

Peak Resources – Prime rare earth mover in 2017

Let's put Peak Resources Ltd. (ASX: PEK) in perspective. There were once hundreds of Rare Earth wannabes. Only two got to production and one of those (indeed the veteran player and most well capitalized and funded) failed. Now there was one, Lynas. It's like an Agatha Christie murder mystery with a very limited field of suspects.

So now there is the second generation on the scene. Though with the caveat that all were around in the first generation, but represent a very whittled down band of survivors. This second generation consists of the companies like Alkane, Peak Resources and less than a handful of others. Even some of those may have to "keep circling the airport awaiting a landing slot" until prices recover to levels that start to excite investor interest (which still hasn't happened). The only ones to move forward in the very short term are those with either a strongly committed core investors (as Peak and Alkane have) or have serious offtakers prepared to advance money for the project build. This means that Alkane and Peak win the award for "REE developers most likely to produce" in the short term. We can think of one other REE company that might be able to nose ahead in the race, but it's not a big field, and that would happen only if Alkane or Peak slacken their pace.

The two "must haves" are thus having a key supporter and having all plans at a "ready to build" point. Anyone who wants to go back to the drawing board at this point may find themselves still a developer in the mid-2020s.

Getting Real with Downstream

This brings us to the specific topic of Peak Resources. Their

initial PFS called for a processing plant that was NOT in Tanzania so the crew at Peak decided that it was far better to locate their plant near to the customers (identified as being in Europe) and where costs and risks could be quantified.

In the end the result was the selection of the so-called Wilton site in the Tees Valley, in the northern UK. This area is a world renowned industrial centre with an established history and expertise in the chemical industry. The area has first class infrastructure including excellent roads, mainline rail services, an international airport and the UK's fifth largest sea port.

The company justified the choice on the grounds that the United Kingdom met all of the technical and commercial requirements whilst offering some of the most competitive operating cost and commercial benefits.



Rustling Up Official Support

The key to setting this deal up was the support of the UK government through the Department for International Trade which includes UK Export Finance as well as locally from the Tees Valley Combined Authority. Having had reason to deal with them myself on “another matter” I have found UKTI and Teeside very keen to see cutting edge technology businesses move into the area to take up the brown fields sites left when shipbuilding and steel and other heavy industries went into decline. Therefore Rare Earths value-added processing and things like Lithium Ion battery recycling are things that push their buttons.

The Wilton site is also located within an Enterprise Zone with Enhanced Capital Allowance status. Companies locating in these sites can apply to receive a first year capital allowance of 100% on qualifying plant and machinery currently set to a maximum of 125 million Euros. The corporate tax rate is currently set at 20% and will reduce to 17% from 1 April 2020.

Metallurgical Treatment Details

The mineralogy of the Ngualla Ore lends itself to a multi-stage mineral processing operation on site in Tanzania (Capex having been estimated US\$206 million) consisting of barite removal by flotation, regrinding and rare earth flotation. From this a high grade (>40% rare earth oxide) processed concentrate is produced. Peak has been evaluating a number of options from direct sale of this rare earth concentrate, toll treatment through third party facilities and, as a base case, the establishment of the proposed refinery in Tees Valley (with an estimated capex of US\$124 million) by the Peak or a refining partner

The refinery will comprise of an alkali roast, water leach, dilute acid leach, purification and finally rare earth separation via solvent extraction. The Tees Valley location brings with it access to chemical and electrical engineering resources, along with specialist contract engineering

companies in Tees Valley for the planned maintenance program.



The major operating costs of the refinery are reagents and this makes the Tees Valley location particularly attractive given the proximity via ocean freight to multiple direct and by-product suppliers in UK and EU. As an example, the current cost of hydrochloric acid at Teesside, the primary reagent, is approximately 40% below the indexed cost seen in the Gulf Coast of the US over the past five years.

Conclusion

One thing that strikes us here is that Peak have effectively unbundled the mining side from the processing side and thus

opened up the potential options for the future. For decades now the trend has been to site both mine and processing in relative proximity. This thinking has largely sunk the bulk of REE players because to comply with the "logic" one had to locate large processing facilities in inaccessible, infrastructure poor locations with concomitant escalation in capex and the eternal enslavement to issues like the price of diesel. Without naming names one can think of a number of the once mighty wannabes in the REE space that came unstuck on insisting on building the totality of their operations in outlandish locations.

Dare we say it, but the way things are evolving Peak will also potentially have a stranglehold on processing the ore of other REE miners (if and when they should appear) due to the centralized European location, which would otherwise be unthinkable if the processing was inland in Africa. This in itself makes the funding of the processing component in the UK potentially separable from funding of the mine.

Peak are quite rightly throwing out the flawed hymnbook that REE developers, specialty metals producers and other miners have been singing out of for so long. Vertical integration does not mean all facilities have to be in the same place and in these days of cheap shipping rates it is more important to be near to the customers than near to a hole in the ground. This project will be one to watch in 2017 for next moves.