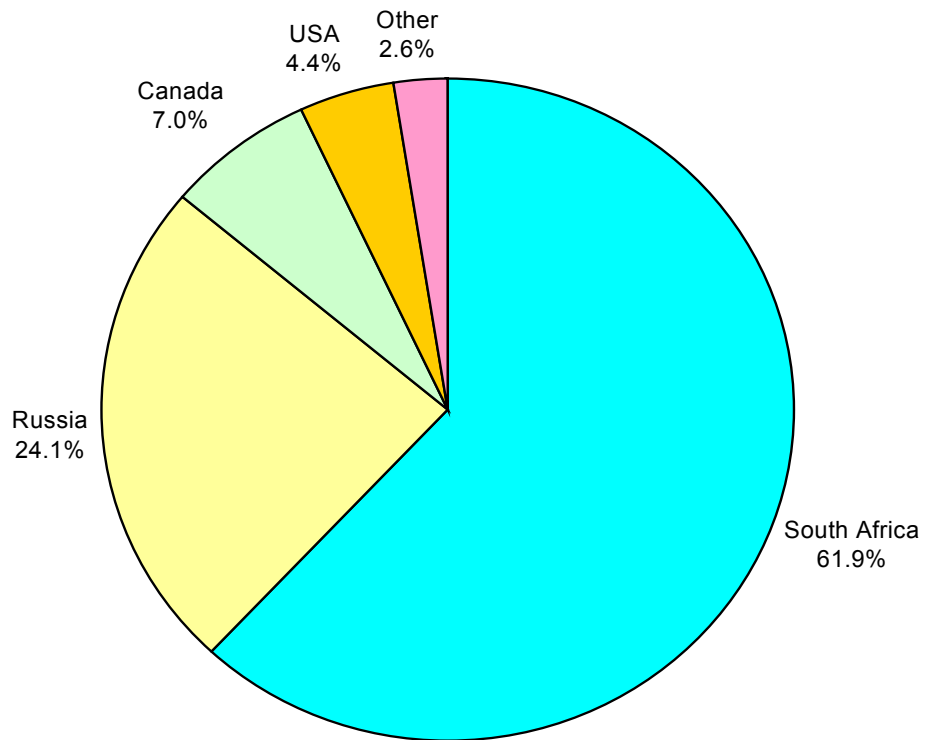


Fig. 1 - THE BUSHVELD COMPLEX, SHOWING PRODUCING, DEVELOPING AND POTENTIAL PLATINUM-GROUP METAL MINES (Source: Platinum 2003, Johnson Matthey)

South Africa's contribution to world PGM supply in 2002 is illustrated in Figure 2, while the country's PGM production and revenue gained from exports from 1993 to 2002 is reflected in Table 2.

Fig. 2 - WORLD SUPPLY OF PLATINUM-GROUP METALS, 2002



Sources: Kendall, 2003, pp 48 - 52

Department of Minerals and Energy

Notes: South Africa: PGMs production

Russia, Canada and Other: Platinum, palladium and rhodium only

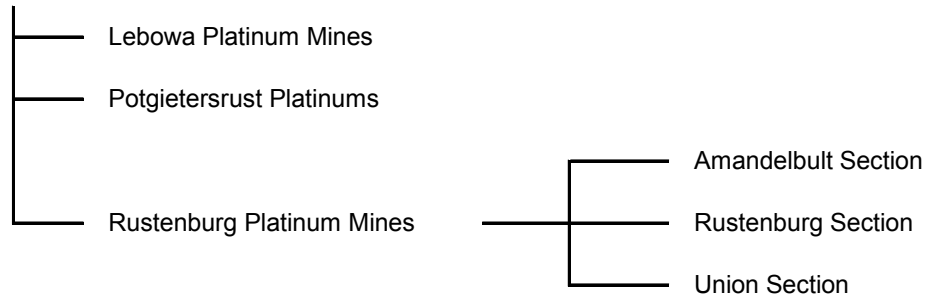
USA: Platinum and palladium production only

