

Arafura takes the trouble to explain rare earths today

☒ Time for stocktaking in the rare earth space, time for pausing for a moment to consider just where we are. This is important as the cascading information makes it hard for all but industry insiders to keep pace.

Recently the annual report of Arafura Resources (ASX:ARU) was posted on InvestorIntel. How many people read it? If you didn't, then you cannot be blamed: the art of writing annual reports has faded in recent years, and many contain nothing more than a recitation of the year's work and all the required financial statements. Largely annual reports, so far as the general reader is concerned, are not worth the trouble and time.

Years ago financial journalists made a point of reading annual reports because many of them contained comments by either the chairman or the chief executive that were newsworthy. Annual report comments were a regular staple of reporting in the financial pages. No longer.

Yet Arafura's chairman Ian Kowalick in his comments in the annual report made some sensible and informative comments which, given the varying degrees of understanding of rare earths by investors and financial journalists, might have proved instructive to reprint. The report also includes a very useful update on the REE market which is worth reading by InvestorIntel followers – and worth putting in the files for future reference. This is especially as I can find no mainstream media financial sections that even noticed them.

Ian Kowalick makes one very interesting point, especially as several companies (including his own) for some years maintained it as the guide to the specific company's value.

But he says that the traditional notion of the “basket of REE” is now less relevant as rare earth suppliers and users outside of China become more sophisticated, and investors gain a better understanding of the market segments of each of the rare earth elements.

(Yes, of course: haven’t we started talking about neodymium and praseodymium and the magnet business, almost it seems to the exclusion of any of the others? But few people have actually spelled it out as well as has Kowalick.)

He then goes to make this point: It is becoming important for REE companies to highlight the specific elements from which they to expect to derive most value.

This is especially the case with Nd and Pr: they now comprise 59% of the overall value of the global rare earths market. “With demand for permanent magnets forecast to grow by 10% annually over the next decade, security of supply of NdPr will become increasingly important, particularly as structural changes take place in China and market participants look to lock in secure alternative REE sources,” he adds.

He claims Arafura is founded on “one of the best” resources of neodymium and praseodymium. He argues, too, that its location in the Northern Territory of Australia is a low risk place to be.

Yes, I can hear many readers say “we know all that”. But my point is that this is the sort of information the general financial press should be publishing but, so far as I can see, is not.

Last week this item appeared on Australian radio, the network owned by the Australian Broadcasting Corporation and which covers the entire continent. The segment in *The World Today* program went like this:

CLINT JASPER: The 17 chemical elements that make up the rare

earths group can actually be found in small amounts all over the world. So while they aren't exactly rare – some of their applications are pretty exciting.

(Beeping of car starting up)

ELECTRIC CAR SALESMAN: So that is the sound of the Leaf started.

CLINT JASPER: So as we can hear, there is no sound...

Take electric and hybrid cars for example: they use about 13 kilograms of rare earths – cerium is used to polish the glass, europium and yttrium are used in the LCD screen, and lanthanum's a key component of rechargeable batteries.

But most importantly, for the miners of these elements, are the ones that make magnets: neodymium, praseodymium, and dysprosium – these are used in the engine's traction motor.

But despite this. it's pretty rare to find anyone who actually knows about them – even the guy who sells electric car.

Here we are, four years on from the great rare earth craze, and this is the level of sophistication we are faced with. And that makes the comments offered by Arafura so important yet, of course, so largely ignored except by those who follow the company.

The annual report is posted here on InvestorIntel. If you look in the Operations Review, there is a very handy summary of the rare earths market. There are some useful up to date Chinese export figures worth filing.

Thanks, Arafura, for keeping alive the reason to read annual reports. More companies should follow your example.

Go back and read the report.

Arafura reigns in costs to enhance Nolans rare earth project economics

✘ April 4, 2013 – Gavin Lockyer, Managing Director at Arafura Resources Limited ('Arafura', ASX: ARU) speaks to Tracy Weslosky, Editor-in-Chief and Publisher of InvestorIntel, about Arafura's strategy to lower capital (CAPEX) and operating (OPEX) costs for its 100 per cent-owned Nolans Rare Earths Project in Australia's Northern Territory. After making the initial announcement at the 2013 Technology Metals Summit in Toronto, Arafura withdrew from Whyalla (in South Australia) where it had intended to build a chemical processing and rare earth separation facility, signaling the launch of an ambitious cost saving strategy to improve the economics of the Project. Since the original announcement, Gavin said "we've managed to achieve AUD\$ 500 million in CAPEX savings; we're looking to further refine that but I guess the big winner really is our OPEX, which has allowed us to save AUD\$ 4.80/kilo of REO, bringing it down to about AUD\$ 15.60 which according to our Intel, probably puts us right in the middle of the cost curve in terms of producers inside and outside of China."

There has been some contradictory information in the technology metals sector. Arafura has been working on test programs and flow-sheet development for the past seven years because of the uniqueness of the ore body. However, Gavin said that Arafura is "well on track now in terms of commercializing the resource; we announced our maiden Ore Reserve last year and the latest OPEX and CAPEX numbers only go to enhance the economic assessment." Gavin also clarifies the fact that

Arafura will be saving AUD\$ 98 million per annum in OPEX “and that is over the life of the mine which is currently estimated at 22 years.” However, Gavin says that the resource extends beyond the current limits such that Arafura could be producing for much longer than originally estimated.

