ASX ANNOUNCEMENT

1 July 2026

BAYAN AND THE UNIVERSITY OF QUEENSLAND SIGN RESEARCH AGREEMENT TO ADVANCE STRATEGIC YTTRIUM PROCESSING TECHNOLOGY

Highlights

- **Research partnership established with The University of Queensland:** Bayan has entered into a research agreement with The University of Queensland ("UQ") to advance Bayan's exclusively licensed Yttrium Upgrade Processing Technology Patent US10696562B2 (the "Yttrium Upgrade Patent"), originally developed at the Colorado School of Mines *(see ASX Announcement dated 10 December 2025).*
- **Independent validation on Australian rare earth feedstocks:** Under the research program, Bayan and UQ plans to evaluate the patented process using Australian rare earth feedstocks, including intermediate precipitates derived from UQ's work on rare earth recovery from Mary Kathleen uranium tailings in Queensland.
- **Potential pathway towards pilot-scale development:** The program is designed to generate the technical data required to assess future pilot-scale test work and further development opportunities for the Yttrium Upgrade Patent.
- **Research led by recognised hydrometallurgy experts:** The program will be led by Professor James Vaughan and UQ's Hydrometallurgy Research Group, which has extensive expertise in ion exchange, hydrometallurgy and critical minerals processing.
- **Exposure to a strategically important critical mineral:** Yttrium is recognised as a critical material used in advanced defence, aerospace, electronics and high-performance ceramic applications. Yttrium is recognised as a defence-critical material due to its role in yttrium aluminium garnet (YAG) lasers for targeting and guidance, yttria-stabilised zirconia (YSZ) thermal barrier coatings for jet engines and gas turbines, and specialised phosphors and ceramics used in military display and high-temperature systems.
- **Processing technology leveraged to yttrium pricing tailwinds:** Yttrium oxide prices ex-China have risen sharply following China's imposition of export licensing controls on heavy rare earths in April 2025, underlining the strategic importance of Bayan's yttrium upgrade technology.
- **Strengthens Bayan's critical minerals strategy:** The collaboration complements Bayan's rare earth exploration portfolio and supports the Company's

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broader objective of identifying technologies that may enhance future value across the rare earth supply chain.

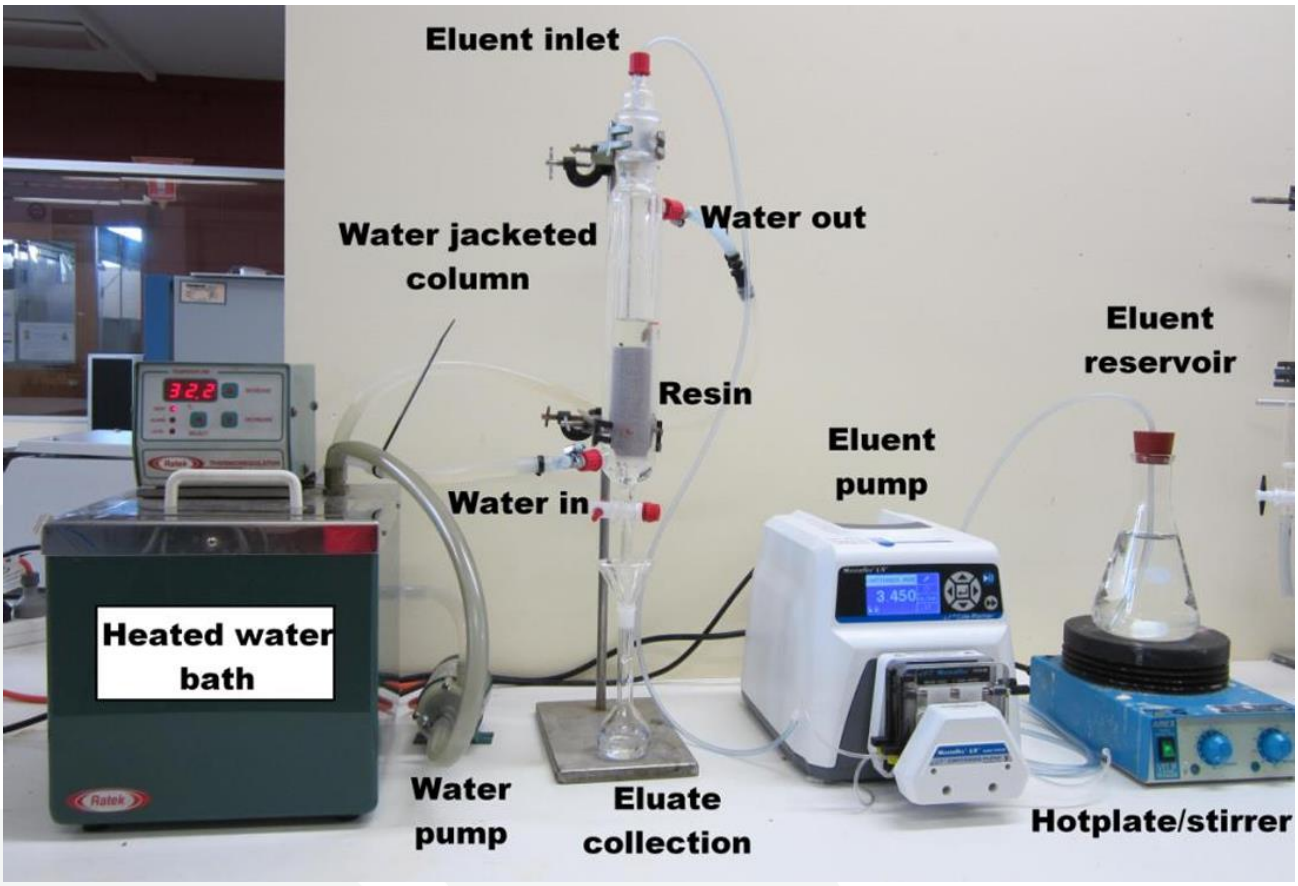

Figure 1: University of Queensland Hydrometallurgy Research Group IX Resin Column Set-Up

Bayan Mining and Minerals Ltd (ASX: BMM; "BMM", "Bayan" or "the Company") is pleased to announce that it has entered into a research agreement with The University of Queensland ("UQ") to advance development of its exclusively licensed Yttrium Upgrade Processing Technology Patent (US10696562B2) (the "Yttrium Upgrade Patent"), originally developed at the Colorado School of Mines.

