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CONSCIOUS MINING

Operating out of Papua New Guinea's Western Province, Ok Tedi Mining Limited is a vital element of the local community and is working towards more environmentally sustainable development.

Images courtesy of Ok Tedi Mining Limited

Nigel Parker, CEO of Ok Tedi Mining Limited, has more than 30 years of experience in the resources sector. He has spent 16 years in management roles for BHP Steel and Bluescope Steel, working in the US, Sri Lanka, Thailand, China, Papua New Guinea, and Australia.

The CEO Magazine caught up with Nigel to look at the challenges and triumphs of Ok Tedi, at the history of the mine, and the environmental issues that have arisen in its past.

***The CEO Magazine:* Can you highlight some of the challenges that come from working in Papua New Guinea?**

Nigel: Papua New Guinea is an emerging nation, 39 years as an independent nation with all those learning experiences. It's a nation

that I think has some issues with the old Australian culture still overlaying its age-old cultures. You've got a falling away of the old Australian education system after the past 39 years, which the current Prime Minister is trying to rectify. You've got administrative structures, like Australian-style municipal councils that don't work in PNG.

A strong hope that I have is that PNG can start to work its way through government and administrative-type areas in particular to develop more appropriate governance models that are more aligned to their own cultures. The issue with expats is that that we're not born into those cultures, so although you become reasonably aligned to the cultural thinking and the cultural ways, not being born into those cultures means you'll never be able to understand the subtleties.

What advice would you offer expats looking at positions in PNG?

First-time expats find it the most difficult. When we recruit expats, married couples, the husband gets involved in his work, and it's challenging work in the mining environment but very rewarding work for young guys. It's the wife that's usually the issue we have to deal with, and in the final interview we always bring the wife to site. We take feedback from the expat wives because the success of the executive is highly dependent on the success of his wife and fitting into the community.

In terms of advice, PNG is very Australian in the sense that Australia was very much a part of PNG pre-independence and there still is a very close relationship with Australia, so you're not jumping into something totally different to >



what you're used to. Tabubil itself is a big country town, like an Australian country town. It's very safe and secure, but you can't just jump in a car and go down to the shopping mall, so you've got to be prepared to make your home there. The best advice is: if you do take a role like this, accept that it's career advancement, it's well-paid work, but you've got to relax into the culture, both the Papuan New Guinean culture and the expat culture, and just take it easy.

How has Ok Tedi Mining Limited become part of the community in which it operates?

The managing director has, for many years, fondly been referred to as the governor of the Western Province. Last year, I was down in an area called Aimbak where the current governor, Ati Wobiro, and his wife and my wife were to launch the rehabilitation of a road from Aimbak to Lake Murray. The local chiefs were up there and welcomed the governor and myself as the former governor. "Mr Parker," they said, "now that we have a real governor, you're no longer the governor of the Western Province, but we will make you prime minister to support the governor."

I think that's indicative of the capital I've built up with their communities because it's a bigger role than mayor, since Ok Tedi touches every part of the Western Province of PNG. It provides compensation to the communities, and it supports Medevac and school development programs. There is an extraordinary impact that we do have, and we continue to build very positively through the Ok Tedi Development Foundation and through some of the marvellous and extraordinary work done under the leadership of Ian Middleton, the CEO.

Can you give our readers an overview of Ok Tedi's history and the environmental issues that have surrounded the mine?

BHP originally had 52 per cent of the resource, the PNG government had 30, and the Canadian company



Inmet had 18 per cent. This was up until January 2002, when BHP elected to withdraw from the mine. BHP were concerned because Ok Tedi was a riverine discharge mine where we discharge our mine waste and tailings into the river system, and that has been the cause of all the environmental controversy that has surrounded Ok Tedi. In the late 1990s, they were very concerned because of these environmental movements throughout the world. BHP, being very responsible for its own affairs, got to the point where they questioned the continuance of the mine because of the environmental issues and the damage to the river system.

BHP actually wanted to close the mine, but the state of PNG couldn't agree to that because it formed such an extraordinary part of the PNG economy. So a deal was done between BHP and the government where BHP would vest its interest into a special-purpose vehicle that was established in Singapore, the PNG Sustainable Development Program

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- Nigel Parker

Limited, which would hold BHP's 52 per cent interest for the benefit of PNG. So that structure was put in place, and in January 2011, we bought Inmet out as a share buyback arrangement, and from then on the company was fully owned for the benefit of PNG, both through the government's direct shareholding and the PNG Sustainable Development Program.

