Australian Strategic Materials demerger from Alkane Resources unlocks shareholder value

written by InvestorNews | August 27, 2020

Australian Strategic Materials Limited (ASX: ASM | ASMMF) ("ASM") is the result of Alkane Resources Ltd. (ASX: ALK | OTCQX: ALKEF) demerging their Dubbo rare earths and poly-metallic project in late July 2020 to form a new listed company. The combined market cap of Alkane Resources and ASM now exceeds its previous value as a single company, showing that the demerger achieved its goal of unlocking shareholder value.

The key assets of the newly-listed Australian Strategic Materials ("ASM") include:

- **The Dubbo Project** (flagship) is a 100% owned 'construction ready' poly-metallic and rare earths project with potential to become a key global supplier of specialty metals and rare earths. The Dubbo deposit is a proven, large deposit of Zr, REE, Nb and Hf minerals
- **Metals Technology Business** – ASM is investing in new technologies related to the separation, purification and metallisation of oxides. Their JV pilot plant with ZironTech is now in operation.
- **Toongi Pastoral Company** – The company owns 3,500 hectares of freehold and leasehold land 25kms south of Dubbo, NSW, Australia.

What's happening now with Australian Strategic Materials

ASM's strategy is to not only produce rare earths concentrate but to go further up the value chain and produce various

strategic metals. Should ASM succeed, it would place them in that exclusive club in the mining industry of being an alternative strategic high value metals producer outside of China.

To achieve this goal of producing metals from their Dubbo Project, ASM is working with their Joint Venture (JV) partner, South Korea's Zirconium Technology Corporation ("ZironTech"). The JV is now advancing a pilot project to produce various metals by combining their proprietary process with ZironTech's metallisation technology. ASM has exclusive global commercialization rights under the licence. The pilot plant is now up and running in South Korea.

Australian Strategic Materials plans to move up the rare earths and strategic materials value chain

Source

The latest progress in pilot testing the extraction of strategic metals:

July 2, 2020 – ASM/ZironTech JV produces titanium metal alloy with a 45% power saving. The commercial pilot plant was commissioned on time and on budget, with ~30kg of titanium metal alloy produced. A subsequent run of the pilot plant produced another 22kg of titanium metal alloy, with up to 50% less energy than current commercial production methods. Then in August ASM reported that their JV produced 9.16kg titanium (Ti) metal powder assaying 99.83%.

July 13, 2020 – ASM/ZironTech JV produces high quality neodymium (Nd) metal alloy, with successful laboratory production of ~1kg

of neodymium metal alloy.

ASM & ZironTech produce a ~1kg of neodymium (87%) metal alloy using their 45% more efficient reduction process at their pilot plant

Source

August 19, 2020 – JV produces second key permanent magnet metal, praseodymium (Pr). Commercial pilot plant produces 5.3kg Pr metal assaying 99.3%. JV announces a forward plan for commercial pilot plant production of neodymium, praseodymium and dysprosium metal in August.

ASM & ZironTech produce 5.3kg of high purity praseodymium metal (99.3%)

Source

"This is a major milestone in ASM's integrated strategy that includes clean metal production for all products from the development of the Dubbo Project in Central West NSW", according to ASM's Managing Director, David Woodall. "This integration of metal production into ASM's business is consistent with the Australian Government's objective of adding value within Australia, while ensuring supply security and stability of these critical materials to global and domestic Australian manufacturing sectors."

The Dubbo Project is a large resource of zirconium, hafnium, niobium, and rare earths (including praseodymium, neodymium, and yttrium). It is the most advanced poly-metallic project of its kind outside China. The Project has an estimated 70-year mine

life and can be an open pit design. The Project is ready for construction with all major state and federal approvals and licenses in place. The 2013 DFS resulted in a pre-tax NPV8% of A$1.235 billion, and a pre-tax IRR of 19.3%. The Company has since proposed a two stage production start up so as to lessen the first stage CapEx from an estimated US$930 million to US$480 million. A follow up FS plans to incorporate the new and improved processing techniques from their ZironTech JV.

Closing remarks

Rare earths are not rare in the earth's crust, however extracting and purifying them is the challenge that has traditionally been an expensive and polluting process, mostly done in China. What ASM and their JV partner ZironTech are doing is revolutionizing the process of rare earth metals production, using much more energy efficient methods that are also less harmful to the environment. It is still early days with their pilot plant testing however results so far with titanium, neodymium, and praseodymium appear to be highly promising.

Effectively ASM is working towards becoming a vertically integrated ("mine to metal") western producer of high purity strategic/critical and valuable metals. Subject to further testing and funding the plan is to have clean metal processing plants in Korea and Australia. More efficient processing techniques should significantly improve the economics of ASM's Dubbo Project as well as opening up the opportunities for wider commercialization of their breakthrough technology.

The market seems to agree. Australian Strategic Materials' stock price has doubled so far in August and ASM is now trading on a market cap of A$264m.