

# CHEOWA SHAPES UP TO BE ZAMBEZI'S FIRST MINE



Julian Ford, MD of Zambezi Resources, pictured at the recent Africa Mining Congress in Livingstone, Zambia (photo: Arthur Tassell).

Zambezi Resources Ltd (Zambezi or ZRL), the Australian junior company focused on exploration in Zambia, believes that there is a good chance that its Cheowa copper-gold project could enter production in late 2010. Says Julian Ford, the company's MD: "While we still have to complete a prefeasibility study, currently underway, and, of course, a BFS, Cheowa is shaping up very nicely and we believe it has real potential to develop into a mine. If it does, it will rank as the first copper and gold producer in the south of the country."

Ford, although now an Australian citizen, is South African by birth and has a degree in Chemical Engineering from the University of Natal. Prior to forming Zambezi Resources in 2004 and listing it on London's AIM, he worked for a number of resource companies including Alcoa Australia, British Gas, Western Metals and Rustenburg Platinum Mines. His senior colleagues in Zambezi include Dr Geoffrey Johnson, who is Exploration Director, and Dr Willie Sweta, who is Executive

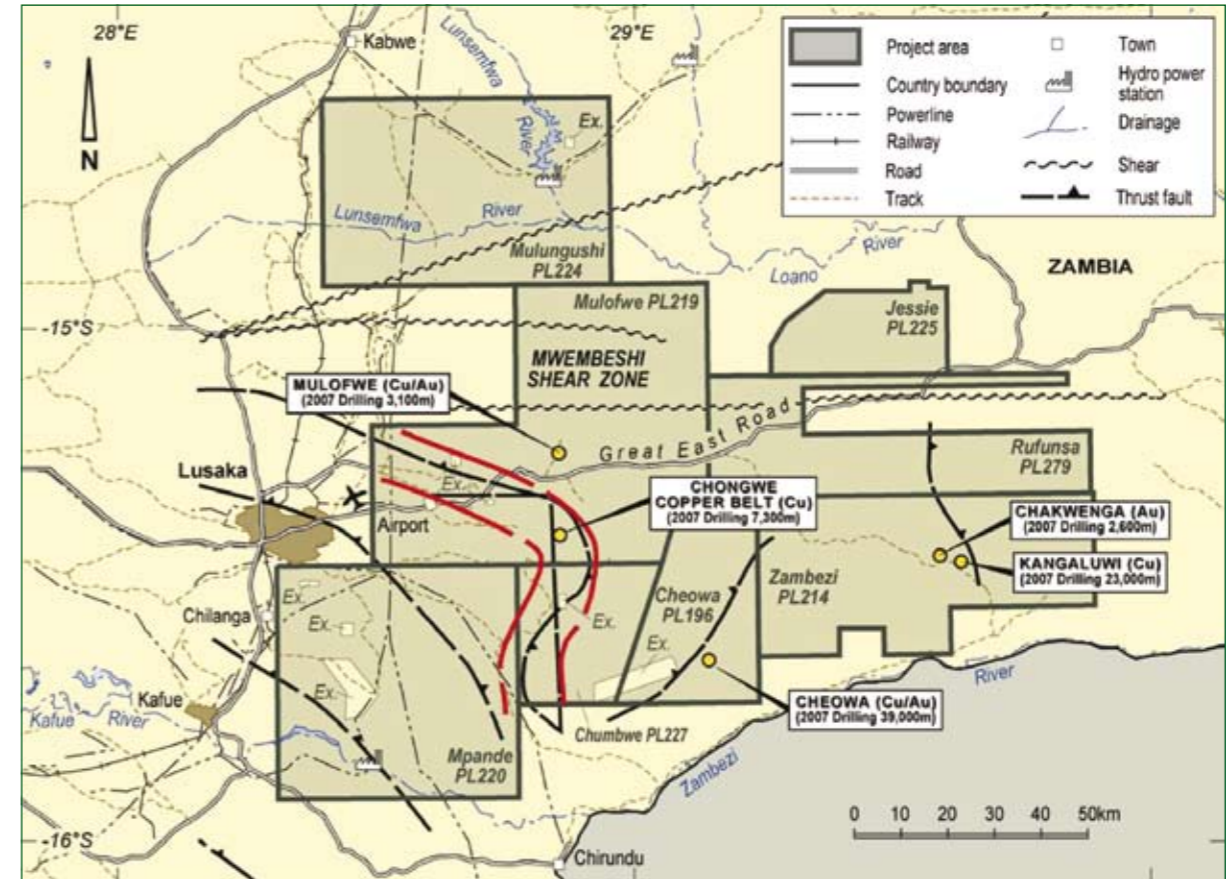
Chairman of Mwembeshi Resources, ZRL's Zambian subsidiary and operational company. Sweta, a metallurgist, is highly respected in Zambia, having served as the country's Director of Mines. He is also the Chairman of AZMEC (the Association of Zambian Mineral Exploration Companies), which represents the exploration community in Zambia.