TABLE 2 – SOUTH AFRICA'S PRODUCTION AND SALES OF PLATINUM-GROUP METALS, 1993 – 2002

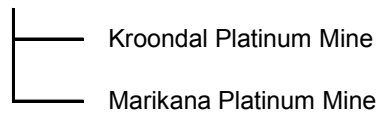
| YEAR | PRODUCTION kg | EXPORT SALES | | |
|------|------------------|--------------|-------------|---------|
| | | Mass kg | Value (FOB) | |
| | | | R ' 000 | R/kg |
| 1993 | 176 167 | 153 711 | 5 188 809 | 33 757 |
| 1994 | 183 926 | 162 157 | 5 809 613 | 35 827 |
| 1995 | 183 097 | 175 158 | 6 572 506 | 37 523 |
| 1996 | 188 636 | 183 962 | 7 428 137 | 40 379 |
| 1997 | 196 604 | 187 167 | 8 403 862 | 44 900 |
| 1998 | 199 953 | 193 502 | 11 602 274 | 59 959 |
| 1999 | 216 479 | 198 713 | 13 964 729 | 70 276 |
| 2000 | 206 770 | 198 944 | 24 645 761 | 123 883 |
| 2001 | 228 747 | 193 354 | 29 381 009 | 151 954 |
| 2002 | 239 585 | 207 637 | 30 458 603 | 146 692 |

2. CORPORATE STRUCTURE OF THE SOUTH AFRICAN PLATINUM-GROUP METAL MINING INDUSTRY AS AT DECEMBER 2003

ANGLO AMERICAN PLATINUM CORPORATION LTD



AQUARIUS PLATINUM LTD



BARPLATS INVESTMENTS LTD



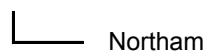
IMPALA PLATINUM HOLDINGS LTD



LONMIN PLC



NORTHAM PLATINUM LTD



3. PLATINUM-GROUP METAL MINING COMPANIES

ANGLO AMERICAN PLATINUM CORPORATION LIMITED

Registered Office: 55 Marshall Street
Johannesburg

PO Box 62179
Marshalltown, 2107

Telephone: +27 11 373 6111
Facsimile: +27 11 373 5111

E - mail: traymond@angloplat.com

Website: www.angloplatinum.com

Founded: 1946

Control: Anglo American plc (69,6 per cent)

Financial Year: Ends 31 December

PRODUCTION UNITS IN THE COMPANY

Lebowa Platinum Mines
Potgietersrust Platinums
Rustenburg Platinum Mines:
Amandelbult Section
Rustenburg Section
Union Section

COMMITTED PROJECTS

Bafokeng-Rasimone Platinum Mine project
**Modikwa Platinum Mine project (Anglo American Platinum Corporation Limited 50%,
African Rainbow Minerals Consortium 50%)**

Twickenham Platinum Mine project

PRODUCTION

| FINANCIAL YEAR | TONNES MILLED | REFINED PGMs | HEAD GRADE - 4E* |
|-------------------|---------------|--------------|------------------|
| | (kt) | kg | g/t |
| 1998 | 22 011 | 101 373 | 5,52 |
| 1999 | 22 853 | 109 528 | 5,40 |
| 2000 | 24 575 | 101 254 | 5,05 |
| 2001 | 26 844 | 114 262 | 5,01 |
| 2002 | 31 352 | 122 784 | 4,62 |

Source: Company reports

Note: * the total 4E grams produced from concentrating divided by the tons milled

MINERAL RESERVES

(Estimated as at 31 December 2002)

| CLASSIFICATION | TONNES | 4E GRADE | 4E |
|--------------------------------|----------|----------|----------|
| | Mt | g/t | t |
| Proved - Rustenburg Section | 53,33 | 4,79 | 255,63 |
| Probable - Rustenburg Section | 252,47 | 4,62 | 1 166,50 |
| Proved - Amandelbult Section | 53,84 | 5,66 | 304,93 |
| Probable - Amandelbult Section | 350,63 | 5,25 | 1 839,91 |
| Proved - Union Section | 19,91 | 5,31 | 105,70 |
| Probable - Union Section | 126,55 | 4,82 | 609,93 |
| Proved - Potgietersrust | 45,40 | 3,29 | 149,37 |
| Probable - Potgietersrust | 286,71 | 2,57 | 736,84 |
| Proved - Lebowa | 8,99 | 4,50 | 40,49 |
| Probable - Lebowa | 468,52 | 4,98 | 2 332,16 |
| Proved - BRPM | 13,05 | 5,06 | 66,06 |
| Probable - BRPM | 31,30 | 4,89 | 153,06 |
| Proved - Modikwa | 2,64 | 4,30 | 11,35 |
| Probable - Modikwa | 3,96 | 4,80 | 19,01 |
| Proved - Total | 197,16 | 4,73 | 933,54 |
| Probable - Total | 1 520,14 | 4,51 | 6 857,40 |

