Company Profile & High level BFS
Ngualla Rare Earth Project Update

Peak Resources Limited (‘Peak’ or the ‘Company’) 75% ownership, together with its partners Appian Natural Resources Fund (‘Appian’) 20% and International Finance Corporation (‘IFC’) 5%, is developing the Ngualla Project to be a low cost next generation rare earth producer with a product suite that is strongly aligned to the high value and expanding magnet metal market. With this distinctly different development approach backed by the advantages of a large high quality deposit, a proven metallurgical process and real world, rare earth experience, the Company is well positioned for the surge in demand for magnet metals from the electrification of automobiles and the green technology sectors.

The Company completed a Bankable Feasibility Study (‘BFS’ or ‘Study’) in April 2017 in partnership with Tier One international consultants led by Amec Foster Wheeler backed by extensive pilot plant test work, detailed engineering design and cost studies and a high confidence Mineral Resource estimate. The Study components consist of a mine and a multi-stage processing plant on-site at Ngualla in Tanzania and a rare earth refinery in the Tees Valley, United Kingdom.

Subsequent to the BFS (ASX Announcement “BFS positions Ngualla one of world’s lowest cost RE Projects” of 12 April 2017), Peak undertook an internal optimisation study on the project which increased the design capacity through the processing facilities by approximately 16% (ASX Announcement “Process optimisation study boosts Ngualla’s operating margin” of 28th August 2017). The results and assumptions from this study and update to the BFS are included in this Project Update (‘Update’).

The focus of the BFS and subsequent optimisation study has been to evaluate the feasibility of the development of a long life open pit mine and associated multistage processing plant on site at Ngualla in Tanzania. A base case of a subsequent rare earth refinery located in Tees Valley in the United Kingdom is presented to produce approximately 2,810 tonnes per annum of >99% purity Neodymium-Praseodymium Oxide (NdPr), plus additional refined rare earth co-products. Alternative marketing strategies being investigated by the Company also include toll treating of the processed rare earth product from Ngualla at an existing refinery or direct sale of the product.

The increased production rate of the optimisation study is based on the Ore Reserve (ASX announcement dated 12th April 2017 “Ngualla Rare Earth Project - Updated Ore Reserve”) and which, together with this report, summarises the Material Assumptions. A revised mine plan was not generated for the optimisation study. The increased production rate is based on a compressed BFS mine schedule, which would reduce the operational life to 26 years, from 31 years at BFS. The Ore Reserve is based on the 2016 Weathered Bastnaesite Zone Mineral Resource estimate at +1% rare earth oxide cut-off grade (ASX announcement ‘Higher grade Ngualla Mineral Resource contains nearly 1 million tonnes rare earth oxide’ of 22nd February 2016) and the mining, processing and economic assumptions contained in the following sections of this report. 91% of the Mineral Resource estimate on which the Ore Reserve is based is classified in the Measured JORC category and 9% in the Indicated. No Inferred material is included in the Ore Reserve.

Figure 1.1: Relative value* contributors by product type and constituent REO’s.

*Relative value of contained REO equivalent product mix based on prices assumed in Table 12.1 of this report for individual rare earth oxides.
2. STATEMENT FROM CEO

STATEMENT FROM THE CHIEF EXECUTIVE OFFICER
ROCKY SMITH, B.SC (CHEM)

12th October 2017

It is with a great deal of pride that the Peak team delivers the results of the BFS and follow up internal process optimisation study for the Ngualla Project. Completing a BFS is a milestone reached only by a select few rare earth companies and is the culmination of many years of hard work. Investors can take comfort in the tier one approach Peak and its partners have used. It is our understanding that we are also the only company outside of China that has used experienced rare earth industry operational and marketing executives to feed their expertise into a BFS back stopped by extensive pilot planting on the whole production process.

When you combine the above with the design being led by engineering consultants of the calibre of Amec Foster Wheeler, all stakeholders should have comfort on the deliverability and operability of the planned mining, processing and refining solution that the Ngualla Project represents.

You will note as you read on in this document how the superior physical attributes of the Ngualla orebody combined with the unique advantages of the Tees Valley refinery location positions Peak to be one of the world’s lowest operating and capital cost rare earth developers.