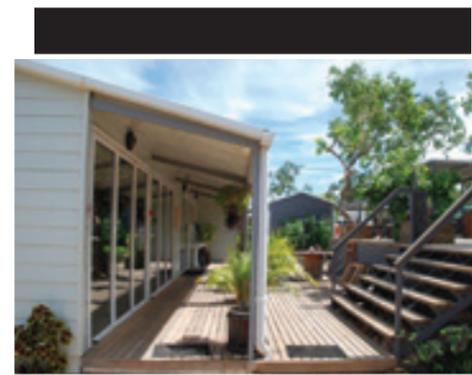
In the 10 years until 31 December 2012, we paid slightly over US\$4 billion in dividends. No-one in their wildest dreams thought the company would be in a position to pay that kind of money. That's all internally generated funds; to this day, the company does not have any balance sheet debt, we don't lease any equipment, and we don't hedge our product. We're self-generating without any support whatsoever. So the company has done extraordinarily well.

Tabubil is the mining town that is Ok Tedi's mining town, and everything you see there is pretty much owned by Ok Tedi: the internal roads, the footpaths, the

lighting, the sewerage systems. It's all Ok Tedi's; we own it, we manage it, and we run it as a special mining lease.

Even though we discharge our tailings in the river system, we use the river to transport the tailings about 100 kilometres to a place called Bige where we actually dredge 80-85 per cent of the sediment from the river and we deposit that into land-based tailings-storage facilities. So we do have a tailings-storage facility; the problem is that we use the river to transport the tailings and about 10-15 per cent of the fines get through into the river system and continue down the river. So BHP looked at every opportunity to mitigate the environmental damage in the late 1990s and we set up the dredging operation, which costs us \$50-60 million a year to continue dredging, so it's been very successful.

Subsequently, we put in a sulphur-extraction plant where we send >



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those tailings to Bige by pipelines and we bury those. In management's view, we should be looking at a closer-to-mine tailings facility so that we don't actually use the river at all. So we have pre-feasibility studies underway to look at a tailings facility much close to the mine, which would then permit us to pipe all the tailings into a land-based tailings facility and do away with depositing into the river system.

How does your company adopt a scientific approach to environmental consciousness?

We have a very large scientific department led by Dr Michael Ridd. They're kind of the unsung heroes in our business. I have a personal program to identify all of our unsung heroes in the business, and the environmental department is one of those. They have an extraordinary amount of data and very committed scientists. They have a licence to look at innovative ways to address our environmental issues. That's not just the tails out of the river; it's our environmental issues right across the board.

At Bige, for instance, they take all of the mess waste and they



convert it to mulch. At the Ok Tedi Development Foundation, we now take all the mess cooking oil and covert that into soap, which we give out to the communities. The big innovative program that we did commission late last year was our rubber tyre recycling plant where we have 35 years of waste tyres, which are an environmental issue because they don't degrade. So the plant breaks those down into rubber crumb. We take the metal and the fibre out, and we sell the rubber crumb into Australia. And that's a world-first initiative for the mining industry.

What role does corporate social responsibility play in your company's operations?

We've very much embraced corporate social responsibility, more so in the past four years when the concept of social responsibility has been recognised and known through developed nations. We now openly use that terminology and we actually are reporting. In 2011, we started to report along the line of corporate social responsibility and IFC principles. In 2011-2012, we focused on the G3 principles, and in 2013 our annual report was >

reported under G4. It's all about our social responsibility, and that links into the Ok Tedi Development Foundation.

The Ok Tedi Development Foundation came about through the BHP exit; it was formed under legislation, so zero rate of income tax. Its design under the BHP exit was to be the implementing part of the PNG Sustainable Development Program, so it implements control programs directly for the communities. The communities use that now for their own projects as well, to actually manage and implement that. When it was put together back in 2001-2002, it was leading edge because out of it came things like the financial assurance fund for mine closure, the Ok Tedi Development Foundation, and a rewards-benefit system.

An extraordinary amount of forethought went into BHP's exit program, which we still benefit from today, and other mining

companies are picking up on it. So we are now reporting our programs: our environmental programs, our community benefit programs. And at Ok Tedi, we have our own community relations department, and our subsidiary, Ok Tedi Development Foundation, is a separate legal entity that actually focuses on the community programs themselves.

