

EXPLORATION

Old fields have new dimensions

By Richard Roberts, 11-17 February 2008



Trench sampling at Tallebung in New South Wales.

THE Tallebung tin field in New South Wales doesn't look a lot different to when it was last mined nearly 40 years ago. A series of shallow openpits might have been in production more recently. There's a power line to the dilapidated front office; a concrete shell for the primary crusher; a ROM pad and a healthy looking low-grade stockpile. But for YTC Resources chief

executive Rimas Kairaitis, it is impossible to focus on Tallebung's past. He now believes the 'prospect', and several others in YTC's portfolio, have a much bigger future.

Initial support for the Tallebung view could come as early as next week when YTC gets back assays for 1000m of trenching completed in December last year. The company has also had some of the core from 24 drill holes completed in the early 1970s re-assayed after exploration manager Ian Cooper noticed traces of silver in some of the core inspected at the NSW state core library.

Kairaitis told *HighGrade* during a visit this week to YTC's Orange headquarters and regional prospects, the old Tallebung core was also being re-sampled for tungsten, indium and other metals. But the silver has particular significance.

"The presence of tin and tungsten was known, however, silver has not been recognised at Tallebung before and has the potential to add a whole new dimension to the system," he said.

"Generally speaking, tin porphyry systems have a high level silver – plus zinc and maybe lead – zone, but in other Australian tin porphyry examples such as Taronga in north NSW and

Ardlethan in central NSW the erosion level is pretty deep and the silver zone appears to have eroded away.

“The potential for the silver zone to be preserved [at Tallebung] allows us to make exciting comparisons to the South American tin-silver-zinc systems on the Bolivian tin belt and, for example, Pirquitas in Argentina [21 million tonnes grading 198 grams per tonne silver, 0.24% tin and 0.88% zinc].”



The disused primary crusher pad at Tallebung.

The shallow trench lines among a host of old adits and across northern, central and southern sections of what is believed to be a large and deeper sheeted quartz vein system that could host bulk-tonnage tin, tungsten, silver and zinc mineralisation were

considered by Kairaitis to be the best way to get a sense of the lateral scale of the mineralised system after widespread rock-chip sampling produced a string of elevated silver (up to 537gpt), tin (up to 4.8%), tungsten (up to 0.5%), copper, lead and zinc values.

YTC has booked a rig to start drilling at least four 400m diamond core holes from late April.

Kairaitis said about half the drill holes completed in the 1972 campaign, including one that got a 28m intersection of 0.1% tin from 162m depth, finished in tin-bearing, porphyry-style quartz stockwork. The interpretation of a larger porphyry tin system was further supported by the presence of a significant magnetic anomaly at depth, which was being interpreted as the development of pyrrhotite at the apex of a mineralising granite. A central drill hole in the new campaign will test the magnetic centre of the vein system and is aimed in part at intersecting copper rich mineralisation on the margin of the granite.

“We estimate they [the old Tullabong Tin Syndicate] mined 8-10 million tonnes of alluvial tin in the 1960s and 70s,” Kairaitis said.

“It was all pretty much free-digging material and the moment they hit hard rock they went home.

“There’s a huge volume of low-grade tin here. We need to find out how much silver, tungsten and copper there is. If we’re lucky we’ll get a silver supergene [zone], though we would have to be lucky.

“The target for Tallebung at this stage is a deposit of more than 50Mt grading 0.2% tin, 0.05% tungsten and plus-30gpt silver, which is about a three-million-ounce gold equivalent deposit.”

The suite of minerals at Tallebung, and potential large-scale resource, holds strong appeal for major YTC shareholder and backer Yunnan Tin Group of China, which is investing in a new tungsten processing facility and copper smelter, and already operates China’s biggest tin smelter, at Geiju in Yunnan. The Chinese company is in the process of swapping a 19.9% stake in YTC for 16.13% of Hong Kong-listed Poly Investments Holdings Ltd – an exchange which puts the value of the YTC shares at about \$A1.37 each – which will leave Yunnan with a 13% direct holding in YTC. Yunnan and YTC chairman Jianming Xiao has publicly re-stated the Chinese group’s commitment to develop and grow YTC, and Kairaitis believes exposure to the Hong Kong financial market via Poly – a “market that certainly understands tin” – is positive for YTC’s future fund-raising needs.

In a recent ASX announcement he mentioned YTC’s ability to finance future acquisitions, and confirmed to *HighGrade* the current focus remained on property rather than corporate deals. YTC was looking outside NSW and outside Australia.

Yunnan’s investment in YTC preceded last year’s Australian initial public offering of A25c shares, which raised \$A3.5 million to add to \$A2.67 million from Yunnan and about \$A650,000 from seed investors. The company’s shares were trading at \$A1.15 in the middle of this week.

It spent about \$A2 million on exploration last year, retaining \$A3.7 million at the end of 2007. As well as the work at Tallebung, YTC completed 1862m of core drilling at the Torrington tin-tungsten project in north-east NSW – for which most assays are awaited; a three-hole diamond drilling program at the Baldry gold-copper prospect (down-dip extension of an epithermal gold deposit mined by BHP Gold in the early 1990s) near Orange; and some ground-breaking lead-up exploration at the Doradilla and Kadungle (see separate report this edition of *HighGrade*) prospects, which have emerged with Tallebung as YTC’s main first-up mining targets.

Another Avebury?

Kairaitis expects to have a diamond drill working at one of the three properties through to the end of 2008 and has budgeted about \$A2 million for this year's exploration program.

Successive drilling campaigns are planned at Kadungle, testing deep porphyry copper-gold targets, Tallebung and Doradilla, with a second diamond rig available to the company if required.