Source: Company reports

FINANCIAL RESULTS (R millions)

| YEAR | NET SALES REVENUE | COST OF SALES | GROSS PROFIT ON SALES | TAXATION | CAPITAL EXPEND. |
|------|----------------------|------------------|-----------------------------|----------|--------------------|
| 1998 | 6 622,9 | 4 815,8 | 1 807,1 | 646,6 | 1 460,0 |
| 1999 | 8 518,0 | 5 338,7 | 3 179,3 | 612,3 | 1 472,9 |
| 2000 | 15 537,0 | 6 675,8 | 8 861,2 | 2 932,4 | 1 919,7 |
| 2001 | 17 878,9 | 8 262,9 | 9 616,0 | 4 308,8 | 3 586,1 |
| 2002 | 19 552,7 | 10 129,9 | 9 422,8 | 2 998,9 | 5 994,1 |

Source: Company reports

AQUARIUS PLATINUM LIMITED

Registered Office: Clarendon House
2 Church Street
Hamilton
Bermuda

Telephone: +61 8 9367 5211

Facsimile: +61 8 9367 5233

E - mail: info@aquariusplatinum.com

Website: www.aquariusplatinum.com

Financial Year: Ends 30 June

Aquarius Platinum (South Africa) Pty Limited

Registered Office: 1st Floor
Block A
The Great Wall Group Building
5 Skeen Boulevard
Bedfordview
Johannesburg

PO Box 1282
Bedfordview, 2009

Telephone: +27 11 455 2050
Facsimile: +27 11 455 2095

E - mail: info@aquariususa.co.za

PRODUCTION UNITS IN THE COMPANY

Kroondal Platinum Mine
Marikana Platinum Mine

COMMITTED PROJECTS

Everest South project

| SOUTH AFRICAN PRODUCTION | | |
|--------------------------|--------------|-------------------|
| FINANCIAL YEAR | TONNES MINED | 4E IN CONCENTRATE |
| | (kt) | kg |
| 2000 | na | 2 493,6 |
| 2001 | na | 4 565,1 |
| 2002 | 2 663 | 6 758,7 |
| 2003 | 3 654 | 7 378,0 |

Source: Company reports

SOUTH AFRICAN MINERAL RESERVES

(Estimated as at 30 June 2003)

| CLASSIFICATION | TONNES | 4E GRADE | 4E |
|--------------------------|--------|----------|--------|
| | Mt | g/t | t |
| Proved - Kroondal | 11,55 | 3,89 | 44,79 |
| Probable - Kroondal | 4,60 | 3,29 | 15,24 |
| Proved - Marikana | 16,38 | 3,59 | 58,79 |
| Proved - Everest South | 15,14 | 3,33 | 50,39 |
| Probable - Everest South | 11,65 | 3,18 | 37,01 |
| Proved - Total | 43,07 | 3,57 | 153,97 |
| Probable - Total | 16,25 | 3,22 | 52,25 |

Source: Company reports

FINANCIAL RESULTS (\$ thousands)

| YEAR | REVENUE | COST OF SALES | GROSS PROFIT | TAXATION | CAPITAL EXPEND.* |
|------|---------|---------------|--------------|----------|------------------|
| 2000 | 47 750 | 20 466 | 27 284 | 7 145 | 59 286 |
| 2001 | 97 408 | 34 919 | 62 489 | 18 756 | 109 398 |
| 2002 | 96 421 | 36 480 | 59 941 | 14 693 | 37 493 |
| 2003 | 96 862 | 57 562 | 39 300 | 6 456 | 59 598 |

Source: Company reports

Note: * In South Africa

BARPLATS INVESTMENTS LIMITED

Registered Office: 3rd Floor
Old Trafford 4
Isle of Houghton
Boundary Road
Houghton
Johannesburg

PO Box 61386
Marshalltown, 2107

Telephone: +27 11 481 3900

Facsimile: +27 11 484 0254

E - mail: investor@implats.co.za

Website: www.barplatsinvestments.co.za

Founded: 1987

Control: Impala Platinum Holdings Ltd (83,2 per cent)

Financial Year: Ends 30 June

PRODUCTION UNITS IN THE COMPANY

Crocodile River Mine

| FINANCIAL YEAR | PRODUCTION | |
|-------------------|---------------|---------------------|
| | TONNES MILLED | PGMs IN CONCENTRATE |
| | (kt) | kg |
| 2001 | 344 | 889,6 |
| 2002 | 757 | 2 360,8 |
| 2003 | 472 | 1 517,9 |

Source: Company reports

MINERAL RESERVES

In accordance with the SAMREC Code, no Mineral Reserves are reflected for Crocodile River. Current market conditions, costs associated with the mining method and mining contract, as well as production volumes rendered the Mineral Resources uneconomic.

