

GROWTH

Several projects in Kumba's pipeline of growth opportunities are now being developed, while other exciting opportunities are at various stages of investigation.

IRON ORE

Sishen Expansion Project After completion of the detailed feasibility study for the 10Mtpa Sishen expansion project, an investment decision was made in February 2005.

The project applies jig technology, new to Sishen but extensively used in the iron ore industry, to extract additional ore from existing run-of-mine and previously stockpiled material. The 16Mtpa feed to the new plant, incorporating jiggling technology, will produce about 10Mtpa of saleable ore with an average iron content of 64%. The project is currently in early implementation phase and construction has commenced. Production will begin by mid-2007, ramping up to full capacity by the beginning of 2009. Improvements identified during the detailed design phase of the project together with higher commodity and labour costs in the construction industry led to a revision in the capital estimate of the project from R3,0 billion to R3,6 billion. A study is also under way for the expansion of the project to deliver an additional 3Mtpa of output.

Export Logistics Expansion Project Kumba and Transnet concluded an agreement to expand the Sishen-Saldanha export channel in February 2005. The agreement allows for an additional 11,5Mtpa of iron ore to be exported from Saldanha Bay. This will bring Kumba's iron ore rail allocation to Saldanha Bay to 35,0Mtpa by 2009. Of this, 33,2Mtpa will be exported.

Sishen South Project This project involves the development of a greenfields open-cast operation on a group of iron ore bodies some 90km south of Sishen mine, and immediately to the west of the current mining operations of Assmang's Beeshoek mine.

Due to export logistics constraints, a phased approach for developing the mine is currently being studied. The first phase of 3Mtpa will form part of the current 35Mtpa Sishen-Saldanha export agreement concluded with Transnet. The project will produce a range of products similar to the Sishen expansion project. Kumba is expected to make a final investment decision on the estimated R1 billion first phase in the current year following approval of the mining right application.

Expansion of the mine to some 9Mtpa during a second development phase will be synchronised with further expansion of export logistics capacity. Discussions with Transnet are advanced and are expected to be concluded during 2006.

Although the 420Mt Sishen South resource allows for the 9Mtpa phase 1 and 2 developments to deliver non-beneficiated ore, a study is also under way on further expansion of the mine – involving ore beneficiation – to 12-15Mtpa.

Phoenix Project The objective of the Phoenix project is to extend by some 20 years the life of mine at Thabazimbi, which is in Limpopo province and provides Mittal with lumpy and fine ore. This will be achieved by exploiting the *in situ* low-grade banded ironstone formation, which, when combined with high-grade hematite, provides an economically viable ore feed. Based on test work and similar technology for the Sishen expansion project, a flow sheet has been developed with sufficient flexibility to produce the required tonnages and quality of lumpy and fine product. The project is currently in the bankable feasibility phase. An investment decision on the project could be made during 2006 with 2,5-3,0Mtpa production beginning in 2009.

Falémé Project The Falémé deposit, located in the south-eastern corner of Senegal, is owned by the Senegalese government development company, Miferso. Kumba and Miferso concluded a

preliminary agreement in 2004 for the two parties to explore the potential to create an export-oriented iron ore mine at Falémé. It is envisaged that up to 12Mtpa of high-grade ore will be mined over a 20-year period and transported to a new terminal to be built on the Atlantic coast south of the capital, Dakar, for sale mainly into the European market.

Kumba exercised its option to acquire an 80% interest in the project during November 2005 and has approved the commencement of a bankable feasibility study for the integrated development of the mine and infrastructure. This is envisaged to be completed in 2007. If viable, construction is planned to begin in the second quarter of 2007 and first production towards the end of 2008.

Miferso has recently put Kumba's rights to the project in dispute. Kumba will pursue the legal actions available to it to preserve its contractual rights.

Sishen Expansion Project II A study confirmed the potential value of expanding Sishen by a further 10-20Mtpa. This expansion will further exploit the lower-grade material used by the Sishen expansion project. The current focus of the project is to determine potential products and to analyse alternatives for capacities, mine plans and mining technology. A final feasibility study for this project will be completed in 2007 and production could start by 2011.

Zandrivierspoort Project Kumba acquired a 50% interest in the Pietersburg Iron Ore Company (PIC) in the 1980s. This company owns the Zandrivierspoort iron ore mineral and surface rights, 30km north of Polokwane, and has conducted extensive exploration and technical studies to develop the project. Phelps Dodge sold its 50% interest in PIC to Mittal in December 2004. Since then, the parties have developed a framework to conduct a pre-feasibility study which started exploration activities in 2005. During 2006 and 2007, alternative processing

and final product options will be evaluated and the parties intend to commit to a detailed bankable feasibility study in 2008, if interim studies prove a viable business case. Kumba submitted an application for the conversion of the old-order prospecting permit to a new-order prospecting right in December 2005.

