

INVESTMENT IN A SELECTION OF SOUTH AFRICA'S MINERAL SECTOR

DIRECTORATE: MINERAL ECONOMICS



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**INVESTMENT IN A SELECTION OF
SOUTH AFRICA'S MINERAL SECTOR**

DIRECTORATE: MINERAL ECONOMICS

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GENERAL OVERVIEW

In this report, newly committed mineral related projects refer to mineral or mining projects to which funds have already been committed and are being spent to advance these projects. Potential mineral related projects refer to projects to which development funds have not yet been committed but feasibility studies have been carried out to qualify required funds for development of these projects. The figures supplied refer to the situation as at August 2006.

The total estimated investment in newly committed mineral related projects in South Africa in the year 2006 amounts to R 54 909 million (table 1). This is a decrease of 13 percent from the 2005 amount of R 69 903 million. However, this decrease is not a true indicator as over 50 percent of the committed projects did not have estimated costs at the time of publishing this report.

The total expected investment in potential mineral related projects in South Africa in the year 2006 is estimated at R 64 446 million (table 2), an increase of 23 percent compared with 2005's amount of R 52 439 million.

As illustrated in the summary tables 1 and 2, gold accounted for some 33 percent of the investment in newly committed primary mineral projects, while platinum accounted for 67 percent. As far as future potential projects are concerned, gold is expected to account for 32 percent and platinum 68 percent.

1. INTRODUCTION

South Africa's large diversity of mineral resources means that, companies have access to a wide range of mineral investment opportunities. The country is recognized world wide as a leading and reliable supplier of a large variety of minerals and mineral products of consistently high quality. In 2005, some 59 different minerals were produced from 993 mines and quarries. Foreign and local companies have long recognized South Africa's mineral potential and have been contributing significantly to both exploration and development projects.

This report focuses on investment in platinum group metals (PGM's), gold and mineral processing facilities.

2. NEWLY COMMITTED MINERAL RELATED PROJECTS.

Table. 1

Of the R 54 909 estimated investment in newly committed projects, an amount of R 53 213 million is earmarked for primary mineral projects and R 1 695 million for minerals processing projects.

2.1 GOLD

Table. 3

South Africa's gold producers committed some 55 gold related projects in the year 2006. Out of the 55, 26 projects had costs indicated at the time of publishing this report. The total cost of the 26 projects amounts to R 17 436 million. AngloGold Ashanti's investment of R 4 185 million in Moab Khotsong mine in the North West is the largest single investment, followed by Goldfields' R 2 850 million Driefontein number 5, sub-vertical shaft and Kloof's number 4-vertical shaft R 1 666 million.

2.2 PLATINUM

Table. 4

South Africa's platinum producers committed some 95 PGMs related projects in the year 2006. Only 41 projects have cost indicated at the time of publishing out of the 95 projects. The total cost of the 41 projects amount to R 35 778 million. The single largest investment is from Impala Platinum's 16 shaft in North West worth of R 4 500 million, followed by Anglo Platinum's R 2 400 million in the Rustenburg section in North West Province. Another notable project is Impala's 20 shaft project worth R 2 100 million.

2.3 OTHER MINERALS

There was no record of other mineral commodities at the time of publishing this report.

2.4 PROCESSED MINERALS

Table. 5

Investment in newly committed mineral processing projects amounts to about R 1 694 million.

3. POTENTIAL MINERAL RELATED PROJECTS.

Table.2

During the period under review, an estimated amount of R 64 446 million was anticipated for potential mineral-related projects. Of this amount, R 61 984 million was earmarked for primary mineral projects. As illustrated in summary tables, gold accounted for some 32 percent of the investment in potential primary mineral projects, platinum 68 percent while processed minerals accounted for 4 percent.

3.1 GOLD

Table.6

About R 19 891 million worth of projects were earmarked for potential gold related projects. Of the 30 identified projects, only 14 have costs indicated.

3.2 PLATINUM

Table. 7

Although most of the potential platinum-group-metals projects are rapidly converted to committed projects, R 42 094 million was earmarked for platinum projects. About 51 projects were recorded, of which 23 have costs indicated.

3.3 OTHER MINERALS

No records of other minerals were recorded during this period.

3.4 PROCESSED MINERALS

Table. 8

An amount of R 2 462 million was earmarked for potential projects in the minerals processing sector.

4. COMPLETED PROJECTS

4.1 GOLD

Table. 9

Records show that about 29 gold related projects were completed between 2002 and 2005. Although not all the projects had costs attached, a minimum of R 6 814 million was reported from 19 of the projects. Placer Dome's South Deep joint venture with Western Areas, completed early in 2005, was the largest of these projects, with a R4 000 million investment.

4.2 PLATINUM

Table. 10

Between 2002 and 2005, 40 platinum group metal projects worth R 10 490 million were complete, although there were 10 more projects which have no costs indicated. Notable among these projects were, Anglo Platinum's Rustenburg section in the North West Province, worth at R 1 800 million and Impala Platinum's 1 shaft and 12 shaft decline in the North West Province, worth at R 886 million and R 824 million respectively.

4.3 OTHER MINERALS

There is no record of any "other mineral" related projects having been completed.

4.4 PROCESSED MINERALS

Table. 11

Projects estimated at R 3 646 million were completed between 2002 and 2005. Although there were 26 projects in total, this figure is for 20 projects only. Notable among these projects were, Anglo Platinum's Polokwane smelter worth at R 1 450 million completed in 2003.

