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Assore Limited (Assore) is a mining holding company engaged principally in ventures involving base minerals and metals.

The group's principal investment is a 50% interest in Assmang Limited (Assmang) which it controls jointly with African Rainbow Minerals Limited (ARM). The group, through its various joint venture entities and subsidiary companies, is involved in the mining of manganese, iron and chrome ores together with other industrial minerals and the production of manganese and chrome alloys. The group is also responsible for marketing all products produced, the bulk of which is exported and the remainder either used in the group's beneficiation processes or sold locally.

The company was incorporated in 1950 and its shares are listed on the JSE Limited under "Assore" in the general mining sector.

15,02% of the company's shares are held by black empowerment entities: Shanduka Resources (Proprietary) Limited (11,76%) and the Bokamoso Trust (3,26%), a broad-based black empowerment community trust.

The company also has control over an additional 10,98% of its shares which are earmarked to increase empowerment shareholding to 26% by the year 2014 as required by the Minerals and Petroleum Resources Development Act.

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## CORPORATE INFORMATION

### EXECUTIVE DIRECTORS

Desmond Sacco (Chairman)<sup>#</sup>  
R J Carpenter (Deputy Chairman)  
C J Cory (Chief Executive Officer)  
P C Crous (Group Technical Director)

### NON-EXECUTIVE DIRECTORS

P N Boynton  
B M Hawksworth<sup>\*†#</sup>  
M C Ramaphosa  
Dr J C van der Horst<sup>\*†#</sup>

### ALTERNATE DIRECTORS

J W Lewis (British) (Alternate to R J Carpenter)  
N G Sacco (Alternate to C J Cory)  
P E Sacco (Alternate to Desmond Sacco)  
R Smith (Alternate to M C Ramaphosa)

<sup>†</sup> Independent

<sup>\*</sup> Member of the Audit Committee

<sup>#</sup> Member of the Remuneration Committee

### SECRETARY AND REGISTERED OFFICE

African Mining and Trust Company Limited  
Assore House  
15 Fricker Road  
Illovo Boulevard  
Johannesburg 2196

### POSTAL ADDRESS

Private Bag X03  
Northlands 2116  
Email: [info@assore.com](mailto:info@assore.com)  
[www.assore.com](http://www.assore.com)

### TRANSFER SECRETARIES AND SHARE TRANSFER OFFICE

Computershare Investor  
Services (Proprietary) Limited  
70 Marshall Street  
Johannesburg 2001

### ATTORNEYS

Webber Wentzel Bowens  
10 Fricker Road  
Illovo Boulevard  
Johannesburg 2196

Deneys Reitz

82 Maude Street  
Sandton 2196

### AUDITORS

Ernst & Young Inc.  
Wanderers Office Park  
52 Corlett Drive  
Illovo  
Johannesburg 2196

### BANKERS

The Standard Bank of South Africa Limited  
88 Commissioner Street  
Johannesburg 2001

### CORPORATE INFORMATION

Company registration number: 1950/037394/06  
Incorporated in South Africa

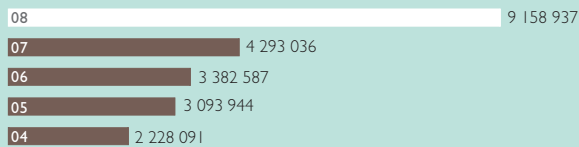
FINANCIAL HIGHLIGHTS

□ Increased prices for all products and significantly higher sales volumes for manganese ore

□ Headline earnings increased by 315,4% to R3,06 billion

□ Final dividend increased from 200 cents to 1 000 cents per share

□ Approval for feasibility study on 6,0 million ton expansion at Khumani Iron Ore Mine



Turnover (R'000)



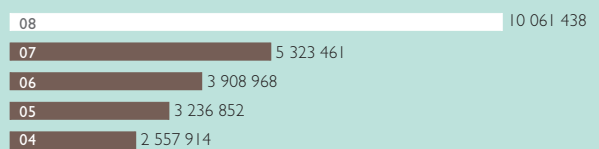
Gross profit (R'000)



Attributable profit (R'000)



Headline earnings (R'000)



Total assets (R'000)

TURNOVER

R9 158,9m

ATTRIBUTABLE PROFIT

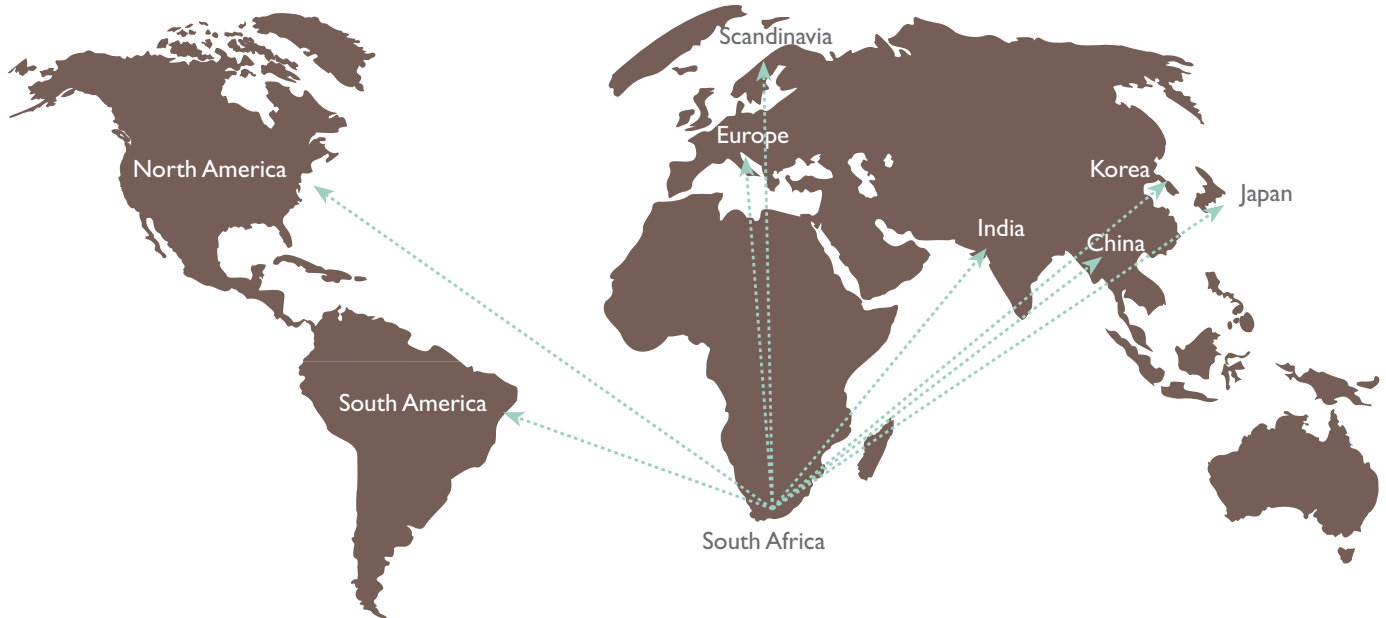
R3 069,5m

GROSS PROFIT

R4 490,4m

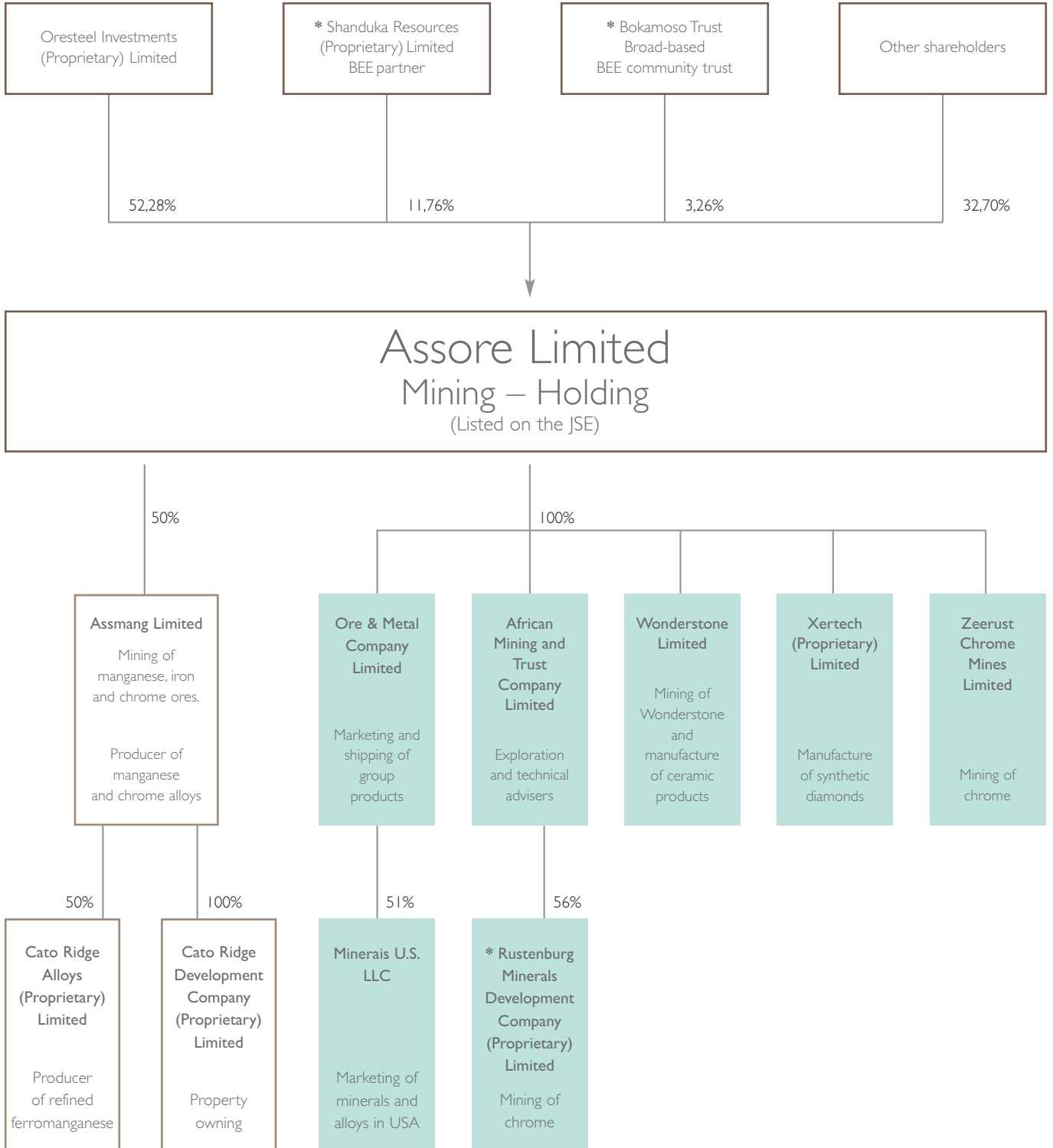
HEADLINE EARNINGS

R3 057,7m



Strong relationships have been established with customers in Europe, North America, South America, India and the Far East and products with a market value of approximately R14,6 billion (2007: R6,3 billion) were marketed and distributed in these regions during the year.

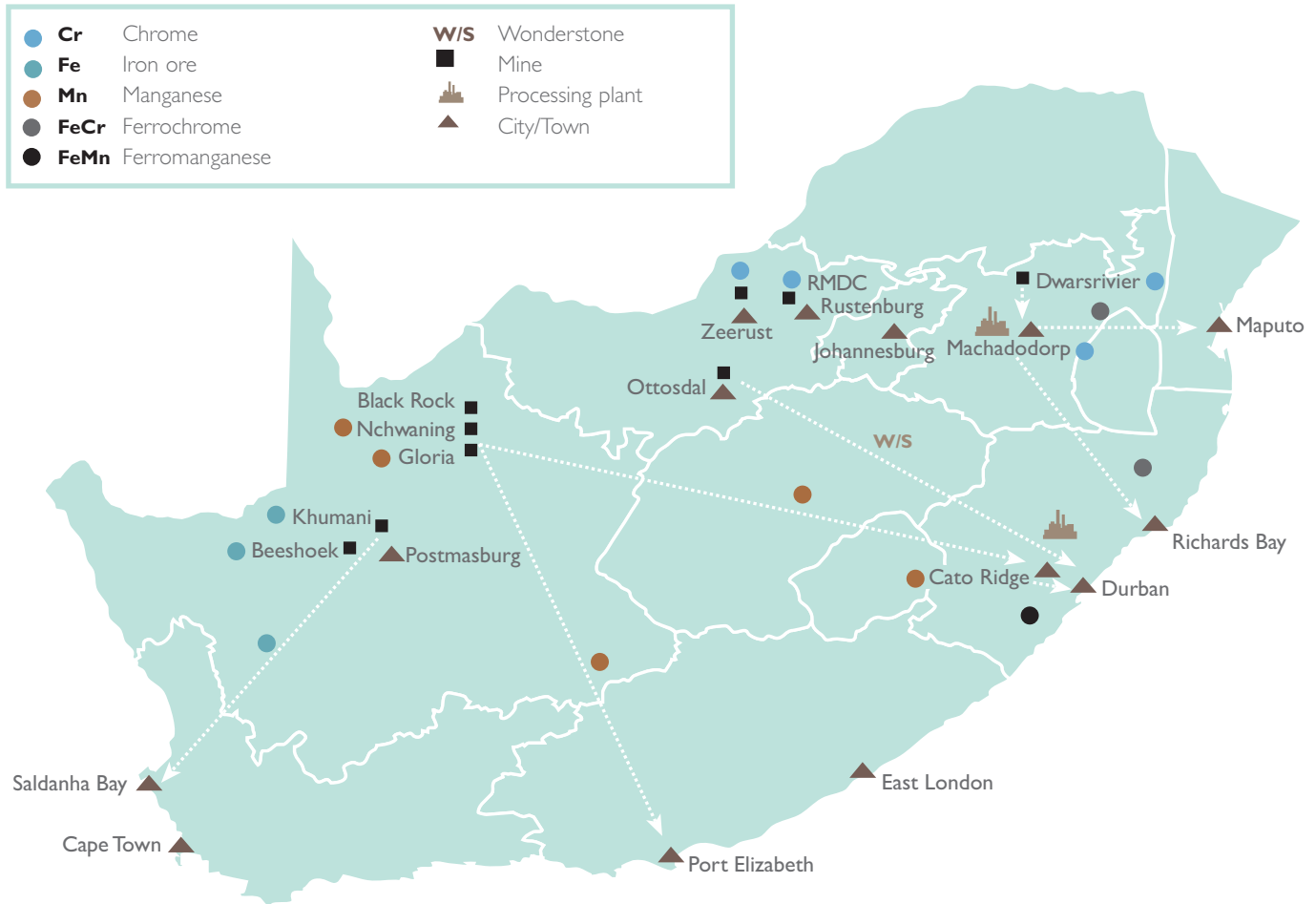
GROUP STRUCTURE OF OPERATING COMPANIES



\* Black economic empowered entity

## Location of operations in South Africa

The activities of the group were conducted through its jointly controlled entities and subsidiary companies which are set out in the group structure chart included on page 5.



