minelife

RESOURCE BULLETIN by Gavin Wendt

Wednesday 1st November, 2017

<u>Additions to our Watch-List Portfolio</u>

In today's note we've expanded our coverage universe by introducing six new companies to our Watch-List. I have also added them to our Portfolio page, which you can click on and access on our website.

Specifically, we've strengthened our coverage of three key commodities – gold, zinc and cobalt.

<u>The new stocks comprise:</u>

Gold - Empire Resources (ASX: ERL) and Vango Mining (ASX: VAN)

Zinc - Todd River Resources (ASX: TRT) and Consolidated Zinc (ASX: CZL)

Cobalt – Nzuri Copper (ASX: NZC) and Australian Mines (ASX: AUZ)

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Empire Resources - (ASX: ERL, Share Price: $0.024, Market Cap: $12m)

<u>Key Catalyst</u>

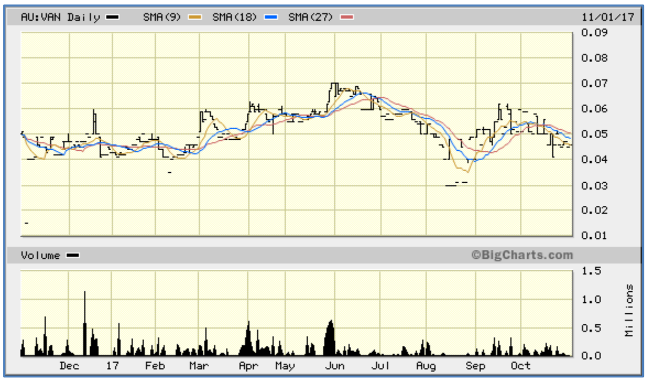
Maiden gold production at Penny's Find deposit in Western Australia.

ERL has been around for some time, but there's potential for a re-rating with its maiden gold pour at its Penny's Find project near Kalgoorlie in early October representing its first foray into gold production. Operated under a joint venture, Empire owns a 60% stake in Penny's Find, with partner Brimstone Resources Ltd retaining 40%. The project hosts more than 21,700oz in open-pit reserves defined within indicated and inferred resources of 470,000t grading 4.42g/t gold for 66,800oz. In its BFS completed in mid-2016, the initial mine design was an 80m deep open-pit, with production over an 11-month period and capital expenditure paid back within eight-months or earlier. Concurrent to boosting open-pit reserves and mining, an underground feasibility study is underway at Penny's Find, with initial indicated and inferred resources of 170,000t at 5.40g/t gold identified directly under the open-pit.

ERL produced more than $2 million worth of gold from its maiden processing campaign at Penny's Find, which saw 21,710 tonnes of ore processed over a 15-day period at Golden Mile Milling's nearby Lakewood Mill. About 1,500 ounces of gold were produced at a 94% recovery rate at a calculated ore head grade of 2.38g/t Au. This is expected to rise in upcoming campaigns as mining moves to the higher-grade part of the orebody. With a further 16,000t currently being processed at the Burbanks mill south of Coolgardie, Empire Resources will be bringing in even more cash flow in the coming weeks.

In its first year of operation, the company expects Penny's Find to generate $7.6 million in free cash flow based on a A$1,500/oz gold price with an additional $2 million in additional revenue for every $100/oz increase in the gold price above $1,500/oz.

Vango Mining - (ASX: VAN, Share Price: $0.046, Market Cap: $20m)



<u>Key Catalyst</u>

Gold production planned from Plutonic Dome project in Western Australia during 2018.

VAN is set to transition to production in 2018 via its K2 Deposit within its 100%-owned Plutonic Dome project, which will generate the company's first cash flows and a potential re-rating. The K2 Deposit was last mined in 1997 by Resolute Mining (ASX: RSG), which completed an underground development Feasibility Study during 1996. K2 is located in the north-eastern section of the project, 35km by haul road from Billabong Gold Pty Ltd's Plutonic treatment plant. Vango has a binding Ore Treatment Agreement with Billabong to facilitate the processing of K2 ore.