TABLE 1

NEWLY COMMITTED MINERAL-RELATED PROJECTS 2005

| Sector | Cost R'million | As percentage of primary minerals | As percentage of total minerals |
|---------------------------|---------------------------|--|--|
| <i>Primary</i> | <i>53 213</i> | <i>100</i> | <i>97</i> |
| Gold | 17 436 | 33 | 32 |
| Platinum | 35 778 | 65 | 65 |
| Other | | | |
| <i>Processed Minerals</i> | <i>1 695</i> | | <i>3</i> |
| TOTAL | 54 909 | | 100 |

TABLE 2

POTENTIAL MINERAL-RELATED PROJECTS 2005

| Sector | Cost R'million | As percentage of primary minerals | As percentage of total minerals |
|---------------------------|---------------------------|--|--|
| <i>Primary</i> | <i>61 984</i> | <i>100</i> | <i>96</i> |
| Gold | 19 891 | 32 | 31 |
| Platinum | 42 094 | 68 | 65 |
| Other | | | |
| <i>Processed Minerals</i> | <i>2 462</i> | | <i>4</i> |
| TOTAL | 64 446 | | 100 |

FIGURE 1

Newly Committed Mineral Related Projects by Sector - 2006

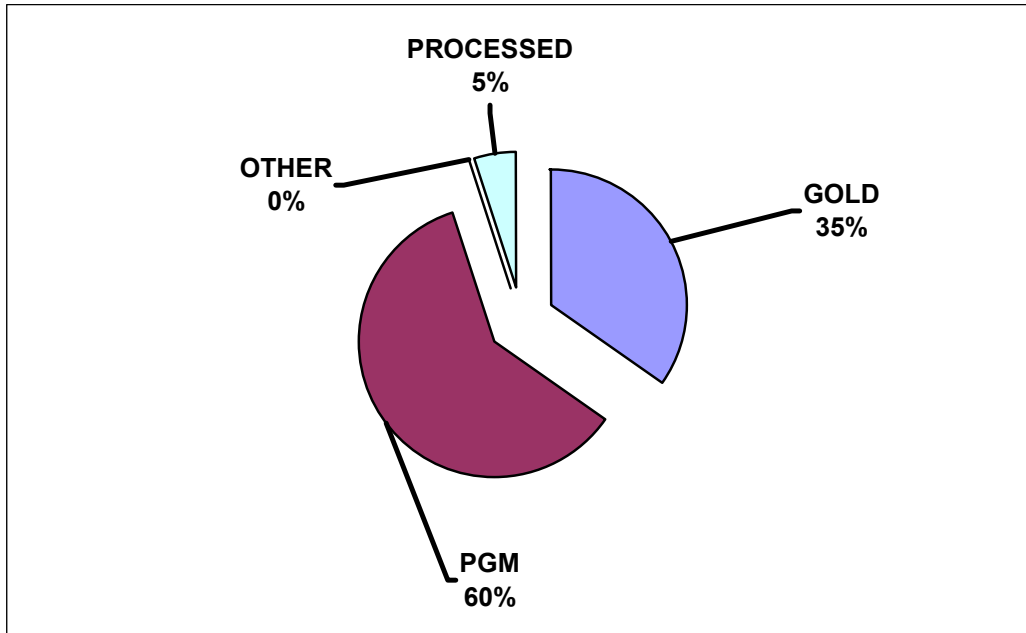


FIGURE 2

Potential Mineral Related Projects by Sector- 2006

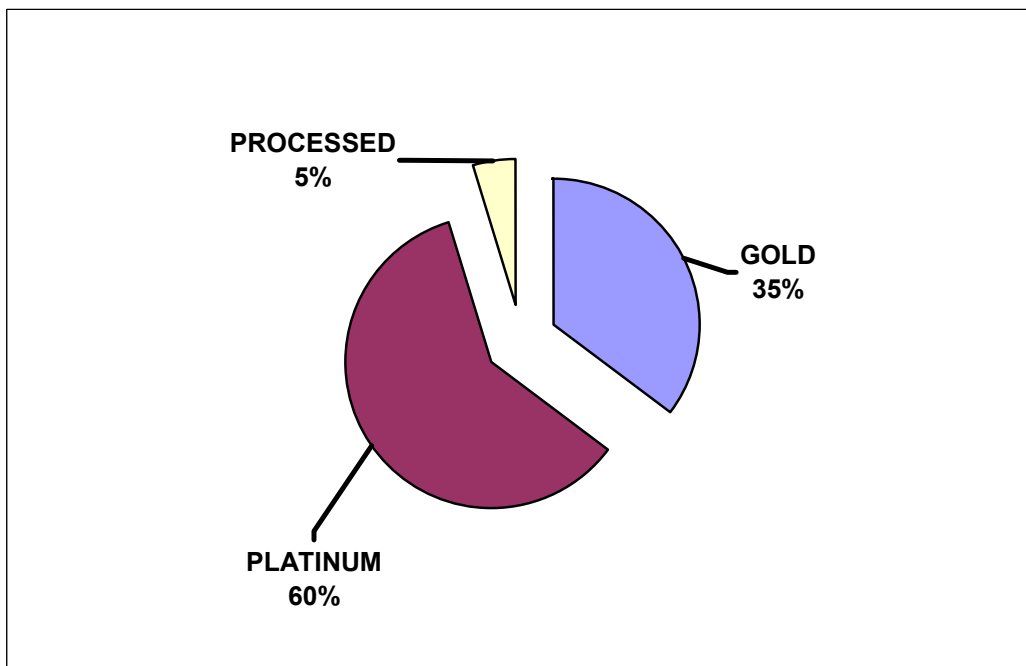
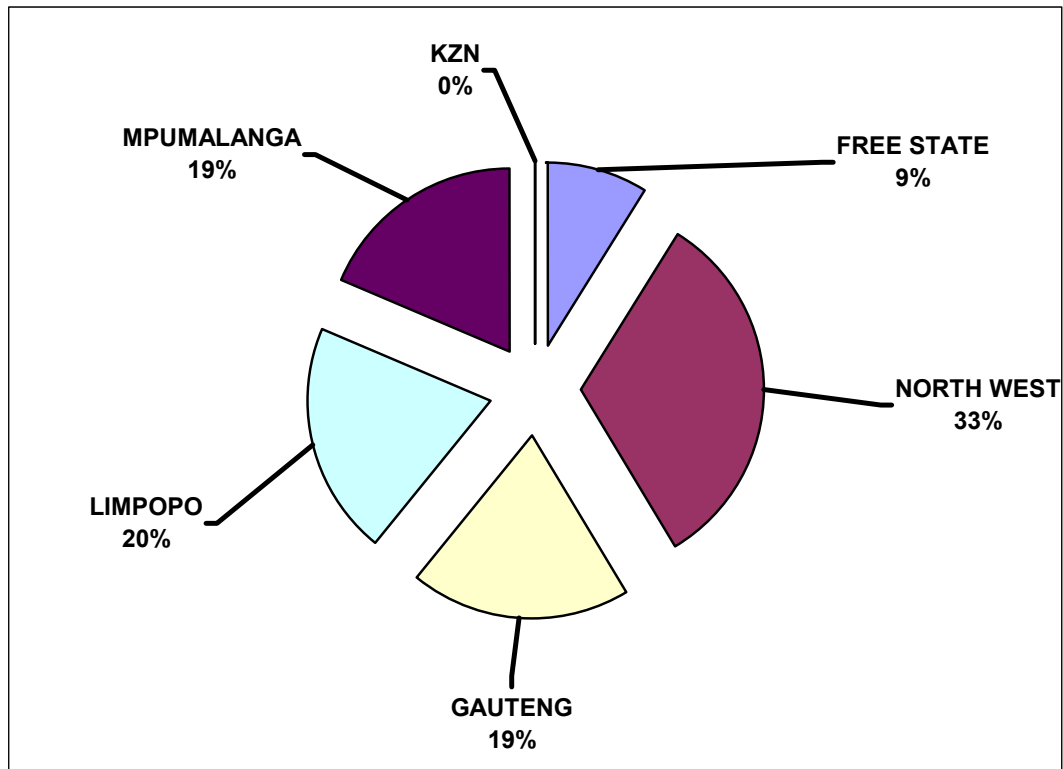