The profit/(loss) contributions for the various classes of business of the group were as follows:

|  | <b>2008</b><br>R'000 | 2007<br>R'000 |
|--|----------------------|---------------|
| Mining and beneficiation                             | <b>2 764 474</b>     | 655 098       |
| Marketing and shipping                               | <b>454 167</b>       | 120 553       |
| Profit on disposal of available-for-sale investments | <b>19 221</b>        | 36 786        |
| Other  | <b>(59 497)</b>      | (9 082)       |
| Profit per income statement                          | <b>3 178 365</b>     | 803 355       |

| Operating entities                      | Commodity                    | Operation  | Type of operation   | Description  |
|---|------------------------------|--|---|--|
| <b>JOINT VENTURE ENTITY (ASSMANG)</b>   |                              |  |   |  |
| Manganese Division                      | Manganese<br>(see page 44)   | <ul style="list-style-type: none"> <li>● Nchwaning Mine</li> <li>● Gloria Mine</li> <li>● Cato Ridge Works</li> <li>● Cato Ridge Alloys</li> </ul> | <p>Mine, washing and screening</p> <p>Mine, washing and screening</p> <p>Ferromanganese smelting</p> <p>Refined ferromanganese smelting</p> | Manganese ore is mined in the Black Rock area of the Northern Cape province and manganese alloys are produced at the Cato Ridge Works in KwaZulu-Natal. Cato Ridge Alloys, a joint venture with Japanese partners, produces refined ferromanganese at the Cato Ridge Works. Feed for the Cato Ridge Works is derived from Assmang's manganese mines and the bulk of both ore and alloy production is exported.               |
| Chrome Division                         | Chrome<br>(see page 44)      | <ul style="list-style-type: none"> <li>● Dwarsrivier Mine</li> <li>● Machadodorp Works</li> </ul>  | Mine and concentrator Smelter and pelletising plant   | Chrome ore is mined at Dwarsrivier Mine near Lydenburg in Mpumalanga province and production is used mainly to supply the group's Machadodorp Ferrochrome Works.   |
| Iron Ore Division                       | Iron ore<br>(see page 44)    | <ul style="list-style-type: none"> <li>● Beeshoek Mine</li> <li>● Khumani Mine</li> </ul>  | <p>Mine, crushing, screening and dense medium jigging</p> <p>Mine, crushing, screening and dense medium jigging</p>                         | <p>Iron ore is mined at the Beeshoek open-cast operations which are located outside Postmasburg in the Northern Cape.</p> <p>Iron ore is mined in open-cast operations which are located near Kathu in the Northern Cape.</p>  |
| <b>SUBSIDIARY COMPANIES</b>             |                              |  |   |  |
| Rustenburg Minerals Development Company | Chrome<br>(see page 44)      | Rustenburg Mine  | Mine and concentrator   | Chrome ore is mined near Rustenburg in open-cast operations and production is supplied mainly to the local market. The company is in the process of developing two decline shafts which when in production in early 2009 will replace the existing open-cast operations.   |
| Wonderstone                             | Wonderstone<br>(see page 44) | Wonderstone Mine   | Mining of Wonderstone and manufacture of ceramic products   | The company mines a type of pyrophyllite, which, for trade purposes, is referred to as Wonderstone. The deposit is located outside Ottosdal, approximately 300 kilometres west of Johannesburg. The bulk of the material mined is exported to the United States of America, the United Kingdom and the Far East, and the balance beneficiated to produce high precision components manufactured to customers' specification. |
| Zeerust Chrome Mines                    | Chrome                       | Zeerust Chrome   | Mining of chrome  | Processing chrome dumps  |
| Xertech                                 | N/A                          | Xertech  | Manufacture of synthetic diamonds   | The group's synthetic diamond production facility operates from premises in Linbro Park on the outskirts of Johannesburg under the name of Xertech. Our production is currently for export.  |
| Ore & Metal Company                     | N/A                          | Ore and metal  | Marketing and shipping of products<br>(see page 44)   | Ore and Metal Company Limited is responsible for the marketing and shipping of all the group's products, including those produced by the three divisions of Assmang. Strong relationships have been established with customers in Europe, North America, South America, India and the Far East.  |
| Minerais U.S. LLC                       | N/A                          | Minerais   | Marketing of minerals and alloys in USA<br>(see page 44)  | Minerais U.S. LLC is responsible for marketing and sales administration of the group's products in the USA, in particular manganese and chrome alloys, and trades in various related commodities.  |
| African Mining & Trust Company          | N/A                          | African Mining   | Exploration and technical adviser<br>(see page 44)  | African Mining and Trust Company Limited is technical adviser to Assmang and other group companies for which it receives fee income.   |



## BOARD OF DIRECTORS



## EXECUTIVE DIRECTORS

**DESMOND SACCO**

Chairman

*BSc (Hons) (Geology) (Wits) (Unisa)*

Des qualified as a geologist and joined the Assore group in 1968. He was appointed to the Assore board in 1974 and, on retirement of his father in 1992, he was appointed Chairman and Managing Director. In that year, he was also appointed Deputy Chairman of Assmang Limited and in 1999, he became Chairman of Assmang. He is a fellow of the Institute of Directors (IOD) and of the Geological Society of South Africa (GSSA).

**C J CORY**

Chief Executive Officer

*BA, CA(SA), MBA (Wits)*

Chris completed articles with Alex.Aiken & Carter (now KPMG) and qualified as a Chartered Accountant in 1982. In 1989 he joined the Assore group as Group Accountant. In 1992 he was appointed Group Financial Director and made Chief Executive Officer in June 2004 when the roles of Assore Chairman and Managing Director were separated. He was appointed to the Assmang Board as a non-executive director in 1993 and currently chairs the Assmang Audit Committee. He is a member of the South African Institute of Chartered Accountants (SAICA).

**R J CARPENTER**

Deputy Chairman

*BA, ACIS*

Bob joined the Ore & Metal Company Limited in 1964 and was appointed Managing Director in 1991. Ore & Metal is a wholly owned subsidiary of the Assore group and is marketing and shipping agent for all products produced by Assore and Assmang group companies. He was appointed to the Assore board in 1987, to the Assmang Board in 1989 and was made Deputy Chairman of Assore in 1993.

**P C CROUS**

Group Technical Director

*BSc (Eng), BComm, MBA*

Phil trained as a mining engineer obtaining a BSc (Eng) at Pretoria University in 1975. Thereafter he joined Iscor, and in 1977 he took up a position with Assmang where he advanced to Mine Manager. In 1982 he joined Sasol as General Mine Manager and was subsequently promoted to Operations Manager at Secunda Collieries, responsible for four mechanised mines. In 1988 he joined manufacturing company Sandock-Austral as Managing Director. In 1991 he was invited to join Assore in his current position as Group Technical Director and was appointed to the Assmang Board in 1992. He is a member of the South African Institute of Mining and Metallurgy (SAIMM) and the Institute of Directors (IOD).



## NON-EXECUTIVE DIRECTORS

### **P N BOYNTON**

Non-executive director

*BSc (Hons), BComm, CA(SA), ACMA, MBA*

Paul joined Old Mutual's investment team in 1995, having previously worked as an investment banker in Johannesburg for seven years and before that for Deloitte for three years. He is currently head of Alternative Asset Management at Old Mutual and an executive director of Old Mutual Investment Group South Africa. He joined the Assore board as a non-executive director in July 2004 and served until 27 August 2008 on the group's Audit Committee.

### **B M HAWKSWORTH**

Independent non-executive director

*CA(SA)*

Brian qualified as a Chartered Accountant in Durban and relocated to Johannesburg in 1973 as a partner in Ernst & Young. Since withdrawing as a partner of Ernst & Young he has held several non-executive directorships including the Financial Services Board (the FSB). He was appointed to the Assore board as an independent non-executive director in 1996 and currently chairs the Assore Audit and Remuneration Committees. He is a member of the South African Institute of Chartered Accountants (SAICA) and was a past member of its Council and Executive Committee and is also a fellow of the Institute of Directors which he chaired in the early 1990s.

### **M C RAMAPHOSA**

Non-executive director

*BProc*

Cyril is executive chairman of Shanduka Group, a black-owned and managed investment company. He is joint non-executive chairman of Mondi Group and non-executive chairman of the MTN Group Limited, the Bidvest Group and SASRIA Limited. His other directorships include SAB Miller, Macsteel, Alexander Forbes and Standard Bank.

He is a member of the Commonwealth Business Council and Vice-Chairman of the Global Business Coalition on HIV/AIDS, Tuberculosis and Malaria (GBC). He was general secretary of NUM in the 1980s. Cyril, as Secretary General of the African National Congress (the ANC) from 1991 – 1994 led the party in the negotiations that resulted in South Africa's first democratic elections in 1994. After chairing the constitutional assembly, he left politics for business in 1997. He is the former chairman of the Black Economic Empowerment Commission (1998 – 2001). Cyril, a qualified lawyer, remains a member of the ANC and its national executive committee.

### **DR J C VAN DER HORST**

Independent non-executive director

*BA, LLD*

Johannes studied at the Universities of Stellenbosch and Hamburg (Germany) and the Harvard Business School. He held various positions in Old Mutual from 1971 to 2002 including General Manager (Investments) from 1985 to 1997. In September 1997, he was appointed to head up Old Mutual's demutualisation project which culminated in the listing of Old Mutual on the London Stock Exchange and the JSE Limited in July 1999. He served on the Assore board between 1989 and 1997, and again since January 2003 when he was appointed as an independent non-executive director and serves on the group's Audit and Remuneration Committees. He is also on the boards of Reunert Limited and Wooltru Limited.

## Manganese and iron ore continue to be big profit generators but the manganese price now fixed quarterly, however, demand is still strong particularly from China.

If it does nothing else, a chairman's annual review is expected to address at least two key issues; a review of the past year and an informed preview of the year ahead. While I eagerly look forward to doing the first, to attempt any specific predictions regarding the world economy or the outlook for our business at this stage would be foolhardy.

The need for caution in this respect is emphasised by the fact that many of the world's financial experts, who were predicting 'soft landings' and 'a possible minor recession' a few months ago, are increasingly relating the current state of the world's economy to conditions in the Great Depression of the 1930s.

Possibly the turmoil currently being experienced is different, but one thing seems prudent and that is to assume that the spin-off of what has already happened will reverberate around the world for many months to come.

### THE YEAR UNDER REVIEW

The past financial year ending 30 June 2008, saw the group achieve exceptional results, exceeding even the high expectations, which I anticipated in my review, last year. Assore's prime focus remains its 50% shareholding in Assmang and the commissions and other income derived from marketing the group's products and providing technical and management services to group companies.

The contribution from core products relative to Assore's headline earnings for the past year are manganese ores and alloys with 73,6%, iron ore with 14% and chrome ores and alloys with 12,3%. As longer-term readers will know, the past few years have seen a steadily increasing demand for these minerals and metals, fed largely by a rampant Chinese economy, which spurred sales volumes and prices. Assmang's earnings, which are proportionately consolidated by Assore, increased Assore's profit for the year by 315,7% to a record of R3,18 billion (2007: R803,4 million) for the year under review. The manner in which this growth escalated over the course of the year is highlighted by the fact that 78,7% of those earnings, were achieved in the second half of the year.

A notable feature of the year was that the rand exchange rate, which has often played a key role in previous years' performances, was relatively neutral. The average rand US dollar exchange rate for the 2008 year of R7,27 was less than 1% above the previous year and the euro was barely 1,1% higher at R10,72 and that was more a factor of euro strength against most other major currencies than of rand weakness.

Other positive achievements during the year included the effective commissioning of the Khumani Iron Ore Mine, which commenced production in May 2008, and is on schedule to ramp-up exports from 8,4 million to 10 million tons per annum with effect from the first quarter of 2010. The expansion of output by a further six million tons per annum, to 16 million tons at an estimated cost of R7,3 billion, is the subject of a feasibility study.

The public enquiry, opened by the Department of Labour in 2007, into the manganese dust exposure levels at the Cato Ridge Works has received some attention in the press in the past months. As the enquiry is still in progress, it would be premature to comment on the outcome other than to say that dust levels are monitored and recorded continuously in the Works to ensure they are maintained within minimum legislated requirements. A medical surveillance programme, which has been reviewed by a team of appropriate medical practitioners, has been initiated at the Works and will be implemented at all group operations during the forthcoming financial year.

Regretfully, Cato Ridge Works suffered seven fatalities during the year in two separate furnace explosions, which occurred in December 2007 and February 2008. On behalf of management and the company, I offer condolences to their relatives and a Trust is currently in the process of being set up to alleviate the financial situations of the families concerned. The damage caused by the incidents led to the shutdown of the entire plant for a short period which has affected performance of the Manganese Division into the new financial year but where possible, contractual sales have been met out of stock. Rebuilding of No 6 furnace has commenced and it is scheduled to come on line during October 2008.

### SALES VOLUMES

Sales volumes for the year by commodity were as follows:

|                   | 2008  | Metric tons '000 |          |
|-------------------|-------|------------------|----------|
|                   |       | 2007             | % change |
| Iron Ore          | 6 581 | 6 855            | (4)      |
| Manganese Ore*    | 3 711 | 2 327            | 59       |
| Manganese Alloys* | 247   | 251              | (2)      |
| Charge Chrome     | 275   | 232              | 19       |
| Chrome Ore*       | 304   | 172              | 77       |

\* Excludes intragroup sales

**RESULTS FOR THE YEAR**

Consequent upon the significant increases in volume sales and the higher prices achieved by Assmang, Assore's turnover for the 2008 financial year rose by 113,3% to R9,16 billion while gross profit increased by 301,4% to R4,49 billion. Profit after tax was R3,18 billion, representing a 295,6% rise and headline earnings per share were 11362 cents, up by 317,7%. The total dividend per share, in relation to these earnings was 1250 cents (2007: 350 cents) an increase of 257,14%.


**CAPITAL EXPENDITURE**

The bulk of the group's capital expenditure occurs in Assmang and is summarised by division for the year as follows:

|                        | 2008<br>Rm   | 2007<br>Rm |
|------------------------|--------------|------------|
| Iron Ore Division      | <b>2 231</b> | 1 735      |
| Manganese Division     | <b>511</b>   | 297        |
| Chrome Division        | <b>158</b>   | 199        |
| <b>Total – Assmang</b> | <b>2 900</b> | 2 231      |

Of the R2,23 billion spent in the Iron Ore Division, R2,1 billion related to the construction of the Khumani Iron Ore Mine where production has already commenced and which is on schedule and within budget to produce at a rate of 10 million tons per annum, commencing during the first quarter of 2010. The remainder of the capital expenditure related to rebuilding and upgrading the furnaces at Cato Ridge (R102 million) and replacement of equipment, expansion of housing facilities and upgrading of environmental projects.

**MINING RIGHT CONVERSIONS**

New order mining rights have already been obtained for the Khumani Iron Ore Mine and the chrome mine at Rustenburg. Applications have been submitted for the conversion of mining rights for the Wonderstone Mine and Assmang's manganese and chrome mines. Once these applications are finalised, all the group's mining rights will be 'new order rights' as envisaged by the Minerals and Petroleum Resources Development Act. (refer Black Economic Empowerment page .

**DISCLOSURE OF SPECIAL SHARE REPURCHASES**

At a general meeting convened on 4 September 2008, shareholders approved all resolutions pertinent to the proposed repurchase of shares which were detailed in a circular to shareholders on 12 August 2008 and subsequently updated with the release of results for the financial year, dated 29 August 2008. These shares were acquired with the intention of being on-sold into a second BEE transaction in order to increase ownership of Assore shares by HDSAs from the current 15,3% to 26% as required by the charter by the year 2014.

Current stock market conditions, both locally and internationally, are rendering it extremely difficult to complete the envisaged transaction to take Assore's empowerment to 26% in the short term. However, the group has the necessary cash flow to finance the cost of the preference shares which were issued on 15 September 2008, which at current rates amounts to approximately R27 million per month and in all likelihood the group will be in a position to commence redeeming these shares out of cash resources during the forthcoming year.

**DIVIDENDS**

An increased interim dividend of 250 cents (2007: 150 cents) per share was declared on 18 February 2008 and paid to shareholders on 17 March 2008.

In line with the results for the year the board declared an increased final dividend of 1000 cents (2007: 200 cents) making a total dividend for the year of 1250 cents per share (2007: 350 cents). The final dividend will have been paid to shareholders on 22 September 2008 and is not included in the income statement as it was declared after year-end.

**OUTLOOK**

As I indicated at the beginning of this review, making any specific comments regarding the outlook for the next financial year in the prevailing economic conditions would be little more than a hazardous guess. Assore's fundamental position is one of strength and remains so, going ahead, but it has to be borne in mind that our products are largely exported to countries whose demand for them could be significantly affected by the financial health of those countries or the countries to which they sell after refining and processing.

Many of our sales are contractual – the iron ore on annual terms, manganese ore between three and six months, while alloy contracts are fixed quarterly. Had the world economic 'meltdown' not occurred, it is reasonable to say that we would have been looking at another good year. I cannot be more specific than that.

Of potentially favourable consideration is the fact that the bulk of Assmang sales are paid in foreign currencies, mainly US dollars and that a weaker rand – already a fact at the time of writing – has a significantly beneficial effect on income as it has done regularly in recent years.

**APPRECIATION**

Another record year highlights the persistent dedication and commitment of management and staff for which I thank them, particularly since operating at high tempo places its own strains on resources. The part played by our customers, suppliers, shareholders and bankers has again contributed greatly and receives our appreciation.

The effective commissioning of the Khumani Iron Ore Mine, which commenced production in May 2008, and is on schedule to ramp up exports from 8,4 million to 10 million tons per annum with effect from the first quarter of 2010.





