

09 DECEMBER 2024

ANALYSIS OF TEST WORK AND STUDIES TO-DATE CONFIRM BOARD DECISION TO ADVANCE PROJECT DEVELOPMENT AT SANDY MITCHELL

SANDY MITCHELL TENEMENT PROGRESS UPDATE

- A large diameter Auger Drill has now arrived on site ready to start the next phase of sampling. A further 10 metric tonnes will be drilled for further assays and to produce the metallurgical test work needed to further progress and optimise the PFS work program
- Following further analysis of on-site test works and continuing independent studies, Ark Mines Board of Directors continues to assess that the Sandy Mitchell Rare Earth project has commercial development potential
- The Board has decided to progress optimisation works to advance project development, which will subsequently be incorporated into more detailed plans for mine development
- Recent project updates, which included a Mineral Resource Estimate (MRE) upgrade along with an updated Exploration Target, will be incorporated into a planned Scoping Study which is currently undergoing a comprehensive review to ensure accuracy and quality control
- The advancement of on-site works programs in November further confirmed a number of the project's unique attributes, including:
 - ✓ **Geology and mining economics**
 - suitable for mining with 1 large loader
 - no drill and blast
 - no overburden
 - no topsoil
 - mineralisation from surface
 - no clay constraints
 - only 12m deep
 - at 12m – can be selectively mined
 - no tails dam
 - no waste piles
 - ✓ **Metallurgy and Processing**
 - screen upgrades grade whilst mining up front
 - in situ processing with gravity only
 - no chemicals
 - no salts, no acids
 - ✓ **Low environmental impact**
 - no impact on farm country – (no potential subsidence)
 - the landform will be returned to its pre-mine state
 - low-cost pathway for land rehabilitation requiring only seeding the ground

- Following completion of the Exploration Target in November 2024, Ark has continued to engage independent expert Harrier Project Management following publication of a report by Harrier in May 2024 which assessed the commercial potential of the Company's stated development pathway

Ark Mines Limited (ASX: AHK) ("AHK" or the "Company") is pleased to announce that, following an extensive review of on-site works programs carried out to-date, the Board has determined that the commercial potential of Ark's fully-owned Sandy Mitchell Rare Earths and Heavy Minerals project warrants the continuation of project development and associated commercial studies.

In carrying out its comprehensive review, the Board took into account study works carried out to-date by Harrier Project Management, a Queensland-based specialist advisory firm, following the publication earlier this year of an independent export report (refer ASX Announcement 16 May 2024).

The report concluded that the Sandy Mitchell project has several inherent advantages that make it highly amenable to the extraction of a rare earths concentrate through simple low-cost beneficiation by gravity processing, which is likely to be accepted by third-party refiners using the sulphuric acid baking process - the most widely used process globally for treating the monazite concentrates typically found in placer deposits.

Since the publication of the Harrier report, Ark announced an upgraded Mineral Resource Estimate (MRE), comprising a Measured resource of 71.8 Mt @ 1,732.7 ppm Monazite Equivalent, calculated using a 700ppm MzEq lower cut-off grade (refer ASX Announcement 2 October 2024).

The Board remains of the view that the reported MzEq and HM grades in the MRE upgrade are expected to support strong project economics through simple low-cost downstream processing, with reference to current market prices for monazite concentrate.

Building off the updated MRE estimate, Ark also announced an updated Exploration Target Estimated for Sandy Mitchell of between 1.3 billion tonnes to 1.5 billion tonnes at 1,286 to 1,903 ppm monazite equivalent (refer ASX Announcement 6 November 2024) – representing an increase in the MzEq grade from the July 2024 estimate and highlighting the potential scale of Sandy Mitchell as one of the world's largest surface-expressed terrestrial sand based rare earth deposits

Having carried out an extensive review of all project works carried out to-date, Ark has continued to progress towards the completion of key project development studies. As stated in previous announcements, the works carried out to-date are being incorporated into a comprehensive Scoping Study, which is scheduled for completion imminently.

Works programs have also commenced to advance development of a planned comprehensive Pre-Feasibility Study (PFS), in conjunction with independent expert consultants to ensure the highest levels of accuracy and quality control.

Ark Mines Managing Director, Ben Emery, commented: "As we advance development of the Sandy Mitchell project, the Ark management team have continued with a comprehensive assessment of all works carried out to-date. Following ongoing project reviews and data analysis in consultation with independent experts, the Ark Mines Board remains of the view that the project has a number of unique inherent advantages which make it amenable to potential commercial project development. As previously announced to the market, the Company is now advancing key project development studies including a planned Scoping Study due imminently. The Company anticipates that results from the planned Scoping Study along with broader works programs, including our Mining Lease (ML) application submitted in October which covers over 400 hectares of the project, will then be incorporated into a comprehensive Pre-Feasibility Study (PFS) in 2025."

