Mozambique builds a mining future

This former Portuguese colony is attempting to diversify its minerals sector, with vast potential in uranium and diamonds to build on successful gold exploration.

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ESPIE the financial crisis, prospects for Mozambique’s mining sector look bright. Fatima Momade, National Director of Mining Resources, has recently forecast that the mining and oil sectors are planned to remain as the future drivers of GDP growth, reaching close to 15% by 2010. While oil revenues will lead this growth, mining-sector revenues, starting from a low base in 2000, are expected to be worth US$380 million by 2012.

Optimism about the future is well-founded. In October, the government announced that it had secured US$500 million from the Dutch and Danish governments as well as the European Union to build a railway to link the coal-rich Moatize mines (Vale SA) to Nacala port by 2015. Combined with the investment of US$2 billion, this project will see mineral exports take off to more than US$1 billion annually when the new Moatize coal mine reaches full production.

It is unlikely that there will be much political unrest surrounding this month’s presidential elections, given that ruling party Frente de Liberta de Mozambique (Frelimo) is a clear favourite to win. However, though Mozambique has been able to attract much foreign investment projects in gold mining and BHP Billiton’s Mozal aluminium smelter became the major drivers of growth and stimulated demand from associated service and construction sectors.

Some mining projects in Mozambique have been slowed and JSW Steel Ltd of India recently pulled out of its coal project, claiming that a high ash content meant that the quality was unsuitable.

The country’s diverse geology offers a range of minerals and metals, including gold, uranium, titanium, coal and bauxite. The Manica belt spanning western Mozambique is the primary source for the country’s gold, copper, iron ore and lead resources. High-grade bauxite is also found in this region.

GOLD PROSPECTS

Canada-listed explorer African Queen Mines Ltd has several gold projects in Mozambique. In September, the company announced that the highest values obtained from the King Solomon project on the Fingoe Belt in...
western Tete Province were: 11.87g/t Au, 3.67% Cu, 56.3ppm Ag, with 6.8ppm Bi. Initial rock samples from the site indicate potential for a sizeable copper-gold-silver polymetallic regional skarn system.

Following more results from King Solomon in October, company chairman and chief executive Irwin Diani said: “Further sample results from the King Solomon project are proving to be consistent with the initial results. The smelter’s potential presence of a large regional gold-bearing polymetallic system. The King Solomon project is now the focal point for our work on Mozambique’s Fingoe Belt through various joint ventures. Our exploration work is accelerating.”

In July, African Queen announced an earn-in and joint-venture (JV) agreement with Swiss-based Opti Metal Trading Ltd, covering exploration, development, and exploitation of a licence held by Opti Metal.

Early this year, African Queen also entered into a JV agreement with Bobcat Mining to help fund exploration and development of the historic Braganza mine, on the Mutare-Penhalonga Greenstone Belt. However, in July, African Queen announced that it had abandoned its plans to develop Braganza due to poor exploration results and the financial crisis. In doing this, it has relinquished its right to earn a 75% interest in the project from joint venture partner Bobcat Mining Ltd. In November 2008, the company announced that it had earned a 51% interest in two JVs with Manica Minerals Ltd (a private company) for the exploration, development and exploitation of the Cazula gold project and the Fingoe grass-roots gold project.

The Delta Trading group of Mozambique was granted a gold mining licence for the Monarch mine in Penhalonga in 2008. It has an agreement that stipulates the first quantities of gold produced must be sold to the Bank of Mozambique. Based in Maputo, Delta is a privately-owned company operating in Mozambique since the 19th century. Mining at Monarch was expected to start this year.

DIAMOND PROSPECTING PERMITS ISSUED

In July 2008, seven out of 15 companies and one individual were selected by tender to prospect for diamonds in the basin of the Save river, which marks the conventional boundary between southern and central Mozambique. The companies are: Save, M’Panda Lda; Preciosa - Precious Stones and Gems Exploitation Ltd; Geominas; Monte Binga; Manica Land Mining Ltd, and SIVAS. The individual licence was granted to Amlcar Octavio Paulo.

The companies are prospecting along eight blocks in the basin of the Save River from Mozambique’s border with Tanzania to its mouth. This work is likely to take at least five years and results are not expected any earlier.