As a result of the higher US dollar prices for manganese alloys for the year combined with increased sales of manganese ore, the contribution to the profit of Assore from this division increased to R4 087 million (2007: R287,9 million)

## MINING AND BENEFICIATION

### MANGANESE ORE AND ALLOYS

Manganese ore is mined by Assmang in the Black Rock area of the Northern Cape province and manganese alloys are produced at the Cato Ridge Works in KwaZulu-Natal (the Works). Cato Ridge Alloys, a joint venture between Assmang, Mizushima Ferroalloys Company Limited and Sumitomo Corporation Limited, (both of Japan), produces refined ferromanganese by causing oxygen to be blown into a converter fed with molten metal supplied by the Works. Feed for the Works is derived from Assmang's manganese mines and the bulk of both ore and alloy production is exported. Sales tonnages of manganese ore and alloy for the year were as follows:

|                   | Metric tons<br>2008<br>'000 | Metric tons<br>2007<br>'000 |
|-------------------|-----------------------------|-----------------------------|
| Manganese ore*    | 3 711                       | 2 327                       |
| Manganese alloys* | 247                         | 251                         |

\* Excludes intragroup sales

Manganese ores and alloys are used in the production of crude steel and world crude steel production continued to grow in the year under review increasing for the 2007 calendar year by 8,1% to a record of 1 343 million tons (2006 calendar: 1 240,0 million tons) of which China produced 489,0 million tons (2006 calendar: 419,0 million

tons) representing an increase over the previous year of 16,7% (2007: 17,7%). Chinese growth remains the main driver in the demand for crude steel but it is unlikely that the current growth of steel output in China will not continue at its present rate. With strong demand from increasing steel production and a shortage of both high and medium grade manganese ore, due to the consolidation of suppliers as well as a reduction in sales to the seaborne market by some integrated producers, prices of both manganese ores and alloys rose to unprecedented levels during the year under review. Prices for manganese alloys were propelled even further by other factors such as increased export taxes in China and electric power cost escalations.

The performance of the Manganese Division was negatively affected by the disruption to the production caused by the unfortunate explosions at Cato Ridge in December 2007 and February this year regrettably resulting in seven fatalities. The latter explosion destroyed Furnace 6, severely damaging the control room of Furnace 5 and caused the entire plant to be shut down for a period of time. Furnace 6 has been rebuilt and recommissioned during October this year. Where possible contractual sales commitments have been met by selling from stock.

Sales of high carbon ferromanganese were marginally up at 174 000 tons for the year (2007: 170 000 tons), but stocks were significantly reduced as a result of the lower production. Alloy sales from the



RUSTENBURG MINERALS

metal recovery plant increased to 29 071 tons (2007: 24 000 tons) for the year in line with production improvements. Refined ferromanganese sales were, however, severely affected by the explosion at Furnace 6 and reduced sales tonnage to 44 705 tons from the previous year's 56 000 tons. With Furnace 6 back into production at Cato Ridge Alloys the hot metal supply to the refining converter of Cato Ridge Alloys will return to normal from November 2008 onwards.

As a result of the higher US dollar prices for manganese alloys for the year combined with increased sales of manganese ore, the contribution to the profit of Assore from this division increased to R4 087 million (2007: R287,9 million). Capex for the year for the Manganese Division was R5 10,8 million (2007: R297,7 million) of which R292,7 million (2007: R34,7 million) was spent on furnace rebuilds and R2 18,1 (2007: R38,9 million) on various smaller projects at the mine.

#### CHROME AND CHROME ALLOYS

Chrome ore is mined at Assmang's Dwarsrivier Mine near Lydenburg in Mpumalanga province and production is used mainly to supply Assmang's Ferrochrome Works at Machadodorp. The group also mines chrome ore near Rustenburg (Rustenburg Minerals Development Company (Proprietary) Limited) (RMDC) in open-cast operations and production is supplied mainly to the local market (refer black empowerment in Assore).

The bulk of chrome ore mined worldwide is converted to ferrochrome and utilised in the production of stainless steel. Global stainless steel production has remained almost flat during the period under review with production in the first half of calendar 2008 at 15,2 millions tons (2007: 15,5 million tons) and total production for calendar 2008, unlikely to exceed 28,2 million tons (2007 calendar year: 28,5 million tons).

Despite stainless steel's disappointing performance, demand for ferrochrome remained very strong throughout the period due to requirements from China and a reduction in austenitic stainless steel production due to high nickel prices. This reduction in turn caused an increase in ferritic production with a resulting rise in demand for virgin raw materials. This change in market demand combined with low stocks levels and the uncertainties created by the electrical power supply outages at the beginning of the year, assisted ferrochrome producers in achieving significant price increases in three out of the four quarters.

Assmang's charge chrome sales increased by 18,4% to 274 829 tons for the financial year (2007: 232 000 tons), while chrome ore sales increased by 6,9% to 183 498 tons (2007: 172 000 tons). As a result of the higher prices and increased volumes, the division made a substantially higher profit for the year and the contribution to the profit of Assore was R341,5 million (2007: R38,4 million).



The Khumani Mine is on schedule and within budget to produce 10 million tons per annum with effect from the first quarter of 2009 and production for the year to June 2009 should increase to 7,2 million tons.

Approximately 341 634 tons (2007: 286 032 tons) of run of mine, lumpy and concentrate were produced by RMDC during the year which, as a result of higher prices, resulted in a net profit after tax of R53,7 million (2007: R10,2 million) of which R23,6 million (2007: R4,5 million) was due to minorities being BEE partners, Mampa Investment Holdings (Proprietary) Limited.

Mining operations at RMDC are still open-cast, however, open-cast resources will be largely depleted during the forthcoming year and two underground shafts are being developed on the existing deposits at an estimated cost of R150 million (2007: R100 million). Development of these shafts commenced in the current period and as a result capital expenditure during the year increased to R49,4 million (2007: R7,6 million). Capital expenditure on the new shafts will be funded from the cash resources of RMDC and, if required, loan facilities made available by Assore.

#### IRON ORE

Iron ore is mined by Assmang in open-cast operations at Beeshoek which is located outside Postmasburg in the Northern Cape and from the new Khumani Iron Ore Mine near Kathu (Khumani) which commenced production in May 2008. During the year and until the plant and loading facilities at Khumani became operational, detrital iron ore from the Khumani was transported by road to Beeshoek for processing in order to meet contractual commitments to customers.

Sales of iron ore for the year were in line with both plan and contractual commitments and totalled 6,6 million tons (2007: 6,9 million tons). The Khumani Mine is on schedule and within budget to ramp up production for export from 8,4 million tons per annum to 10,0 million tons per annum with effect from the first quarter of 2010 and production for the year to June 2009 should increase to 7,2 million tons.

Following a successful prefeasibility study, agreement has been reached to proceed with a feasibility study on a 6 million ton expansion at Khumani which would increase production capacity from 10 million tons per annum to 16 million tons per annum at an estimated cost of R7,3 billion. Start up expenditure on the study of R1,2 billion, including the purchase of long lead time capital item has been approved and the study should be completed by the second quarter of calendar 2009. In line with commitments received from Transnet on the additional rail and port capacity required, 4 million of the 6 million tons will be sold in the export market and the balance of 2 million tons will be placed into the local market.

World demand for seaborne iron ore continued to grow rapidly during the year-end and for calendar 2007 was 782,0 million tons (2006: 722,0 million tons) with demand expected to increase to at least 866 million tons in 2008 as the growth in world crude steel production continues.



## WONDERSTONE

Based on strong world demand for iron ore especially in China, prices improved by a further 65% in the last quarter of the year under review. Based on the higher prices the contribution of the Iron Ore Division to Assore profit was significantly higher at R780 million (2007: R339,7 million).

Capital expenditure for the year in the Iron Ore Division was R2 231,0 million (2007: R1 734,5 million) of which R2 131,0 (2007: R1 641,0 million) was spent on development of Khumani and production commenced in May 2008 at a capital cost to date of R3 770,5 million. Capacity is currently being increased from 8,4 million tons to 10,0 million tons which is on schedule to be achieved by the first quarter of 2010 and at a total cost, including expenditure to date, of R4,2 billion.

### WONDERSTONE

Since 1937, the group has mined a type of pyrophyllite which, for trade purposes, is referred to as Wonderstone. The deposit, which is located outside Ottosdal, approximately 300 kilometres west of Johannesburg, is of volcanic origin and displays unique corrosion, heat and abrasive resistant properties. The bulk of the material mined is reworked into finished components and exported to the United States of America, the United Kingdom and the Far East. The components are utilised in various hi-tech industrial applications including the manufacture of synthetic diamonds and consumable products for the welding and electronics industries.

During the year, sales of 545,3 tons (2007: 726,9 tons) of natural pyrophyllite were concluded at US dollar prices slightly higher than the previous year. In response to market demand, the company also supplies certain customers with a range of high precision components for use directly in their manufacturing processes. Last year 1 383 400 (2007: 1 299 431) components were produced and sold on this basis.

Wear resistant tiles are produced by the company's Technical Ceramics Division, Ceramox, which it acquired in 2002. Turnover, has increased by 23,6% in the past year and should increase significantly following the capital expansion project scheduled for completion by January 2009. Wonderstone is also produced in powder form to customer specific, particle size distribution requirements. This specified powder can be supplied in natural, calcined or spray dried form. Customers for these products benefit from the higher degree of technical support with regard to the material's performance characteristics and technical applications. Both the mine and its manufacturing operations have been awarded ISO 9001: 2000 and SO 14001 accreditation.

Turnover for the year increased to R39,9 million (2007: R35,7 million) due to increased sales prices, sales volumes and favourable exchange rates resulting in a profit for the year of R4,9 million (2007: loss R2,8 million).



## ORE AND METAL

Capital expenditure for the year amounted to R15,5 million (2007: R3,3 million), most of which was spent on the expansion of the manufacturing operations.

### SYNTHETIC DIAMONDS

The group's synthetic diamond production facility operates from premises in Linbro Park on the outskirts of Johannesburg under the name of Xertech. Sales were concluded mainly for export during the year in terms of a sales agency agreement finalised in the previous year with an established supplier in Europe. Process development work during the year has resulted in a significant improvement in the quality of finished product which is gaining market acceptance. Due to delays in commissioning the two additional 14 000 ton presses sales are still not covering fixed costs and a loss of R27,0 million (2007: R15,1 million loss) was incurred for the year.

The quality of production which has been achieved on a sustainable basis is competitive in the higher end of the market and it is planned to increase sales significantly during the forthcoming year with the facility now operating on a 24/7 shift basis.

Capital expenditure for the year was R14,1 million (2007: R42,0 million) and it is anticipated that the increased capacity will impact significantly on sales and reduce average cost of production in the forthcoming year.

### MARKETING AND SHIPPING

Wholly owned subsidiary, Ore and Metal Company Limited, is responsible for the marketing and shipping of all the group's products, including those produced by the three divisions of Assmang. Strong relationships have been established with customers in Europe, North America, South America, India and the Far East and products with a market value of approximately R14,6 billion (2007: R6,3 billion) were marketed and distributed in these regions during the year. The company is an established supplier to the steel and allied industries worldwide and has operated effectively in these markets for over 70 years. Commission income is based on the value of sales negotiated during the year, and based on the higher sales volumes and prices achieved for most products, profit after taxation increased to R145,5 million (2007: R50,5 million) for the year under review.

### MINERAIS U.S. LLC

The group holds a 51% share in Minerais U.S. LLC (Minerais) which is a limited liability company registered in the state of New Jersey in the United States of America (USA). Minerais is responsible for marketing and sales administration of the group's products in the USA, in particular manganese and chrome alloys, and trades in various commodities related to the steel making industry. The company made a contribution to group net profit for the year of R50,1 million (2007: R15,7 million) due mainly to the strong markets in manganese and chrome alloys.



AFRICAN MINING

### TECHNICAL ADMINISTRATION

As technical adviser to Assmang and other group companies African Mining and Trust Company Limited provides operational management services to the group's mines and plants including joint management responsibilities for Assmang. For these services it receives fee income based on turnover and commodity prices net profit after taxation increased to R113,6 million (2007: R30,5 million).

### INVESTMENTS

The group maintains a portfolio of listed shares which are selected and held in accordance with long-term investment criteria. No additions were made to the portfolio during the year and disposals generated a profit after capital gains tax of R19,2 million (2007: R36,8 million). The portfolio is valued in the financial statements at market value and the difference between cost and market value is transferred to other reserves net of any capital gains tax which would arise on eventual disposal. At year-end the market value of the remaining portfolio was R408,6 million (2007: R236,0 million) based on a cost of R181,4 million (2007: R37,0 million). Dividends received on the portfolio for the year were R9,0 million (2007: R5,0 million).

Other income also includes interest received of R67,7 million (2007: R20,7 million) generated from cash in excess of current requirements which is invested on a short-term basis in the money market.

This report is issued as the annual update of resources and reserves to inform shareholders and potential investors of the mineral assets controlled by the group.

#### OVERVIEW – ASSMANG

| MANGANESE<br>Mineral resources | (MEASURED+INDICATED) |      |      | (PROVED+PROBABLE)      |      |      |
|--------------------------------|----------------------|------|------|------------------------|------|------|
|                                | Mt                   | Mn % | Fe % | Mineral reserves<br>Mt | Mn % | Fe % |
| BLACK ROCK                     |                      |      |      |                        |      |      |
| No 1 Seam                      | 137,7                | 44,7 | 8,83 | 115,3                  | 44,7 | 8,83 |
| No 2 Seam                      | 185,2                | 42,5 | 15,4 | –                      | –    | –    |
| GLORIA                         |                      |      |      |                        |      |      |
| No 1 Seam                      | 52,5                 | 38,3 | 5,54 | 40,4                   | 38,3 | 5,54 |
| No 2 Seam                      | 29,4                 | 29,9 | 10,1 | –                      | –    | –    |

| IRON ORE<br>Mineral resources | (MEASURED+INDICATED) |       | (PROVED+PROBABLE)      |       | CHROMITE<br>Mineral resources | (MEASURED+INDICATED) |                                  | (PROVED+PROBABLE)      |                                  |
|-------------------------------|----------------------|-------|------------------------|-------|-------------------------------|----------------------|----------------------------------|------------------------|----------------------------------|
|                               | Mt                   | Fe %  | Mineral reserves<br>Mt | Fe %  |                               | Mt                   | Cr <sub>2</sub> O <sub>3</sub> % | Mineral reserves<br>Mt | Cr <sub>2</sub> O <sub>3</sub> % |
| BEESHOEK                      | 120,4                | 63,55 | 22,9                   | 64,28 | DWARSRIVIER                   | 44,0                 | 39,16                            | 35,1                   | 39,16                            |
| KHUMANI                       |                      |       |                        |       |                               |                      |                                  |                        |                                  |
| Bruce                         | 265,0                | 64,69 | 215,3                  | 64,5  |                               |                      |                                  |                        |                                  |
| King                          | 379,7                | 64,49 | 295,6                  | 64,52 |                               |                      |                                  |                        |                                  |

#### SUBSIDIARY COMPANIES

##### Resource/reserves

| Mine                | Commodity   | In Situ resource (millions) |                |               | Total resource | Reserve (millions) |               |               | In Situ rand/ton | Value* (million) |
|---------------------|-------------|-----------------------------|----------------|---------------|----------------|--------------------|---------------|---------------|------------------|------------------|
|                     |             | Measured tons               | Indicated tons | Inferred tons |                | Proved tons        | Probable tons | Total reserve |                  |                  |
| Rustenburg Minerals | Chrome      | 2,0                         | 2,9            | 5,4           | 10,3           | 1,3                | 1,8           | 3,1           | 29,42            | 142,27           |
| Wonderstone Ltd     | Wonderstone | 4,8                         | 0,0            | 104,8         | 109,6          | 4,6                |               | 4,6           | 10,55            | 51,15            |
| Zeerust Chrome      | Chrome      | 0,9                         | 0,0            | 10,6          | 11,5           | 0,8                |               | 0,8           | 7,44             | 6,53             |

\* Measured and indicated multiplied by Rand/Ton

#### SALIENT HIGHLIGHTS 2007/2008

**Khumani** – 15% increase in iron ore reserves due to higher iron ore prices. Export production starts mid-2008.

**Beeshoek** – Supplied both local and export markets. Resources/reserves now under severe strain.

**Nchwaning** – Measured resources increased by 172% due to the more appropriate classification methods used.

**Dwarsrivier** – Chrome production exceeded target by 14%. Board approval for the North decline.

## MINERAL RESERVES AND RESOURCES REPORT – Assmang operations

### GENERAL STATEMENT

Assmang's method of reporting mineral resources and mineral reserves conforms to the South African Code for Reporting Mineral Resources and Mineral Reserves (SAMREC Code) and the Australian Institute of Mining and Metallurgy Joint Ore Reserves Committee Code (JORC Code).

The convention adopted in this report is that mineral resources are reported inclusive of that portion of the total mineral resource converted to a mineral reserve. Resources and reserves are quoted as at 30 June 2008.