FINANCIAL RESULTS (R millions)

| YEAR | SALES | COST OF SALES | PROFIT FROM OPERATIONS | TAXATION | CAPITAL EXPEND. |
|------|-------|---------------|------------------------|----------|-----------------|
| 2001 | 116,9 | 57,9 | 59,0 | 0,03 | 132,7 |
| 2002 | 262,9 | 193,1 | 69,8 | 0,13 | 68,6 |
| 2003 | 154,6 | 198,2 | (43,6) | 0,13 | 51,0 |

Source: Company reports

Note: () Loss

IMPALA PLATINUM HOLDINGS LIMITED

Registered Office: 3rd Floor
Old Trafford 4
Isle of Houghton
Boundary Road
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Johannesburg

PO Box 61386
Marshalltown, 2107

Telephone: +27 11 481 3900

Facsimile: +27 11 484 0254

E - mail: investor@implats.co.za

Website: www.implats.co.za

Founded: 1957

Financial Year: Ends 30 June

SOUTH AFRICAN PRODUCTION UNITS IN THE COMPANY

Impala Platinum

COMMITTED PROJECTS

Marula Platinum Mine project (Impala Platinum Holdings Limited 80%, Mmakau Mining (Pty) Limited 10%, various investors 10%)

SOUTH AFRICAN PRODUCTION

| FINANCIAL YEAR | TONNES MILLED | REFINED PGMs | HEAD GRADE - 5 PGMs & Au |
|-------------------|---------------|--------------|-----------------------------|
| | (kt) | kg | g/t |
| 1999 | 14 638 | 61 522,7 | 5,31 |
| 2000 | 14 662 | 59 501,0 | 4,97 |
| 2001 | 14 840 | 58 381,3 | 4,90 |
| 2002 | 14 850 | 58 925,6 | 5,05 |
| 2003 | 15 042 | 59 827,6 | 5,06 |

Source: Company reports

SOUTH AFRICAN MINERAL RESERVES

(Estimated as at 30 June 2003)

| CLASSIFICATION | TONNAGE | GRADE - 5 PGE & Au | 5 PGE & Au |
|----------------------------|---------|-----------------------|------------|
| | Mt | g/t | t |
| Proved - Impala Platinum | 40,1 | 5,16 | 206,9 |
| Probable - Impala Platinum | 160,2 | 5,05 | 808,9 |
| Probable - Marula Platinum | 50,7 | 3,55 | 180,0 |
| Proved - Total | 40,1 | 5,16 | 206,9 |
| Probable - Total | 210,9 | 4,69 | 988,9 |

Source: Company reports

FINANCIAL RESULTS (R millions)

| YEAR | SALES | OPERATING EXPENSES | PROFIT FROM OPERATIONS | TAXATION | CAPITAL EXPEND.* |
|------|----------|-----------------------|---------------------------|----------|---------------------|
| 1999 | 4 602,0 | 2 986,8 | 1 615,2 | 525,2 | 431 |
| 2000 | 7 003,6 | 3 900,8 | 3 102,8 | 1 061,9 | 783 |
| 2001 | 11 969,1 | 5 120,3 | 6 848,8 | 2 815,2 | 2 090 |
| 2002 | 11 901,5 | 5 764,9 | 6 136,6 | 2 142,0 | 1 250 |
| 2003 | 11 807,0 | 6 775,9 | 5 031,1 | 1 936,4 | 1 675 |