ZRL, now also listed on the ASX, was established to explore in Zambia – and not just in Zambia but specifically southern Zambia – with the target being copper/gold deposits. As Ford says, "We are highly focused. We're not spreading ourselves over half a dozen countries and half a dozen metals and minerals. We've chosen to concentrate on Zambia for several reasons. Firstly, it has the geological prospectivity. Secondly, the southern part of the country, outside of the Copperbelt, has not been intensively explored for well over 30 years and has therefore not been subjected to modern geological exploration methods, particularly the latest geophysical and geochemical techniques. And, thirdly, Zambia is an excellent country

in which to operate. It has an infrastructure which is excellent by African standards, it is a democracy and it has mining legislation which, if not world beating, is certainly reasonably transparent and offers security of tenure."



A diamond drill rig working on Zambezi's Chakwenga gold project in southern Zambia.



Lusaka East project locations and 2007 drilling statistics.

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As regards the focus on copper/gold, Ford says that southern Zambia is widely recognised as having the potential to host both iron oxide copper-gold and carbonate-hosted gold and copper-gold deposits. "Exploration in the 1960s and 70s identified this potential but was never followed up, as a result of the nationalisation of Zambia's mining industry at that time, as well as the unsettled political situation in Southern Africa which characterised that period," he says.

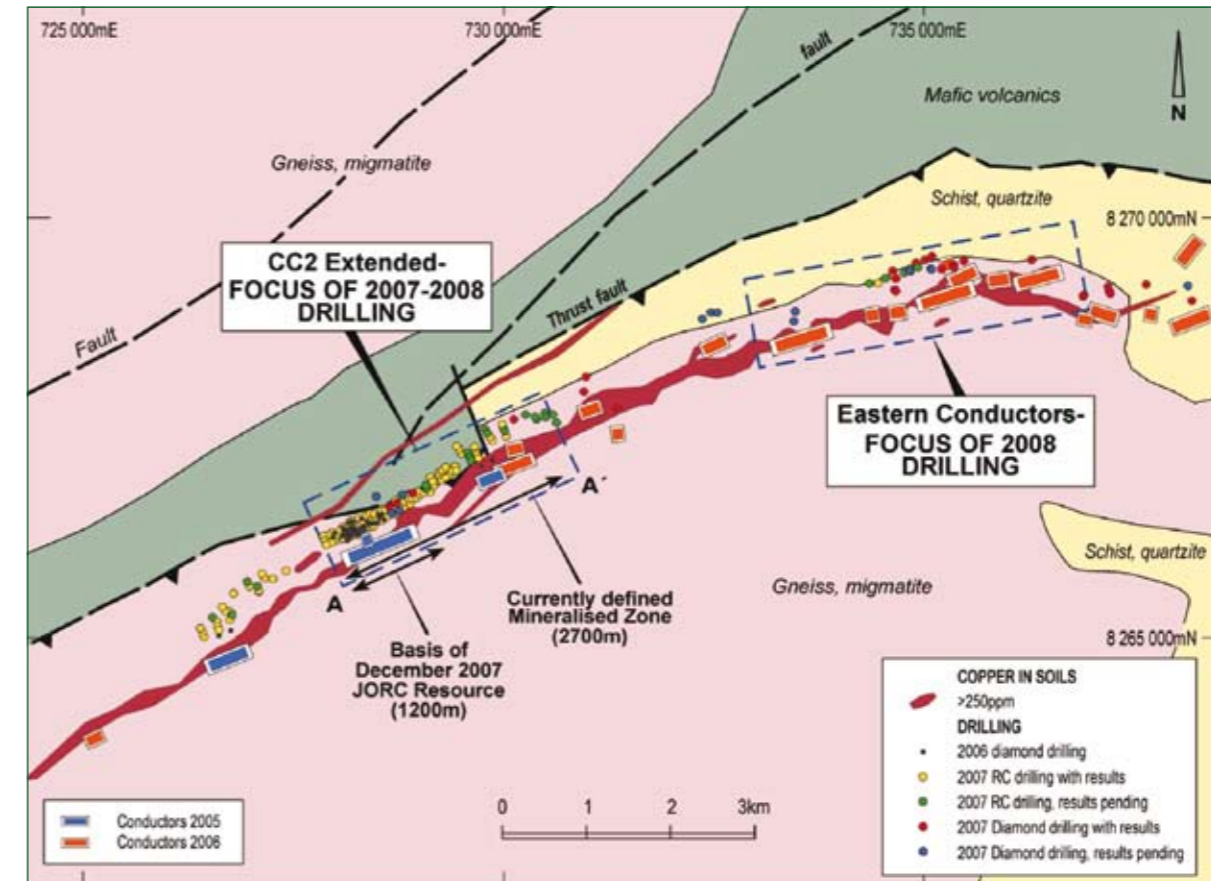
Zambezi's tenement package – which was originally assembled by Jon Crowe, an Australian geologist who now heads Baobab Resources – consists of two groups of properties, the so-called Lusaka East projects and the Chipata project, which extends over the border into Mozambique. Between them they cover over 17 000 km<sup>2</sup>. Chipata is at an early stage of exploration and most of Zambezi's efforts are currently directed towards the Lusaka East projects, located 50 to 200 km to the east, north-east and south-east of Lusaka. Of the Lusaka East projects, the most advanced is Cheowa, about 100 km to the east of Lusaka on the edge of the Zambezi Valley escarpment, Kanguwui and Mulofwe Dome.