Underground resources are in-situ tonnages at the postulated mining width, after deductions for geological losses. Underground mineral reserves reflect milled tonnages while surface mineral reserves (dumps) are in situ tonnages without dilution. Both are quoted at the grade fed to the plant. Open-cast mineral resources are quoted as in situ tonnages and mineral reserves are tonnages falling within an economic pit-shell.

The evaluation method is generally ordinary kriging with mining block sizes ranging from 10 x 10 metres to 50 x 50 metres in the plan view. The blocks vary in thickness from 5 to 10 metres. The evaluation process is fully computerised, generally utilising the Datamine software package.

The mineral resources and mineral reserves are reported on a total basis regardless of the attributable beneficial interest that Assmang has on the individual projects or mines.

Maps, plans and reports supporting resources and reserves are available for inspection at Assmang's registered office and at the relevant mines.

In order to satisfy the requirements of the Minerals and Petroleum Resources Development Act, Assmang's operations will have to obtain new mining rights for all properties required to support the planned operations over the next 30 years. The act is effective from 1 May 2004 and the new rights must be obtained within five years from then. The operations are at various stages of application.

Rounding of figures may result in computational discrepancies.

### DEFINITIONS

The definitions of resources and reserves, quoted from the SAMREC CODE, are as follows:

A **'mineral resource'** is a concentration (or occurrence) of material of economic interest in or on the earth's crust in such form, quality or quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade, continuity and other geological characteristics of a mineral resource are known, estimated from specific geological evidence and knowledge, or interpreted from a well constrained and portrayed geological model. Mineral resources are subdivided, in order of increasing confidence in respect of geoscientific evidence, into inferred, indicated and measured categories.

An **'inferred mineral resource'** is that part of a mineral resource for which tonnage, grade and mineral content can be estimated with a low level of confidence. It is inferred from geological evidence and assumed but not verified geological and/or grade continuity. It is based on information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that may be limited or of uncertain quality and reliability.

An **'indicated mineral resource'** is that part of a mineral resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a reasonable level of confidence. It is based on exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. The locations are too widely or inappropriately spaced to confirm geological and/or grade continuity but are spaced closely enough for continuity to be assumed.

A **'measured mineral resource'** is that part of a mineral resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a high level of confidence. It is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. The locations are spaced closely enough to confirm geological and grade continuity.

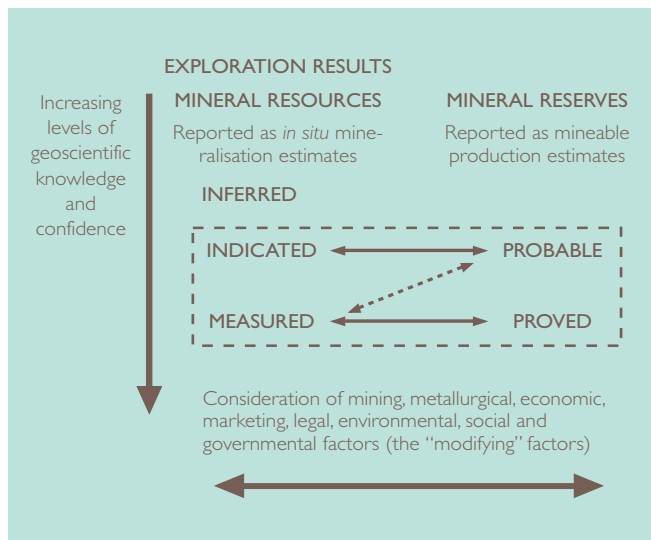
A **'mineral reserve'** is the economically mineable material derived from a measured and/or indicated mineral resource. It is inclusive of diluting materials and allows for losses that may occur when the material is mined. Appropriate assessments, which may include feasibility studies, have been carried out, including consideration of, and modification by, realistically assumed mining, metallurgical,

## ORE RESERVES AND MINERAL RESOURCES (continued)

economic, marketing, legal, environmental, social and governmental factors. These assessments demonstrate at the time of reporting that extraction is reasonably justified. Mineral reserves are subdivided in order of increasing confidence into probable mineral reserves and proved mineral reserves.

A **'probable mineral reserve'** is the economically mineable material derived from a measured and/or indicated mineral resource. It is estimated with a lower level of confidence than a proved mineral resource. It is inclusive of diluting materials and allows for losses that may occur when the material is mined. Appropriate assessments, which may include feasibility studies, have been carried out, including consideration of, and modification by, realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors. These assessments demonstrate at the time of reporting that extraction is reasonably justified.

A **'proved mineral reserve'** is the economically mineable material derived from a measured mineral resource. It is estimated with a high level of confidence. It is inclusive of diluting materials and allows for losses that may occur when the material is mined. Appropriate assessments, which may include feasibility studies, have been carried out, including consideration of, and modification by, realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors. These assessments demonstrate at the time of reporting that extraction is reasonably justified.



### COMPETENCE

The competent person with overall responsibility for the compilation of the Mineral Reserves and Resources report is Paul van der Merwe, PrSciNat, an ARM employee. He consents to the inclusion in this report of the matters based on the information in the form and context in which it appears.

Paul van der Merwe graduated with a BSc (Hons) in Geology from the Free State University. He spent four years as an exploration geologist at FOSKOR. He then joined the Uranium Resource Evaluation Group of the then Atomic Energy Corporation of South Africa for 12 years. While employed there he studied geostatistics and spent some time at the University of Montreal, Canada. In 1991 he joined Anglovaal Mining (now ARM) in the Geostatistics Department and evaluated numerous mineral deposit types for this group in Africa. In 2001 he was appointed as Mineral Resource Manager for the group. He is registered with the South African Council for Natural Scientific Professions as a Professional Natural Scientist in the field of practice of geological science, Registration Number 400498/83, and as such is considered to be a competent person.

All competent persons at the operations have sufficient relevant experience in the type of deposit and in the activity for which they have taken responsibility. Details of the competent persons are available from the company secretary on written request.

The following competent persons were involved in the calculation of mineral resources and reserves.

### RESOURCES AND RESERVES

|                                |           |
|--------------------------------|-----------|
| M Burger/S v Niekerk, PrSciNat | Iron      |
| B Rusive                       | Manganese |
| M Burger, PrSciNat             | Chrome    |

P J van der Merwe  
August 2008

## Manganese

**Locality** – The manganese mines are situated in the Northern Cape province of South Africa, approximately 80 kilometres north-west of the town of Kuruman. Located at latitude 27°07'50"S and longitude 22°50'50"E, the site is accessed via the national N14 route between Johannesburg and Kuruman, and the provincial R31 road.

**History** – In 1940, Assmang acquired a manganese ore outcrop on a small hillock known as Black Rock. Several large properties underlain by ore were subsequently found and acquired. Today the Black Rock area is considered to be the largest and richest manganese deposit in the world. Manganese ore operations were extended and today include the Gloria and Nchwaning underground mines. Manganese ore is supplied locally to Assmang-owned smelters, but is mainly exported through Port Elizabeth to Japanese and German customers.

**Mining authorisation** – The Nchwaning mining lease (ML10/76) comprises an area of 1 877,0587 hectares and is located on the farms Nchwaning (267), Santoy (230) and Belgravia (264). An application for the conversion to a new order mining right was submitted during the 2008 financial year.

The Gloria mining lease (ML11/83) comprises an area of 1 713,1276 hectares and is located on portion 1 of the farm Gloria (266). An application for the conversion to a new order mining right was submitted during the 2008 financial year.

**Geology** – The manganese ores of the Kalahari Manganese field are contained within sediments of the Hotazel Formation of the Griqualand West Sequence, a subdivision of the Proterozoic Transvaal Supergroup. At Black Rock, Belgravia and Nchwaning, the Hotazel, Mapedi and Lucknow Formations have been duplicated by thrusting. The average thickness of the Hotazel Formation is approximately 40 metres.

The manganese ore bodies exhibit a complex mineralogy and more than 200 mineral species have been identified to date. The hydrothermal upgrading has resulted in a zoning of the ore body with regard to fault positions. Distal areas exhibit more original and low-grade kutnohorite + braunite assemblages, while areas immediately adjacent to faults exhibit a very high-grade hausmannite ore. The intermediate areas exhibit a very complex mineralogy, which includes bixbyite, braunite and jacobsite amongst a host of other manganese-bearing minerals. A similar type of zoning also exists in the vertical sense. At the top and bottom contacts it is common to have high iron (Fe) and low manganese (Mn) contents while the reverse is true towards the centre of the seam. This vertical zoning has given rise to a mining practice where only the centre 3,5-metre-

high portion of the seam is being mined. At the Gloria mine the intensity of faulting is much less, which also explains the lower grade.

Two manganese seams are present. The No. 1 seam is up to 6 metres in thickness, of which 3,5 metres are mined, using a manganese marker zone for control. There is, therefore, minimum dilution. Studies are being undertaken to evaluate the effect of increasing the mining height to 5 metres.

**Mineral resources and Ore reserves** – Measured resources at Nchwaning are based on the two-thirds of the semivariogram sill range. Areas where the borehole spacing is greater than this distance and up to the sill range are classified as indicated. There are no inferred resources at Nchwaning. Measured/indicated resources were converted to proved/probable reserves by a LOM scheduling exercise done by Snowden Mining Consultancy. Geological losses are built into the grade models. Measured resources at Gloria are classified as material available up to 50 metres in front of the mining faces. Material situated further than 50 metres from the face and up to a boundary string around the dense drilled area on Gloria is classified as indicated resources. The rest of the property with limited drill information is classified as inferred. In the coming year an increase in the measured resources by in-fill drilling is anticipated. At Gloria a 23% pillar loss is accounted for in moving measured/indicated resources into proved/probable reserve.

The Nchwaning Mine was diamond drilled from surface at 330-metre centres and the data captured in Excel spreadsheets. The core was logged and 0,5-metre-long, half-core, diamond-saw cut samples were submitted to Assmang's laboratory at Black Rock for X-ray fluorescence (XRF) analyses. Mn and Fe values were checked by wet chemical analyses. Several standards were used to calibrate XRF equipment, and results are compared with other laboratories on a regular basis.

At Nchwaning a total of 341 boreholes for the No. 1 ore body and 372 holes for the No. 2 ore body, as well as a total of 20 000+ face samples were considered in the grade estimation. The available data for an area was optimised over a thickness of 3,5 metres and exported into data files for computerised statistical and geostatistical manipulation to determine the average grades of Mn, Fe, silica (SiO<sub>2</sub>), calcium (CaO) and magnesium (MgO).

Ordinary kriging interpolation within Datamine was used to estimate the grade of each 50 x 50 x 3,5-metre block generated within the geological model. Sub-cell splitting of the 50 x 50-metre blocks was allowed to follow the geological boundaries accurately.



## ORE RESERVES AND MINERAL RESOURCES (continued)

The relative density of Nchwaning manganese ore was taken as 4,3t/m<sup>3</sup>.

Trackless mechanised equipment is used in the bord and pillar mining method. Mining in the eastern extremity of Nchwaning occurs at a depth of 200 metres while the deepest (current) excavations can be found at a depth of 519 metres below the surface. Gloria Mine is extracting manganese at depths that vary between 180 and 250 metres below the surface.

Ore from Nchwaning No. 2 mine is crushed underground before being hoisted to a surface stockpile via a vertical shaft. Similarly, ore from the Nchwaning No. 3 mine is crushed underground before being conveyed to a surface stockpile via a declined conveyor system. Ore is withdrawn from the surface stockpile and forwarded to two stages of crushing, dry screening and wet screening to yield lumpy and fine products.

At the Gloria Mine, ore is crushed underground before being conveyed to a surface stockpile via a decline shaft. At both plants the finer fractions are stockpiled while the coarser fractions are extracted from the respective product boxes into road haulers, sampled, weighed and stored on stacks ahead of despatch. Samples from each stack are analysed for chemical content and size distribution. This ensures good quality control and enables the ore control department to blend various stacks according to customer demand.

**Year-on-year change** – The 2008 mineral reserves for the Nchwaning No. 1 ore body changed from 114,6 million tonnes in 2007 to 115,3 million tonnes. A LOM scheduling exercise by Snowden showed that the 20% loss when changing from resource to reserve previously used, proved to be very conservative, hence the increase in reserves. The mineral resources at Nchwaning No. 1 ore body decreased by 5,7 million tonnes to 137,7 million tonnes (143,4 million tonnes). The mineral resources at Nchwaning No. 2 ore body increased slightly to 185,2 million tonnes from 181,9 million tonnes. This is the same as it was in 2006 (184,7 million tonnes), indicating a modelling problem in 2007.

**NCHWANING MINE: 2 BODY MANGANESE RESOURCES**

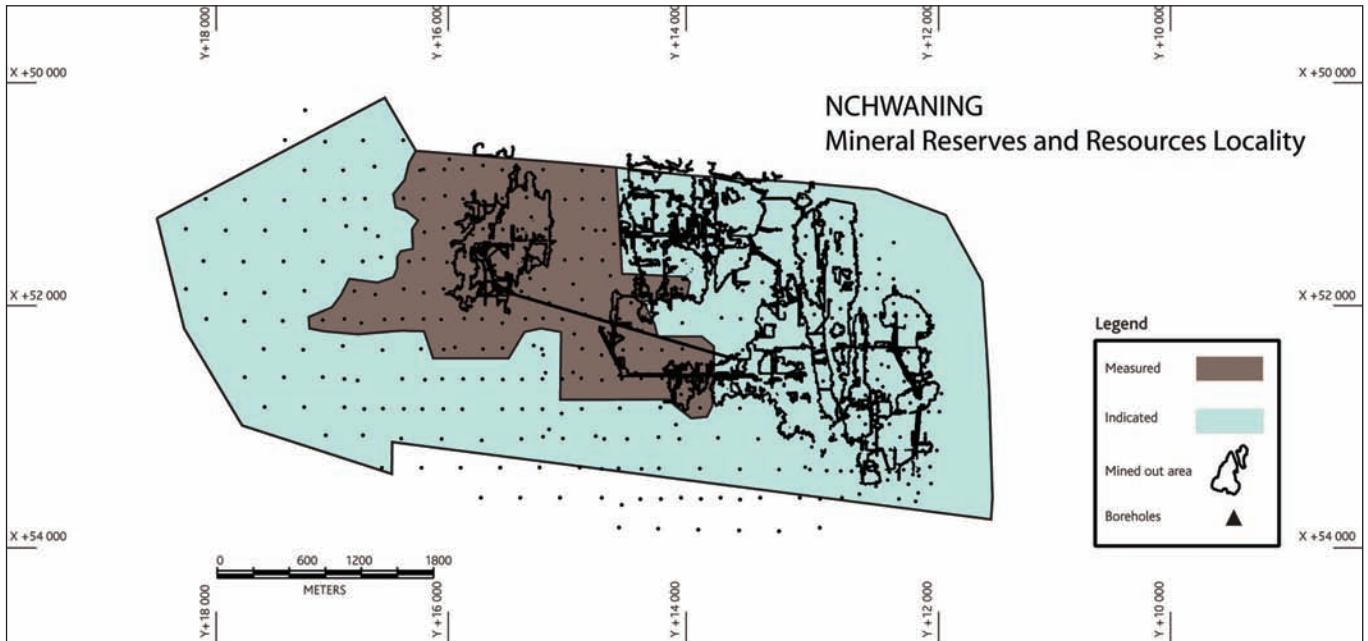
| <b>Nchwaning 2 body resources</b>  | <b>Tonnes Mt</b> | <b>Mn %</b> | <b>Fe %</b> |
|------------------------------------|------------------|-------------|-------------|
| Measured                           | 53,9             | 42,1        | 16,1        |
| Indicated                          | 131,3            | 42,6        | 15,1        |
| <b>Total resources 2 body 2008</b> | <b>185,2</b>     | <b>42,5</b> | <b>15,4</b> |
| Total resources 2 body 2007        | 181,9            | 42,4        | 15,5        |
| Inferred                           | none             |             |             |

Measured resources are based on two-thirds of the semivariogram sill range rule. Areas outside this distance are classified as indicated. Proved reserves = Measured resources used in LOM scheduling by Snowden. Probable reserves = Indicated resources used in LOM scheduled by Snowden.