Based on the positive outcomes of VAN's upgraded DFS early in 2017, the plan is to utilise the free cash flows generated to expand Resources at its nearby Trident Deposit with a view to developing it into a long-term gold producing project.

The K2 DFS assessed the economic viability of underground mining at K2, with toll treatment of ore at the Plutonic plant. The results are highly positive and include project pre-tax NPV of $19.02 million, project IRR of 382.07%, pre-production capital costs of $6.4 million, a project margin of approximately $462/oz, total free cashflows of $22.66 million over an initial two-year mine life, and a payback period of just 13 months.

VAN plans to expand the K2 Resource base and the potential mine life of the proposed mining operation via targeted drilling programs designed to expand the Resource base.

Todd River Resources - (ASX: TRT, Share Price: $0.115, Market Cap: $7.5m)

<u>Key Catalyst</u>

Diverse zinc portfolio in the Northern Territory with multiple irons in the fire.

TRT is a spin-off from TNG Ltd (ASX: TNG) and maintains a high-quality portfolio of base metal projects (mostly zinc-lead) at varying levels of exploration advancement. Given the escalating price of zinc (at a decade high), TRT's share price performance since listing at $0.20 is incongruous, hence why we're initiating coverage now. I believe it's an opportune time.

The biggest attraction is its 100%-owned Manbarrum zinc-lead project, located 70km northeast of Kununurra in the Northern Territory, where it recently appointed leading mining industry consultants CSA Global to undertake a Conceptual Mining Study. Manbarrum was a flagship project for TNG prior to the discovery of its Mount Peake vanadium-titanium-iron deposit - and is now a key asset for TRT.

The purpose of the Conceptual Mining Study is to establish the criteria for a successful development of the Manbarrum Project. CSA Global proposes to explore a range of key project parameters to identify the circumstances required to support the project development and to enable it to be successfully developed.

Manbarrum is one of the largest undeveloped zinc projects in Australia, incorporating the Sandy Creek deposit, hosting a Mineral Resource of 22.5Mt @ 1.81% Zn, 0.44% Pb and 4.6g/t Ag. Numerous additional targets are located along strike from the Sandy Creek resource on the southeastern margin of the Bonaparte Basin, including the Djibitgun and Browns prospects.

Manbarrum also lies 40km ENE of the large-scale Sorby Hills Base Metal Project, situated across the Western Australian border. Sorby Hills contains a large lead, zinc and silver resource, which presents opportunities to explore synergies with the Manbarrum Zinc-Lead Project.

Consolidated Zinc - (ASX: CZL, Share Price: $0.015, Market Cap: $11m)

<u>Key Catalyst</u>

Advanced Plomosas project in Mexico boasts high-grade zinc production potential.

CZL's major focus is in Mexico, where it owns 51% of the high-grade Plomosas zinc-lead-silver project. Historical mining at Plomosas between 1945 and 1974 extracted more than 2 million tonnes of ore grading a very high 22% Zn+Pb and over 80g/t Ag. Only small-scale mining has continued to the present day and the mineralised zones remain open at depth and along strike. CZL's main focus is to identify and explore new zones of mineralisation within and adjacent to the known mineralisation at Plomosas, with a view to identifying new mineral resources that are exploitable and transitioning to production.

CZL recently announced positive Scoping Study results into the recommencement of mining at Plomosas, with positive results at a base-case level and additional areas where returns might be improved. The strategy underpinning the Scoping Study was to recommission the mine and plant with an early start up at Tres Amigos, while optimising and drilling to expand the remaining resource to provide higher-grade mill-feed in years 2 and 3 onwards.

The study focussed on mining the Tres Amigos resource on Level 5 using existing infrastructure. The Tres Amigos resource comprises a total resource of 544,000 tonnes grading 11.2% zinc, 2.1% lead and 13.9 g/t silver – with 10% categorised within the Indicated category. While slightly lower grade than the other resources at Plomosas, this material was prioritised due to its proximity to surface, the ability to immediately access the ore via existing infrastructure, the high metallurgical recoveries that had previously been identified and the quality concentrate that test-work has established can be obtained.