FIGURE.3

**Newly Committed Mineral Related Projects
by Province- 2006**



Of South Africa's nine provinces, North West, Limpopo and Gauteng accounted for 72 percent of reported total newly committed mineral related projects. Over 71 percent of mineral investment projects in North West are platinum related and over 95 percent of those in Gauteng are gold related.

5. CONCLUSION

The figures in this report reflect a selection of projects at resource extension level and mineral processing phase, thus reflecting a minimum investment in South Africa's mineral sector. Future publications will include upstream investment in exploration as well as supplementary business. This preliminary study indicates that South Africa remains a highly prospective area for investment in the mining sector and all stakeholders continue to work hard to improve the investment landscape in the country.

GOLD MINING - NEWLY COMMITTED PROJECTS

| Holding Company | Mine/Project | Province | Project | Cost R'million | Completion Date |
|--------------------------------|------------------|------------|--|----------------|-----------------|
| Aflease | Modder East | Gauteng | New mine | 300 | unknown |
| Aflease | Sub Nigel | Gauteng | Feasibility study | unknown | 2006 |
| Aflease | Holfontein | Gauteng | Exploration programme | unknown | unknown |
| Aflease | Turnbridge | Gauteng | Exploration programme | unknown | unknown |
| Aflease | Ventersburg | Free State | Exploration programme | 4.2 | 2006 |
| African Pioneer Mining | Agnes | Mpumalanga | Princeton | unknown | 2007 |
| African Pioneer Mining | Agnes | Mpumalanga | Top Opencast Project feasibility study | unknown | unknown |
| AfriOre/WBPM | FSC project | Free State | Exploration programme | unknown | unknown |
| AfriOre/African Pioneer Mining | Dwaalboom | North West | Exploration programme | unknown | unknown |
| AngloGold Ashanti | Moab Khotsoeng | North West | New mine | 4185 | 2012 |
| AngloGold Ashanti | Mponeng | North West | Shaft Deepening Project | 1334 | 2010 |
| AngloGold Ashanti | TauTona | Gauteng | CLR Shaft Pillar | 286 | 2008 |
| AngloGold Ashanti | TauTona | Gauteng | CLR Below 120 Level | 978 | 2011 |
| AngloGold Ashanti | TauTona | Gauteng | VCR Pillar | 121 | 2007 |
| AngloGold Ashanti | Vaal River Ops. | North West | Mizpah Low Grade Plant | unknown | 2007 |
| Bema | Petrex | Gauteng | Exploration programme (Hexrivier & Roodepoort) | unknown | unknown |
| Bema | Petrex | Gauteng | Surface water ingress | unknown | unknown |
| Caledonia Mining | Eersteling | Limpopo | Exploration programme | unknown | unknown |
| Caledonia Mining | Barbrook | Mpumalanga | Mine expansion | unknown | unknown |
| Centurion Gold | Uvongo | Mpumalanga | Exploration programme | unknown | unknown |
| Centurion Gold | South Rand Basin | Mpumalanga | Exploration programme | unknown | unknown |
| DRDGOLD | ERPM | Gauteng | Pumping facilities upgrade | 24 | 2007 |
| DRDGOLD | ERPM | Gauteng | Plugging | unknown | 2006 |
| DRDGOLD | Blyvooruitzicht | Gauteng | Blyvoor Expansion | 65 | unknown |
| DRDGOLD | Blyvooruitzicht | Gauteng | Doornfontein South Below 35 level | 8.8 | unknown |
| DRDGOLD | Blyvooruitzicht | Gauteng | Mining at No 2 Sub-shaft | 80.5 | 2007 |
| DRDGOLD | Argonaut | Gauteng | Exploration programme | unknown | unknown |
| Gold Fields | Beatrix | Free State | North Section infrastructure | 1300 | 2006 |
| Gold Fields | Beatrix | Free State | Surface drilling | unknown | unknown |
| Gold Fields | Kloof | Gauteng | Extension Area feasibility study | unknown | 2006 |
| Gold Fields | Kloof | Gauteng | No. 4 Sub-vertical shaft | 1666 | 2006 |
| Gold Fields | Kloof | Gauteng | 67-line development | 34 | unknown |
| Gold Fields | Kloof | Gauteng | No. 1 shaft pillar extraction | unknown | unknown |
| Gold Fields | Kloof | Gauteng | No. 3 shaft drop down | unknown | unknown |
| Gold Fields | Kloof | Gauteng | Eastern Boundary Area feasibility study | unknown | unknown |
| Gold Fields | Kloof | Gauteng | No. 10 shaft pumping infrastructure | unknown | unknown |
| Gold Fields | Driefontein | Gauteng | No. 1 Tertiary shaft | 2850 | 2007 |
| Gold Fields | Driefontein | Gauteng | No. 5 Sub-vertical Shaft | unknown | 2007 |
| Gold Fields | Driefontein | Gauteng | No. 4 shaft pillar extraction | unknown | unknown |
| Gold Fields | Driefontein | Gauteng | No. 5 shaft DE feasibility study | unknown | 2006 |
| Gold Fields | Driefontein | Gauteng | No. 10 shaft CL pillars feasibility study | unknown | unknown |
| Great Basin Gold | Burnstone | Mpumalanga | New mine | 1013 | unknown |
| Harmony | Randfontein | Gauteng | Doornkop South Reef | 959 | 2011 |
| Harmony | Elandsdraal | North West | Elandsdraal shaft deepening | 798 | 2010 |
| Harmony | Tshepong | Free State | Tshepong North Decline | 280.3 | 2008 |
| Harmony | Masimong | Free State | Expansion | 314 | 2010 |
| Harmony | Phakisa | Free State | Completion of shaft | 612.9 | 2008 |
| Harmony | Target North | Free State | Feasibility study | unknown | unknown |
| Harmony | Evander | Mpumalanga | No 3 decline | 95 | 2006 |
| Harmony | Orkney | North West | Re-opening 6 & 7 shafts | 90 | unknown |
| Miranda Mineral Holdings | Lowveld | Limpopo | Exploration programme | unknown | unknown |
| Pamodzi Gold | Middelvlei | Gauteng | New mine | unknown | 2006 |
| Simmer & Jack | TGME | Mpumalanga | Expansion | unknown | 2008 |
| Simmer & Jack | Ezulwini | Gauteng | Re-opening mine | unknown | unknown |
| Simmer & Jack | TGME | Mpumalanga | Re-opening Beta mine | unknown | unknown |
| Simmer & Jack | TGME | Mpumalanga | Re-opening Frankfort mine | unknown | unknown |
| Simmer & Jack | TGME | Mpumalanga | Exploration programme | 2 | unknown |
| Simmer & Jack | Sabie | Mpumalanga | Exploration programme | 13 | 2008 |
| Superior Mining | Bothaville | Free State | Exploration programme | 22.5 | unknown |
| Thistle | President Steyn | Free State | Feasibility study: Golden Triangle | unknown | 2006 |
| TOTAL | | | | 17436.2 | |