**NCHWANING MINE: 1 BODY MANGANESE RESOURCES/RESERVES**

| <b>Nchwaning 1 body resources</b>  | <b>Tonnes Mt</b> | <b>Nchwaning 1 body reserves</b> | <b>Tonnes Mt</b> | <b>Mn %</b> | <b>Fe %</b> |
|------------------------------------|------------------|----------------------------------|------------------|-------------|-------------|
| Measured                           | 43,8             | Proved                           | 37,6             | 46,9        | 8,96        |
| Indicated                          | 93,9             | Probable                         | 77,7             | 43,7        | 8,76        |
| <b>Total resources 1 body 2008</b> | <b>137,7</b>     | <b>Total reserves 1 body</b>     | <b>115,3</b>     | <b>44,7</b> | <b>8,83</b> |
| Total resources 1 body 2007        | 143,4            | Total reserves 1 body            | 114,70           | 44,8        | 8,87        |
| Inferred                           |                  | none                             |                  |             |             |

Nchwaning borehole locality map showing the mineral resource classification



Procedures for drilling and assaying at Gloria Mine are the same as at Nchwaning. A total of 103 boreholes were considered in the evaluation of the Gloria 1 body mine. The wide-spaced borehole interval puts some limitation on the evaluation in areas away from current mining faces. A total of 5 100+ underground sampling values were used in evaluating areas close to current mining. The boreholes were optimised over a stoping width of 3,5 metres and the relative density was taken as 3,8t/m<sup>3</sup>. The seams were evaluated by means of statistical and geostatistical methods to determine the average grades of Mn, Fe, SiO<sub>2</sub>, CaO and MgO. Ordinary kriging interpolation within Datamine was used to estimate the grade of each 50 x 50 x 3,5-metre block generated within the geological model. Sub-cell splitting of the 50 x 50-metre blocks was allowed to follow the geological boundaries.

**Year-on-year-change** – The 2008 proved reserves at Gloria No 1 body decreased to 6,8 million tonnes (7,7 million tonnes) due to re-evaluation and production draw-down. The probable reserves also decreased from 67,4 million tonnes to 33,6 million tonnes as a result of a new delineation approach followed for the indicated resources. A substantial increase of the Inferred resources is seen

due to the more appropriate delineation boundary for Indicated resources. The mineral resources at Gloria No 2 body were also reclassified using the new boundaries and substantial shifts in resources between categories occur. No markets exist for Gloria 2 body ore at this point in time.

**GLORIA MINE: 2 BODY MANGANESE RESOURCES**

| Gloria 2 body resources      | Tonnes       |             |             |
|------------------------------|--------------|-------------|-------------|
|                              | Mt           | Mn %        | Fe %        |
| Measured                     | –            | –           | –           |
| Indicated                    | 29,4         | 29,9        | 10,1        |
| <b>Resources 2 body 2008</b> | <b>29,4</b>  | <b>29,9</b> | <b>10,1</b> |
| Resources 2 body 2007        | 67,9         | 31,9        | 10,9        |
| <b>Inferred 2008</b>         | <b>132,3</b> | –           | –           |
| Inferred 2007                | 70,3         |             |             |

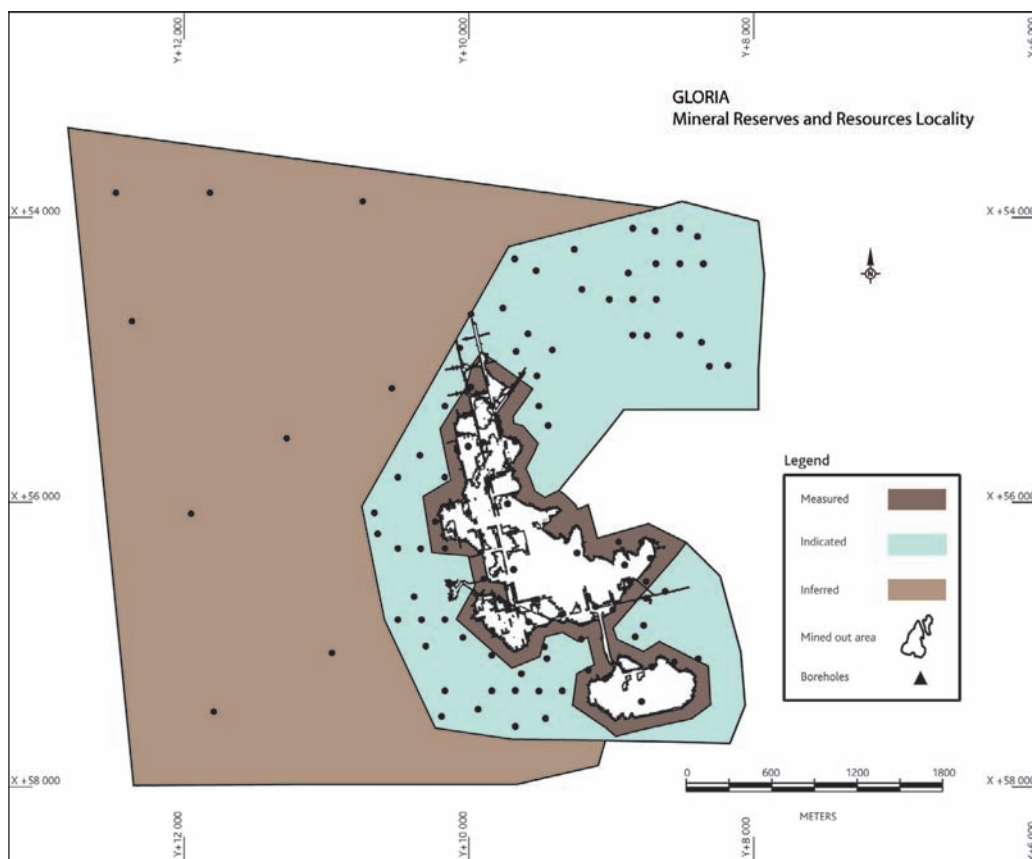
Measured resources = immediately available tonnes up to 50 metre in front of mining faces. Indicated resources are as per dense drilling area (see map). Proved reserves = measured resources less 23% pillar loss. Probable reserves = indicated resources less 23% pillar loss.

### GLORIA MINE: I BODY MANGANESE RESOURCES/RESERVES

| Gloria I body resources            | Tonnes       |                              | Gloria I body reserves | Tonnes      |             |
|------------------------------------|--------------|------------------------------|------------------------|-------------|-------------|
|                                    | Mt           |                              |                        | TMt         | Mn %        |
| Measured                           | 8,82         | Proved                       | 6,8                    | 38,4        | 4,9         |
| Indicated                          | 43,7         | Probable                     | 33,6                   | 38,3        | 5,67        |
| <b>Total resources I body 2008</b> | <b>52,5</b>  | <b>Total reserves I body</b> | <b>40,4</b>            | <b>38,3</b> | <b>5,54</b> |
| Total resources I body 2007        | 97,6         | Total reserves I body        | 75,1                   | 38,3        | 5,67        |
| <b>Inferred 2008</b>               | <b>132,3</b> |                              | -                      | -           | -           |
| Inferred 2007                      | 70,3         |                              |                        |             |             |

### HISTORICAL MANGANESE PRODUCTION AT NCHWANING AND GLORIA MINES

| Year             | Nchwaning<br>Mt | Gloria<br>Gloria Mt |
|------------------|-----------------|---------------------|
| 2003/2004        | 1,17            | 0,33                |
| 2004/2005        | 1,97            | 0,15                |
| 2005/2006        | 2,83            | 0,13                |
| 2006/2007        | 2,49            | 0,43                |
| <b>2007/2008</b> | <b>2,71</b>     | <b>0,41</b>         |



## Iron Ore

**Locality** – The Iron Ore Division is made up of the Beeshoek Mine located on the farms Beeshoek 448 and Olynfontein 475. The iron ore resources on the farms Bruce 544, King 561, and Mokaning 560, which were formerly known as the BKM Project, are now being developed into what is known as the Khumani Iron Ore Mine. All properties are in the Northern Cape approximately 200 kilometres west of Kimberley. The Beeshoek open-pit operations are situated 7 kilometres west of Postmasburg and the new Khumani open pits will be adjacent to, and south-east of, the Sishen Mine, which is operated by Kumba Resources. Located at latitude 28°30'00"S/longitude 23°01'00"E, and latitude 27°45'00"S/longitude 23°00'00"E respectively, these mines supply iron ore to both the local and export markets. Exports are railed to the iron ore terminal at Saldanha Bay.

**History** – Mining of iron ore (mainly specularite) was undertaken as early as 40 000 BC on the farm Doornfontein which is due north of Beeshoek. The potential of iron ore in this region was discovered in 1909, but, due to lack of demand and limited infrastructure, this commodity was given little attention. In 1929 the railway line was extended from Koopmansfontein (near Kimberley) to service a manganese mine at Beeshoek. In 1935 The Associated Manganese Mines of South Africa Limited (Assmang) was formed, and in 1964 the Beeshoek iron ore mine was established, with a basic hand sorting operation. In 1975 a full washing and screening plant was installed and production increased over the years to the current level of approximately 6 million tonnes a year.

**Mining authorisation** – The Beeshoek mining lease (ML3/93) comprises an area of 5 685,64 hectares and is located on the farms Beeshoek (448) and Olynfontein (475). An application for the conversion to a new order mining right was submitted during the 2008 financial year.

The Khumani mining lease comprises an area of 7 388,02 hectares and is located on the farms Bruce (544), King (561), Mokaning (560) and McCarthy (559). New order mining rights were granted during the 2007 financial year.

**Geology** – The iron ore deposits are contained within a sequence of early Proterozoic sediments of the Transvaal Supergroup deposited between 2 500 and 2 200 million years ago. In general two ore types are present, namely laminated hematite ore forming part of the Manganore Iron Formation and conglomerate ore belonging to the Doornfontein Conglomerate Member at the base of the Gamagara Formation.

The older laminated ore types occur in the upper portion of the Manganore Iron Formation as enriched high-grade hematite bodies. The boundaries of high-grade hematite ore bodies crosscut primary sedimentary bedding, indicating that secondary hematitisation of the iron formation took place. In all of these, some of the stratigraphic and sedimentological features of the original iron formation are preserved.

The conglomeratic ore is found in the Doornfontein Conglomerate Member of the Gamagara Formation and is lenticular and not persistently developed along strike. It consists of stacked, upward fining conglomerate-gritstone-shale sedimentary cycles. The lowest conglomerates and gritstones tend to be rich in sub-rounded to rounded hematite ore pebbles and granules and form the main ore bodies. The amount of iron ore pebbles decreases upwards in the sequence so that upper conglomerates normally consist of poorly sorted, angular to rounded chert and banded iron formation pebbles.

The erosion of the northern Khumani deposit is less than that in the southern Beeshoek area. The result is that Khumani is characterised by larger stratiform bodies and prominent hanging wall outcrops. The down-dip portions are well preserved and developed, but in outcrop the deposits are thin and isolated. Numerous deeper extensions occur into the basins due to karst development. A prominent north-south strike of the ore is visible. The southern Beeshoek ore bodies were exposed to more erosion and are more localised and smaller. Outcrops are limited to the higher topography on the eastern side of the properties. Down dip to the west, the ore is thin and deep. The strike of the ore bodies is also in a north-south direction, but less continuous.

Haematite is the predominant ore mineral, but limonite and specularite also occur.

## MINERAL RESOURCES AND ORE RESERVES

In the iron ore operations, the following table shows how the search ellipse (ie the ellipsoid used by the kriging process to determine if a sample is used in the estimation of a block) is used to classify the mineral resource:

|           | Minimum number of samples | Maximum number of samples | Search ellipse settings XYZ (m) |
|-----------|---------------------------|---------------------------|---------------------------------|
| Measured  | 6                         | 30                        | 100 × 100 × 10                  |
| Indicated | 5                         | 30                        | 200 × 200 × 20                  |
| Inferred  | 4                         | 30                        | 400 × 400 × 40                  |

## ORE RESERVES AND MINERAL RESOURCES (continued)

Only measured and indicated resources are converted to proved and probable reserves respectively. Modifying factors were applied to these resources and financially optimised. The financial outline is used to define the optimal pit by means of the Lersch-Grossman algorithm. The resources within this mining constraint are defined as reserves. These are categorised into different product types, destined for the different plant processes and scheduled for planning.

The methodology followed to identify targets is initiated with geological mapping, followed by geophysics (ground magnetics and gravity). Percussion drilling is used to pilot holes through overlying waste rock down to the iron ore bodies. Diamond drilling is the next phase, which is usually on a 200 × 200-metre grid. Further infill drilling is carried out at spacing ranging from 100 × 100 metres to 25 × 25 metres, depending on the complexity of the geological structures. Numerous exploration programmes were completed in the last 40 years. A total of 2 832 holes (1 315 holes on Khumani and 1 517 holes on Beeshoek) were drilled. Core samples were logged and split by means of a diamond saw and the half-core is sampled every 0,5 metres. Before submission for assaying, the half-cores were crushed, split and pulverised. Samples with values larger than 60% are included in the definition of the ore bodies. Any lower-grade samples inside the ore body are defined as internal waste and modelled separately. Each zone is modelled per section, and then wire framed to get a three-dimensional (3D) model.

Ordinary kriging interpolation within Datamine was used to estimate the grade of each 10 × 10 × 10-metre block generated within the geological model. Density in the resource model is calculated using a fourth degree polynomial fit applied to the estimated Fe grade. Densities range from 4,38 t/m<sup>3</sup> (60% Fe) to 5,01 t/m<sup>3</sup> (68% Fe). A default density of 3,2 is used for waste.

At Beeshoek all blast holes are sampled per metre, but composited per hole. All holes are analysed for density and blast holes in ore are sampled and analysed for Fe, potassium oxide (K<sub>2</sub>O), sodium oxide

(Na<sub>2</sub>O), silica (SiO<sub>2</sub>), aluminium oxide (Al<sub>2</sub>O<sub>3</sub>), phosphorus (P), sulphur (S), CaO, MgO, Mn and barium oxide (BaO). Every fifth blast hole is geologically logged per metre, which is used to update the geological model. The chemical results of these holes are used to update the ore block model. Approximately 45 000 blast holes are drilled a year and 9 000 blast holes are used every year to update the models. The major analytical technique for elemental analyses is XRF spectroscopy. Volumetric titration is used as verification method for the determination of total iron in the ore. International standards (eg SARM111) and inhouse iron standards are used for calibration of the XRF spectrometer. The Beeshoek laboratory participates in a round robin group that includes seven laboratories for verification of assay results.

**HISTORICAL PRODUCTION AT BEESHOEK AND KHUMANI MINES**

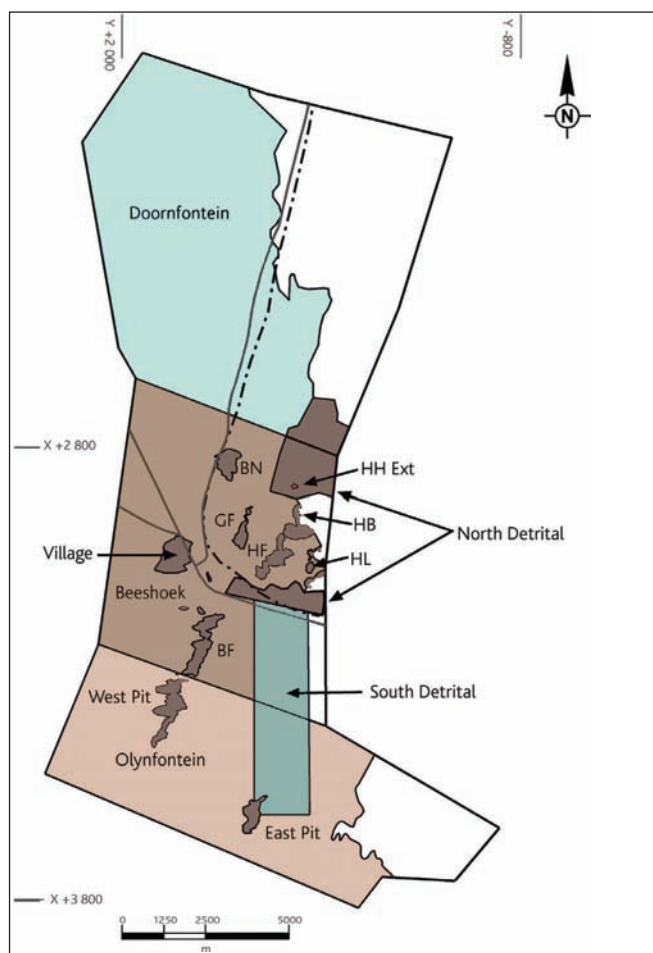
| Year             | Beeshoek<br>Mt | Khumani    |
|------------------|----------------|------------|
| 2003/2004        | 6,3            |            |
| 2004/2005        | 6,0            |            |
| 2005/2006        | 6,2            |            |
| 2006/2007        | 6,7            |            |
| <b>2007/2008</b> | <b>5,3</b>     | <b>2,0</b> |

**Year-on-year change** – The 2008 mineral resources at Beeshoek Mine decreased from 134,5 to 128,36 million tonnes, due to the annual production drawdown. The mineral reserves at Beeshoek decreased from 28,6 million tonnes to 22,6 million tons. The village deposit is still not in reserve as a result of to the high stripping ratio, but due to the higher iron ore prices, this deposit will be revalued to see if its exploitation had become economic. Ore reserves at the BN and the BF pits were drawn down heavily to meet sales requirements. The Khumani Mine will take over the Beeshoek export production in mid-2008.