The metallurgical test-work indicates that zinc recoveries of 90% to 95% could be obtained to produce a clean concentrate with contained grades of 55% Zn and 4% Pb. Initial confidential discussions with a number of potential off-take partners suggest this will be a sought after concentrate due to the low levels of deleterious elements or elements that attract a penalty. The Scoping Study has arrived at an industry competitive total capital expenditure - comprising plant, mining, infrastructure and indirects including contingency of 15%. Several areas have been identified that could be optimised and warrant further review.

CZL’s strategy is focused on optimising the study outputs, particularly through the addition of new ore sources from within the Plomosas mine area, along with completion of permitting required to commence construction and production.

Nzuri Copper - (ASX: NZC, Share Price: $0.175, Market Cap: $40m)

Key Catalyst

Positive Feasibility Study results for Kalongwe copper-cobalt project in DRC.

NZC recently released robust feasibility study results with respect to its flagship Kalongwe copper-cobalt project in the Democratic Republic of the Congo. Copper is performing strongly and cobalt prices are booming thanks to its use in batteries, combined with a looming supply shortage.

The Nzuri feasibility study highlighted the strong financial credentials of the project with an internal rate of return of up to 71% on a development with a modest estimated capital cost of $US53.1 million ($67 million). The key numbers in the Nzuri study include annual production of 19,360 tonnes of copper and 1507 tonnes of cobalt. Initial mine life is estimated to be seven years with the cash cost of combined copper and cobalt calculated at $US1.35 per pound of copper equivalent.

The relative simplicity of the stage one project and anticipated 12-month timeline to production, once funding and board approvals are secured, make this a very attractive foundation project for Nzuri. In addition, the feasibility study highlights the significant upside that can be unlocked through future project expansion, including the potential for leaching of cobalt ore and mineralised rejects.

Ongoing exploration across Nzuri’s tenements is likely to add to the reserve estimate in the feasibility study of 7 million tonnes of ore assaying 3.03% copper and 0.36% cobalt for a contained 211,494 tonnes of copper and 25,128 tonnes of cobalt. Nzuri is also exploring a number of options to increase the life of the project which is located close to the world-class Kakula project of Ivanhoe mines.

Small when compared with other copper and cobalt mines, Kalongwe is a starter mine for Nzuri in the Katanga region of the Congo — a location known for very large developments which supply a large proportion of the world's copper and most of its cobalt. Funding options are being considered by Nzuri include a conventional debt and equity package as well as off-take agreements with strategic partners.

Australian Mines - (ASX: AUZ, Share Price: $0.097, Market Cap: $261m)

Key Catalyst

Strategic cobalt exposure adjacent to Robert Friedland's high-flying Clean TEQ.

AUZ this week advised the market that its Flemington cobalt-scandium-nickel project in NSW is part of the same deposit as Clean TEQ's (ASX: CTQ) world-class Syerston project. Syerston hosts one of the world's biggest and highest-grade scandium deposits about 450km northwest of Sydney - and is one of the biggest undeveloped nickel and cobalt resources outside Africa.

Flemington's maiden mineral resource confirms the ore body is a direct continuation of the Syerston ore body. AUZ's share price soared to a high of $0.13 on the back of the release on Tuesday, but has since retraced on profit-taking. Given the fact that CTQ has a market capitalisation of $926m, there's a strong 'near-ology' argument to be made – with AUZ trading at around a quarter of CTQ's market value.

Flemington's resource was measured at 2.7 million tonnes grading at 0.101% cobalt and 403 parts per million scandium - for 2,744 tonnes of cobalt and 1,090 tonnes of scandium. Syerston contains 132,000 tonnes of cobalt and 19,222 tonnes scandium. AUZ believes the Flemington resource could be much bigger, as the present resource area covers only about 1% of the interpreted prospective host geology. A resources expansion drilling program is underway using multiple rigs.

AUZ also owns the Sconi project in Queensland. A pre-feasibility study in 2013 found the project could produce 50 tonnes of high purity scandium oxide per year over 20 years, and generate an average EBITDA of $59 million annually.