What management philosophy drives your approach to business?

You hear the phrase 'leading edge' all the time, but I'm looking for the 'next edge'. The leading edge is behind us because people are achieving leading edge. In management thinking, you've got to think of the next edge that is going to give you a competitive advantage. This started to form in my mind when I was in China with BHP. Everyone was so nervous about the Chinese acquiring the technology and creativity. I sat back and thought,



"That's fine. It's going to happen anyway because we're selling products into the market. What we've got to be doing is looking for that next edge."

It's interesting that the US is where all the thinking innovation comes from, so mind power is the US's competitive edge. In Australia, unfortunately, successive governments have destroyed this notion. When I was a boy, we lived >

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Taking Care of Business

Mineral Resources Star Mountains ensures that projects in Papua New Guinea run smoothly and takes care of all involved parties.

off the sheep's back. Successive governments, through free trade, have destroyed agriculture to the point where you can only have massive combined farming on grand scales. We've destroyed manufacturing in this country. Dick Smith said to me once, "AWA went broke because it was too slow moving into China."

I've lived in China and the US, two of the most protective countries in the world. When I lived in the US 20-odd years ago, we had three or four people whose only job was to monitor our importing cost of steel because of US anti-dumping laws. Here in Australia, we have all this free trade, where all the orange juice you buy out of supermarkets comes from South America. Australia, in my opinion, has to look to its own and protect its own.

Can you tell our readers about Ok Tedi's Mine Life Extension project and what the future holds?

When I first joined eight years ago, Ok Tedi's mine life was to finish in

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- Nigel Parker

2010. The mine, as BHP has left it now, is scheduled in for 2015 when we've depleted the ore in the pit shell. There is still a lot more ore there, and we put a proposition to government in November 2012 that we should continue the mine for at least another 10 years. That project has now been approved.

There are three issues with Ok Tedi—the pit shell, the theoretical design, and shape of the hole in the mountain—and we are licensed under a pit shell to mine within. Then we're licensed to dump our mine waste and tails into the river system. Under mine continuation, we've addressed two issues. First off, we had to widen the pit shell to access the ore that's in the bottom. There are 400 million tonnes of waste on top of that ore, and we wanted to be licensed to change from putting that into the river system to putting that into a stable waste dump. The government has approved the widening of the pit shell, but the Department of Environment wants more work done on the stable waste dump.

We are very confident that we will be able to construct it; we've had three independent international groups look at it, with no fatal flaws. We're still trying to work with the Department of Environment to

understand what their issues are with that, which has a cost of \$300 million over 10 years. Management's position is very firm with this aspect: we are vehemently of the view that in contemporary mining, it is the board's and management's obligation to look at every opportunity to mitigate not only our current operations and going forward, but to mitigate the legacies of our past in regard to our environmental issues, which are our mining practices of dumping waste and tailings into the river system.

We believe that if we can find solutions to both of those, then the river will start to recover very quickly. The Ok Tedi, Ok Mani, and the Fly River systems are very powerful water bodies, and if we cease the dumping of waste into those river systems, even though those waste dumps will erode in 100–150 years, we believe that the commencement of the recovery will start very quickly, and we can show and prove that this actually does happen.

So we still have some work to do to bring them on board with constructing a stable waste dump, but are adamant that it is the right way to go and we will continue to pursue that very professionally. •



Mineral Resources Star Mountains (MRSM) represents the economic and social interests of the Ok Tedi Mine Landowner Groups (10 mine villages) located at Tabubil, along the Star Mountains and Fly River Basin, in the North Fly District of the Western Province of PNG, it was established through the Mineral Resources Development Corporation 'MRDC' in 1997.

MRSM has grown its business arm of the company to participate in various spin-offs on a self-managed basis via the following companies:

- Tabubil Engineering Limited: Fabrication, civil, carpentry, and construction, it boasts the largest and best equipped engineering workshops in the Western Province.

- Highway Transport Limited: Providing services under contract to OTML and other companies in the Western Province and Port Moresby
- Fubilan Security Services: Providing security services for the group, plus other entities in town and province.
- Fubilan Catering Services: The first and only catering company operating anywhere in Papua New Guinean with ISO 22000 and ISO 9001:2008 Certification.

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