PLATINUM-GROUP METAL MINING - NEWLY COMMITTED PROJECTS

| Holding Company | Mine/Project | Province | Project | Cost R'million | Completion Date |
|-------------------------------|---------------------------------|------------------|-----------------------------|----------------|-----------------|
| African Platinum | Leeuwkop Phase 1 | North West | Feasibility study | unknown | 2006 |
| African Rainbow Minerals/Plat | Kalplats | North West | Pre-feasibility study | unknown | 2006 |
| African Rainbow Minerals/Imp | Two Rivers | Mpumalanga | New mine | 1300 | 2007 |
| AIM Resources | Mokopane Platinum | Limpopo Province | Exploration programme | unknown | unknown |
| Akanani Mining | Akanani Platinum | Limpopo Province | Pre-feasibility study | unknown | 2007 |
| Anglo Platinum/Royal Bafoken | Bafokeng-Rasimone Platinum Mine | North West | Phase 2 | 1200 | 2011 |
| Anglo Platinum/Royal Bafoken | Styltdrift | North West | Feasibility study | unknown | 2006 |
| Anglo Platinum/Aquarius | Kroondal | North West | Pool & share expansion | 810 | 2006 |
| Anglo Platinum/Aquarius | Marikana | North West | Pool & share expansion | 228 | 2008 |
| Anglo Platinum | Rustenburg Section | North West | Rustenburg UG2 phase 1 | 1350 | 2007 |
| Anglo Platinum | Rustenburg Section | North West | Rustenburg UG2 phase 2 | 2400 | 2008 |
| Anglo Platinum | Western Limb Tailings Ret | North West | Phase 1 | 647 | 2006 |
| Anglo Platinum | Western Limb Tailings Ret | North West | Phase 2 | 965 | 2008 |
| Anglo Platinum | Amandelbult Section | Limpopo Province | No 1 shaft UG2 optimisation | 50 | 2006 |
| Anglo Platinum | Precious Metals Refiners | North West | Capacity expansion | 1500 | 2006 |
| Anglo Platinum | PPRust | Limpopo Province | PPRust North pit | 1400 | unknown |
| Anglo Platinum | Lebowa | Limpopo Province | Brakfontein Merensky | 1100 | 2009 |
| Anglo Platinum | Lebowa | Limpopo Province | Middelpunt Hill | unknown | unknown |
| Anglo Platinum | Rustenburg Section | North West | Turffontein replacement | 580 | 2009 |
| Anglo Platinum | Rustenburg Section | North West | Frank replacement | unknown | 2008 |
| Anglo Platinum | Rustenburg Section | North West | Waterval decline extension | unknown | 2006 |
| Anglo Platinum | Union Section | Limpopo Province | 3 S UG2 decline | unknown | unknown |
| Anglo Platinum | Der Brochen | Mpumalanga | Exploration programme | unknown | unknown |

