



Peak commences Beneficiation Pilot Plant

Peak Resources Limited ("Peak" or the "Company"; ASX Code: PEK) is pleased to advise piloting of the beneficiation flowsheet has commenced on a 66 tonne bulk sample of typical weathered bastnasite mineralisation collected from the Ngualla Rare Earth Project in Tanzania.

Summary

- A flowsheet consisting of two stage flotation with intermediate regrinding has been selected for the treatment and upgrading of the Ngualla mineralisation
- The flowsheet is a simple, robust and effective means of achieving an up to 8 times upgrade of the run of mine (ROM) grade of rare earths
- Standard flotation cells and readily available reagents are utilised
- ALS Metallurgy "ALS" (previously Ammtec) has been selected for piloting this flowsheet



Figure 1: Commissioning of the barite prefloat circuit

The selection and piloting of the beneficiation flowsheet is an integral part of the Bankable Feasibility Study ("BFS") and demonstrates Peak's commitment to move towards the commercialisation of the Ngualla Project.

Peaks Managing Director Darren Townsend commented *"The commencement of the beneficiation pilot plant is another key milestone in the development of the Ngualla Project. My congratulations go to the Peak technical team and their consultants for the commencement of this key work program."*

About Peak

Peak is an ASX-listed Company developing the Ngualla Rare Earth Project in Tanzania in conjunction with its partners Appian and IFC. Ngualla is a large high grade rare earth deposit that is particularly rich in the high growth magnet metals neodymium and praseodymium. Peak has commenced the Bankable Feasibility Study for the Ngualla Project and has appointed AMEC Foster Wheeler as the lead engineer for the study.

Technical Report

Beneficiation Flowsheet

After extensive evaluation of two alternative beneficiation flowsheets developed specifically for Ngualla’s unique mineralisation, a two stage flotation process with an intermediate regrind step has been selected on the basis of operational advantages and lower operating costs.

The flowsheet takes advantage of a significant proportion of the gangue (waste) mineralisation being in the form of relatively large barite particles. An initial coarse grind (-75 microns) is employed to liberate the barite and allow its selective removal using standard flotation techniques. Typically this process stage rejects greater than 95% of the barite whilst losing only around 10% of the rare earth bearing bastnasite.

The barite depleted concentrate is then screened, thickened and sent to a regrind mill where the particle size is reduced to less than 45 microns. This provides liberation of the bastnasite from iron bearing gangue minerals. A second stage of standard flotation is then undertaken at a temperature of 50°C using dispersants, gangue depressants and a hydroxamic acid as a rare earth collector. The overall process is illustrated below in Figure 2.

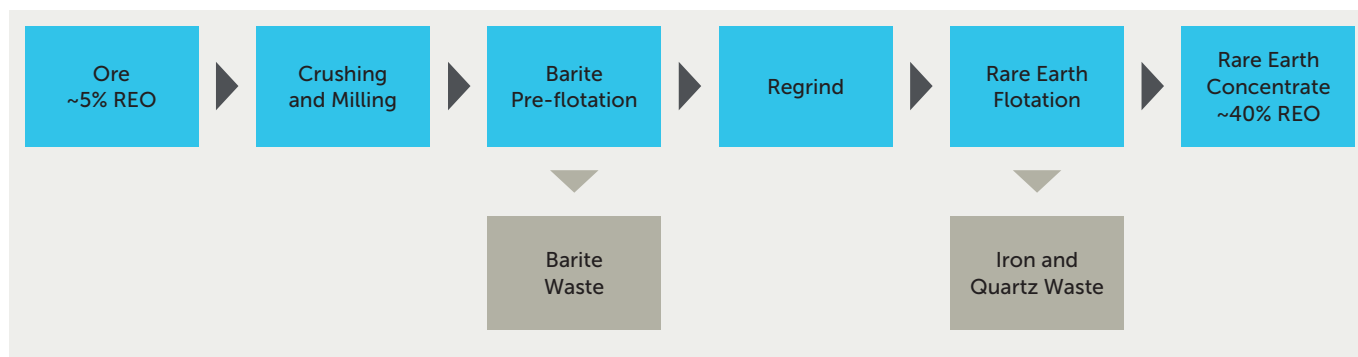


Figure 2: Two Stage Float flowsheet developed and selected by Peak .