The Peak team has delivered on the one thing it can control – operating cost. We have reduced our annual operating cost from US$118 million per annum, as stated in the Preliminary Feasibility Study (‘PFS’) of March 2014, to US$91 million per annum in the latest optimisation study completed in August 2017. This 23% or US$27 million per annum reduction alone is outstanding but making this achievement even more exceptional is the fact that this absolute operating cost reduction has occurred in conjunction with an increase in average annual NdPr production by 25% from 2,240 tonnes per annum at the PFS to 2,810 tonnes in the current design. This has been achieved with no increase in capital cost. Together these improvements make the Ngualla Project one of the world’s lowest cost rare earth projects.

We believe that the information set out above makes Peak the go to investment for exposure to the exciting rare earth magnet market that is underpinned by high growth applications such as e-mobility and low carbon technologies.

The Asset ● The Market ● The Team
Peak Resources - more than the sum of its parts and the first choice for investment in the rare earth space.
Permanent magnets made up ~70% of the rare earth market by value in 2015. Of this, the two key rare earths Neodymium and Praseodymium made up ~65%.

Peak’s Ngualla Project is one of the highest grade undeveloped Neodymium/Praseodymium (NdPr) deposits in the world. With its 26 year mine life and simple open cut, low strip ratio mining and bastnaesite mineralogy it is blessed with significant natural advantages. Peak has demonstrated through extensive pilot planting a flow sheet that is able to reject 70% of the loss making cerium oxide (which makes up 48% of the total rare earths to be refined) prior to the addition of any expensive chemical reagents into our process. As a result this means 90% of Peak’s predicted future revenue is to be from NdPr, which is perfectly aligned to the highest value component of the rare earth market that is being driven by demand from e-mobility and low carbon technologies.

To put the results from the BFS into context it is important for us to show you how Ngualla compares with other projects. A benchmarking exercise has been completed using data from Adamas Intelligence. Initially we started with 58 global junior rare earth projects and this number was reduced to 29 projects due to availability of quality data to be able to perform a detailed, comprehensive and professional comparison.

The following methodology has been applied. The white indicator on the following dials show for the specific KPI the closest perceived competitor of Peak Resources. This competitor is a light rare earth project, has low or moderate radioactivity levels in its ore body, undertakes full separation to produce separated oxides and has either a project status of Preliminary-Feasibility (‘PFS’), Definitive Feasibility Study (‘DFS’) or Bankable Feasibility Study (‘BFS’).

The ghosted white indicator shows all the projects which are not perceived as a direct competitor due to disqualifying elements such as:

- Projects only at PEA (Preliminary Economic Assessment or Scoping) stage or earlier have immature cost data and information which is not comparable with the quality of a PFS or BFS project status.
- Heavy rare earth projects which are by nature not comparable with light rare earth projects.
- Projects with high radioactivity levels in their mineralisation
- Low margin projects that aim to sell a low value intermediate or mixed rare earth product as opposed to a final purified product that is readily tradeable in the world’s rare earth markets

*Adamas Intelligence
RESULTING IN A TOTAL LIFE OF PROJECT
OPEX INTENSITY (US$/KG NdPr Oxide) OF
US$ 32.24#/kg NdPr*

is the breakeven point for positive cash flow. Considering today’s (26 September 2017) spot pricing FOB China of US$72.00/kg and understanding the projections and the drivers for the market outlook of increased demand for NdPr, Peak aims to take advantage of the expected increase in pricing as new permanent magnet technology applications arrive on the factory floors.

* OCBRITDA = Operating cost before royalties, interest, tax, depreciation and amortisation
* NdPr = Nd₂O₃/Pr₆O₁₁ Mixed Oxide 2N – min 75% Nd₂O₃

CAPEX INTENSITY OF
US$ 5.00/kg NdPr

The Ngualla Project has the potential to have the lowest Capex intensity per unit output of NdPr over Life of Mine compared to other fully integrated development projects.