| | | | | | |
|-------------------------------|--------------------------|------------------|--------------------------|---------|---------|
| Anglo Platinum | Rooderand | North West | Exploration programme | unknown | unknown |
| Anglo Platinum/ARM Mining C | Modikwa | Limpopo Province | New mine | 1850 | 2006 |
| Anglo Platinum/ARM Mining C | Modikwa | Limpopo Province | Phase 2 | unknown | unknown |
| Anglo Platinum/Lonmin Platinu | Pandora | North West | Pre-feasibility study | unknown | 2006 |
| Anglo Platinum/Mvelaphanda | Booyensdal | Mpumalanga | Exploration programme | unknown | unknown |
| Anglo Platinum/Xstrata | Mototolo JV | Mpumalanga | New mine | 1350 | 2007 |
| Anooraq Resources/Anglo Pla | Thusong | North West | Exploration programme | 11.9 | unknown |
| Anooraq Resources/Anglo Pla | Ga-Phasha | Limpopo Province | Pre-feasibility study | unknown | unknown |
| Anooraq Resources/Anglo Pla | Platreef: Boikgantsho JV | Limpopo Province | Pre-feasibility study | unknown | 2006 |
| Anooraq Resources/Anglo Pla | Platreef: Kwanda JV | Limpopo Province | Exploration programme | 25 | unknown |
| Aquarius Platinum | Everest | Mpumalanga | New mine | 707 | 2006 |
| Aquarius Platinum | Eastern Bushveld | Mpumalanga | Exploration programme | unknown | unknown |
| Bakgaga Platinum | Bakgaga | Limpopo Province | Exploration programme | unknown | unknown |
| Barplats | Crocodile River | North West | Re-opening of mine | 120 | 2006 |
| Barplats | Kennedy's Vale | Mpumalanga | Feasibility study | unknown | 2007 |
| Boynton | Grootboom | Mpumalanga | Exploration programme | unknown | unknown |
| Boynton | Pilanesberg | North West | Feasibility study | unknown | 2007 |
| Boynton | Golden Valley | Gauteng | Exploration programme | unknown | unknown |
| Boynton | Rietfontein | North West | Exploration programme | unknown | unknown |
| Caledonia Mining | Rooipoort | Limpopo Province | Exploration programme | unknown | unknown |
| Centurion Gold Holdings | Spruitfontein/Marikana | North West | Re-opening of mine | unknown | 2007 |
| Eastern Platinum/Lion's Head | Mareesburg | Mpumalanga | Feasibility study | 14 | 2006 |
| Eastern Platinum | Spitzkop | Mpumalanga | Pre-feasibility study | unknown | 2006 |
| Eland Platinum Mines | Elandsfontein | North West | Feasibility study | unknown | 2006 |
| Implats | Impala Platinum | North West | 11 Shaft decline | 921 | 2006 |
| Implats | Impala Platinum | North West | 14 Shaft decline | 1754 | 2010 |
| Implats | Impala Platinum | North West | 20 Shaft | 2100 | 2011 |
| Implats | Impala Platinum | North West | 16 Shaft | 4500 | 2014 |
| Implats | Impala Platinum | North West | E & F block | unknown | unknown |
| Implats | Impala Platinum | North West | MF2 plant upgrade | unknown | unknown |
| Implats | EPMR | Gauteng | Expansion phase 2 | 600 | 2006 |
| Implats | EPMR | Gauteng | Expansion phase 3 | 50 | 2008 |
| Implats/Mmakau | Marula | Limpopo Province | New mine (Phase 1) | 3234 | 2009 |
| Ivanhoe Nickel & Platinum | Turfspruit | Limpopo Province | Feasibility study | unknown | unknown |
| Jubilee | Dullstroom | Mpumalanga | Exploration programme | 6.8 | unknown |
| Jubilee | Elandsdrift | North West | Exploration programme | unknown | unknown |
| Jubilee | Bokfontein | North West | Exploration programme | unknown | unknown |
| Jubilee | Grass Valley | Limpopo Province | Exploration programme | unknown | unknown |
| Lonmin Platinum | Eastern Platinum | North West | Saffy shaft | 975 | 2009 |
| Lonmin Platinum | Western Platinum | North West | Hossy shaft | 535 | 2008 |
| Lonmin Platinum | Karee | North West | K4 shaft | 1662 | 2009 |
| Lonmin Platinum | Western Platinum | North West | Rowland Merensky sub-dec | 197.4 | 2014 |
| Lonmin Platinum/Boynton | Loskop | Mpumalanga | Exploration programme | unknown | unknown |

Table 5

| PROCESSING MINERALS - NEWLY COMMITTED PROJECTS | | | | | |
|--|----------------------|----------------------|---|----------------|-----------------|
| Holding Company | Mine/Project | Province | Project | Cost R'million | Completion Date |
| Harmony | Phoenix | Free State | Slimesdam re-treatment | 34.7 | unknown |
| Anglo Platinum | Rustenburg Section | North West | Waterval Concentrator retrofit | 700 | 2007 |
| Anglo Platinum | PPRust | Limpopo Province | Polokwane effluent water supply | unknown | 2007 |
| Anglo Platinum | Rustenburg Section | North West | Sulphuric acid plant | unknown | 2006 |
| Implats | Impala Platinum | North West | Smelter expansion | 900 | unknown |
| Lonmin Platinum | Smelter & refineries | Gauteng & North West | Metallurgical capacity expansion: Feasibility study | 60 | 2007 |
| Northam Platinum | Northam | Limpopo Province | Development through 20 line fissure fault | unknown | unknown |
| Northam Platinum | Northam | Limpopo Province | Furnace slag treatment facility | unknown | unknown |
| Total | | | | 1694.7 | |

Table 6

| GOLD MINING - POTENTIAL PROJECTS | | | | | |
|----------------------------------|---------------------|------------|---------------------------------------|----------------|-----------------|
| Holding Company | Mine/Project | Province | Project | Cost R'million | Completion Date |
| Aflease | Turnbridge & Klein | Gauteng | New mine | 15 | unknown |
| Aflease | Inner & outer basin | North West | Exploration programme | unknown | unknown |
| Aflease | Ventersburg | Free State | New mine | 241 | unknown |
| AngloGold Ashanti | Tau Lekoa | North West | Above 900 level | 90 | 2008 |
| AngloGold Ashanti | Mponeng | North West | VCR 120 - 125 level | 1035 | 2009 |
| AngloGold Ashanti | Moab Khotsong | Free State | Phase 2: below 101 level | 2160 | 2012 |
| AngloGold Ashanti/Gold Fields | West Wits Line Go | Gauteng | Western Ultra Deep Levels | unknown | unknown |
| Caledonia Mining | Eersteling | Limpopo | Re-opening mine | unknown | unknown |
| Gold Fields | Driefontein | Gauteng | No. 5 shaft DE | 1859 | 2013 |
| Gold Fields | Kloof | Gauteng | Kloof Extension Area | 847 | 2010 |
| Gold Fields | Kloof | Gauteng | Eastern Boundary Area | 7116 | unknown |
| Gold Fields | Kloof | Gauteng | Main Shaft pillar extraction | unknown | unknown |
| Gold Fields | Beatrix | Free State | Vlakpan | unknown | unknown |
| Gold Fields | Beatrix | Free State | Eastern Decline | unknown | unknown |
| Harmony | Joel | Free State | Sinking of North shaft | unknown | unknown |
| Harmony | Lorraine | Free State | Re-opening mine | unknown | unknown |
| Harmony | Orkney | North West | Re-opening 3 shaft | unknown | unknown |
| Harmony | Evander | Mpumalanga | Re-opening 6 shaft | unknown | unknown |
| Harmony | Evander | Mpumalanga | Poplar | unknown | unknown |
| Harmony | Evander | Mpumalanga | Rolspruit | unknown | unknown |
| Harmony | Target North | Free State | Target expansion Phase 1 | 900 | unknown |
| Harmony | Target North | Free State | Target expansion Phase 2 | 1500 | unknown |
| Harmony | Target North | Free State | Target expansion Phase 3 | 4000 | unknown |
| Matodzi Resources | Wits Nigel | Gauteng | Re-opening mine | unknown | unknown |
| Simmer & Jack | Buffelsfontein | North West | Exploration programme | 4.6 | unknown |
| Simmer & Jack | Buffelsfontein | North West | Mining at New Klerksdorp Gold Estates | unknown | unknown |
| Simmer & Jack | Buffelsfontein | North West | South plant upgrade | 100 | unknown |
| Thabex | Pilanesberg projec | North West | Exploration programme | unknown | unknown |
| Thistle | President Steyn | Free State | Eldorado exploration | 23 | unknown |
| Thistle | President Steyn | Free State | Golden Triangle | unknown | unknown |
| TOTAL | | | | 19890.6 | |