## BEESHOEK IRON ORE: RESOURCES/RESERVES

| Pit/Area          | Measured      |              | Indicated   |              | Inferred    |              | Total resource<br>no inferred |              | Proved<br>reserve |              | Probable<br>reserve |          | Total<br>reserve |              |
|-------------------|---------------|--------------|-------------|--------------|-------------|--------------|-------------------------------|--------------|-------------------|--------------|---------------------|----------|------------------|--------------|
|                   | Mt            | Fe %         | Mt          | Fe %         | Mt          | Fe %         | Mt                            | Fe %         | Mt                | Fe %         | Mt                  | Fe %     | Mt               | Fe %         |
| BN                | 21,4          | 63,51        | 0,01        | 62,67        | –           | –            | 21,41                         | 63,51        | 14,58             | 64,03        | –                   | –        | 14,58            | 64,03        |
| HF/HB             | 16,6          | 64,3         | 0,30        | 63,85        | –           | –            | 16,90                         | 64,30        | 2,55              | 65,24        | 0,03                | 66,45    | 2,58             | 65,25        |
| BF                | 8,57          | 63,35        | 0,23        | 63,54        | –           | –            | 8,80                          | 63,36        | 3,54              | 63,72        | 0,01                | 62,58    | 3,55             | 63,72        |
| East Pit          | 9,14          | 64,61        | 0,03        | 64,19        | –           | –            | 9,17                          | 64,61        | 1,89              | 65,66        | –                   | –        | 1,89             | 65,66        |
| Village           | 40,79         | 63,56        | 0,09        | 64,64        | –           | –            | 40,89                         | 63,57        | –                 | –            | –                   | –        | –                | –            |
| GF                | 3,13          | 63,81        | 0,09        | 61,80        | –           | –            | 3,22                          | 63,76        | –                 | –            | –                   | –        | –                | –            |
| HH Ext            | 0,28          | 62,63        | –           | –            | –           | –            | 0,28                          | 62,63        | –                 | –            | –                   | –        | –                | –            |
| HL                | 3,57          | 65,09        | 0,05        | 65,23        | –           | –            | 3,62                          | 65,1         | 0,27              | 65,96        | –                   | –        | 0,27             | 65,96        |
| West Pit          | 10,19         | 63,04        | –           | –            | 0,05        | 61,87        | 10,19                         | 63,04        | –                 | –            | –                   | –        | –                | –            |
| N Detrital        | –             | –            | 5,9         | 60,00        | –           | –            | 5,9                           | 60,00        | –                 | –            | –                   | –        | –                | –            |
| S Detrital        | –             | –            | –           | –            | 3,7         | 60,0         | –                             | –            | –                 | –            | –                   | –        | –                | –            |
| <b>Total 2008</b> | <b>113,67</b> | <b>63,74</b> | <b>6,65</b> | <b>60,44</b> | <b>3,75</b> | <b>61,87</b> | <b>120,38</b>                 | <b>63,55</b> | <b>22,8</b>       | <b>64,28</b> | <b>–</b>            | <b>–</b> | <b>22,9</b>      | <b>64,28</b> |
| Total 2007        | 120,74        | 63,67        | 6,70        | 60,07        | 0,05        | 61,87        | 127,49                        | 63,31        | 28,0              | 64,16        | 0,62                | 64,03    | 28,62            | 64,16        |

## Beeshoek resources



**Year-on-year change** – At Khumani Mine the 2008 mineral resources remain the same when compared to 2007. The ore reserves increased by 15% to 510,9 million tonnes (444,7 million tonnes) due to the higher iron ore prices taken into account in the open-pit designs. It is however expected that these reserve figures will further increase due to the iron ore price increase announced in April 2008. Infrastructure construction is in progress, and production is to start mid-2008, with an estimated life of mine of 30 years. During the 2007/2008 financial year overburden stripping took place and in the order of 2 Mt ore was stockpiled.

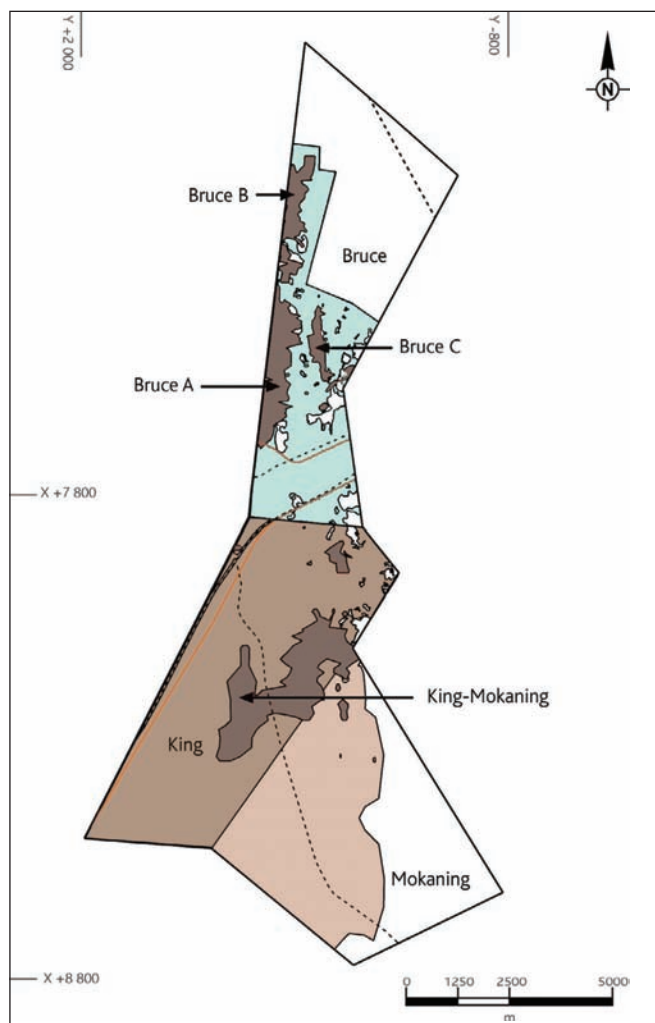
Mining operations are all open pit, based on the conventional drill-and-blast, truck-and-shovel operations. Run-of-mine ore is crushed and stored as high or normal grade on blending stockpiles. Ore from the stockpiles is either sent to the wash-and-screen plant or, if contaminated, to the beneficiation plant. The washing and screening plant consist primarily of tertiary crushing, washing, screening, conveying and stacking equipment. The beneficiation plant consists of tertiary crushers; scrubbers; coarse and fine jigs or Larcodems; fine crushing; elutriators and upward flow classifiers; lumpy, fines and scaw product stockpiles; and a rapid load-out facility. No chemical is being used in any of the treatment plants.

## ORE RESERVES AND MINERAL RESOURCES (continued)

## KHUMANI IRON MINE: RESOURCES/RESERVES

| Area              | Measured     |              | Indicated    |              | Inferred    |              | Total measured and indicated |              | Proved reserve |              | Probable reserve |              | Total reserve |              |
|-------------------|--------------|--------------|--------------|--------------|-------------|--------------|------------------------------|--------------|----------------|--------------|------------------|--------------|---------------|--------------|
|                   | Mt           | Fe %         | Mt           | Fe %         | Mt          | Fe %         | Mt                           | Fe %         | Mt             | Fe %         | Mt               | Fe %         | Mt            | Fe %         |
| Bruce A           | 23,5         | 64,91        | 99,0         | 64,54        | 0,8         | 63,37        | 122,5                        | 64,60        | 13,9           | 64,47        | 84,2             | 64,43        | 98,1          | 64,44        |
| Bruce B           | 21,1         | 65,71        | 77,0         | 64,06        | 8,7         | 64,64        | 98,1                         | 64,43        | 20,4           | 65,55        | 64,7             | 63,88        | 85,1          | 64,28        |
| Bruce C           | 37,2         | 65,45        | 6,9          | 65,95        | 1,6         | 64,80        | 44,1                         | 65,45        | 30,4           | 65,27        | 1,66             | 65,55        | 32,1          | 65,28        |
| King/Mokaning     | 255,8        | 64,53        | 123,9        | 64,48        | 17,7        | 63,98        | 379,7                        | 64,49        | 209,6          | 64,47        | 85,99            | 64,64        | 295,6         | 64,52        |
| Khumani Detrital  | –            | –            | –            | –            | 12,0        | 60,00        | 12,0                         | 60,00        | –              | –            | –                | –            | –             | –            |
| <b>Total 2008</b> | <b>337,9</b> | <b>64,73</b> | <b>306,8</b> | <b>64,43</b> | <b>40,8</b> | <b>62,97</b> | <b>644,7</b>                 | <b>64,59</b> | <b>274,3</b>   | <b>64,64</b> | <b>236,6</b>     | <b>64,36</b> | <b>510,9</b>  | <b>64,51</b> |
| Total 2007        | 337,9        | 64,73        | 306,8        | 64,43        | 40,8        | 62,97        | 644,7                        | 64,59        | 273,2          | 64,75        | 171,5            | 64,59        | 444,7         | 64,69        |

## Khumani resources



## Chromite

**Locality** – Chromite operations at Dwarsrivier Mine form part of the Chrome Division of Assmang Limited. The mine is situated on the farm Dwarsrivier 372KT, approximately 30 kilometres from Steelpoort and 60 kilometres from Lydenburg, in Mpumalanga province in South Africa. Located at longitude 30°05'00"E/latitude 24°59'00"S, Assmang purchased the farm from Gold Fields Limited, together with all surface and mineral rights in October 1998.

**History** – Neighbouring properties to the north and south of Dwarsrivier had existing chrome mining operations at the time of purchase. The feasibility study of the plant, tailings dam and designs for the open-cast and underground mines then commenced. After the completion of the consolidated assessment, approval to proceed with the final design and construction work was given in July 1999.

Chromite was obtained from the open-cast mining areas at a rate of approximately 0,9 million tonnes a year and these areas were mined out within five years. Underground mining commenced in 2005 at a rate of 1,2 million tonnes a year. Dwarsrivier Mine is specifically geared to deliver high quality metallurgical grade chromite to the Machadodorp smelter. In addition, the plant has been designed to produce chemical and foundry grade products.

**Mining authorisation** – An old order Mining Licence 21/99 was granted in October 1999. It was granted for the mining of chrome and platinum group metals. An application for the conversion to a new order mining right was submitted during October 2007.

**Geology** – Dwarsrivier Mine is situated in the eastern limb of the Bushveld Complex, which comprises persistent layers of mafic and ultramafic rocks, containing the world's largest known resources of platinum group metals, chromium and vanadium. The mafic rocks termed the Rustenburg Layered Suite, are approximately 8 kilometres thick in the eastern lobe, and are divided formally into five zones.

The rocks of the marginal zone at the base of the succession consist mainly of pyroxenites with some dunites and harzburgites. Above the marginal zone, the lower zone comprises mainly pyroxenites, harzburgites and dunite, and is present only in the northern part of the eastern lobe, and only as far south as Steelpoort. The appearance of chromitite layers marks the start of the critical zone, economically the most important zone. The layers are grouped into three sets termed the lower, middle and upper groups. The sixth chromitite seam in the Lower Group (LG6), is an important source of chromite ore and is the ore body being mined at Dwarsrivier Mine. In the

eastern lobe, in the vicinity of Dwarsrivier; the strike is nearly north-south, with a dip of approximately 10 degrees towards the west. Average thickness of the LG6 seam is about 1,86 metres in the Dwarsrivier area. Pipelike dunite intrusions are evident in the area, as well as dolerite dykes that on average strike northeast-southwest. No significant grade variation is evident, especially not vertically in the ore seam. Small, insignificant regional variations do, however, exist.

**Mineral resources and ore reserves** – Information was obtained from boreholes with a 300- to 150-metre grid spacing. Resources were determined with a decreasing level of confidence:

- Measured resource (150 metres drill grid spacing);
- Indicated resource (300 metres drill grid spacing); and
- Inferred resource (drill grid spacing greater than 300 metres)

All possible resources down to a mineable depth of 350 metres below ground level have been considered.

A strategy to ensure the availability of adequate information ahead of mining activities is in place. The strategy is to ensure all mining areas falling within the first five years of the life of mine plan contain proved reserves. Vertical diamond drilling holes are used, except where information is needed to clarify large-scale fault planes. The mineral resource at Dwarsrivier Mine is based on a total of 230 diamond drill holes that have been used for grade estimation and ore body modelling purposes. The drill core is NQ size and is geologically and geo-technically logged. The collar position of the drill holes is surveyed, but no down-hole surveys are done, and the holes are assumed to have minimal deflection.

The chromitite seam is bounded above and below by pyroxenites. As such, the ore horizon is clearly defined. The core is sampled from the top contact downwards at 0,5-metre intervals. The core is split and half is retained as reference material in the core sheds. The other half is crushed and split into representative samples, which are crushed and pulverised for chemical analysis. The samples are analysed fusion/ICP-OES for chrome oxide ( $\text{Cr}_2\text{O}_3$ ),  $\text{SiO}_2$ ,  $\text{FeO}$ ,  $\text{Al}_2\text{O}_3$ ,  $\text{MgO}$  and  $\text{CaO}$ . Three laboratories, all ISO 17025 accredited for this method, are used. Every tenth sample is analysed in duplicate. SARM 8 and SARM 9 standards, as well as inhouse reference material (CRI), are included every 20 to 30 samples in each batch. The density for each sample is measured using a gas pycnometer.

Datamine software is used to construct a 3-D geological model (wireframe) of the LG6 chromite seam, based on borehole and other geological data. A cut-off value of 35%  $\text{Cr}_2\text{O}_3$  was used to



distinguish between ore and waste. Mineral resources have been calculated using ordinary kriging, where  $\text{Cr}_2\text{O}_3$ -,  $\text{FeO}$ -,  $\text{Al}_2\text{O}_3$ -,  $\text{MnO}$  and  $\text{MgO}$ -contents of the LG6 seam and densities were determined, using block sizes of  $50 \times 50 \times 4$  metres.

During mining, a slightly diluted run of mine ore is fed to the beneficiation plant. This decreases the average grade from approximately 40%  $\text{Cr}_2\text{O}_3$  to 37%  $\text{Cr}_2\text{O}_3$ . An addition of approximately 9% of waste material results in this 3%  $\text{Cr}_2\text{O}_3$  grade decrease. In the dense media separation part of the plant, the coarse fraction is upgraded to 40%  $\text{Cr}_2\text{O}_3$ , with a yield of 80%. In the spiral section of the plant the finer fraction is upgraded to 44%  $\text{Cr}_2\text{O}_3$ , and 46%  $\text{Cr}_2\text{O}_3$  respectively, for metallurgical grade fines and chemical grade fines. Foundry sand is also produced with a similar grade to that of the chemical grade fines. A 67% yield is achieved in the spiral circuit.

**Year-on-year change** – When compared to 2007, the 2008 mineral reserves decreased by 1,3 million tonnes to 35,1 million tonnes (36,4 million tonnes) and the mineral resources show a decrease of 1,6 million tonnes to 44,02 million tonnes (45,64 million tonnes). The reason for the change is the draw-down by the annual production. The current life of mine of the Dwarsrivier Chrome Mine is more than 30 years. Excluded from this plan are the inferred mineral resources and material situated deeper than 350 metres below ground level.