Arafura, meanwhile, is continuing to work closely with a Chinese partner, Shenghe Resources Holding, a Shanghai listed company, to develop a more international rare earths business. Shenghe owns and operates a rare earths mine in China, accounting for 4-5% of the Chinese production quota system. Shenghe has been helping Arafura, along with other Chinese partners, to find ways to optimize the flow sheet in order to speed up the process leading to production. And as far as the crucial issue of production is concerned; Gavin said that the Company hopes to optimize the process thanks to the collaboration with Shenghe in 2014 by which a more definitive engineering study should be ready to present to potential financiers throughout 2015 and in order for construction to start in 2016. Shenghe is introducing Arafura to engineering firms in China, specialized in building rare earth plants. Their experience could help Arafura complete construction sooner than expected.

The other important benefit of having a partnership with Shenghe is that financiers “want to see offtake arrangements”. Gavin stresses that Arafura has not reached any actual offtake arrangement with Shenghe or any other Chinese buyer for the time being. However, Shenghe have been able to assist Arafura in being introduced to their existing offtakers and potentially supply them “with more products, as needed, outside the Chinese quota system.” Gavin feels the WTO ruling on Chinese rare earth export quotas may lead to China dismantling their export quota and tariff regime, and limiting production to meet only domestic demand. This may cause rare earth prices to increase in the short term as Chinese supply to Western customers is curtailed. Gavin adds “the discussions

I've had suggest that Lynas and Molycorp, and ourselves would more than adequately feed the rest of the world, so all I can say is that these government bodies should cough up some money and help us get into production to help us resolve your supply situation."

Disclaimer: Arafura Resources Limited is an advertorial member of InvestorIntel

Chinese technical know-how opens way for Arafura REE project

✘ Australian rare earths hopeful Arafura Resources (ASX: ARU), for all the speed bumps it has hit in recent years, still has an economically sound project, according to analyst Tony Parry of Sydney-based Resource Capital Research. And the relationship with major shareholder (24.9%) East China Mineral and Exploration Bureau (ECE) is likely to result in even further cost savings, he said.

His client says that Arafura is taking decisive action to improve the project economics and project financing prospects for what he calls "its world scale Nolans Rare Earths project". So far projected operating costs and capital requirements have been slashed and are likely to be reduced further with on-going Chinese technical input. "These initiatives have maintained sound project economics despite rare earths price uncertainty", the RCR report adds. (RCR has a consultancy arrangement with Arafura, which it fully

discloses, but Dr Parry has been providing informed commentary of the REE sector for some years.)

In fact, Parry is surprisingly upbeat: he sees Nolans as the next major rare earth oxides project to achieve project financing and a decision to mine. This will come as something of a surprise to investors: at the time the report was finalised, ARU shares were at A8.1c, reflecting both the delays to the Nolans project and the general lack of interest in the rare earths sector among Australian traders. Its present market capitalisation of just A\$36 million is further indication that the Australian rare earth sector badly needs a confidence shot in the arm. (And, as noted below, the market seems to have completely forgotten that there could be valuable phosphate and uranium by-product.)

Parry reminds us, however, that in his view Nolans is underpinned by a world class REE project. Probable reserves of 24 million tonnes at 2.8% TREO equate to a 22-year mine life based on yearly output of 20,000 tonnes of rare earth oxides. "Few other rare earths hopefuls globally have been able to demonstrate such a high degree of resource confidence," he writes.

Apart from its Chinese shareholder, which is described as "supportive and active" in its relationship with the Australian company, RCR says Arafura is continuing to develop strong relationships with major multinational companies (including Germany's ThyssenKrupp); the report argues that establishing offtake agreements with major players is vital to unlocking project finance. While ECE is now providing expertise to Arafura in REE processing technology, Arafura has also signed a memorandum-of-understanding with Shenghe Resources, a US\$1.4 billion market capitalisation Chinese rare earths producer. Shenghe has been allocated 4.5% of Chinese REE export quotas. It is also providing technical advice to the Australian company and, potentially, to customers for future offtake agreements. The company also has a memorandum

of understanding with an unnamed Korean multinational.

For those who have not been following the Arafura story of late, the RCR report provides a useful thumbnail sketch: the Nolans project is 135km north-northwest of Alice Springs in Australia's Northern Territory. It has a contained 670,000 tonnes of rare earth oxides, and contains also 3 million tonnes of phosphate and 4900 tonnes of uranium. Of the rare earths, Nolans has significance for production of neodymium and europium.

Parry sees rare earth prices as now being in a firming phase, after a three year rollercoaster ride. First there was the tenfold price increase beginning in late 2010, and then the crash back to earth by early 2012. But he rightly says that, while prices are stabilising, the extreme volatility has severely shaken market confidence in the rare earth sector and its leading contenders. This had pushed ARU to revisit the project "configuration" in order to slash operating costs and trim capital requirements. Parry believes the rare earth sector has reached the bottom of this cycle. He sees prices continuing to firm in 2014 due to ongoing consolidation in the Chinese rare earth industry and the elimination of illegal production in China.