

Saturday 14th February, 2015

Broken Hill Prospecting – Murray Basin mineral sands drilling set to commence – Stock to Watch

Broken Hill Prospecting (ASX: BPL, Share Price: \$0.057, Market Cap: \$5.7m) has been on our Watch-List for some time. Up to this point the company has been of interest because of its unique focus on outlining a commercial cobalt resource within the Broken Hill region. In fact, the company represents Australia's only ASX-listed cobalt exposure, an increasingly important strategic metal in the modern world. More recently, BPL has expanded its Broken Hill exploration focus to include mineral sands, following the acquisition of five attractive exploration licences that were previously held by Iluka Resources.

We had the opportunity for lunch on Friday with BPL's Managing Director, Ian Pringle, who advised that an initial air-core exploration drilling on the Murray Basin mineral sands properties will shortly commence.

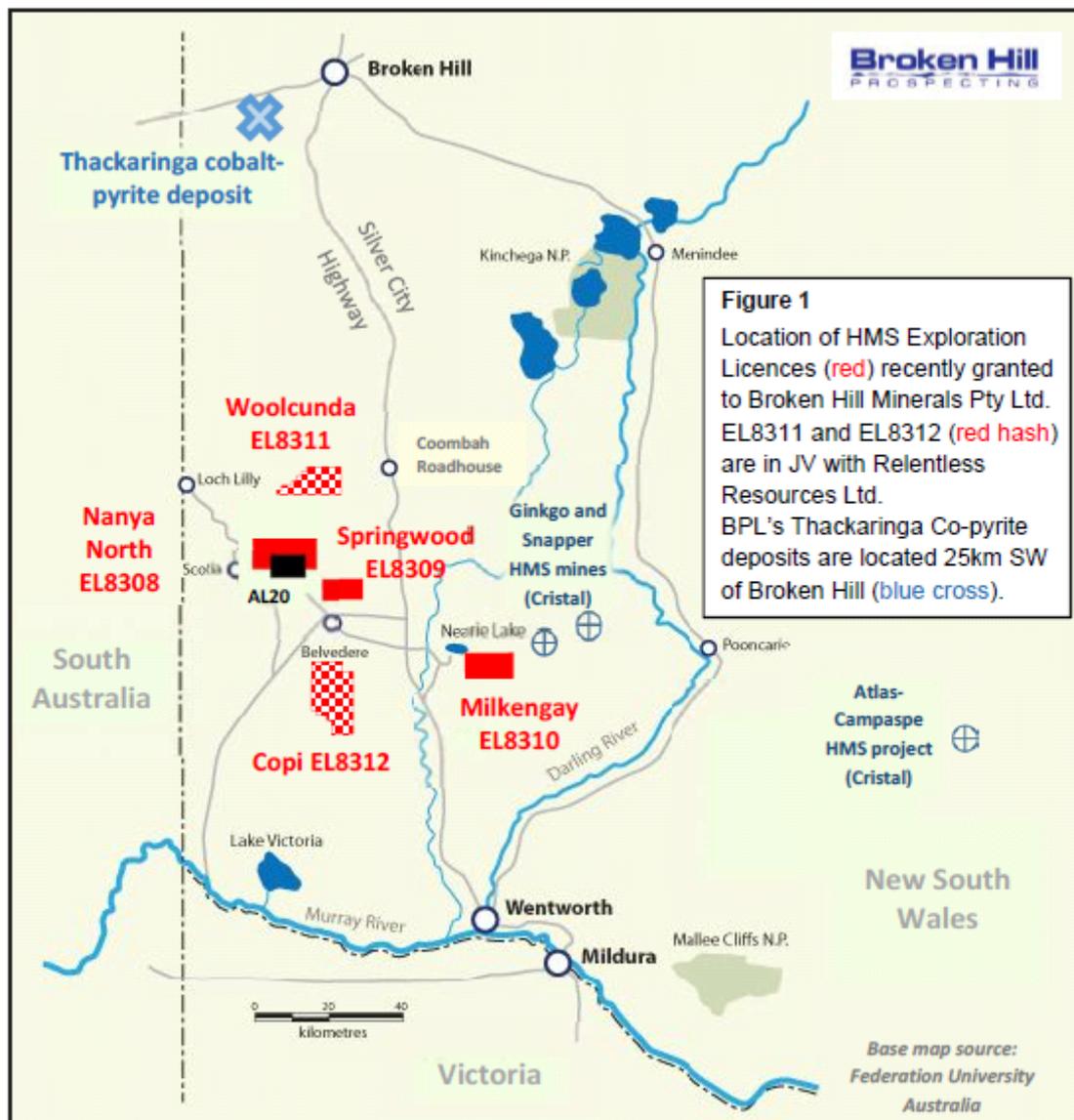


Market Significance

BPL's five new exploration licences include numerous heavy mineral sands (HMS) prospects, which host titanium and zirconium mineral sand deposits. Importantly, they complement BPL's existing large, cobalt-pyrite (sulphuric acid) deposits and enhance the company's overall production prospects. We look forward to the company's initial drilling program that will commence on 23rd February, with funding provided via a joint venture worth \$2 million in funding for drilling and feasibility studies on two significant targets.

Latest Activity

During October 2014, Broken Hill Minerals Pty Ltd (BHM) (a 100%-owned subsidiary of BPL) was granted five exploration licences (highlighted in red in graphic below) to explore for HMS deposits within the extensive Murray Basin, south of Broken Hill. BHM and Relentless Resources Limited (an unlisted Australian company) have formed a joint venture to evaluate HMS deposits within two of the five tenements (EL8311 'Woolcunda' and EL8312 'Copi') and will specifically evaluate the Copi North and Magic HMS strandline prospects.