Table 7

| PLATINUM-GROUP METAL MINING - POTENTIAL PROJECTS | | | | | |
|--|--|------------------|-----------------------------|----------------|-----------------|
| Holding Company | Mine/Project | Province | Project | Cost R'million | Completion Date |
| African Platinum | Leeuwkop Phase 1 | North West | New mine | 2300 | 2011 |
| African Rainbow Minerals/Plat | Kalplats | North West | Feasibility study | unknown | 2007 |
| African Rainbow Minerals/Plat | Kalplats | North West | New mine | 300 | unknown |
| Anglo Platinum | Lebowa | Limpopo Province | Middelpunt Hill | unknown | unknown |
| Anglo Platinum | Amandelbult Section | Limpopo Province | No 3 shaft Deep | 4200 | unknown |
| Anglo Platinum | Union Section | Limpopo Province | 4 S & 4B declines (Phase 3) | unknown | unknown |
| Anglo Platinum | PPRust | Limpopo Province | PPRust North expansion | 4000 | unknown |
| Anglo Platinum | Twickenham | Limpopo Province | New mine | 3350 | unknown |
| Anglo Platinum/Lonmin Platinu | Pandora Joint Venture | North West | New mine | 3320 | 2012 |
| Anglo Platinum | Der Brochen | Mpumalanga | New mine | 3200 | unknown |
| Anglo Platinum/Mvelaphanda | Booysendal | Mpumalanga | New mine | 2500 | unknown |
| Anglo Platinum/Anooraq Reso | Ga-Phasha | Limpopo Province | New mine | 1300 | unknown |
| Anooraq Resources/Anglo Pla | Platreef: Boikgantsho JV | Limpopo Province | New mine | 1070 | unknown |
| Barplats | Kennedy's Vale | Mpumalanga | New mine | unknown | unknown |
| Boynton | Scheiding | Limpopo Province | Exploration programme | unknown | unknown |
| Eastern Platinum/Lion's Head | Mareesburg | Mpumalanga | New mine | 60 | 2007 |
| Eastern Platinum | Spitzkop | Mpumalanga | New mine | 510 | 2008 |
| Eastern Platinum/Equilibrium | Rooikraal | Mpumalanga | Exploration programme | unknown | unknown |
| Eland Platinum Mines | Elandsfontein | North West | New mine | 1471 | 2008 |
| Implats | Marula | Limpopo Province | Phase 2 | 600 | unknown |
| Implats | Marula | Limpopo Province | Phase 3 | unknown | unknown |
| Implats | Impala Platinum | North West | 11 Shaft decline extension | unknown | unknown |
| Implats | Impala Platinum | North West | 14 Shaft decline extension | unknown | unknown |
| Implats | Impala Platinum | North West | 17 Shaft | unknown | unknown |
| Implats | Base Metal Refinery | Gauteng | Expansion | unknown | unknown |
| Ivanhoe Nickel & Platinum | Turfspruit | Limpopo Province | New mine | 3600 | unknown |
| Jubilee | Buffelsvallei/Zaaiplaats | Mpumalanga | Exploration programme | unknown | unknown |
| Jubilee | Sallie Slood/Swartkoppies | Mpumalanga | Exploration programme | unknown | unknown |
| Jubilee | Puselo | Limpopo Province | Exploration programme | unknown | unknown |
| Lonmin Platinum | Western Platinum | North West | Middelkraal vertical shaft | unknown | unknown |
| Lonmin Platinum/Mvelaphanda | Lonmin Plat. Limpopo Phase 2 (Doornvlei, Baobab East & Dwaalkop) | Limpopo Province | New mine | 532 | 2007 |
| Lonmin Platinum | Lonmin Plat. Limpopo Phase 3 (Zebediela) | Limpopo Province | New mine | 680 | 2011 |
| Lonmin Platinum | Lonmin Plat. Limpopo opencast | Limpopo Province | New mine | unknown | unknown |
| New Platinum Corp./Sebata K | Tjate Project | Limpopo Province | New mine | 2300 | unknown |
| Nkwe Platinum | De Wildt | North West | Feasibility study | 20 | 2007 |
| Nkwe Platinum | De Wildt | North West | New mine | 500 | unknown |
| Nkwe Platinum | Pilanesberg | North West | Pre-feasibility | unknown | unknown |
| Nkwe Platinum | Northam | Limpopo Province | Exploration programme | unknown | unknown |
| Nkwe Platinum | Eastern Bushveld | Mpumalanga | Exploration programme | unknown | unknown |
| Nkwe Platinum | Amandelbult | Limpopo Province | Exploration programme | unknown | unknown |
| Pan Palladium | Grass Valley | Limpopo Province | New mine | 652 | unknown |
| Platinum Australia/Limpopo De | Smokey Hills | Limpopo Province | Feasibility study | unknown | unknown |
| Platinum Australia/Limpopo De | Smokey Hills | Limpopo Province | New mine | unknown | 2007 |
| Platinum Group Metals/Anglo | Western Bushveld JV | North West | Feasibility study | unknown | unknown |
| Platinum Group Metals/Anglo | Western Bushveld JV | North West | New mine | 1429 | unknown |
| Platinum Group Metals | Tweespalk | Limpopo Province | Exploration programme | unknown | unknown |
| Ridge Mining/Anglo Platinum | Sheba's Ridge | Mpumalanga | New mine | 4200 | unknown |
| Ridge Mining | Fonte Verde | Mpumalanga | Exploration programme | unknown | unknown |
| Ridge Mining | Western Ridge | Limpopo Province | Exploration programme | unknown | unknown |
| Southern Sphere Mining and | Mooiplats | Mpumalanga | Exploration programme | unknown | unknown |
| Sylvania Resources | | | CTRP | unknown | unknown |
| Total | | | | 42094.0 | |