Dwarsrivier Mine

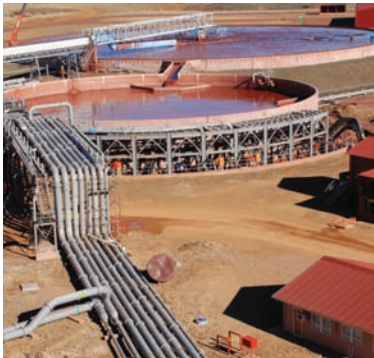


**DWARSRIVIER MINE: CHROME RESOURCES/RESERVES PLAN**

| Resources                                | Tonnes       |                                  |              | Reserves              | Tonnes      |                                  |              |
|--|--------------|----------------------------------|--------------|-----------------------|-------------|----------------------------------|--------------|
|  | Mt           | Cr <sub>2</sub> O <sub>3</sub> % | FeO %        |                       | Mt          | Cr <sub>2</sub> O <sub>3</sub> % | FeO %        |
| Measured                                 | 15,30        | 39,32                            | 23,21        | Proved                | 12,2        | 39,32                            | 23,21        |
| Indicated                                | 28,72        | 39,06                            | 22,55        | Probable              | 22,9        | 39,06                            | 22,55        |
| <b>Total measured and indicated 2008</b> | <b>44,02</b> | <b>39,16</b>                     | <b>22,79</b> | <b>Total reserves</b> | <b>35,1</b> | <b>39,16</b>                     | <b>22,79</b> |
| Total measured and indicated 2007        | 45,64        | 39,16                            | 22,79        | Total reserves        | 36,4        | 39,16                            | 22,79        |
| Inferred                                 | 53,11        | 39,00                            | 22,71        |                       |             |                                  |              |

**HISTORICAL PRODUCTION AT DWARSRIVIER CHROME MINE**

| Year             | Mt          |
|------------------|-------------|
| 2003/2004        | 0,96        |
| 2004/2005        | 0,92        |
| 2005/2006        | 0,82        |
| 2006/2007        | 1,01        |
| <b>2007/2008</b> | <b>1,24</b> |





Of the R2,23 billion spent in the Iron Ore Division, R2,1 billion related to the construction of the Khumani Iron Ore Mine where production has already commenced.



The Assore board believes that strong corporate governance not only enhances sustainable control of an organisation but is essential to preserving organisational reputation, investor confidence, access to capital, when required, and sustainable employee motivation.

Consequently, the group subscribes, in all its activities, to a policy of best practice in business management and corporate governance for South African companies, which it implements in accordance with the following three dimensional framework:

- Installing a risk and control environment within its business entities where management is responsible for identifying, quantifying and managing risks to achieve the organisation's objectives on a sustainable basis;
- Creating a process which provides executive management, through the Audit Committee, with assurance over the adequacy of internal control within the organisation, ie that the risk and control environment in place is appropriate for the business concerned and is working as intended; and
- Establishing a challenge process to identify the effectiveness of both the risk management environment and the assurance processes. This is generally the role of the internal audit function and other independent technical assurance specialists used on a consultancy basis.

The company's shares are listed on the JSE which requires that all listed companies comply with the Code of Corporate Practices as set out in the King Report on Corporate Governance. The King Report was originally issued in November 1994 and updated in March 2002 as the "King II Report". The objective of the King Reports is to formulate recommendations for the maintenance and improvement of standards of corporate governance in South African companies in accordance with international best practice.

The group's practices are compliant with all the material requirements of these reports and ongoing consideration is given to those peripheral practices recommended in the King II Report which have not yet been implemented by the group. Where it is not possible or it is impractical for the group to comply with the recommendations, the instances are referred to in this report and mention is made of the alternative procedures which the board has agreed to implement.

#### **BOARD OF DIRECTORS**

The directors are committed to the principles of corporate discipline, transparency, independence, accountability, responsibility, fairness and social responsibility.

#### **Composition**

The Assore board has a unitary structure comprising eight directors, four of which are executive and four non-executive.

Of the four non-executive directors, Mr P N Boynton represents the Old Mutual Life Assurance Company (South Africa) Limited (Old Mutual), which has interest in the group and Mr Cyril Ramaphosa represents the Shanduka Group which is one of Assore's black economic empowerment partners. The other two non-executive directors are regarded as independent and hold directorships in other listed and unlisted companies registered in South Africa.

The non-executive directors do not receive any benefits from the company other than their fee for services as directors, which, in the case of the directors representing Shanduka and Old Mutual, are paid over to their respective employers.

The four executive directors are Messrs Desmond Sacco (Chairman), R J Carpenter (Deputy Chairman), C J Cory (Chief Executive Officer) and P C Crous (Group Technical Director) and each of these executives is also on the board of joint venture company, Assmang.

#### **Remuneration**

Details of emoluments paid to directors and directors' interests in shares of the company are disclosed in the Directors' Report on pages 100 and 101 and none of the executive directors have signed contracts of service with the company which specify either a paid notice period or additional compensation in the event of termination.

#### **Election**

In accordance with the company's Articles of Association, all directors are subject to retirement by rotation and re-election by shareholders at least once every three years. In addition all directors are subject to re-election by shareholders at the first annual general meeting following their initial appointment. A brief curriculum vitae of each director is set out on page 102 of this report.

### Meetings

The board meets at least four times per annum on predetermined dates with additional meetings convened when considered necessary. The board met on four occasions in the year under review and attendance at these meetings was as follows:

|                      | Possible | Attended |
|----------------------|----------|----------|
| Desmond Sacco        | 4        | 3        |
| R J Carpenter        | 4        | 4        |
| C J Cory             | 4        | 4        |
| P C Crous            | 4        | 4        |
| B M Hawksworth       | 4        | 4        |
| P N Boynton          | 4        | 4        |
| M C Ramaphosa        | 4        | 1        |
| Dr J C van der Horst | 4        | 4        |

### Audit Committee

B M Hawksworth (Chair)      P N Boynton  
C J Cory                              Dr J C van der Horst

The Audit Committee is a sub-committee of the board and the Chairman of the Audit Committee reports on activities of the committee at each board meeting.

Representatives of the internal and external auditors are also invited to attend the regular meetings of the committee and, if necessary, have direct access to the Chairman of the committee throughout the year.

In line with the recent amendments to the Companies Act, Messrs Boynton and Cory have resigned from the Audit Committee but continue to attend meetings by invitation.

The Audit Committee was established in terms of a charter approved by the board which, *inter alia*, sets out its duties and responsibilities and is reviewed on an annual basis to ensure it remains appropriate to the activities of the group.

The majority of the members of the Audit Committee, including the Chairman (who will make himself available to take questions at the annual general meeting), are non-executive directors and the committee meets at least three times per annum. The prime objectives of the Audit Committee are to:

- monitor the efficiency and effectiveness of the group's internal control environment;
- review and approve the drafts of financial reports prior to their issue;
- consider the appropriateness of the group's accounting policies; and
- provide a forum for the management of the external and internal audit functions and the resolution of issues which arise from audit activities.

All audit work is undertaken based on programmes prepared in accordance with an ongoing risk evaluation process which ensures that

the focus of the audit effort is optimised (refer Risk Management and Internal Audit and Internal Control below).

### Remuneration Committee

B M Hawksworth (Chair)      Dr J C van der Horst  
Desmond Sacco

The majority of the members are non-executive directors, including the Chairman, and the committee meets at least once a year for the annual salary review which the Chief Executive Officer attends by invitation. Recommendations on the broad framework and cost of executive remuneration are made annually to the board for approval and in order to do so the committee is required to determine:

- the group's general policy on executive remuneration;
- specific remuneration packages for executive directors; and
- where necessary, criteria to assess the required performance of executive directors.

The remuneration of non-executive directors is determined by the Assore executive and, in terms of the Articles of Association, requires approval at a shareholders' meeting. Remuneration of other employees in the group is determined annually by the executive directors in conjunction with the human resources department.

### Insider trading and closed periods

The group operates a closed period prior to the publication of its interim and final results. During this period directors, officers and designated persons who may have access to price sensitive information are precluded from dealing in the shares of the group. The closed period extends from the first day of the month following the end of a financial reporting period and expires on the day on which the interim or final results are published. Where appropriate, dealing is also restricted during sensitive periods where major transactions are being negotiated and a public announcement is imminent.

### RISK MANAGEMENT

Risk is an ever-present feature of business in general. It is exacerbated in the mining industry as a result of the remote locations of operations, the physical danger inherent in the day-to-day activities of mining and smelting operations and the volume and complexity of legislation with which these industries have to comply. The most prominent financial risks to which the group is exposed, namely fluctuations in exchange rates and world commodity prices, are to a large extent outside of the board's direct control.

Group risk management is achieved through the identification and control of all significant business risks including operational risks, which could adversely affect the achievements of the group's business objectives. Risk is managed at group level through the appointment of various risk management committees, which comprise representatives from senior management. The committees report to the board of directors through the Audit Committee. An independent formalised process of identifying, recording and

reviewing the management of major risk exposures has been implemented, assisted by specialised external consultants where required. Independent risk engineering consultants grade each operation against international risk standards for fire, security, engineering, commercial crime, contingency planning and mining, as well as environmental risk to monitor whether current practices meet the set criteria and are being maintained. The risk management committees are also responsible for ensuring that appropriate financial and insurance mechanisms are integrated into the risk plan and the group is protected against catastrophic risk including failure of IT systems.

In addition, the group risk management process includes ongoing review of compliance with legislation in the areas of environmental rehabilitation, health and safety, and human resource management. This review is undertaken in conjunction with independent, specialist consultants and subjected to regular compliance audits. Reports emanating from these independent reviews are tabled at the Audit Committee, which monitors progress and raises unresolved issues at board level for resolution.

## HEALTH, SAFETY AND ENVIRONMENT

### Health

The HIV/AIDS pandemic is without doubt the most important health concern for all businesses in South Africa. It does not only affect the productivity of all operations through illness, absenteeism and untimely death, but also has an impact on the working environment of employees and on the social implications for both their families and the communities within which they live.

Each of the larger operations in the group has devised a comprehensive strategy to control the impact of HIV/AIDS on its operations and on its global competitiveness, and to provide humanitarian support to affected employees and their families. Current policies focus on the education of the workforce using an extensive HIV/AIDS education programme. This programme has also been taken to the schools and other institutions within the rural areas surrounding the group's operating divisions. Regular surveys are conducted to measure changing attitudes towards HIV/AIDS and voluntary education also takes place. Participation in initiatives to address HIV/AIDS is ongoing. The HIV/AIDS Scorecard process has evolved over the past three years to measure the extent to which the operations are subscribing to the King II Good Governance Principles, which requires the board of directors to:

- ensure they understand the social and economic impact that HIV/AIDS will have on the group's business activities;
- adopt an appropriate HIV/AIDS strategy plan and policies to address and manage the potential impact;
- regularly monitor and measure performance using established indicators; and
- report to stakeholders on a regular basis. Management of the HIV/AIDS pandemic is critical to sustainable development and, in order to achieve the goals set in the King II Report, the group will continue to improve its operational interventions by setting targets for each operation and reviewing achievement against plan on a regular basis.

### Safety

Employees undergo stringent safety training on operating procedures, use of equipment and operation of plant and machinery. Attention is focused on supervision and direction in reducing workplace accidents and related occupational health and hygiene related incidents. Activities in this regard include the application of regular measurement against legislated or regulatory requirements, analytical reviews of accidents which occur and compliance with current industry and international best practices.

### Environment

The Assore group views its responsibility in terms of protecting the environment in a serious light and environmental management is regarded as a key performance area for all operations. Environmental management systems are based on internationally accepted standards and are implemented in conjunction with recognised consultants based on the following commitments:

- Recognition of rehabilitation as an essential part of the mining process;
- Ongoing maintenance and assessment of environmental conditions surrounding mining and smelting activities with the view to reducing to a minimum pollution, waste generation and other negative impacts on the environment in which operations are located;
- Developing awareness amongst staff of environmental issues through ongoing training programmes; and
- Maintaining positive relationships on environmental issues with stakeholders, including shareholders, employees, neighbours and regulatory authorities.

It is a requirement that all mining companies in the group undertake environmental impact assessments and complete restoration work with regard to areas that have been disturbed by mining and prospecting activities in accordance with these assessments. All companies in the group, which are currently involved with prospecting and mining activities, have submitted environmental management programmes to the relevant Regional Director of the Department of Minerals and Energy for approval and all the costs associated with the programmes are regarded as an integral part of the prospecting and mining operations concerned. These costs are either charged to the cost of mining when incurred or, where it is not possible to complete restoration work as an integral part of the mining operation, annual contributions are made to the Environmental Trust Funds (Trusts) which have been established for this purpose. Annual contributions to these Trusts are calculated, based on the remaining life of the mining operations and the final estimated cost concerned, which includes decommissioning costs and the cost of restoration as required by the Department of Minerals and Energy. Notwithstanding the transfers made to the Trusts, the full liability for rehabilitation is raised as a long term provision and the investments of the Trusts are recognised as an asset in the group's balance sheet.

### INTERNAL AUDIT AND INTERNAL CONTROL

The board, through its appointed Audit Committee, is accountable for the implementation of appropriate internal controls, which are reviewed regularly for efficiency and effectiveness. These controls are designed to manage the risk of failure, and provide reasonable

assurance that there is an adequate system of internal control in place. As with all management systems the assurance provided is not absolute and the risk of failure cannot be eliminated entirely. The internal audit functions at the various operations in the group have been outsourced to the special services divisions of recognised professional auditing firms. Internal auditors monitor the operation of the internal control systems and, after discussion with management, report findings and recommendations to the Audit Committee. Corrective action is taken to address control deficiencies as and when they are identified. Nothing has come to the attention of the board to indicate that any material breakdown in the effective functioning of controls, procedures and systems has occurred during the year under review.

Representatives of the internal audit team are invited to attend Audit Committee meetings and, where areas of new risk are identified eg initiation of capital projects or new systems of internal control, separate independent investigations take place on an ad hoc basis in addition to the programmed reviews referred to above.

#### **EMPLOYEE PARTICIPATION AND SOCIAL INVESTMENT**

For many years, collective bargaining procedures have been negotiated with workforce representatives but, where a workforce has elected not to be represented by a recognised union, it is encouraged to elect a Works Committee to achieve the same objectives. The forums so created are utilised in wage negotiations and to communicate information regarding operating performance and facilitate workforce participation in health, safety and educational issues.

The group is committed to promoting respect for the dignity of the individual, the maintenance of fair employment conditions and the development, through education, of competent and committed employees. The group, in conjunction with the Assore Chairman's Fund, provides financial assistance for study purposes to all members of staff, including their dependants, based on defined performance criteria. A substantial proportion of the donations made annually by the fund is made to a wide range of educational institutions ranging from self-help programmes and adult literacy training to financial assistance for study at tertiary level. The fund also supports and provides sponsorship for a variety of sporting events, in particular, providing financial assistance and incentives for the participation of young sportsmen and women from disadvantaged backgrounds who display significant sporting talent.

#### **EMPLOYMENT EQUITY**

The Employment Equity Act imposes obligations, *inter alia*, on all companies to meet certain employment quotas with regard to the various employee groupings which are designated by the act.

The board is of the view that the advancement of new and existing employees by means of employment equity can only succeed if this forms part of carefully managed succession and workforce plans which do not compromise the high standards of efficiency sought by the group in the workplace.

Employment equity plans and reports for each operation were developed in consultation with the recognised unions at each of the

operations and have been presented to the Department of Labour in accordance with legal requirements. An Employment Equity Committee, representing management and employees, exists at each of the operations and progress in implementing the equity plans and revising targets is monitored on a regular basis. The following equity principles have been employed within the legislative framework in formulating the policies referred to above:

- To ensure no unfair discrimination occurs in employment practices;
- To treat all persons equally, fairly, with dignity and respect;
- To achieve a diverse, efficient workforce which aims to be equitably representative of the population in its operational areas;
- To create opportunities for, and remove barriers to, human resource development;
- To involve employees and their representatives in employment equity matters; and
- To be an effective corporate partner of communities, government and other social stakeholders.

The development of skills is a critical issue, which is being implemented rapidly, but thoroughly, at each operation in order to address the widening gap between the supply of, and demand for, skilled labour.

#### **CODE OF ETHICS, RESPONSIBILITIES TO STAKEHOLDERS AND SUSTAINABLE DEVELOPMENT**

The group has not developed a comprehensive Code of Ethics but the following principles have been adopted to guide various aspects of corporate behaviour to ensure the group remains committed to the highest standards of integrity in dealing with its stakeholders and developing its business activities in a sustainable way.

##### **Investors**

Dealing properly with all stakeholders in order to serve the best interests of shareholders on a sustainable basis. Commitment to full compliance with relevant laws and rules, good corporate governance, transparency and fair dealing.

##### **Employees**

Employing only the most appropriately skilled individuals and investing in their development in a non-discriminatory environment.

##### **Communities**

Promoting strong relationships with, and raising the capacity of the communities in which the group's activities are located.

##### **Customers and business partners**

Seeking mutually beneficial long-term relationships with customers, business partners, contractors and suppliers based on fair and ethical practices.

##### **Governmental bodies**

Respect for laws of the countries in which the group operates, while seeking to observe within its operations the universal standards promulgated by leading inter-governmental organisations.

##### **Non-governmental organisations**

Maintenance of constructive relations with relevant non-governmental organisations.




Assore is supportive of the broad-based economic imperatives contained in the Minerals and Petroleum Resources Development Act (the MPRD Act) and the Broad-based Socio-economic Empowerment Charter for the South African Mining Industry issued thereunder (the Mining Charter), and has embarked on initiatives aimed at meeting these requirements at its mining operations, as set out below.