In what we regard as a major coup for BHM (particularly given the parlous state of fund-raising within the junior resources sector at present), Relentless Resources will contribute staged payments totaling \$2 million in exchange for a 50% participating interest in the tenements. Planned exploration is set to include drill-testing, along with scoping and feasibility studies. As confirmed by Ian Pringle on Friday, the joint venture intends to commence drill-testing on February 23rd at both Copi North and Magic, in order to help determine HMS grade and distribution along strike trends measuring more than 10km.

Technical Significance

BPL's plan is to establish a foothold within the HMS industry, where emerging technology is making significant advances in processing and recovery of titanium (Ti) and zirconium (Zr) minerals (ilmenite, leucoxene, rutile and zircon) from HMS deposits.

The company has adopted what we consider to be a sensible, measured and highly commercial strategy, based on focused exploration activity in order to identify an initial HMS resource with a high content of heavy minerals relative to other nearby deposits and operations.

This in turn could provide the basis for a low-cost, small-footprint mining operation, with higher-grade feed than nearby operating mines (Cristal's Ginkgo and Snapper mines and Murray Zircon's Mindarie mine), which have average HMS grades of between 3.6% HM and 3.9% HM. We believe this would also potentially highlight BPL as an attractive corporate opportunity and provide multiple options as to how the project's value could be monetized.

Project Overview

During mid-2014, BPL applied for a large portfolio of HMS prospects south of Broken Hill, encompassing 20 known deposits (titanium and zirconium). All of the HMS prospects have been investigated by other mineral explorers including Iluka Resources Ltd, Bemax Resources Ltd (now Cristal Mining) and Westralian Sands Ltd. Several have been shown to be of considerable size.

Recent advances in technology have resulted in lower-cost and competitive processing options for fine-grained heavy mineral sands, unlocking an opportunity to take a fresh look these prospects. BPL will seek to define a near-surface deposit of about 50 million tonnes of around 5% HM (with ~2-4Mt contained HM). This could support a mining operation of 3Mtpa - 6 Mtpa, producing ~200,000t HM/year.

BPL is undertaking shallow drill-testing along grids that cover the highest priority target areas. This work will use conventional drilling equipment, and most holes are likely to be less than 30 metres depth. Sampling and assessment will take care to evaluate the fine-grained HMS fractions as well as the more conventional coarser-grained strand zones. Previous work by other companies has located considerable volumes of fine-grained HMS, as well as narrower zones of coarse sands with appreciable ilmenite, rutile and zircon content.

Some of the ilmenite separated from any future HMS mining could be amenable to upgrading to titanium pigment utilising sulphuric acid produced from BPL's potential cobalt processing options.

Cobalt Project

BPL is the 100%-owner of near-surface cobalt mineral deposits located around Thackaringa, 25km south west of Broken Hill. The acreage comprises two exploration licenses and two mining leases. The company is exploring several large, low-grade and near-surface cobalt deposits. The deposits are strategically situated beside major railway and road networks and within a half-hour's drive of Broken Hill.

BPL is focused on assessing these deposits for large, open-cut mining and cobaltiferous pyrite concentrate production/processing, in order to produce cobalt, sulphuric acid for industrial application, feldspar-quartz for ceramics and a high-iron residue for iron smelters.

The combined Inferred Resources and potential mineralisation for the areas covered by mining leases totals 39.7 million tonnes of 1.79 pound per tonne cobalt (71 million pounds of contained cobalt metal). Wide-spaced drilling during 2012 at the Railway prospect intersected near-surface cobaltiferous pyrite mineralisation within a zone which trends for more than 1.5km and is up to 300 metres wide, with mineralisation open at depth.

BPL has commenced a resource assessment and will undertake feasibility studies to investigate a 7.5 million tonne per year open-cut mine, with annual production of pyrite concentrate containing about 7,000 tonnes of cobalt. BPL is confident of successful project development, assisted by growing industrial demand for cobalt - which is mostly produced as a by-product of African copper mines and nickel deposits. The project's greatest appeal is its location in a supremely low-risk jurisdiction.

Separately, the pyrite-cobalt mineralisation has shown itself to be a valuable feed source for sulphuric acid production, an important chemical which is commonly imported into Australia. It is integral in the processing of many mineral resources, as well as in industrial applications.

In late 2012, BPL commissioned GHD Engineering to complete scoping studies that detailed robust economics for the production of pyrite concentrate to manufacture sulphuric acid. The work highlighted the increasing Australian and world demand for sulphuric acid and suggests that a chemical industry based on sulphuric acid production could add considerable project value.

In 2014 a three-month independent study, entitled *Strategic Evaluation of Sulphuric Acid Production*, was completed that incorporated details of the 2012 GHD scoping study report. It determined that optimal economic parameters were likely to be achieved from producing sulphuric acid at Broken Hill, where new industries to process titanium sand products (ilmenite, leucosene) could provide a large and long-term (plus 20 years) customer for the acid.

Summary

We are encouraged by BPL's dual exploration approach. The company benefits from being the only pure Australian exposure to cobalt - a metal that is growing in demand terms, primarily due to increased new-age battery usage. Lithium-ion batteries contain 60% cobalt and will be widely used in the new generation of electric vehicles. At the same time, there are considerable supply-side concerns for end-users seeking a reliable and conflict-free supply source, given the high proportion of production that is sourced from Africa. We are also excited by the company's HMS ambitions, with the initial February drilling program set to reinforce the attraction of the company's Murray Basin ambitions. We retain the stock on our Watch-List.

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