

22 AUGUST 2023

METALLURGICAL TEST WORK COMMENCING ON RARE EARTHS AND HEAVY MINERALS AT SANDY MITCHELL

HIGHLIGHTS

- Metallurgical test work is scheduled to commence this week on the recently-drilled rare earth element (REE) and Heavy Mineral sands from the Sandy Mitchell placer deposit
- Mineral Technologies (MT) has been appointed and will undertake a concept study for mineral sands flowsheet development, inclusive of Rare Earths (RE) mineral beneficiation evaluation by flotation and conventional techniques; test work results expected to be reported early October
- The key areas covered by the program are:
 - ✓ Detailed ore metallurgical characterisation to define the composition of the ore
 - ✓ Heavy Mineral Concentrate (HMC) production (wet shaking table) which defines response to gravity / fast track production of a gravity HMC
 - ✓ MSP processing inclusive of
 - Batch flotation of HMC to evaluate extraction of RE-minerals.
 - Conventional processing techniques (Electrostatic & magnetic) for REE and other minerals
 - ✓ QEMSCAN mineralogy
- Ark recently completed a 1,505 metre maiden drilling program covering a small area of 1.3km with first assays pending
- Sandy Mitchell's Rare Earths sands are amenable to panning a concentrate indicating low-cost, fast start up, straightforward beneficiation by gravity processing

Ark Mines Limited (ASX: AHK) is pleased to announce it has initiated preliminary metallurgical test work to characterise the REE's and Heavy Minerals identified within the sands at its Sandy Mitchell prospect, located North of Chillagoe in North Queensland (Figure 1), appointing leading minerals processing company Mineral Technologies to undertake the program.

Executive Director Ben Emery said: *"Whilst the sands from the project can be upgraded to a concentrate by gravity means, conducting metallurgical testing at Sandy Mitchell is imperative for us to understand the concentrate product, the grades, recoveries, style of mineralisation, and the process techniques to extract valuable Rare Earths elements, as well as Heavy Minerals such as zircon and titania from the material. The project is well-endowed with Rare Earths and Heavy Minerals and our objective is to produce and sell both. Test work is likely to take six weeks. In the interim, we anticipate releasing assays from the first drill program very shortly and this will help us define next steps for an expanded drill program and other project development activities. Being a placer deposit gives us a number of unique advantages in bringing the project into production much more rapidly and cost effectively than a hard rock or ionic clay deposit."*

Metallurgical Test Work Overview

The objectives of the study are:

- Complete a metallurgical characterisation of the ore sample.
- Conduct preliminary test work to assess suitability of beneficiation by gravity. Produce a gravity Heavy Mineral Concentrate (HMC) for further evaluation.
- Fractionate the HMC using:
 - Froth flotation for wet-only rare earth minerals recovery and upgrade.
 - Magnetic fractionation and final upgrade.

MT is a subsidiary of ASX200 company the Downer Group Limited. MT is a leading minerals processing company in the Australian market with extensive experience in REE metallurgy and mineral sands through the development of projects providing engineering, metallurgical test work and patented equipment design and supply.

Sandy Mitchell is unique compared to other Rare Earths projects with material hosted in fine sands, known as Terrestrial Placer deposits, which are amenable to panning a concentrate thus allowing for low-cost, fast start up, straightforward beneficiation by gravity processing. Hence, processing costs are anticipated to be significantly lower than hard rock and ionic clay hosted Rare Earths projects. Sandy Mitchell will also benefit from having considerable scale based on the current 140 km² of tenements held and contiguous sub blocks of over 138km² currently under application.

