

**17 JUNE 2025**

## **METALLURGICAL IMPROVEMENT WORK COMMENCES AT SANDY MITCHELL**

**THE COMPANY ANNOUNCES A PROGRAM OF METALLURGICAL IMPROVEMENT WORK AT SANDY MITCHELL RARE EARTH AND HEAVY MINERALS PROJECT**

### **Highlights**

- Specialist consultants IHC Mining have commenced a detailed metallurgical testing program to improve both the beneficiation process and mineral separation process for rare earths and heavy minerals at Sandy Mitchell.
- Initial work will deliver improved characterisation and preparation of feed for beneficiation. This will flow into an improved flowsheet design through enhanced processes choices.
- Metallurgy program will utilise a 2,225kg bulk sample from 2024 drill program.
- Results from the IHC metallurgical analysis will be incorporated into the works program for the detailed Pre-Feasibility Study, which is underway and currently scheduled for completion in early 2026.
- Process flow sheet designed to produce the following products from the surface sand at Sandy Mitchell:
  - Rare Earth Oxides including magnet rare earths and critical rare earths
  - Zircon with accessory hafnium
  - Accessory titanium oxides
  - Garnet
- Metallurgy program to be accompanied by the planned recommencement of drilling at Sandy Mitchell, where Ark is targeting a significant expansion of the existing Measured resource.

Ark Mines Limited (ASX: AHK) ('AHK' or the 'Company') is pleased to announce the commencement of a detailed metallurgical improvement program at its fully owned Sandy Mitchell Rare Earth and Heavy Minerals project in North Queensland.

The metallurgy program will be undertaken by IHC Mining, a leading Australian mining services company which operates a state-of-the-art metallurgical testing facility outside Brisbane with specialist expertise in mineral sands processing.

The test work is expected to deliver additional refinements to existing product data and build off the expert metallurgical review commissioned by Harrier Project Management in May 2024 (refer ASX Announcement 16 May 2024).

For personal use only

The IHC metallurgical analysis will be incorporated into the works program for the detailed PFS for Sandy Mitchell, which is currently scheduled for completion in early 2026 and will also incorporate assay results from a forthcoming drill program aimed at expanding the existing Measured resource.

**Managing Director Ben Emery said:**

*“Timing is everything in mining, and we continue to believe that Sandy Mitchell can deliver a near term large scale rare earth mine to the market within two years. IHC are already making great progress on a very thorough test-work programme that has been well thought out to cover a wide array of processing options. This advanced metallurgy work is expected to further strengthen our commercial development strategy for Sandy Mitchell, by confirming the applicability of low-cost downstream processing to convert the mineral sands into a range of end-user products that are in demand across global rare earth and heavy mineral markets. We look forward to providing updates on the results of metallurgy work in the coming weeks, to complement the planned recommencement of drilling at Sandy Mitchell where Ark is targeting a significant increase in the existing Measured resource – all of which will provide important inputs to the preparation of our detailed PFS.”*

**Sandy Mitchell Development Update**

The planned recommencement of drilling follows the completion of the Northern Australia wet season and will be supported by a recent \$1.5m Placement to professional and sophisticated investors (refer ASX Announcement 1 May 2025).

The engagement of IHC Mining marks the next step in the mine development strategy for Sandy Mitchell, following a two-phase drill program in 2024 which delivered a Measured Mineral Resource Estimate (MRE) of 71.8 Mt @ 1,732.7 ppm Monazite Equivalent (refer ASX Announcement 2 October 2024) and the completion of a Scoping Study which confirmed the project was commercial (refer ASX Announcement 11 December 2024).

The Measured resource includes a basket of high value Heavy Minerals (HM) and a high magnetic REO (Nd, Pr, Dy, Tb) element proportion of 25 % of the TREO basket, positioning Sandy Mitchell as one of Australia’s most enriched MREO deposits.

**About IHC Mining**

IHC Mining is a multi-service mining engineering and consulting group, with specialist knowledge across geology, metallurgy and mining services. The Company’s Brisbane-based laboratory is capable of a range of industry-standard analytical techniques, bench-scale metallurgical evaluations and bulk processing on full-scale mineral processing equipment.

The company operates at the forefront of process technology developments and stocks equipment from a range of industry-leading manufacturers, enabling it to independently deliver optimal process solutions. IHC has a team of experts providing technical knowledge and industry experience into a client-collaborative approach, to ensure customers’ goals are achieved and that the interpretation and implications of the outcomes are understood.

As a prominent player in mineral sands consultancy, IHC assists exploration, mining and engineering companies with the development of process options for new projects, as well as the management and optimisation of existing processes.

For personal use only

The company confirms that it is not aware of any new information or data that materially affects the information included in the relevant market announcements and, in the case of estimates of mineral resources, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed.

#### **AUTHORITY FOR RELEASE**

**This announcement has been approved for release to the ASX by the Board of Ark Mines Ltd.**

#### **FURTHER INFORMATION**

**For further information please contact:**

**Roger Jackson**  
Executive Chairman  
info@arkmines.com.au

**Ben Emery**  
Executive Director  
info@arkmines.com.au

Or visit our website and social media:  
[www.arkmines.com](http://www.arkmines.com) | [www.twitter.com/arkmineslimited](https://www.twitter.com/arkmineslimited)

### **About Ark Mines Limited**

Ark Mines is an ASX listed Australian mineral exploration company focused on developing its 100% owned projects located in Northern Queensland. The Company's exploration portfolio consists of four high quality projects.

#### **The Flagship Sandy Mitchell Rare Earth and Heavy Mineral Project**

- Ark owns 100% of the 147km<sup>2</sup> EPM 28013 'Sandy Mitchell' – an advanced Rare Earths Project in North Queensland with additional 138km<sup>2</sup> of sub blocks under application
- Measured Mineral Resource Estimate (MRE) of 71.8 Mt @ 1,732.7 ppm Monazite Equivalent calculated using a 700ppm MzEq lower cut-off grade (see Appendix A for Resource Report).
- Very high historical TREO grades\* including high grade pan concentrates of:
- Project contains all critical Light Rare Earths as well as Heavy 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

#### **Gunnawarra Nickel-Cobalt Project**

- Comprised of 11 sub-blocks covering 36km<sup>2</sup>
- Borders Australian Mines Limited Sconi project - most advanced Co-Ni-Sc project in Australia

For personal use only

- Potential synergies with local processing facilities with export DSO Nickel/Cobalt partnership options

**Mt Jesse Copper-Iron Project**

- Project covers a tenure area of 12.4km<sup>2</sup> located ~25km west of Mt Garnet
- Centered 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 18km<sup>2</sup>
- Prospective for gold and associated base metals (Ag, Cu, Mo)
- Porphyry outcrop discovered during initial field inspection coincides with regional scale geophysical interpretation

**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 Ark Mines' control.

Actual results and developments will almost certainly differ materially from those expressed or implied. Vertex Minerals 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.