AND A TOTAL PRE-PRODUCTION CAPEX OF
US$ 365 million

for Ngualla and Tees Valley refinery combined. This has the potential to be the lowest Capex among its peers for a fully integrated producer. We highlight the fact that the Project now includes a third solvent extraction circuit which will improve margins by separating cerium and lanthanum.
‘PHYSICALS DRIVE ECONOMICS’

PEAK RESOURCES: NUMBER 1 AMONG ITS PEERS

Compared to other rare earth projects, Ngualla has lower capital investment requirements and, thanks to a unique combination of favourable physical attributes and the improved processing route selected, enviably low operating costs that will make it cost competitive with Chinese production.

Nguala’s favourable project economics are in part driven by the high NdPr grade and favourable mineralogy of the rare earth deposit itself, combined with the development of an extraction and purification process that targets the higher value rare earths. This combined with the location of the refinery in proximity to the source of inexpensive reagents and utilities helps drive low Opex.

With the alignment of products and value drivers to the high demand magnet metal market, the project is also in a favourable position in terms of marketing and future demand for its products.

We believe the three most important measures of the Ngualla Project are, in order:

1) Opex intensity per unit of NdPr output;
2) Capex intensity per unit of NdPr output; and
3) Total Capex (inclusive of producing fully separated rare earth oxides).

The Ngualla Project has the potential to be a world leading, fully integrated rare earth development project based on each of these measures.

We believe, as a result of the low Opex position, the Ngualla Project is financially more robust and will be able to handle periods of softness in rare earth prices. We see this as an important distinguishing feature of the Ngualla. Based on our assumptions of expected pricing, as set out in this Project Update, which are driven off anticipated strong demand for e-mobility and low carbon technologies, Ngualla is predicted to generate US$ 108 million dollars per annum in free cash flow (post tax and royalties) with an IRR of 22% (post tax).
3. HIGHLIGHTS (continued)

**PRE TAX & ROYALTIES NPV$_{10}$**
US$ 686 million

**POST TAX & ROYALTIES NPV$_{10}$**
US$ 444 million

**PRE TAX & ROYALTIES NPV$_{8}$**
US$ 914 million

**POST TAX & ROYALTIES NPV$_{8}$**
US$ 612 million

**PRE TAX IRR**
26%

**POST TAX IRR**
22%

**AVERAGE ANNUAL REVENUE**
US$ 241 million

**AVERAGE ANNUAL OPERATING COST**
US$ 91 million

**AVERAGE ANNUAL CASH FLOW**
US$ 108 million pa

**PRE-PRODUCTION CAPEX**
US$ 365 million

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**Notes:** See Table 12.1 for price assumptions. Financial highlights are reported on a 100% owned basis. The production target and schedule on which the financial information is based is in turn based on the Ore Reserve and stated Material Assumptions in ASX Announcement “Ngualla Rare Earth Project – Updated Ore Reserve” dated 12 April 2017 and those summarised in this Project Update.

Rare earth price assumptions on which the financial evaluation is based are derived from forecasts by independent industry experts and are as stated in Section 12 of this Project Update.

Peak will require new funding for its 75% share in the Ngualla Project in order to achieve the stated financial outcomes, which will result in some dilution of existing shares, the quantum of which will depend on the final debt to equity ratio of the financing package that is yet to be arranged.
Peak Resources is focused on delivering an integrated rare earth project
The Company’s 75%-owned project combines mining and multi-stage processing at Ngualla in Tanzania, with downstream refining at a solvent extraction separation plant in the UK to produce a range of rare earth products. Approximately 90% of the value of the final product is associated with a high-purity neodymium and praseodymium oxide.

Ngualla is one of the world’s largest NdPr deposits
The Ngualla deposit is located in Tanzania, 147 kilometres from the city of Mbeya. It is one of the world’s largest NdPr deposits, with total mineral resource containing 4.6Mt of REO. The deposit is host to a thick blanket of weathered, high-grade mineralisation from surface. The Weathered Bastnaesite Zone Mineral Resource estimate at a cut-off of 1.0% REO is 21.3Mt grading 4.75% REO, containing 1,010,000t REO, of which 89% is in the Measured category.

Tanzanian operations to produce 32,700tpa of beneficiated REO mineral concentrate grading 45% REO
The Company plans to process 711,000tpa of dry ore through a multi-stage flotation-based beneficiation process to produce 32,700tpa of high-value, 45% REO concentrate containing 14,700tpa of REO.