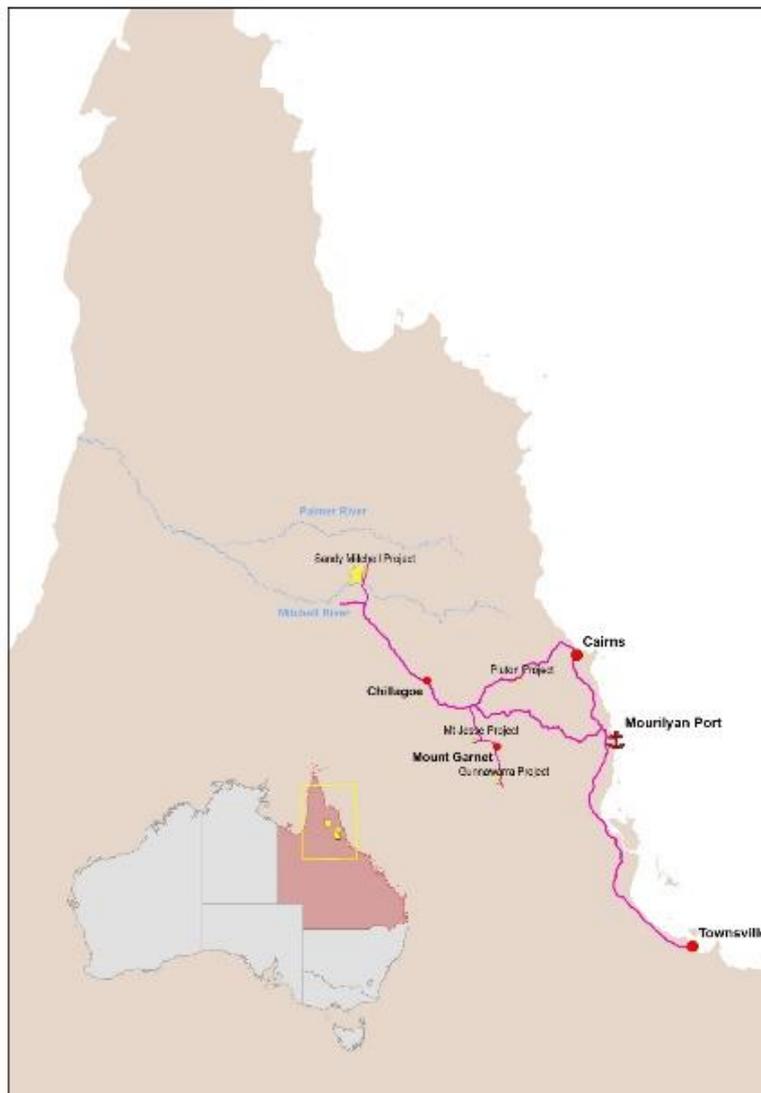


Figure 1: Location of the Sandy Mitchell Project, near Chillagoe, Nth QLD.

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About Ark Mines Limited

Ark Mines is an ASX listed Australian mineral exploration company focused on developing its 100% owned projects located in the prolific Mt Garnet and Greenvale mineral fields of Northern Queensland and includes:

The Sandy Mitchell Rare Earth and Heavy Mineral Project

- **Ark has recently acquired the 147km² EPM 28013 'Sandy Mitchell' tenement – an advanced Rare Earths Project in North Queensland with additional 138km² of sub blocks under application**
- **Very high historical TREO grades including high grade pan concentrates of all critical Light Rare Earths including dysprosium (Dy), terbium (Tb), holmium (Ho), erbium (Er), thulium (Tm) ytterbium (Yb), yttrium (Y) and excluding only Lutetium**
- **Up to 25% of the TREO is Nd and Pr (magnet metals)**
- **Rare Earths at 'Sandy Mitchell' are amenable to panning a concentrate**
- **Planned low-cost, fast start up, straightforward beneficiation by gravity processing**

The Company's exploration portfolio also consists of three high quality projects covering 200km² of tenure that are prospective for copper, iron ore, nickel-cobalt and porphyry gold:

Gunnawarra Nickel-Cobalt Project

- Comprised of 11 sub-blocks covering 36km²
- Borders Australian Mines Limited Sconi Project - most advanced Co-Ni-Sc project in Australia
- Potential synergies with local processing facilities with export DSO Nickel/Cobalt partnership options

Mt Jesse Copper-Iron Project

- Project covers a tenure area of 12.4km² located ~25km west of Mt Garnet
- Centred on a copper rich magnetite skarn associated with porphyry style mineralization
- Three exposed historic iron formations
- Potential for near term production via toll treat and potential to direct ship

Pluton Porphyry Gold Project

- Located ~90km SW of Cairns near Mareeba, QLD covering 18km²

- Prospective for gold and associated base metals (Ag, Cu, Mo)
 - Porphyry outcrop discovered during initial field inspection coincides with regional scale geophysical interpretation

Reliance on historic data

All sample data reported in this release, as disclosed in the body of the release, in the tables in the Appendix and in the JORC table is based on data compiled by the Competent Person from other sources and quoted in their original context. These sources have been referenced in the text and the original Competent Persons statements may be found with the relevant documents. Some of this information is publicly available but has not been reported in accordance with the provisions of the JORC Code and a completed Table 1 of the JORC Code and Competent Persons statement is attached to this Release. Whilst every effort has been made to validate and check the data, these results should be considered in the context in which they appear and are subject to field verification by the Company.

Competent Persons Statement

The Information in this report that relates to exploration results, mineral resources or ore reserves is based on information compiled by Mr Roger Jackson, who is a Fellow of the Australian Institute of Mining and Metallurgy and a Fellow of the Australasian Institute of Geoscientists. Mr Jackson is a shareholder and director of the Company. Mr Jackson has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the activity that he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the 'Australian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves' (the JORC Code). Mr Jackson consents to the inclusion of this information in the form and context in which it appears in this report. Mr Jackson confirms information in this market announcement is an accurate representation of the available data for the exploration areas being acquired.

Forward Looking Statements and Important Notice

This report contains forecasts, projections and forward-looking information. Although the Company believes that its expectations, estimates and forecast outcomes are based on reasonable assumptions it can give no assurance that these will be achieved. Expectations and estimates and projections and information provided by the Company are not a guarantee of future performance and involve unknown risks and uncertainties, many of which are out of the company's control.

Actual results and developments will almost certainly differ materially from those expressed or implied. The company has not audited or investigated the accuracy or completeness of the information, statements and opinions contained in this announcement. To the maximum extent permitted by applicable laws, Ark Mines makes no representation and can give no assurance, guarantee or warranty, express or implied, as to, and takes no responsibility and assumes no liability for the authenticity, validity, accuracy, suitability or completeness of, or any errors in or omission from, any information, statement or opinion contained in this report and without prejudice, to the generality of the foregoing, the achievement or accuracy of any forecasts, projections or other forward looking information contained or referred to in this report.

Investors should make and rely upon their own enquiries before deciding to acquire or deal in the Company's securities.