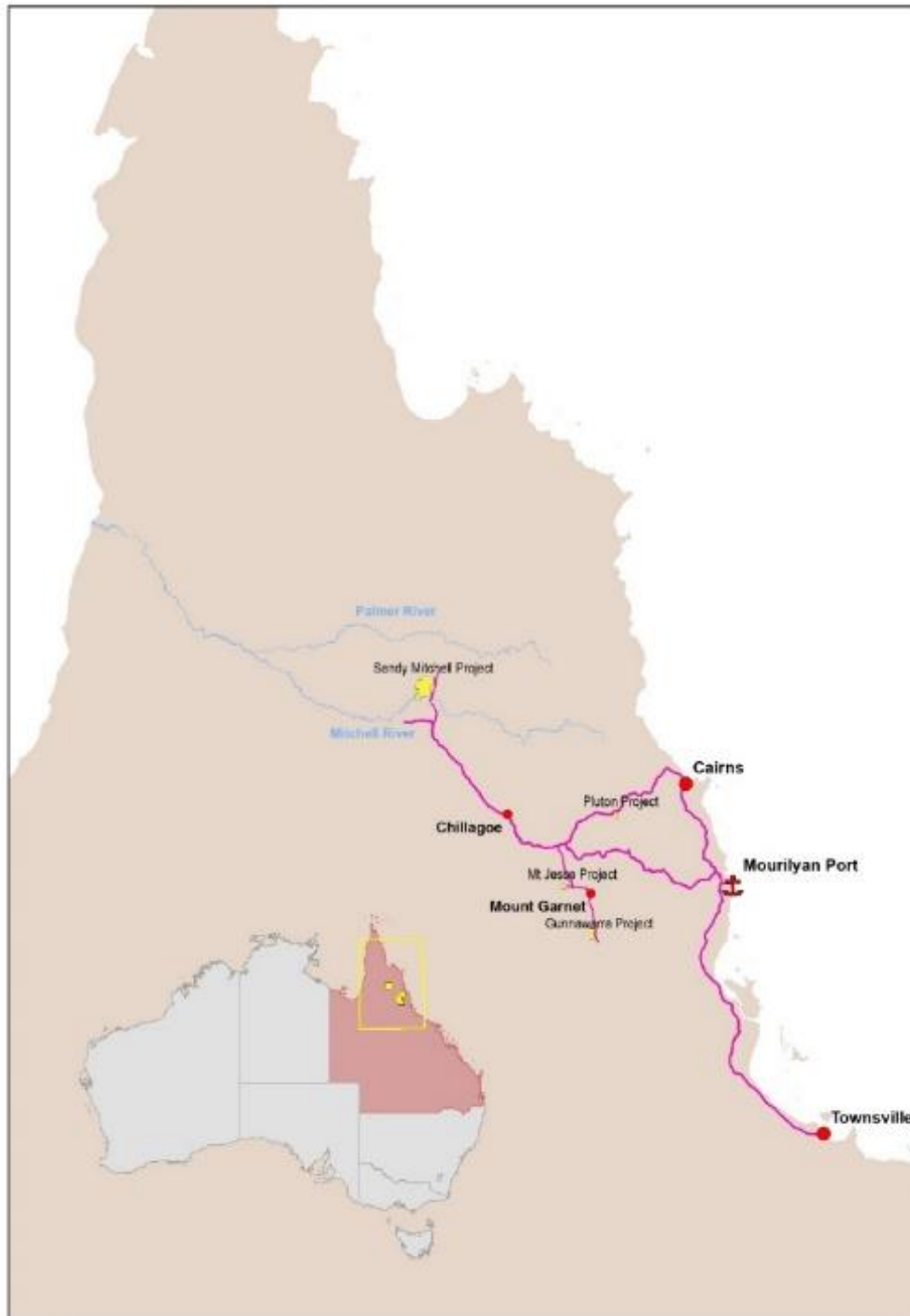


Figure 1 Location of the ML application in yellow

The entity confirms in the subsequent public report that it is not aware of any new information or data that materially affects the information included in the relevant market announcement and, in the case of estimates of mineral resources, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement 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.



Roger Jackson
Chairman
9 December 2024

FURTHER INFORMATION

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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 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 161.2km² EPM 28013 '*Sandy Mitchell*' – an advanced Rare Earths Project in North Queensland with additional 138km² 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).
- 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 (i.e. heavy magnet metals)
- Rare earths at '*Sandy Mitchell*' are amenable to panning a concentrate; planned low-cost, rapid start-up, straightforward beneficiation by gravity processing.

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
- 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 18km²
- 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.