



Premium mining industry news

The new laterite boom begins (if you listen carefully)

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AS HIS grey hairs multiply exponentially, *The Metal Detective* is often prone to nostalgia. He can still recall those glory days when the nickel laterite barons were going to take over the world by putting all the "dinosaur" sulphide boys out of business.

MD's personal date for the start of the nickel laterite boom was late 1995.

Can it really be more than 10 years since he stood next to geologist Ed Eshuys at the opening of his Jundee gold mine near Kalgoorlie, and Ed asked: "When are you going to write a story about Centaur's plans for mining nickel laterites at Cawse?"

That dramatic foray by Ed's former boss, Joseph Gutnick, into Cawse nickel pulled another colourful personality into the laterite crusade alongside then Anaconda chief Andrew Forrest.

Given the marketing charms of those torch bearers, you can see why laterites (previously worthless clumps of gravely dirt) caught the imagination of the investing public.

Alas, as sure as night follows day, the laterite boom turned into bust as the promoters discovered that high pressure acid leaching (HPAL) was trickier than it looked.

The subsequent financial disasters saw the juniors flock en masse into former WMC sulphide deposits at Kambalda – faster, higher grade and you don't need a \$A2 billion chemical plant to process the ore.

Laterite nickel is now seen as a game for the big end of town. But *MD* is convinced that a quiet revolution is brewing that will see laterites regain at least some of their lustre for a few hardy juniors.

John Macdonald, an independent Perth-based analyst who spent many years researching Anaconda in the first boom, points out that around 50,000 tonnes of new nickel capacity is needed each year just to satisfy the current growth in world demand.

And all of this growth will need to come from laterite sources.

The big new projects – Inco's Goro in New Caledonia and BHP Billiton's Ravensthorpe in Western Australia – are due to fire their first shots in mid-2007.

But Peter Johnston, Australia's last remaining nickel laterite baron, has pointed out that it may take a while for those shots to hit the target.

The chief executive of Perth-based Minara Resources, Johnston recently said the nickel market is dreaming if it expects the new HPAL operations to smoothly meet production targets.

Having spent more than \$100 million in the past few years fixing Minara's Murrin Murrin operation, Johnston's warning should be taken seriously, even if today's proponents have learned a trick or two from past failures.

Stung by Australia's overheated construction market, BHPB has already unveiled a US\$400 million cost blow-out to \$1.8 billion for the combined Ravensthorpe/Yabulu expansion.

Nevertheless BHPB stainless steel materials chief Chris Pointon insists that the mine will meet its schedule of first shipments in the second quarter of 2007.

MD applauds Pointon's confidence. But given the history of laterites in Australia, investors will be saying "I'll believe it when I see it".

However, many bugs need to be ironed out of Ravensthorpe though the majors realise that laterites are the future of nickel. Witness the jockeying for position on the Heron Resources share register by BHPB and Inco.

Owner of the Kalgoorlie Nickel Project (KNP), Heron will be the obvious beneficiary of Australia's

Phase Two laterite boom.

Macdonald argues that the KNP offers a "rare combination of size, amenability to pressure acid leaching, political security and environmental stability".

Moreover, a recent technical discovery could mean that "high average grade" can be added to the list of KNP's attributes.

A brief technical digression: for several years, work on Cawse (now owned by OMG) and BHPB's Ravensthorpe has shown that silica laterite ores grading less than 1% nickel can be upgraded by around 50%, simply by screening out the barren coarse fraction.

As far as *MD* understands it, the boffins have now worked out that using much finer mesh sizes can considerably amplify this cheap "beneficiation" effect.

At Cawse, for instance, 0.8% grade ore is screened through a sub-100 micron mesh to deliver material grading 1.6% to the autoclave, Macdonald said, adding that BHPB has drawn "heavily on the Cawse experience" in designing Ravensthorpe's screening circuit.

In the first six years of operation, Ravensthorpe plans to mine laterite grading 0.89% and upgrade it to a leach feed grade of 1.87%, he said.

MD apologises for that brief burst of technical jargon. But the bottom line is that Heron joint venture partner Inco aims to take advantage of the latest findings in their design of the KNP project.

"If successful KNP could prove to be a nickel producer's Holy Grail; a low-cost, long life, PAL project in a politically and environmentally stable location," Macdonald says.

The crusade will be a long haul, though. Even if all goes well in Inco's exploration and feasibility work, KNP won't be in production until 2013.

As for the screening breakthrough, *MD* has seen enough nickel laterite processing "revolutions" in his time to reserve judgment on this latest milestone.

Still, the work should provide sustenance for the handful of remaining laterite explorers, companies such as Yilgarn Mining – which is exploring a cobalt-rich laterite resource at its Coglia Well joint venture with the Murrin Murrin partners – GME Resources, Cougar Resources and Metallica Minerals.

And if BHPB's "upgrading" experiment proves successful at Ravensthorpe, watch out for a new stampede of laterite-touting juniors.



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