Now into its fourth year of exploration in Zambia, ZRL is arguably the most active explorer in the country. "We have a large regional exploration office in Lusaka which acts as a base for 25 highly qualified geoscientists, the majority of them from Zambia and Zimbabwe," says Ford. "We currently operate five

field camps and have around 100 people in the field. We're also one of the few companies – perhaps the only company – to operate through the wet season. At Cheowa, for example, we've had three diamond rigs working right through the rains, with a helicopter bring in fuel and taking out core samples." He adds that apart from conventional drill rigs, Zambezi also makes use 'man portable' rigs which are made by an Australian company in Indonesia. "The heaviest item on these rigs is the engine, which weighs about



A helicopter at the Cheowa site. Zambezi makes extensive use of helicopters and has employed them, for example, to support the wet season drilling that has been underway at Cheowa over the past few weeks.



The Cheowa project showing conductor locations and drillhole collar locations. The helicopter-borne VTEM survey technique, first used by Zambezi in 2005, has proved of critical importance at Cheowa, allowing direct drill targeting of electrical conductors.

250 kg,” he says. “The rigs are easily moved by helicopter and I would guess that we’re the only users of this equipment in Africa.”

The scale of ZRL’s effort can be gauged for its exploration budgets. Last year it spent US\$20 million and this year its outlay will be a further US\$30 million. Last year it drilled a total of 100 000 m using three different contractors. It has nine rigs contracted for the 2008 field season, starting in May. Comments Ford: “Companies like ours are really the future of the exploration industry. As a broad generalisation, the majors lack exploration capacity and future projects, for the most part, are likely to be generated by specialised and focused juniors such as Zambezi.”

As the company’s most advanced project, Cheowa is getting the lion’s share of ZRL’s attention. A prefeasibility is due for completion in June and has been preceded by a scoping study which examined the viability of a mining operation based on underground mining with the ore being treated in a 2 Mt/a milling and flotation plant to produce 27 000 tonnes of copper and 27 000 ounces of gold annually. The project has powerful backing – Glencore International, one of the world’s biggest metals traders, is farming-in and is spending US\$10 million to earn a 51 % interest. Glencore also controls the Nkana and Mufulira mines on the Copperbelt, and an offtake agreement is in place which will see Cheowa’s concentrates, assuming a mine is built, being treated at the Mufulira smelter, which has recently been substantially upgraded and expanded by Glencore.