Source: Company reports

Note: * In South Africa

LONMIN PLC

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London
SW1X7YL

Telephone: +44 (0)20 7201 6000

Facsimile: +44 (0)20 7201 6100

E - mail: contact@lonmin.com

Website: www.lonmin.com

Founded: 1909

Financial Year: Ends 30 September

Lonmin Platinum

Registered Office: Northdowns
17 Georgian Crescent
Bryanston East
Johannesburg

PO Box 98811

Sloane Park, 2152

Telephone: +27 11 516 1300

Facsimile: +27 11 516 1310

E - mail: pat@lonplats.com

PRODUCTION UNITS IN THE COMPANY

Eastern Platinum Mine

Karee Mine

Western Platinum Mine

PRODUCTION

| FINANCIAL YEAR | TONNES MILLED (kt) | REFINED PGMs kg | YIELD INTO MATTE g/t |
|-------------------|---------------------------|------------------------|--------------------------------|
| 1998 | 9 194 | 36 647,9 | 4,24 |
| 1999 | 9 069 | 35 697,8 | 4,32 |
| 2000 | 9 734 | 37 941,2 | 4,19 |
| 2001 | 10 520 | 41 694,9 | 4,20 |
| 2002 | 11 260 | 45 109,4 | 4,13 |

Source: Company reports

MINERAL RESERVES

(Estimated as at 30 September 2002)

| CLASSIFICATION | TONNAGE Mt | GRADE - 5 PGM & Au g/t | 5 PGM & Au t |
|--------------------------|-------------------|----------------------------------|---------------------|
| Proved - Merensky Reef | 3,7 | 3,7 | 13,8 |
| Probable - Merensky Reef | 194,2 | 4,2 | 808,2 |
| Proved - UG2 Reef | 13,2 | 5,1 | 67,5 |
| Probable - UG2 Reef | 286,5 | 5,2 | 1 499,2 |
| Proved - Total | 16,9 | 4,8 | 81,3 |
| Probable - Total | 480,7 | 4,8 | 2 307,4 |

Source: Company reports

FINANCIAL RESULTS # (\$ millions)

| YEAR | TURNOVER | OPERATING PROFIT | TAXATION | CAPITAL EXPEND.* |
|------|----------|---------------------|----------|------------------|
| 1998 | 388 | 123 | 7 | 173,8 |
| 1999 | 404 | 129 | 15 | 362,2 |
| 2000 | 703 | 397 | 94 | 768,2 |
| 2001 | 815 | 516 | na | 936,5 |
| 2002 | 638 | 348 | na | 1 558,2 |

Source: Company reports

Notes: * R millions

Platinum operations only

MESSINA LIMITED

Registered Office: Nantai Crescent
30 Jellicoe Avenue
Rosebank
Johannesburg

PO Box 2668
Saxonwold, 2132

Telephone: +27 11 442 6923

Facsimile: +27 11 442 6993

E - mail: mike.kritzinger@ser.co.za

Website: www.southernera.com

Founded: 1950

Control: SouthernEra Resources Ltd (73,06 per cent)

Financial Year: Ends 31 December

COMMITTED PROJECTS

Messina Platinum Mine project

PRODUCTION

| FINANCIAL YEAR | TONNES MILLED (kt) | 3 PGE & Au IN CONCENTRATE kg | HEAD GRADE - 3 PGE & Au g/t |
|-------------------|---------------------------|--|---------------------------------------|
| 2001 | 14,2 | 34,0 | 2,91 |
| 2002 | 153,3 | 463,7 | 3,54 |

Source: Company reports

MINERAL RESERVES

(Estimated as at 31 December 2002)

| CLASSIFICATION | TONNAGE Mt | GRADE - 5 PGE & Au g/t | 5 PGE & Au t |
|----------------------|-------------------|----------------------------------|---------------------|
| Probable - Doornvlei | 32,0 | 4,42 | 141,3 |
| Probable - Voorspoed | 24,5 | 4,99 | 122,2 |
| Probable - Total | | | |

Source: Company reports

FINANCIAL RESULTS (R thousands)

| YEAR | INCOME | OPERATING EXPENSES | PROFIT | TAXATION | CAPITAL EXPEND.* |
|------|--------|-----------------------|--------|----------|---------------------|
| 2001 | 1 369 | 1 142 | 227 | - | 310 |
| 2002 | 2 528 | 785 | 1 743 | - | 520 |

Source: Company reports

Note: * R million

NORTHAM PLATINUM LIMITED

Registered Office: Kenilworth House
Rutherford Estate
1 Scott Street
Waverley
Johannesburg