As at Tallebung, a review of previous exploration records at Doradilla – combined with today's metal price outlook and YTC's China connection – has opened a new door on the potential of the property. The re-examination showed previous exploration by North Broken Hill, Shell Minerals and Seltrust Mining in the 1970s and 80s found "Avebury-style" pentlandite nickel sulphide mineralisation in ultramafic serpentinites. The trouble was, there was no Avebury – the Allegiance nickel sulphide project (12.8Mt grading 1.03%) in northern Tasmania – at the time. It wasn't found until 20 years after Seltrust hit 2m of 1.13% nickel at Doradilla in the same sulphide material.

Kairaitis said recent analysis of high-resolution aeromagnetics by YTC indicated potential for more than 4km of untested strike length of nickel-bearing serpentinites within its main Doradilla tenement area, about 45km south-east of Bourke. "The widest trend is about 2.3km long," he said. "I expect the strike lengths [of individual nickeliferous ultramafic trends] will increase as we test a number of lookalike magnetic trends."

Kairaitis said the deep weathering profile at Doradilla had developed laterite tin deposits above the primary tin skarns – the focus of previous exploration. There was a "strong likelihood" that a similar process had produced nickel laterite deposits above primary, nickel-bearing ultramafics, he said.

YTC plans to start more than 2000m of aircore drilling aimed at "chasing the untested strike of the ultramafics" early next month. "We hope to schedule the diamond rig to follow up the aircore results in June or July," Kairaitis said.

"The arrival of the diamond rig will give us an opportunity to test the depth extent of the main Doradilla tin deposit, as well as the [previously] untested Doradilla copper mine.

“What we are seeing at Doradilla is a pretty staggering range of mineralisation styles.”

YTC will also use the aircore rig to further test the tin-bearing “DMK line” – the main 16km-long skarn horizon – and in particular a lightly explored area between the known Midway and Doradilla deposits. A JORC resource calculation for Midway and the 3KEL area, further north along the DMK line, is understood to be imminent.

Kairaitis said tin exploration at Doradilla was abandoned in 1990 due to depressed tin prices and low tin recoveries from the primary tin-silicate zone. However, Yunnan Tin successfully mined and processed similar material in China. Bulk samples of Doradilla oxide material has been sent to both Yunnan metallurgical laboratories in Kunming, China, and an Ammtec facility in Western Australia.

“Both independent research and work done by the Yunnan Tin Group points to a continuing tightening of the supply side of the tin market,” Kairaitis said.

“After being the world’s third biggest tin exporter a year earlier, China became a net importer of tin in November last year, which will put further upward pressure on the LME tin price. It’s at about \$US17,000/t now, but internal trading of tin in China is already occurring at spot prices up to \$US20,000/t.

“It’s being talked about as the peak [price in the current cycle],” Kairaitis said.

“The Chinese believe \$US20,000/t could be the floor.”

Elephant hunt demands bravery

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NEW SOUTH Wales is elephant country for major copper and gold deposits – there's plenty of evidence at Cadia-Ridgeway, Northparkes and Lake Cowal. Ambitious China-backed exploration minnow YTC Resources hopes to add Kadungle to the list.

Leant an expensive, high-tech geo-imaging instrument and field personnel by company part-owner Yunnan Tin Group last year, YTC believes the tool has helped it considerably narrow its search for a large porphyry copper-gold-molybdenum deposit at Kadungle, about 55km north-west of Parkes. The \$500,000 US-made Geometrics Stratagem EH4 geophysical imaging system, believed to be the only one of its kind used in Australia, has helped identify two large "granite" intrusions beneath a well-documented and sampled, low-grade epithermal system.

YTC CEO Rimas Kairaitis, who convinced former employer Alkane Exploration to sell the Kadungle lease to him and a business partner before he went on to form YTC and vend the property into last year's float, told *HighGrade* the alkaline rocks that formed the intrusions provided directional pointers missing in earlier search activity involving Alkane and a number of other companies.

"It's been really exciting what the EH4 geophysics has thrown up," he said.

"We've been drilling beneath very broad, low-grade copper-gold hits ... and got plus-100m at sort of 0.1-0.2% copper and 0.1-0.2 grams per tonne gold. So we knew we had a system operating and that we had to go deep, we just didn't know exactly where.

"The EH4 has basically said, here it is boys. Here's a big fat anomaly underneath this thing. So we're just going to have to be brave enough to drill a 600-700m hole that's required."

Or several holes. YTC expects to start drilling 3-4 400m-plus diamond core holes this month.

"At the very least I expect to get a huge low-grade gold-copper intersection, and we're hoping that at the core of it we're going to get something more than that. We've really got to find the source of all this smoke," Kairaitis said.

YTC's Kadungle tenements cover about 263sq.km within broad-acre freehold pastoral properties near existing rail and road infrastructure. Up until recently, water supply loomed as the main longer-term consideration for any project.

Past exploration has been focused on the Mt Leadley and Mt Leadley South prospects, two low hills of outcropping mineralised volcanics about 900m apart that have yielded numerous low-grade gold and copper assays. YTC drilling beneath the anomalous outcrops has confirmed the presence of an epithermal gold system in an extensive porphyry-related envelope of copper and gold mineralisation. Regional magnetic surveys have shown the Mt Leadley and Mt Leadley South prospects as distinctive, circular magnetic "holes" about 2km in diameter. Other lookalike magnetic holes have also been detected within the tenement.

Kairaitis said no deep drilling had been done before at Kadungle. Moreover, no signs of the large (800m-wide) intrusions now known to lurk beneath the surface at depth have previously been picked up.

"There's plenty of smoke around here," he said. "We need to find the fire."

Or the Kadungle elephant next to it.

