

## Additional critical mineral product stream doubles Toliara Project's NPV

### Key points

- Pre-feasibility study on the production of monazite has significantly enhanced the forecast financial returns from the Toliara Project.
- With an incremental NPV<sub>10</sub> of US\$1.0 billion (post-tax, real), the Monazite PFS has doubled the Toliara Project's overall NPV<sub>10</sub> to US\$2.0 billion (post-tax, real).
- Monazite is a rich source of rare earth elements critical to the world's green energy transition and represents 2.0% of the heavy mineral in the Toliara Project's Mineral Resources estimate.
- The Monazite PFS demonstrates that tails from the mineral sands processing planned under the Mineral Sands DFS2 can be easily upgraded to a monazite product, for modest additional capital expenditure. Capitalising on what is essentially a 'waste' stream will make the Toliara Project one of the largest and most cost-competitive sources of rare earth oxides globally.
- Other key incremental outcomes from the Monazite PFS include:
  - IRR of 79%.
  - Capex of US\$71 million and a capital payback period of 1 year.
  - Average annual monazite production of 21.8kt, containing 2.8kt of NdPr.
  - LOM free cash flow of US\$4.7 billion, averaging US\$130 million per annum.
  - Average annual EBITDA of US\$164 million.
- Key overall outcomes from incorporating the Monazite Project in the Toliara Project include:
  - Average revenue to cash cost of sales ratio of 4.3 over the 38-year modelled mine life.
  - Increase of LOM free cash flow by 80% to US\$10.6 billion, averaging US\$306 million per annum.
  - Average annual EBITDA of US\$371 million.

African mineral sands producer and developer, Base Resources Limited (ASX & AIM: BSE) (**Base Resources**) is pleased to release the outcomes of its pre-feasibility study on exploitation of the contained monazite at its Toliara Project in Madagascar through concentration of the existing waste stream from the project's mineral sands processing facilities to produce a valuable monazite product (**Monazite PFS**).

On an incremental basis, the Monazite PFS has delivered exceptional outcomes and is a significant enhancement of the Toliara Project as outlined in the enhanced definitive feasibility study on the project's mineral sands (**Mineral Sands DFS2**). For modest additional estimated capital expenditure of US\$71 million, the Monazite PFS outcomes include an incremental post-tax/pre-debt (real) NPV<sub>10</sub> of US\$1.0 billion, IRR of 79% and an average revenue to cost of sales ratio of 7.9, over an initial 38-year mine life. When combined with the Mineral Sands DFS2, the Toliara Project has an overall post-tax/pre-debt (real) NPV<sub>10</sub> of US\$2.0 billion.

### Managing Director of Base Resources, Tim Carstens, said:

"Put simply, the outcomes from our Monazite PFS reinforce our belief that Toliara is the best undeveloped mineral sands project in the world. Unsurprisingly, adding another critical mineral stream through concentrating what would otherwise have been 'waste' from the mineral sands processing has materially improved the forecast financial performance of the project, with a 100% increase in NPV and

free cash flow of almost US\$10.6 billion over the initial modelled life of the project. Utilising the waste stream as an essentially free source of monazite feed will make the Toliara Project one of the largest and most cost-competitive sources of rare earth oxides globally.”

“We have always believed in the Toliara Project’s potential to be a catalyst for growth in Madagascar, creating transformational opportunities for our communities, economic stimulus for the Toliara region and being a flagship investment for the Government. The addition of the monazite product stream enhances these opportunities for all stakeholders, with the project now forecast to generate over US\$4.7 billion in direct government revenue and community development expenditure over the initial 38-year mine life.”

“With the recent conclusion of Presidential elections in Madagascar and reform of the mining regulatory regime well progressed, we believe that 2024 will see conditions supportive of the Toliara Project’s progression. We look forward to resuming discussions with the newly formed Government early in the new year. We remain confident that acceptable fiscal terms can be secured that will support development of the Toliara Project, delivering clear and compelling benefits to our host communities, the nation of Madagascar and our shareholders.”

### Investment evaluation

Below are the key financial and production outcomes from the Monazite PFS, together with the outcomes from Mineral Sands DFS2.

	Unit	Monazite PFS	Mineral Sands DFS2	Combined
NPV <sub>10</sub> (discount rate of 10%), post tax, real	US\$ millions	999	1,008	2,006
<i>NPV<sub>8</sub> post tax, real*</i>	<i>US\$ millions</i>	<i>1,281</i>	<i>1,385</i>	<i>2,666</i>
<i>NPV<sub>10</sub> spot monazite price post tax, real*</i>	<i>US\$ millions</i>	<i>679</i>	<i>1,008</i>	<i>1,687</i>
IRR	%	<b>78.6%</b>	<b>23.8%</b>	32.4%
Initial (Stage 1) Capex	US\$ millions	<b>71</b>	<b>520</b>	591
Construction time (Stage 1)	Months	<b>29</b>	<b>27</b>	27
Stage 2 Capex	US\$ millions	<b>N/A</b>	<b>137</b>	137
Capital Payback Period (Stage 1 + 2)	Years	<b>1.0</b>	<b>4.5</b>	3.6
Production – Monazite	kt pa	<b>21.8</b>	<b>N/A</b>	<b>21.8</b>
Production – ILM/RUT/ZIR	kt pa	<b>N/A</b>	<b>1,033</b>	1,033
Life of mine (LOM)	years	<b>38</b>	<b>38</b>	38
LOM Operating Costs + Royalty	US\$/t ore mined	<b>0.98</b>	<b>3.78</b>	4.92
LOM Operating Costs + Royalty (A)	US\$/t produced	<b>1,089</b>	<b>88</b>	112
LOM Revenue (B)	US\$/t produced	<b>8,648</b>	<b>306</b>	477
LOM Cash Margin (B-A)	US\$/t produced	<b>7,559</b>	<b>218</b>	365
LOM Revenue: Cost of Sales Ratio (B/A)	Ratio : 1	<b>7.9</b>	<b>3.5</b>	4.3
LOM Free Cash Flow	US\$ millions	<b>4,733</b>	<b>5,922</b>	10,655