The selected flowsheet is the result of continuous, incremental improvements achieved in the beneficiation process (Figure 3), with test work delivering concentrate grades of between 30 and to 50% rare earth oxide (REO). These grades represent a two to three fold improvement over the 16.3% REO concentrate attained in the Preliminary Feasibility Study (“PFS”).

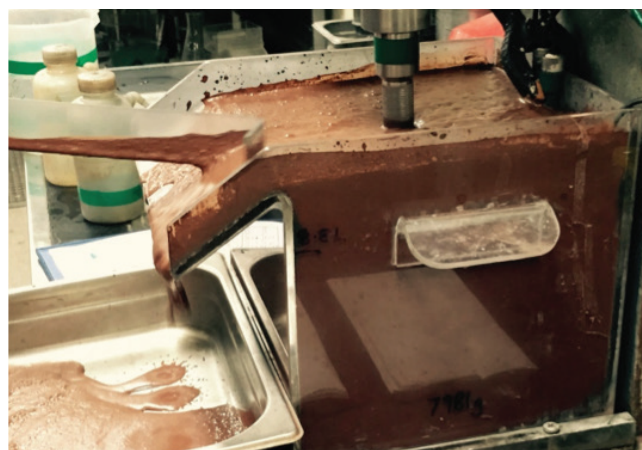


Figure 3: Bench scale flotation test work (second stage REO float) selected by Peak.

The ability to produce a high grade/low mass mineral concentrate is expected to have a profound impact on the overall project economics by reducing both operating and capital costs compared to the PFS via:

- **Decreased transportation costs** of the lower mass concentrate
- **Reduction in acid consuming gangue mineral content**
 - notably iron oxides and hydroxides
- **Significantly reducing the downstream leach recovery plant size**

Pilot Plant Commences

Approximately 66 tonnes of weathered bastnaesite mineralisation was collected from eight trenches (Figure 4) excavated at Ngualla earlier in the year and transported to Perth, Western Australia. This material has been selected to be representative of the first five years mill feed.

Three metallurgical laboratories were requested to provide proposals for the construction and operation of a pilot plant using the two stage flowsheet on a bulk 66 tonnes sample collected from site. ALS in Perth was selected based on their piloting experience, available equipment and technical expertise in rare earth flotation.

ALS have crushed, screened and blended the bulk sample (Figures 6 and 7) in preparation for milling and flotation (Figure 8 and Figure 9).



Figure 4: One of the trenches at Ngualla excavated for the pilot plant bulk sample



Figure 5: A portion of the bulk sample in Perth prior to crushing and homogenisation



Figure 6: Crushing and screening of sample



Figure 7: Homogenised 66 tonne sample

Milling of the bulk sample (Figure 7) and operation of the first stage barite flotation (Figure 9) has now commenced. The overall operation of the plant will continue until the end of the calendar year, producing in excess of two tonnes of high grade concentrate to be used for the downstream leach recovery pilot plant scheduled to commence in the first quarter of 2016.

The beneficiation pilot plant will provide essential operating data to assist in the engineering of the commercial scale operation by Peak's BFS Lead Engineer, AMEC FW as well as providing appropriate samples to third party equipment and reagent vendors.



Figure 8: Greg Henderson, AMEC FW (foreground) and Roy Gordon, Peak Resources, commissioning grinding circuit at ALS.



Figure 9: Beneficiation pilot plant barite prefloat circuit in operation.

For and on behalf of Peak Resources Limited.

A handwritten signature in black ink, appearing to read 'D. Townsend'.

Darren Townsend
Managing Director

The information in this report that relates to Metallurgical Test Work Results based on information compiled and / or reviewed by Gavin Beer who is a Member of The Australasian Institute of Mining and Metallurgy and a Chartered Professional. Gavin Beer is the General Manager Metallurgy of the Company and has sufficient experience relevant to the activity which he is undertaking to be recognized as competent to compile and report such information. Gavin Beer consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Exploration Results is based on information compiled and/or reviewed by Dave Hammond who is a Member of The Australasian Institute of Mining and Metallurgy. Dave Hammond is the Technical Director of the Company. He has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Dave Hammond consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.