Once Glencore has earned its 51 % in Cheowa (which should occur in the second quarter of this

year), it can elect to take management control. Ford, however, believes that it will not exercise this right. “Cheowa is a small project for a group of this size and the likelihood is that Glencore will leave Zambezi to take the project through a BFS and into production,” he states. “Certainly we won’t dilute and we have every intention of maintaining our 49 % interest.”

According to ZRL’s geologists, Cheowa comprises a copper/gold in-soil anomaly extending over 15 km of strike, coincident with an 8 km long VTEM conductor. Diamond drilling during 2006 intersected mas-



Drill core samples at the Cheowa site. Drilling at Cheowa in 2007 amounted to almost 40 000 m.



*A rig working at Cheowa. Cheowa comprises a shear-hosted copper-gold soil anomaly extending over 15 km of strike.*

sive copper sulphides and returned best intersections of 8,3 m at 2,41 Cu, 6 m at 3,54 Cu and 4 m at 3,34 % Cu. In December last year, Zambezi updated the Cheowa resource estimate, which it now puts at 2,9 Mt at 1,05 % copper and 0,22 g/t gold over a strike length of 1,2 km and to a depth of 400 m. This resource is contained in the area known as CC02. Ford believes that with several other mineralised zones still awaiting drilling (the eastern 'conductors' or anomalies will be drilled this year), the company is well on target to build up an eventual resource in the region of 10 Mt.

While Cheowa stands a good chance of being ZRL's first mine, Ford is of the opinion that Kangaluwi, further to the east, has the potential to be a world-class open-pit copper deposit. It has been a focus for Zambezi since 2006 since being discovered by geological prospecting and soil geochemical sampling. Five drilling rigs were operational at the site during the 2007 drilling season and a total of 19 827 m was drilled, 14 712 m by RC rigs and 5 115 m by diamond drills. Results from the RC drilling were announced in January this year and included some impressive intersections – for example, 7 m at 2,14 % copper from 59 m, 7 m at 2,14 % copper from 59 m and 7 m at 1,45 % copper from 143 m. Infill and extension soil geochemical surveys have identified further copper and gold anomalies over extensive areas of the Kangaluwi licence and the 2008 exploration programme will drill test these anomalies. An airborne VTEM geophysical survey is also planned to refine and identify further targets. A first resource estimate is due later this year.

A third ZRL project with company-making prospects, at least in the view of some observers, is Mu-

lofwe (also referred to as the Mulofwe Dome project). It has been described by one analyst who visited the site as having "numerous (almost like a swarm) east-west striking quartz veins containing predominantly copper-gold mineralisation". It covers over 3 000 km<sup>2</sup> and the licence area includes what ZRL calls the CCB or Chongwe Copper Belt (over which it has a second joint venture with Mopani). Mulofwe has taken a back seat to Cheowa and Kangaluwi but has now emerged as a priority target. ZRL's mapping has says the company, demonstrated that the project area "comprises a polymetallic terrain characterised by the presence of on anomalous copper, gold, silver, silver, cobalt, bismuth and uranium".

ZRL has concluded a joint venture with Rio Tinto in respects of the uranium in the area. Under the terms of the agreement, the latter will spend US\$1 million to assess the uranium mineralisation over approximately 1 250 km<sup>2</sup> of the Mulofwe Dome.

Looking ahead, Ford says that Zambezi is now reaching a critical stage in its development as a company, with its first mine definitely on the horizon. As he says, "Southern Zambia has long been regarded as an area with little mining potential but we are busy reversing this perception," he maintains. "Southern Zambia, in fact, has huge prospectivity, as the results we're getting are proving. Albion with its Munali nickel project south of Lusaka has already demonstrated that Zambia is more than just the Copperbelt. We are hoping that we can eventually emulate Albion by bringing one or more projects into production, in the process creating an important new mining province in the country."

*Report by Arthur Tassell, photos (unless otherwise acknowledged) by Zambezi Resources*