Hope Downs Project Following an unfavourable outcome of arbitration proceedings stemming from a dispute (relating to Anglo American acquiring control of Kumba in December 2003) between Kumba and its partner, Hancock Prospecting, in the Hope Downs iron ore project in Western Australia, the latter was granted an option to acquire Kumba's interest in the project. Hancock exercised this option and purchased Kumba's interest on 1 July 2005, resulting in A\$231,4 million being paid to Kumba in full settlement.

COAL

Leeuwpán Jig The Leeuwpán jig plant, at a capital cost of R97 million, was commissioned during the third quarter of 2005, with full ramp up scheduled for the first quarter of 2006. It will increase the annual supply to Eskom by approximately 1Mt of power station coal. Potential also exists to further increase supply to Eskom by 0,4Mtpa.

Grootegeluk 6 (GG6) Construction of the board-approved GG6 plant started in 2005 and is due for commissioning in the second half of 2006. This plant is an extension of the washing circuit of the existing GG2 plant and will treat and beneficiate coal previously sent untreated to the adjacent Matimba power station. The GG6 plant will extract a semi-soft coking coal fraction from the run-of-mine material and will supply 530ktpa to the coking plants being refurbished by Mittal at its Newcastle facility. The capital cost of this project is R323 million.

Inyanda Coal Mine An important milestone was achieved during the year with the long-awaited announcement of the

expansion of the Richards Bay Coal Terminal (RBCT) coal export terminal. This now paves the way for joint venture partners Kumba and Eyesizwe Coal to begin developing the Inyanda Coal project. Inyanda will be a new 1Mtpa export thermal coal mine near Witbank (Mpumalanga) at a capital cost of some R184 million. Construction is expected to start in the last quarter of 2006, with commissioning set for July 2008. However, the project plan will be adjusted and phased according to the construction schedule of RBCT Phase V.

Richards Bay Coal Terminal Kumba Coal is a 12,5% shareholder in the Phase V expansion of RBCT. The RBCT board announced the approval of the Phase V expansion in November 2005. Construction of the facility is expected to start in March 2006 and will span 27 months. This expansion will give Kumba Coal a 2,5Mtpa export allocation, which will be filled by production from the new Inyanda coal mine, as well as from expanded output at Kumba's Leeuwpán and Grootegeluk mines.

Sintel Char A feasibility study on the viability of producing char for the ferroalloy industry from benches 11 and 13 in the Grootegeluk pit was completed during the year. It received conditional board approval in August 2005 and start of construction is planned for April 2006. It is envisaged that production from the char plant will begin at 80ktpa and ramp up to 160ktpa by 2008. The capital estimate for the project is R210 million. The project team is currently finalising offtake agreements and awaiting the environmental impact assessment record-of-decision from the relevant authorities.

Coal supply for Matimba power station expansion A number of projects and studies are under way that would increase utilisation of Kumba's Waterberg coal reserves. Among these is the possible expansion of Grootegeluk mine to supply power station coal to an expanded Matimba power station. A pre-feasibility study was completed in 2005 and the project has

moved into the feasibility phase, which should be completed by mid-2006. Construction is planned to commence in 2008 and production from the expanded facility could begin by early 2010.

Moranbah South In December 2004, Kumba concluded an agreement with Anglo Coal Australia to jointly explore the potential to develop a greenfields hard coking coal mine on the adjacent properties of Moranbah South and Grosvenor South, near the town of Moranbah in the central Bowen Basin coalfield of Queensland, Australia. The deposit contains substantial resources of high-grade coking coal. During 2005, good progress was made in exploring the shallow potential resources and the parties envisage completing exploration and beginning the feasibility study for this during 2006. Exploration on the deeper potential resources will continue during 2006.

Energy opportunities South Africa and its Southern African Development Community neighbours are expected to face an energy shortage in the near future as demand outpaces the ability to supply. The bulk of the region's energy supply will remain coal-based, but the need for more environmentally-friendly sources of energy places emphasis on clean-coal technologies, with the challenge of retaining the regional advantage of low-cost energy. Kumba is investigating a number of energy-related projects and technologies that could contribute to the region's energy supply in a sustainable, economical and environmentally-friendly manner. Following the year end, Kumba agreed with Magaleng, a Botswana company, to investigate the development of a coal deposit with scope for some 2,5Mtpa of thermal coal. The deposit is in the Botswana Mmamabula Central Coal Resource.