ALUMINIUM SMELTER SUCCESS

BHP Billiton’s Mozal aluminium smelter lies just 17km from Maputo. The company holds a 47% interest in the JV. The other partners are: Mitsubishi Corp (25%), Industrial Development Corporation of South Africa Ltd (24%), and the government of Mozambique (3.9%). The smelter uses Aluminium Pechiney AP35 technology to produce standard aluminium ingots and is supplied with alumina by the Worsley refinery in Western Australia. Mozal also built and operates a dedicated berth and other port terminal facilities at Matola, the port of Maputo. The smelter has a capacity to produce over 500,000t/y aluminium ingots.

IFC SUPPORTS IRON-ORE PROJECT

To support local jobs and economic development, the World Bank’s International Finance Corp gave Baobab Resources plc, an Australian exploration company working on a project in Tete province, a US$5 million equity package last January. The purpose was to fund the exploration and feasibility stage phases of the Tete magnetite-ilmenite project, which comprise three contiguous exploration licences. The IFC global head for mining, William Bulmer, commented that the IFC was committed to helping companies develop projects in an environmentally and socially responsible manner, and in regions with low economic growth.

Mid-year, ArcelorMittal announced that it was closing its factory in Maputo and suspending the construction of a steel mill in Boane.

ROOM TO MOVE IN COAL

On March 28, Vale announced its intention to invest US$595 million in its Moatize coal project next year. It has launched this construction of this US$1.3 billion coal project in northern Mozambique, with the capacity to produce 11Mt/y of coal.

The plant will be in Moatize in the Tete province, and the coal will be exported to Brazil, Asia, the Middle East and Europe. The project is expected to produce 8.5Mt/y of metallurgical coal and 2.5Mt/y of thermal coal. Riverside Mining Ltd became a leading coal enterprise following its agreement to acquire exploration tenements in Mozambique, including 16 coal-bearing tenements in the Lower Zambezi Coal Basin in October 2006 and six tenements in the Tete province acquired in August 2007. These tenements are contiguous with tenements already held by Riverside and those held by Vale.

The combined tenement now held by Riverside covers more than 2,500km² in the Tete-Moatize area, with an extensive area capable of supporting long-life operations in this emerging and highly prospective region. The region is within economic reach of the East African coast, with access to the port of Beira via a railway line from Moatize that is being rehabilitated. In April, Riverside received approval from the

MINING-SECTOR REFORM

The International Development Agency (World Bank)-financed Mineral Resources Management Capacity Building project was created in 2001 to improve the institutional capacities in Mozambique’s mining sector. It has brought significant investment to the sector. The project reformed the regulatory framework, encouraged the expansion of private investment in mining and is still helping to reduce poverty in areas where small-scale mining is practised – although more needs to be done to accommodate artisanal miners.

Mozambique’s mining law was revised in 2002 and security of tenure was guaranteed. The mining ministry encourages exploration and also allows companies to repatriate profits; and almost without exception, the government takes no direct stake in mining projects. The nation’s mining laws were established with the aim of leveraging its vast mineral base to boost its overseas revenues through large-scale exports.

Unlike many African countries, the state does not control the mining industry in Mozambique and it is not required to be a participant in mining ventures. The formal mining sector is now successful and the improvements are evident in administering the sector:

- The capacity to process new mining licences has increased exponentially. The mining code has been modernised and mining legislation is now aligned with international best practice;
- Geological infrastructure has been developed. A geophysics regional airborne survey covering 193,441 line kilometres has produced and published geological maps;
- Information streamlined and shared. All map data was delivered to the National Directorate of Geology, where the project established a minerals information system. To date, the government has prioritised the provinces with the most mining activity, including Manica, Tete, Zambezia and Nampula;
- A robust environment management system was established. The project linked the environmental permitting process to the mineral licence application process, so the two could be tracked together;
- Improved sustainability of small-scale mining. The project established pilot small-scale mining sites – in clay and gold – to demonstrate improved techniques to small groups of artisanal miners.

The government has identified several aspects of the legislation which it will now improve. The steps to be taken include:

- Expediting the issue of mining licences by posting maps of existing licence holders online. At present, prospective miners have to apply for mineral licences from local directorates, which then have to examine paper records to check whether the ground has already been taken;
- Embarking on a mineral export promotion programme to boost its depleted foreign exchange reserves;
- Focusing government policies on improving the administrative structure of mining operations as well as upgrading health and security provisions;
- New mining laws to promote small-scale mining.