PO Box 37160
Birnam, 2015

Telephone: +27 11 440 8811
Facsimile: +27 11 440 5944

E - mail: svanderspuy@corp.norplats.co.za

Website: www.northam.co.za

Founded: 1977

Financial Year: Ends 30 June

PRODUCTION UNITS IN THE COMPANY

Northam Platinum Mine

| FINANCIAL YEAR | PRODUCTION | | |
|-------------------|---------------|------------------------|----------------------------|
| | TONNES MILLED | PGMs IN CONCENTRATE | HEAD GRADE - 3 PGE & Au |
| | (kt) | kg | g/t |
| 1999 | 1 800 | na | 6,1 |
| 2000 | 1 660 | na | 6,0 |
| 2001 | 1 948 | 9 912 | 5,4 |
| 2002 | 1 931 | 9 593 | 5,3 |
| 2003 | 2 219 | 11 757 | 5,3 |

Source: Company reports

MINERAL RESERVES

(Estimated as at 30 June 2003)

| CLASSIFICATION | TONNAGE | MILL HEAD | METAL |
|--------------------------|---------|-----------|-------|
| | | GRADE | |
| | Mt | g/t | t |
| Proved - Merensky Reef | 3,0 | 6,26 | 19 |
| Proved - UG2 Reef | 2,4 | 4,01 | 10 |
| Probable - Merensky Reef | 24,2 | 6,05 | 146 |
| Probable - UG2 Reef | 44,0 | 4,01 | 177 |
| Proved - Total | 5,4 | 5,37 | 29 |
| Probable - Total | 68,2 | 4,74 | 323 |

Source: Company reports

FINANCIAL RESULTS (R thousands)

| YEAR | SALES REVENUE | COST OF SALES | OPERATING PROFIT | TAXATION | CAPITAL EXPEND. |
|------|------------------|------------------|---------------------|----------|--------------------|
| 1999 | 719 497 | 596 285 | 123 212 | - | na |
| 2000 | 1 051 953 | 691 925 | 360 028 | 122 817 | 343 400 |
| 2001 | 1 567 883 | 779 501 | 788 382 | 308 143 | 163 000 |
| 2002 | 1 560 685 | 975 549 | 585 136 | 259 121 | 90 000 |
| 2003 | 1 471 999 | 1 086 571 | 385 428 | 198 601 | 176 000 |

Source: Company reports

BY-PRODUCT PLATINUM-GROUP METAL PRODUCERS

EVANDER OPERATIONS

Corporate Office: First Floor
4 The High Street
Melrose Arch
Johannesburg

Suite No. 1
Private Bag X1
Melrose Arch, 2076

Telephone: +27 11 684 0140

Facsimile: +27 11 684 0188

E - mail: corporate@harmony.co.za

Website: www.harmony.co.za

Group: Harmony Gold Mining Company Limited

PRODUCTION

| | 1998 | 1999 | 2000 | 2001 | 2002 |
|-----------|------|------|-------|------|------|
| PGMs (kg) | 75,9 | 80,9 | 264,8 | 52,3 | 98,5 |

Note: PGMs are produced as a by-product of gold mining in the Highveld Ridge district of the Mpumalanga Province.

NKOMATI MINE

Registered Office: 56 Main Street
Johannesburg

PO Box 62379
Marshalltown, 2107

Telephone: +27 11 634 9111

Facsimile: +27 11 634 0383

E - mail: ebrahimt@avmin.co.za

Web site: www.avmin.co.za

Group: Anglovaal Mining Limited

PRODUCTION

| | 1998 | 1999 | 2000 | 2001 | 2002 |
|-----------|-------|-------|---------|-------|---------|
| PGMs (kg) | 364,8 | 485,6 | 1 096,4 | 964,2 | 1 124,6 |

Note: PGMs are produced as a by-product of nickel mining in the Waterval-Boven district of the Mpumalanga Province.

PALABORA MINING COMPANY LIMITED

Registered Office: 1 Copper Road
Phalaborwa

PO Box 65
Phalaborwa, 1390

Telephone: +27 15 780 2929

Facsimile: +27 15 780 2934

E - mail: enquiries@palabora.co.za

Web site: www.palabora.com

PRODUCTION

| | 1998 | 1999 | 2000 | 2001 | 2002 |
|-----------|-------|-------|------|------|------|
| PGMs (kg) | 131,0 | 151,0 | 47,7 | 57,2 | 56,5 |

Note: PGMs are produced as a by-product of copper mining in the Letaba district of the Limpopo Province.

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