HEAVY MINERALS

Fairbreeze Project The Fairbreeze deposit is south of Titor SA's existing Hillendale mine near Mtunzini in KwaZulu-Natal. The project, at a capital expenditure estimate of R645 million, is designed to supplement mining output with that from Fairbreeze as Hillendale's grades decline

Robust pipeline of growth opportunities throughout the group

in future and the crude ilmenite stockpile draws closer to its minimum level.

Detailed engineering is almost complete and the pre-construction phase has started to prepare for construction in mid-2006. Start of construction will be subject to board approval, planned for the first half of 2006.

The mining plant is envisaged to be in operation in July 2008 with an approximate life of mine of ten years.

Toliara Sands Project This project comprises two exploration areas in south-western Madagascar, known as Ranobé and Monombo-Marombe respectively. These are held under an option agreement with Madagascar Resources NL (MRNL), a junior Australian exploration company, which gives Kumba the option to purchase MRNL's interest in the project after completion of an exploration programme and bankable feasibility study.

Should the final option with MRNL be exercised, the Toliara project offers Kumba's heavy minerals division access to a long-term ilmenite feedstock supply source for its Empangeni smelter. In addition to smelter-grade ilmenite, the deposit contains significant by-products, namely high-TiO₂ ilmenite, for synthetic rutile production, rutile, zircon and leucoxene.

The Ranobé pre-feasibility study was completed in June 2005 after exemption had been obtained from the 2004 Protected Areas Decree. Kumba has taken over full management control from Tigor Limited for the project feasibility study, which began in July 2005. It is envisaged that this study will be completed early in 2007 after which a development decision will be made. As part of the study, different options for electricity supply to the project are also being investigated.

Further delineation drilling, as well as exploration on the northern tenements, was undertaken towards the end of 2005. This should confirm an indicated

resource of 553Mt, enable the conversion of a significant part of this into the measured resources category and further quantify the potential of the Monombo-Marombe area.

Dongara Project Tigor Limited acquired the Dongara Project in March 2003 as part of its takeover of Magnetic Minerals. Located 90km south of Geraldton in Western Australia, the 20Mt reserve containing 10% heavy minerals will provide supplementary feedstock for Tiwest's mineral separation plant and synthetic rutile facility.

The first stage of development started this year with the conversion of the exploration tenements to mining licences. As part of the bankable feasibility study, an extensive botanical survey has also begun in preparation for infill resource and metallurgical drilling. Production is planned to start at the end of 2009.

BASE METALS

Chifeng Kumba Hongye Zinc Refinery Kumba has a 60% interest in the 25ktpa Phase 2 module at the Chifeng refinery in Inner Mongolia, China, which was successfully commissioned in 2004. A decision has been made to also participate in the Chifeng Phase 3 expansion, in which smelter capacity will be increased further to 110ktpa. Kumba will participate in the expansion by swapping some of its shareholding in the Phase 2 company into the new Phase 3 company. The enlarged smelter will benefit from better economies of scale and by producing value-added products. Further activities include investigations of possible zinc mining opportunities in the region.

Rosh Pinah Exploration Following the significant recent increase in zinc concentrate production at the Rosh Pinah mine in southern Namibia, an accelerated exploration programme was instituted to define new resources.

Democratic Republic of Congo projects Kumba has long been associated with two

projects in the Democratic Republic of Congo (DRC): the Kamoto copper/cobalt mine and the Kipushi zinc/silver/lead mine, both located in south-eastern Katanga province and previously mined by the state mining company, Gécamines.

The Kamoto project has recently been allocated to a third party on commercial terms similar to that proposed by Kumba. Kumba is assessing its contractual position with the aim of preserving its rights.

A scoping study for the Kipushi project was completed in November 2005 in conjunction with Kumba's partner in the project, Adastra Minerals. It will be used as a basis for concluding a new heads of agreement with Gécamines and the DRC government, which will be aligned to the new mining code and ensure security of tenure.

ALLOYSTREAM™

AlloyStream™ is a process technology developed and patented by Kumba in terms of which fine metalliferous ore is converted directly to the metal or ferroalloy, using cheaper reductants and less electric power than conventional technology, and with lower environmental impact. During the year, the process has been tested specifically in the production of ferromanganese, using a purpose-built, sub-commercial scale furnace at Kumba's pilot plant facility in Pretoria.

An extensive campaign in the latter part of the year demonstrated technical and commercial viability and provided the project team with valuable inputs for the design of the first industrial furnace. The demonstration campaign used a blend of South African manganese ores as intended for use in the first commercial facility.

Negotiations with a strategic partner for use of the technology with manganese are well advanced. This agreement will form the basis of a feasibility study for the first smelting complex using the technology.

Growth opportunities are pictorially presented on p52.