Diamond mining is being treated differently to licensing for metals exploration and exploitation. The diamond licences are linked to contracts which establish the conditions imposed by the government and are intended to guarantee that companies respect the following obligations:

- A guarantee that the Mozambican partner will not be excluded from the partnership;
- A guarantee that the company will never be sold to foreigners if diamonds are discovered;
- A guarantee that the licence will not be passed to third parties, but must be used effectively as issued.

Obete Matine, the deputy national director of mines, announced in March announcing this licensing procedure also confirmed that Mozambique acceded to the Kimberley diamond certification system, aimed at preventing the marketing of ‘conflict diamonds’ – ie, looted from unstable countries and used to finance wars in Africa. States party to the Kimberley Process must enforce rigorous rules to ensure that conflict diamonds do not enter the legitimate trading channels.
Mozambique government for the Benga coal project in Tete, a JV with India’s Tata Steel Ltd (35%). Based on the data collected from recent drilling activities, a coal resource of 4,000Mt has been estimated. Initial development approval for Stage I was given this week.

Earlier this month, the company announced the first coal resources for its 100%-owned Zambeze project in the Moatize Basin, which lies adjacent to the Benga project. Highlights included an indicated coal resource of 1,700Mt with hard coking coal and thermal coal. Riversdale executive chairman Michael O’Keeffe said: “The considerable effort of our team in Mozambique has now delivered another potential Tier One project with similar coal to Benga, yet likely to be a significantly larger-scale operation.”

He added: “A second coking-coal project of this size positions Riversdale as a preferred supplier to the steel industry in the rapidly-developing markets of Brazil and India.”

MINERAL SANDS
Kenmare Resources plc operates the Moma titanium minerals mine which lies on the northern coast of Mozambique. Moma is the world’s largest titanium minerals mine not owned by a major operator, the company says. Reserves include the titanium minerals ilmenite and rutile (used as feedstocks to produce titanium dioxide pigment) as well as zircon, the relatively high-value zirconium silicate mineral.

Mining is accomplished by dredging an artificial mining pond, with concentration of the heavy minerals in a floating wet concentrator plant (WCP) to produce a heavy mineral concentrate (HMC) pumped to a minerals separation plant (MSP) for further processing. The MSP separates and upgrades the HMC into the final products: ilmenite, rutile and zircon. These are exported directly from the mine site using a dedicated shipping terminal and a trans-shipment barge which loads ocean-going ships. Kenmare plans to boost output to 800,000t/y of ilmenite in addition to co-products zircon and rutile.

Mozambique had extended BHP Billiton’s prospecting licence for the US$800 million Chibuto Sands project in the southern Gaza province by two years. But early this year, BHP Billiton halted this project, which was to mine titanium-bearing mineral sands. The giant mining corporation, which controls Corridor Sands Ltd, the company with the prospecting rights, has announced that its pre-viability study “reached the conclusion that the value that can be obtained from this deposit is inadequate to justify its development at this moment”.

Fellow big player Rio Tinto is studying an ilmenite-rutile and zircon products. which BHP Billiton abandoned. It has indicated that the low-slime Mozambique mineral sands would probably be dredgeable and that it may take a decision about the project’s future this year. A conventional heavy mineral separation circuit would allow extraction of ilmenite, rutile and zircon products.

URANIUM EXPLORATION BOOM
Earlier this month, the government announced that the following companies were performing uranium prospection and/or exploration in Mozambique: Omegacorp Ltd, Mantra Resources Ltd, Uranim Inc, Kenmare Resources plc, Helio Resource Corp, Mavuzi Resources Ltd and Red Rock Resources plc. AIM-listed Red Rock Resources announced in 2008 a memorandum of agreement with Goma Investimentos for uranium exploration rights over, and 85% ownership of, the Pedido mineral prospecting licence in Mozambique.

The company will be targeting sandstone-hosted uranium mineralisation within the middle to upper Karoo sequences of a similar type to that of the Kanyemba deposit located by Interuran in the 1980s. The Kanyemba deposit lies directly across the Mozambique/Zimbabwe border. The area’s potential is highlighted further by the Kariba uranium project, in Zambia, which is about 200km to the west along the Zambezi River.

MINING FOR FUTURE PROSPERITY
It is clear that projects have been suspended and investment has slowed in Mozambique but the government’s plans to build a diversified and dynamic mining sector have been successful for nearly a decade now. As commodity demand recovers, it is probable Mozambique will continue after the latest elections along its course of establishing the petroleum, mining and agriculture sectors as the engines of future prosperity.

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