Table 8

| PROCESSING MINERALS - POTENTIAL PROJECTS | | | | | |
|--|----------------------|----------------------|----------------------------------|----------------|-----------------|
| Holding Company | Mine/Project | Province | Project | Cost R'million | Completion Date |
| Anglo Platinum | Amandelbult Section | Limpopo Province | Scavenger plant | 40 | unknown |
| Lonmin Platinum | Smelter & refineries | Gauteng & North West | Metallurgical capacity expansion | 2100 | unknown |
| Harmony | FS 1 plant | Free State | CIL treatment circuit | 300 | unknown |
| Simmer & Jack | Buffelsfontein | North West | CIL conversion | 18 | unknown |
| Total | | | | 2461.5 | |

Table 9

| GOLD MINING - COMPLETED PROJECTS | | | | | |
|---------------------------------------|---------------------|------------|---------------------------------------|----------------|-----------------|
| Holding Company | Mine/Project | Province | Project | Cost R'million | Completion Date |
| Aflease | Afrikander Operatid | North West | Expansion project | 115 | 2003 |
| Aflease | Modder East | Gauteng | Feasibility study | unknown | 2006 |
| African Pioneer Mining | Agnes | Mpumalanga | Expansion & redevelopment | 40 | 2003 |
| Avgold | Target | Free State | New mine | 2100 | 2002 |
| Avgold | Paradise fan area | Free State | Phase 1 exploration drilling | 29 | 2002 |
| Caledonia Mining | Barbrook | Mpumalanga | Re-opening mine | unknown | 2003 |
| Caledonia Mining | Barbrook | Mpumalanga | Plant expansion | unknown | 2006 |
| Crown Gold Recoveries JV | Crown | Gauteng | Reclamation site establishment | 4.3 | 2002 |
| Crown Gold Recoveries JV | Crown | Gauteng | Upgrading of tailings dam complex | 5.9 | 2002 |
| Crown Gold Recoveries JV | ERPM | Gauteng | Cason dump reclamation | 46.5 | 2004 |
| DRDGOLD | Blyvooruitzicht | Gauteng | Plant upgrade | 2.5 | 2005 |
| DRDGOLD | Blyvooruitzicht | Gauteng | Slimes Dam Project expansion | 2.3 | 2005 |
| Gold Fields | Beatrix | Free State | No.3 shaft waste dump | 42 | 2003 |
| Gold Fields | Kloof | Gauteng | No 3 plant upgrade | unknown | 2003 |
| Gold Fields | Driefontein | Gauteng | No 1 plant upgrade | 243 | 2003 |
| Gold Fields | Kloof | Gauteng | Eastern Boundary surface drilling | 23 | 2004 |
| Gold Fields | Kloof | Gauteng | 3D seismic survey | 14.1 | 2004 |
| Gold Fields | Kloof | Gauteng | EBA surface drilling | unknown | 2004 |
| Gold Fields | Beatrix | Free State | No. 2B ventilation shaft | 100 | 2004 |
| Gold Fields | Beatrix | Free State | No. 1 Plant concentrator installation | unknown | 2004 |
| Gold Fields | Kloof | Gauteng | Extension Area surface drilling | unknown | 2005 |
| Gold Fields/Kalgold | Kraaipan | North West | Exploration programme | 4 | 2001 |
| Great Basin Gold | Burnstone | Mpumalanga | Feasibility study | 15.6 | 2006 |
| Harmony | Orkney | Free State | Repairs to no. 3 shaft | 7 | 2003 |
| Harmony | Kalgold | North West | Milling capacity increase | unknown | 2003 |
| Mintails | West Rand | Gauteng | Recommissioning Mogale plant | 20 | 2006 |
| Placer Dome /Western Areas Joint Vent | South Deep | Gauteng | Twin shafts | 4000 | 2005 |
| Simmer & Jack | TGME | Mpumalanga | Plant upgrade | unknown | 2005 |
| Thistle | President Steyn | Free State | Ore pass systems | unknown | 2003 |
| TOTAL | | | | 6814.2 | |