UK-based rare earth refinery to produce final products
Having investigated a number of different flowsheets and following positive trials on actual mineralisation from Ngualla, the Project will use an alkali roast processing route to produce a rare earth solution feed to a solvent extraction-based separation process. In this, the material is firstly roasted with alkali, then washed and filtered before being leached using a low-strength hydrochloric acid, a process that selectively targets Nd and Pr. The project benefits from the low rate of acid consumption, owing to the absence of acid consuming carbonate and phosphate in the mineralisation and the relatively low levels of iron in the concentrate.

Final products from the project are planned to be:
- 2,810 tonnes of neodymium and praseodymium rare earth oxide (2N min 75% Nd$_2$O$_3$),
- 625 tonnes of mixed SEG and Mixed Heavy rare earth carbonate,
- 3,475 tonnes of cerium carbonate and 7,995 tonnes per annum lanthanum carbonate.

Neodymium and praseodymium exposed to high-growth permanent magnet demand
Neodymium and praseodymium are used in combination to create high-powered lightweight NdFeB permanent magnets. Prices of rare earths, including those for NdPr oxides, peaked in 2011 and have since fallen back. Owing to the increased use of high-power magnets in electrical motors and generators, particularly in electric cars and bikes, the outlook for demand for NdPr is very positive.
CAUTIONARY STATEMENTS AND RISK FACTORS

The contents of this announcement reflect various technical and economic conditions at the time of writing. Given the nature of the resources industry, these conditions can change significantly over relatively short periods of time. Consequently, actual results may vary from those detailed in this announcement.

Some statements in this announcement regarding estimates or future events are forward-looking statements. They include indications of, and guidance on, future earnings, cash flow, costs and financial performance. Forward-looking statements include, but are not limited to, statements preceded by words such as "planned", "expected", "projected", "estimated", "may", "scheduled", "intends", "anticipates", "believes", "potential", "predict", "foresee", "proposed", "aim", "target", "opportunity", "could", "nominal", "conceptual" and similar expressions. Forward-looking statements, opinions and estimates included in this announcement are based on assumptions and contingencies which are subject to change without notice, as are statements about market and industry trends, which are based on interpretations of current market conditions. Please also refer to the additional sensitivity factors described in the Project Economics section of the attached report.

Forward-looking statements are provided as a general guide only and should not be relied on as a guarantee of future performance. Forward-looking statements may be affected by a range of variables that could cause actual results to differ from estimated results, and may cause the Company’s actual performance and financial results in future periods to materially differ from any projections of future performance or results expressed or implied by such forward-looking statements. So there can be no assurance that actual outcomes will not materially differ from these forward-looking statements.

These statements are subject to significant risks and uncertainties that include but are not limited to those inherent in mine development and production, geological, mining, metallurgical and processing technical problems, the inability to obtain and maintain mine licenses, permits and other regulatory approvals required in connection with mining and processing operations, competition for among other things, personnel, incorrect assessments of the value of projects and acquisitions, changes in commodity prices and exchange rate, currency and interest rate fluctuations and other adverse economic conditions, the potential inability to market and sell products, various events which could disrupt operations and/or the transportation of mineral products, including labour stoppages and severe weather conditions, the demand for and availability of transportation services, environmental, native title, heritage, taxation and other legal problems, the potential inability to secure adequate financing and management’s potential inability to anticipate and manage the foregoing factors and risks. There can be no assurance that forward-looking statements will prove to be correct.

Where the Company expresses or implies an expectation or belief as to future events or results, such expectation or belief is expressed in good faith and on a reasonable basis. No representation or warranty, express or implied, is made by the Company that the matters stated in this announcement will in fact be achieved or prove to be correct.

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This announcement does not take into account the individual investment objectives, financial or tax situation or particular needs of any person. It does not contain financial advice. You should consider seeking independent legal, financial and taxation advice in relation to the contents of this announcement.

Except as required by applicable law, the Company does not undertake any obligation to release publicly any revisions to any forward-looking statement to reflect events or circumstances after the date of this announcement, or to reflect the occurrence of unanticipated events, except as may be required under applicable securities laws.