

Arafura advances forward in the rare earths market

Around the time of the last financial crisis, concern was growing that China's stranglehold on the rare earth elements (REE) market would bring about catastrophic shortfalls in supply that would impact everything from consumer electronics to military hardware. In response to the fearmongering, a number of explorers began to focus on REE extraction outside of China, but when the recession struck, buyers abandoned the initial public offering that would provide funding to Arafura Resources Ltd. (ASX: ARU) ("Arafura") so that the company could advance their Nolans Project in Northern-Australia to production.

Thanks to the dependable effects of competition and innovation, the REE bomb never did go off, and after striking funding deals with Chinese investors the company has managed to make positive strides every year towards the construction of a functioning pilot plant. In fact, the company's last share purchase plan closed early, raising A\$3.1 million, raising their cash balance at the end of last quarter to A\$12.5 million, which is more than enough to complete the Nolans pilot program. It has been a long and difficult road for rare earth explorers in particular, but the way is now clear for Arafura and a select few others to change the space dramatically in the very near future.

While opportunistic cowboy operations in China were mostly responsible for the disaster zone of a marketplace over the past decade, the country's continued regulatory crackdown on illicit and harmful mining practices is exactly what has caused the sustained REE price increases we have seen in 2017. Arafura's product offering is a rare earth oxide (REO) mix in which neodymium and praseodymium concentrations are particularly high, at 20.6% and 5.9% respectively. Both of

these magnetic metals are leading the curve in terms of the recent value surge, and as they are fundamental in the manufacture of motors used to create efficient wind turbines and electric vehicles, the future of these metals is bright.

Wind power and electric vehicles are two markets that are already undergoing considerable growth and have been given almost unanimous positive forecasts over the coming decades. The UK government recently announced that it is considering a ban on cars powered by fossil fuels by 2040 to push the populace toward electric vehicle uptake. Of course, alongside this, renewable energy solutions must be the focus to avoid simply burning more oil downstream to keep the charge ports operational. It has been rather nice to watch the survivors of the REE space seeing a multitude of silver linings appearing simultaneously, and this year represents a key opportunity to join them in providing the materials essential to our cleantech driven future.

The pilot operations at Nolans are well-advanced, currently having completed phase 3 of 7 of the initial production run, and with the funds on-hand to complete this process, we should expect this to be somewhat of a formality. The Environmental Impact Assessment was submitted back in February and is expected to be finalized this month, with plans for phase 4 of the pilot scheme already underway and scheduled for this quarter, in which a full acid bake will be undertaken before the purification and precipitation phase begins.

It may have been a long time coming, but it seems the time has finally arrived for Arafura to launch into full swing. Keep a close watch on this guys over the next twelve months, as I anticipate that the bounce-back will be swift, sharp and easy to miss.

Lynas defies market to become a super metal heavy weight

It's hard to believe that only a year ago, the fate of Lynas Corporation (ASX: LYC | OTC: LYSDY) ("Lynas") hung in the balance; debts had mounted, Malaysian operations were troubled with opposition, and the market for rare-earth elements (REEs) had never been in worse shape. Today, the company proudly wears the crown of the largest producer outside of China, and as prices begin to recover amid the Chinese crackdown on illicit mining practices, Lynas now reports positive cash flow and record operating efficiency; talk about a turnaround!

The company has been busy undertaking three years of continuous operational improvements and cost management, positioning Lynas to take advantage of the upturn in the rare earths market. This month, the company's quarterly activities report makes for delightful reading, having reached the level of largest supplier of NdPr to the free market with invoiced sales revenue of A\$75.6m for the quarter, and producing their neodymium and praseodymium products at above design rate, with 1,343 tonnes for the quarter, up 17.6% on the June 2016 quarter.

China's asking price for NdPr is being driven higher and higher by continued strong demand for magnetic materials and the effects of the China central government's initiatives to enforce stricter environmental controls. Lynas increased cash flows from operating and investing activities to A\$15.8m from A\$11.6m in the previous quarter, and given that the NdPr price trend is expected to continue in the near term, the company's position should only become stronger throughout 2017.

Neodymium and praseodymium are the company's primary focus. The magnetic elements are experiencing increasing demand due to the rise in the use of magnetic motors in modern technologies such as electric vehicles and wind turbines; two areas in which significant growth is expected over the next decade. In fact, since many scientific groups began warning that carbon emissions must become negative as a matter of global urgency, interest in wind farming has been fueled even further, and some have even predicted that all new vehicles manufactured will be electric by 2030. It seems that the only way really for Lynas is up.

On top of the critical NdPr product, Lynas also produces cerium and lanthanum products which complement its operations. Lanthanum remained in high demand outside China this year, especially for high performance ferrite magnets and NiMH batteries, and all lanthanum produced by Lynas in this quarter was sold. The company also made significant quality improvements to cerium products, allowing them to increase their share of the catalyst and UV cut glass markets. In addition, Lynas have started developing new customized grades for niche applications in order to attract higher prices.

This continued refinement of practices and products is what has kept the company above water during the harsh times of the last half-decade, and there is nothing to suggest that Lynas will change tracks anytime soon. The company enjoys a rare position in that 100% of its assets are commissioned; nothing is sitting on the back burner. Given the hard-won top-dog status the company has achieved, shares are an absolute bargain right now at only A\$0.10, and looking forward, it appears that the next few years will be far more fortuitous than the last for this miraculous survivor of some the harshest market conditions we've ever witnessed.