The MPRD Act has changed the previous common law and statutory position in South Africa in terms of which mineral rights could be held privately. Instead, pursuant to the MPRD Act and with effect from 1 May 2004, the State has assumed sovereignty and custodianship of all mineral rights in South Africa and will grant prospecting rights and mining rights to applicants based on the merits of their applications (which are designated as 'new order rights'). A transitional period is provided during which holders of existing mineral and exploration rights (designated as 'old order rights'), upon meeting certain requirements, may convert such existing in-use old order rights into new order rights, or in the case of unused rights, may apply for new order rights.

The Mining Charter is intended to facilitate the entry of historically disadvantaged South Africans (HDSAs) into the mining industry. The scorecard which the State has issued pursuant to the Mining Charter requires, *inter alia*, that mining companies achieve 15% HDSA ownership of mining assets within five years (ie 1 May 2009) and 26% within 10 years (ie 1 May 2014). The Mining Charter also requires, *inter alia*, that mining companies provide plans and achieve employment equity at management level and procure goods and services from black empowered organisations on a preferential basis in accordance with the predetermined criteria set out in such plans.

In view of meeting the Charter's requirements, Assore, through the appropriate group companies, has:

- Completed an audit of current compliance with the requirements of the Charter:
- Commenced with the introduction of a preferential procurement policy at all its operations.
- Concluded empowerment transactions with Mampa Investment Holdings (being the commercial arm of The Mankwe Development Foundation) (Mampa) in April 2004 and Shanduka Resources (Proprietary) Limited (Shanduka Resources) and the Bokamoso Trust (the Community Trust) in February 2006 (refer below).
- Developed social and labour plans for each of operations which supports the integrated development plan of the relevant local authorities. The plan, which has received the approval of the relevant departments includes the construction of educational facilities, maintenance and upgrading of roads and presentation of programmes on adult education, health and safety and environmental awareness.
- Succeeded in obtaining new order mining rights for its operation at Zandspruit 168 JP and .
- Applied for and obtained new order mining rights on the iron ore deposits mined at Khumani.
- Submitted applications for the conversion of all remaining old order rights to new order rights in particular manganese ore (Nchwaning and Gloria mines), chrome ore (Dwarsrivier) and Wonderstone.

Following the introduction of the MPRD Act, Assore has entered into the following empowerment transactions:

- 1 In April 2004, an empowerment transaction was finalised with Mampa in terms of which Mampa acquired a 44% interest in

Rustenburg Minerals Development Company (Proprietary) Limited (RMDC). RMDC mines chromitite in the Rustenburg area and was previously a wholly owned subsidiary of the Assore group. Mampa is represented on both the management committee and the board of RMDC and has an option to increase its stake in RMDC to 51%. In October 2005 RMDC was successful in its application to convert all of its mining rights to new order rights and on 29 June 2006 RMDC paid its maiden dividend in terms of the joint venture agreement, Mampa receiving R2,5 million.

- 2 In February 2006, the Assore group entered into empowerment transactions effecting the acquisition of 15,02% of the issued ordinary share capital of Assore by two black economic empowerment (BEE) entities, namely:
  - Shanduka Resources, a subsidiary of Shanduka Group (Proprietary) Limited (Shanduka), which purchased an 11,76% equity interest in Assore; and
  - the Community Trust, which has been formed to benefit HDSAs and HDSA community groupings, which purchased a 3,26% equity interest in Assore.
  - On 15 September 2008 the company acquired 2 931 653 Assore shares (being 10,47% of issued share capital) with the intention of negotiating a second empowerment transaction, which once implemented, will result in 26% of the Assore share capital being owned by HDSA's being the required percentage by the year 2014 in terms of the Socio-economic Empowerment Charter for the South African mining industry.

### SHANDUKA RESOURCES

Shanduka Resources is a subsidiary of Shanduka, a black-owned and managed investment holding company founded by Cyril Ramaphosa, James Motlatsi and several other black professionals. Shanduka realises its own contribution to broad-based BEE ownership through community development trusts holding equity interests in Shanduka. These trusts are part of the Shanduka Foundation which was launched in 2004 as the vehicle through which Shanduka channels its social and community investment initiatives. Shanduka has committed to spend in excess of R100 million in upliftment programmes over the next 10 years.

The Shanduka Foundation is committed to support initiatives aimed at:

- developing women-led small businesses and new entrepreneurs;
- providing scholarships for deserving, previously disadvantaged students at accredited tertiary institutions enabling them to continue their studies in business related courses; and
- assisting underprivileged schools to acquire basic facilities through the Adopt-a-School programme.


Shanduka Resources has a long-term strategy to develop a diversified resources house with operational capabilities and has investments in the coal, diamond, paper and gold industries. Shanduka Resources will provide leadership for Assore's BEE partners and strategic support to Assore in achieving its BEE objectives.









### THE COMMUNITY TRUST

The Community Trust was established for the benefit of HDSAs and broad-based HDSA community groupings in the areas in which the Assore group's mines and beneficiation plants are located. Assore has initiated a process through which it will identify and negotiate with certain community groupings for their participation as trustees and beneficiaries in the community trust in accordance with the Community Trust's trust deed.

Assore concluded relationship agreements with each of Shanduka Resources and the Community Trust in order to regulate the respective relationships between the parties to ensure, insofar as is possible, the continued compliance by each of Shanduka Resources and the Community Trust (as the Assore group's BEE partners) with the direct ownership requirements of the Mining Charter.

### SUMMARY OF PREFERENTIAL PROCUREMENT

The group is committed to bringing previously disadvantaged South Africans into the mainstream of the economy by identifying, developing, facilitating and availing business opportunities to BBBEE suppliers at all its operations. Set out below is a summary of the percentage BBBEE procurement measure against total discretionary procurement which is as yet unaudited. Total discretionary procurement is defined as total procurement less procurement through public sector rendering rates  utility service provider etc.

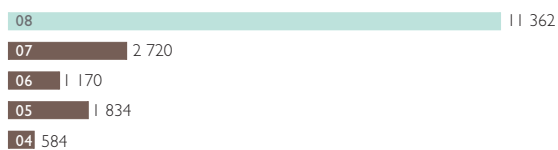
|                     | Total discretionary procurement   | Agreement % BBBEE at June 2008  |
|---------------------|---|---|
| Assmang             |  |  |
| Wonderstone         |  |  |
| Rustenburg Minerals |  |  |
| Xertech             |  |  |

## FIVE-YEAR SUMMARY of the consolidated financial statements

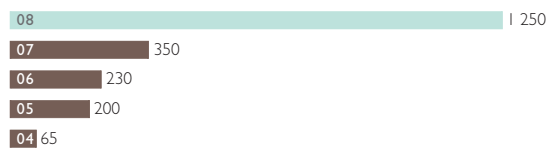
|   | 2004 <sup>^</sup><br>R'000 | 2005*<br>R'000 | 2006<br>R'000  | 2007<br>R'000  | 2008<br>R'000      |
|---|----------------------------|----------------|----------------|----------------|--------------------|
| <b>Income statements</b>  |                            |                |                |                |                    |
| <b>Turnover</b>   | 2 228 091                  | 3 093 944      | 3 382 587      | 4 293 036      | <b>9 158 937</b>   |
| Profit before profit on disposal of available-for-sale investments                            | 309 029                    | 793 607        | 561 614        | 1 129 414      | <b>4 665 106</b>   |
| Profit on disposal of available-for-sale investments  | –                          | –              | 145 777        | 43 025         | <b>22 350</b>      |
| Taxation and State's share of profits   | (99 583)                   | (252 545)      | (227 569)      | (369 084)      | <b>(1 509 091)</b> |
| <b>Profit for the year</b>  | <b>209 446</b>             | <b>541 062</b> | <b>479 822</b> | <b>803 355</b> | <b>3 178 365</b>   |
| Attributable to:  |                            |                |                |                |                    |
| – Shareholders of the holding company   | 169 843                    | 509 445        | 457 384        | 774 704        | <b>3 069 522</b>   |
| – Minority shareholders   | 39 603                     | 31 617         | 22 438         | 28 651         | <b>108 843</b>     |
| As above  | 209 446                    | 541 062        | 479 822        | 803 355        | <b>3 178 365</b>   |
| <b>Other information</b>  |                            |                |                |                |                    |
| Attributable earnings as above (R'000)  | 169 843                    | 509 445        | 457 384        | 774 704        | <b>3 069 522</b>   |
| Headline earnings (R'000)   | 163 444                    | 513 445        | 323 933        | 736 021        | <b>3 057 708</b>   |
| Earnings per share (cents)  | 607                        | 1 819          | 1 652          | 2 863          | <b>11 406</b>      |
| Headline earnings per share (cents)   | 584                        | 1 834          | 1 170          | 2 720          | <b>11 362</b>      |
| Dividends declared during the year  | 12 600                     | 26 600         | 64 400         | 84 000         | <b>126 000</b>     |
| <b>Less: Dividends attributable to treasury shares</b>  | –                          | –              | –              | (2 928)        | <b>(4 392)</b>     |
|   | 12 600                     | 26 600         | 64 400         | 81 072         | <b>121 608</b>     |
| Dividends per share relating to the activities of the group for the year under review (cents) |                            |                |                |                |                    |
| – Interim (declared and paid)   | 20                         | 50             | 80             | 150            | <b>250</b>         |
| – Final (declared subsequent to year-end)   | 45                         | 150            | 150            | 200            | <b>1 000</b>       |
|   | 65                         | 200            | 230            | 350            | <b>1 250</b>       |
| Weighted average number of shares for purposes of calculating earnings per share              |                            |                |                |                |                    |
| Ordinary shares in issue  | 28 000                     | 28 000         | 28 000         | 28 000         | <b>28 000</b>      |
| Treasury shares   | –                          | –              | (305)          | (942)          | <b>(1 088)</b>     |
| Weighted average  | 28 000                     | 28 000         | 27 695         | 27 058         | <b>26 912</b>      |
| Average exchange rates for the year:  |                            |                |                |                |                    |
| SA rand to US dollar  | 6,84                       | 6,18           | 6,41           | 7,20           | <b>7,27</b>        |
| SA rand to euro   | 8,16                       | 7,84           | 7,80           | 9,67           | <b>10,72</b>       |

<sup>^</sup> Year 2004 is prepared in accordance with South African GAAP, and the years thereafter in terms of IFRS

\* Restated due to the adoption of IFRS



Headline earnings per share (cents)

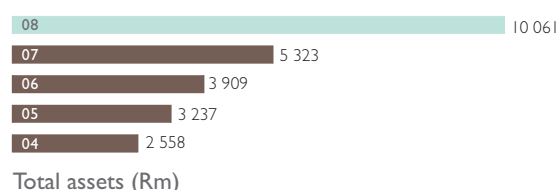
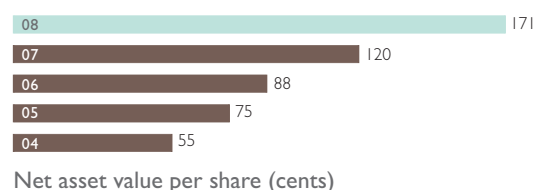


Total dividends relating to the activities of the group for the year under review (cents)

| Balance sheets   | 2004 <sup>^</sup><br>R'000 | 2005*<br>R'000   | 2006<br>R'000    | 2007<br>R'000    | 2008<br>R'000     |
|--|----------------------------|------------------|------------------|------------------|-------------------|
| <b>ASSETS</b>  |                            |                  |                  |                  |                   |
| <b>Non-current assets</b>  |                            |                  |                  |                  |                   |
| Property, plant and equipment, investment properties and intangibles | 1 206 428                  | 1 391 931        | 2 023 210        | 3 003 319        | <b>4 196 018</b>  |
| Available-for-sale investments                                       | 165 715                    | 232 093          | 169 750          | 236 119          | <b>590 191</b>    |
|  | 1 372 143                  | 1 624 024        | 2 192 960        | 3 239 438        | <b>4 786 209</b>  |
| <b>Current assets</b>  |                            |                  |                  |                  |                   |
| Other current assets   | 1 006 005                  | 1 319 769        | 1 544 173        | 1 774 566        | <b>3 286 272</b>  |
| Cash resources   | 179 766                    | 293 059          | 171 835          | 309 457          | <b>1 988 957</b>  |
| <b>Total assets</b>  | <b>2 557 914</b>           | <b>3 236 852</b> | <b>3 908 968</b> | <b>5 323 461</b> | <b>10 061 438</b> |
| <b>EQUITY AND LIABILITIES</b>  |                            |                  |                  |                  |                   |
| <b>Share capital and reserves</b>                                    |                            |                  |                  |                  |                   |
| Ordinary shareholders' interest                                      | 1 549 309                  | 2 092 721        | 2 475 316        | 3 230 707        | <b>4 110 872</b>  |
| Minority shareholders' interest                                      | 42 560                     | 39 363           | 51 114           | 48 673           | <b>111 528</b>    |
| Total equity   | 1 591 869                  | 2 132 084        | 2 526 430        | 3 279 380        | <b>4 222 400</b>  |
| <b>Non-current liabilities</b>                                       |                            |                  |                  |                  |                   |
| Deferred taxation  | 240 576                    | 345 181          | 544 844          | 620 597          | <b>899 701</b>    |
| Long-term liabilities  | 55 425                     | 65 333           | 122 312          | 156 955          | <b>223 320</b>    |
|  | 1 887 870                  | 2 542 598        | 3 193 586        | 4 056 932        | <b>5 345 421</b>  |
| <b>Current liabilities</b>   |                            |                  |                  |                  |                   |
| Non-interest-bearing   | 290 878                    | 467 514          | 461 928          | 721 759          | <b>2 094 528</b>  |
| Interest-bearing   | 379 166                    | 226 740          | 253 454          | 544 770          | <b>2 621 489</b>  |
| <b>Total equity and liabilities</b>                                  | <b>2 557 914</b>           | <b>3 236 852</b> | <b>3 908 968</b> | <b>5 323 461</b> | <b>10 061 438</b> |
| Net asset value per share (rand)                                     | 55                         | 75               | 88               | 120              | <b>171</b>        |
| Exchange rates at year-end   |                            |                  |                  |                  |                   |
| SA rand to US dollar   | 6,17                       | 6,65             | 7,11             | 7,02             | <b>7,84</b>       |
| SA rand to euro  | 7,53                       | 8,06             | 9,10             | 9,50             | <b>12,37</b>      |

<sup>^</sup> Year 2004 is prepared in accordance with South African GAAP, and the years thereafter in terms of IFRS

\* Restated due to the adoption of IFRS



## VALUE ADDED STATEMENT

|  | Note | 2008<br>R'000    | 2007<br>R'000    |
|--|------|------------------|------------------|
| <b>Wealth created</b>                      |      |                  |                  |
| Property, plant and equipment              | 2    | 4 131 072        | 2 938 606        |
| Investment properties                      | 3    | 61 838           | 61 425           |
| Intangible assets                          | 4    | 3 108            | 3 288            |
| Available-for-sale investments             | 5    | 590 191          | 236 119          |
|  |      | <b>4 786 209</b> | <b>3 239 438</b> |
| <b>Wealth distributed</b>                  |      |                  |                  |
| Inventories                                | 6    | 1 287 730        | 976 047          |
| Trade and other receivables                | 7    | 1 998 542        | 798 519          |
| Cash deposits held by environmental trusts |      | 36 942           | 29 097           |
| Cash resources                             | 25.6 | 1 952 015        | 280 360          |
|  |      | <b>5 275 229</b> | <b>2 084 023</b> |
| <b>Retained to develop future growth</b>   |      |                  |                  |
| Share capital                              | 8    | 700              | 700              |
| Share premium                              | 9    | 30 358           | 30 358           |
| Treasury shares                            | 10   | (2 341 725)      | (86 262)         |
| Retained earnings                          |      | 6 063 424        | 3 115 510        |
| Other reserves                             | 11   | 358 115          | 170 401          |
|  |      | <b>4 110 872</b> | <b>3 230 707</b> |
| Minority shareholders' interest            |      | <b>111 528</b>   | <b>48 673</b>    |
| <b>Total equity</b>                        |      | <b>4 222 400</b> | <b>3 279 380</b> |
| <b>Non-current liabilities</b>             |      |                  |                  |
| Long-term borrowings                       | 12   | 72 792           | 75 212           |
| Deferred taxation                          | 13   | 899 701          | 620 597          |
| Long-term provisions                       | 14   | 150 528          | 81 743           |
|  |      | <b>1 123 021</b> | <b>777 552</b>   |

COPY TO COME