\* Alternative NPV calculations are provided for illustrative and comparative purposes. Spot monazite price assumed to be US\$5,900/t. Base Resources considers a 10% discount rate to be the most appropriate for evaluation purposes.

## Investor briefings

Base Resources will host two investor briefings to discuss the outcomes from the Monazite PFS on 19 December 2023 at 8.30am and 5.00pm (AWST). The briefings will be hosted by Tim Carstens (Managing Director), Kevin Balloch (Chief Financial Officer), Stephen Hay (General Manager – Marketing) and Andre Greyling (General Manager – Growth).

The briefings will be by webcast and teleconference. Details for accessing each are below. Participants will only be able to ask questions via the teleconference line. Participants that propose using the teleconference line will need to pre-register their details using the teleconference registration URL provided below. Upon registering, participants will receive an email with their unique PIN and dial-in details so that they can join the call on the day without needing to speak to an operator.

### Australia webcast and teleconference

Date: Tuesday, 19 December 2023

Time: 8.30am AWST / 11.30am AEST

**Webcast URL:** <https://webcast.openbriefing.com/bse-mu-2023-au/>

**Teleconference pre-registration URL:** <https://registrations.events/direct/OCP60911>

### UK webcast and teleconference

Date: Tuesday, 19 December 2023

Time: 5.00pm AWST / 9.00am BST

**Webcast URL:** <https://webcast.openbriefing.com/bse-mu-2023-uk/>

**Teleconference pre-registration URL:** <https://registrations.events/direct/OCP61023>

## Further information about the Monazite PFS and the PFS Materials

Included with and forming part of this announcement are supporting slides titled “Toliara Monazite Project Pre-Feasibility Study” containing detailed information about the Monazite PFS and its outcomes (**PFS Materials**). This announcement should be read together with these slides. The information contained in the slides includes information in relation to the modifying factors in JORC Code Table 1, and the material assumptions (including in respect of the modifying factors) and underlying methodologies and inputs used for the Monazite PFS and from which the financial and production outcomes and other forward-looking statements set out in the PFS Materials were derived.

Base Resources has concluded that it has a reasonable basis for providing the forward-looking statements set out in the PFS Materials. This includes a reasonable basis to expect that Base Resources will, when required, be able to fund development of the Toliara Project, including the additional capital expenditure required to produce a monazite product, and obtain a legal right to exploit monazite<sup>1</sup>. The Disclaimer & Important Notices on pages 2 and 3 of the supporting slides apply to all the PFS Materials, including this announcement.

The PFS Materials also contain the outcomes from Mineral Sands DFS2 and select information from that study. This information has been provided to contextualise the outcomes of the Monazite PFS and because the Monazite PFS was based on concentration of the monazite waste stream from the Mineral Sands DFS2. For this reason, and to the extent material to the production and financial outcomes from the Monazite PFS, the assumptions and underlying methodologies and inputs used for the Mineral Sands DFS2 have also been included in the PFS Materials.

For further information in relation to the Mineral Sands DFS2, refer to Base Resources’ announcement on 27 September 2021 “DFS2 enhances scale and economics of the Toliara Project” available at <https://baseresources.com.au/investors/announcements/>. Base Resources confirms that all the material assumptions underpinning the production information and forecast financial information disclosed in that announcement continue to apply and have not materially changed.

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<sup>1</sup> The Toliara Project’s existing mining tenure, *Permis d’Exploitation* 37242, does not currently provide the right to exploit monazite.

## For further information contact:

### Australian media queries

Citadel Magnus  
Cameron Gilenko and Michael Weir  
Tel: +61 (8) 6160 4900

### UK Media Relations

Tavistock Communications  
Jos Simson and Gareth Tredway  
Tel: +44 (0) 207 920 3150

This release has been authorised by the Board of Base Resources.

### About Base Resources

Base Resources is an Australian based, African focused, mineral sands producer and developer with a track record of project delivery and operational performance. The Company operates the established Kwale Operations in Kenya and is developing the Toliara Project in Madagascar. Base Resources is an ASX and AIM listed company. Further details about Base Resources are available at [www.baseresources.com.au](http://www.baseresources.com.au).