Table 10

| PLATINUM-GROUP METAL MINING - COMPLETED PROJECTS | | | | | |
|--|--|------------------|---|----------------|-----------------|
| Holding Company | Mine/Project | Province | Project | Cost R'million | Completion Date |
| African Rainbow Minerals/Imp | Two Rivers | Mpumalanga | Feasibility study | 160 | 2004 |
| Anglo Platinum | Lebowa Platinum | Limpopo Province | The Middelpunt Hill UG2 Expansion Project | 110 | 2000 |
| Anglo Platinum | Amandelbult Section | Limpopo Province | Amandelbult UG2 Expansion Project | 154 | 2000 |
| Anglo Platinum | PPRust | Limpopo Province | Expansion of capacity | 1300 | 2000 |
| Anglo Platinum | Union Section | Limpopo Province | UG2 expansion project | 446 | 2002 |
| Anglo Platinum | Amandelbult Section | Limpopo Province | UG2 concentrator | unknown | 2003 |
| Anglo Platinum | Rustenburg Section | North West | ACP Plant Phase A | 1800 | 2003 |
| Anglo Platinum | Union Section | Limpopo Province | 4 S & 4B UG2 declines | unknown | 2004 |
| Anglo Platinum | Bafokeng-Rasimone Platinum Mine | North West | Phase 1 | unknown | 2004 |
| Anglo Platinum | Union Section | Limpopo Province | 4 S & 4B declines (Phase 2) | unknown | 2005 |
| Anglo Platinum | Union Section | Limpopo Province | 3 N UG2 decline | unknown | 2005 |
| Anglo Platinum | Amandelbult Section | Limpopo Province | UG2 concentrator | 154.9 | 2005 |
| Anglo Platinum | Rustenburg Section | North West | ACP Plant Phase B | 200 | 2006 |
| Aquarius Platinum | Kroondal Platinum | North West | New mine development | 310 | 1999 |
| Aquarius Platinum | Kroondal Platinum | North West | Mining expansion | 100 | 2001 |
| Aquarius Platinum | Kroondal | North West | Plant upgrade | 81 | 2001 |
| Aquarius Platinum | Marikana | North West | New mine | 621 | 2003 |
| Barplats | Crocodile River | North West | Mine re-opening | 233 | 2002 |
| Barplats | Crocodile River | North West | Trial mining & exploration | 27 | 2003 |
| Barplats | Kennedy's Vale | Mpumalanga | Feasibility study | 8.9 | 2003 |
| Implats | Impala Platinum | North West | New UG2 Plant | 100 | 2001 |
| Implats | Impala Platinum | North West | Concentrate drying plant | 99 | 2002 |
| Implats | Impala Platinum | North West | 10 Shaft decline | 171 | 2003 |
| Implats | EPMR | Gauteng | Expansion phase 1 | 60 | 2003 |
| Implats | Impala Platinum | North West | UG2 plant open circuit mill | 5 | 2004 |
| Implats | Impala Platinum | North West | 1 Shaft decline | 886 | 2004 |
| Implats | Impala Platinum | North West | 12 Shaft south decline | 824 | 2004 |
| Implats | Impala Platinum | North West | 12 Shaft north decline | 471 | 2005 |
| Implats | Base Metals Refinery | Gauteng | Expansion | unknown | 2005 |
| Ivanhoe Nickel & Platinum | Turfspruit | Limpopo Province | Pre-feasibility study | 150 | 2004 |
| Jubilee | Vlaklaagte/Zwartdoorns | North West | Exploration programme | unknown | unknown |
| Lonmin Platinum | Lonmin Plat. Limpopo Phase 1 (Voorspoed) | Limpopo Province | Re-opening of mine | 800 | 2005 |
| Lonmin Platinum | Karee | North West | 3A shaft | 96 | 2002 |
| Lonmin Platinum | Karee, Western & Eastern | North West | Opencast mining | 98 | 2002 |
| Lonmin Platinum | Western Platinum | North West | Sulphur fixation plant | 96 | 2003 |
| Lonmin Platinum | Western Platinum | North West | New converters | unknown | 2003 |
| Lonmin Platinum | Western Platinum | North West | Newman incline shaft | 150 | 2004 |
| Lonmin Platinum | Karee | North West | Karee 3 Merensky sub-incline | 148 | 2005 |
| Lonmin Platinum | Western Platinum | North West | Rowland UG2 sub-decline shaft | 160 | 2005 |
| Northam Platinum | Northam | Limpopo Province | UG2 Capacity Expansion | 142 | 2001 |
| Northam Platinum | Northam | Limpopo Province | Upgrading of hydropower and backfill facilities | 10 | 2002 |
| Northam Platinum | Northam | Limpopo Province | Decline to 13 level | 31 | 2002 |
| Northam Platinum | Northam | Limpopo Province | Accelerated development programme | 209.5 | 2005 |
| Northam Platinum | Northam | Limpopo Province | Additional pumping capacity | 6 | 2005 |
| Northam Platinum | Northam | Limpopo Province | Safety equipment | 17 | 2005 |
| Northam Platinum | Northam | Limpopo Province | Employee housing | 9 | 2005 |
| Pan Palladium/Implats | Grass Valley | Limpopo Province | Pre-feasibility study | 11.6 | 2004 |
| Platinum Group Metals/Anglo | Western Bushveld JV | North West | Exploration programme | 35 | 2006 |
| Ridge Mining | Blue Ridge | Mpumalanga | Feasibility study | unknown | 2003 |
| Ridge Mining | Blue Ridge | Mpumalanga | Revised feasibility study | unknown | 2005 |
| Total | | | | 10490.9 | |

Table 11

| PROCESSING MINERALS - COMPLETED PROJECTS | | | | | |
|--|---------------------------|------------------|---------------------------------------|----------------|-----------------|
| Holding Company | Mine/Project | Province | Project | Cost R'million | Completion Date |
| Anglo Platinum | Polokwane | Limpopo Province | Polokwane smelter | 1450 | 2003 |
| Anglo Platinum | Rustenburg Section | North West | Slag-cleaning furnace | 280 | 2003 |
| Anglo Platinum | Union Section | North West | Mortimer concentrator flotation cells | 20 | 2003 |
| Aquarius/GB Mining/Sylvania | Chromite Tailings Retreat | North West | Tailings retreatment plant | 26 | 2005 |
| Implats | Impala Platinum | North West | Smelter upgrade | 250 | 2001 |
| Implats | Impala Platinum | North West | Sulphuric acid plant | 65 | 2002 |
| Implats | Impala Platinum | North West | Tailings scavenging plant | 48 | 2003 |
| Lonmin Platinum | Western Platinum | North West | MF2 regrind mill | 12 | 2001 |
| Lonmin Platinum | Karee | North West | B-stream concentrator | 141.5 | 2001 |
| Lonmin Platinum | Western Platinum | North West | New smelter | 368 | 2002 |
| Lonmin Platinum | Eastern Platinum | North West | C stream concentrator | 458 | 2002 |
| Lonmin Platinum | Karee | North West | K4 concentrator | | 2002 |
| Northam Platinum | Northam | Limpopo Province | Rebuilding of smelter furnace | 35 | 2003 |
| Northam Platinum | Northam | Limpopo Province | Refrigeration plants | 46 | 2004 |
| Northam Platinum | Northam | Limpopo Province | Hoisting improvements | 12 | 2004 |
| Aflease | Afrikander Operations | North West | Pit & process plant upgrade | unknown | 2002 |
| AngloGold | Great Noligwa | North West | No 8 plant mill | 205 | 2003 |
| Avgold | New Consort | Mpumalanga | Slimes dam retreatment | | 2002 |
| Avgold | Sheba | Mpumalanga | Slimes dam retreatment | 17 | 2002 |
| Bema | Petrex | Gauteng | Grootvlei Mill expansion | unknown | 2003 |
| Bema | Petrex | Gauteng | Water treatment plant | 15 | 2006 |
| DRDGOLD | North West | North West | No 6 shaft mid-shaft loading | 23.8 | 2002 |
| DRDGOLD | Blyvooruitzicht | Gauteng | Slimes Dam Reclamation | 45 | 2004 |
| Gold Fields | Kloof | Gauteng | Metallurgical plant upgrades | 25 | 2002 |
| Gold Fields | Driefontein | Gauteng | No 2 plant new mill | unknown | 2002 |
| Mine Waste Solutions | Chemwes | North West | Gold tailings retreatment plant | 104 | 2003 |
| Total | | | | 3646.3 | |