The collaboration represents a significant milestone in the advancement of Bayan's rare earth processing technology portfolio and is intended to provide independent validation of the Yttrium Upgrade Patent using Australian rare earth feedstocks under process-representative conditions.

Under the agreement, the Company and UQ plan to undertake an initial three-month Phase 1 research program designed to evaluate and optimise the patented ion-exchange process using rare earth intermediate products derived from UQ's ongoing research into

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recovery of rare earth elements from the historic Mary Kathleen uranium tailings near Mount Isa, Queensland. Bayan will pay UQ $70,275 in cash consideration for the delivery of the initial three-month Phase 1 research program.

The Company believes the program has the potential to generate critical technical data required to assess future pilot-scale development opportunities and support the advancement of an Australian-aligned yttrium processing pathway.

Chief Executive Officer, Nathan Kong commented:

"We are very pleased to enter into this research agreement with The University of Queensland to advance our Yttrium Upgrade processing technology originally developed at the Colorado School of Mines. This collaboration brings together Bayan's patented ion-exchange approach with UQ's world-class hydrometallurgy capability and the unique Mary Kathleen tailings resource.

As governments and industry increasingly focus on securing resilient and diversified critical mineral supply chains, technologies capable of improving the upgrading and separation of strategic rare earth elements such as yttrium are attracting growing attention.

The Phase 1 program is an important first step in moving the Yttrium Upgrade Patent from promising bench-scale results towards a pilot-ready, pilot scale development pathway."

Bayan's Upgrade of Yttrium in a Mixed Rare Earth Stream Using Iminodiacetic Acid Functionalized Resin Patent

The Yttrium Upgrade Patent, utilises research of Mountain Pass industrial REE bearing hydrometallurgical solutions, covers methods, techniques, and processes for enhancing the purity of a mixed rare earth solution using ion-exchange. The resin is a chelating resin that interacts poorly with one or more rare earth elements. In one embodiment a rare earth can be selectively excluded for example, Lanthanum, Cerium, Praseodymium, Neodymium, Promethium, Samarium, Europium, Gadolinium, Terbium, Dysprosium, Holmium, Erbium, Thulium, Ytterbium, Lutetium, Scandium, and/or Yttrium. In another embodiment, yttrium can be selectively excluded from the column.

The "selective exclusion" approach represents a paradigm shift from traditional "selective retention" methods. By optimising what NOT to capture, the process potentially:

- Reduces reagent consumption
- Minimises column fouling
- Enables simpler elution protocols
- Increases yttrium purity in fewer steps

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This patent essentially uses a counter-intuitive approach of achieving separation by preventing uptake rather than maximising it, which could offer economic advantages in commercial-scale operations.

In a downstream environment where U.S. and allied OEMs are seeking specific REE blends for magnets, lasers, ceramics and defence applications, flexible ion-exchange routes such as this create opportunities for tailored products.

Phase 1 Research Program

The Yttrium Upgrade Patent uses an iminodiacetic acid ("IDA") functionalised resin to selectively retain yttrium from a mixed REE chloride solution, producing an upgraded yttrium concentrate ahead of downstream solvent extraction processing. The UQ program is designed to replicate and extend the laboratory work underpinning the patent, using process-representative feed material rather than synthetic solutions and to assess whether resin selection can improve on the selectivity reported in the original patent work.

The initial phase of the program is planned to run over three months and comprises:

- Preparation of representative pregnant leach solution, produced from rare earth hydroxide precipitate derived from suitable rare earth feedstock such as the Mary Kathleen tailings, adjusted to reflect yttrium and gadolinium concentrations typical of rare earth process streams from monazite and bastnäsite-sourced feeds;
- Column loading trials comparing two IDA resin types — Amberlite IRC748I, the resin used in the Colorado School of Mines patent work, and an alternative resin from Lanxess — under conditions informed by the patented process, to evaluate resin loading behaviour and rare earth/yttrium selectivity;
- Resin elution trials using sequential dilute and concentrated hydrochloric acid washes to assess yttrium recovery and resin regeneration performance; and
- Analysis and reporting of results, together with planning for the subsequent phase of testwork.

The resin comparison element of the program follows observations from UQ's own resin testing experience that the rare earth-versus-yttrium selectivity gap can vary materially between IDA resin products, indicating a potential avenue for improving on the performance reported in the underlying patent.

The Company will provide a further update on the outcomes of this test program and the scope of subsequent work on completion of the initial phase.

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The Phase 1 Program will be undertaken within UQ's School of Chemical Engineering, which hosts long-standing metallurgy and minerals processing capabilities encompassing ore preparation, separation, extraction and purification across minerals processing, hydrometallurgy and pyrometallurgy.

UQ has a more than 70-year history in metallurgy, with its programs having driven advances in minerals processing and hydrometallurgical technologies and being recognised for world-class research and strong industry partnerships in the resources sector.

The Yttrium Upgrade Patent Development work will be led by Professor James Vaughan, Metallurgy Major Lead in UQ's School of Chemical Engineering and Leader of the Hydrometallurgy Research Group.

Professor Vaughan's group specialises in the hydrometallurgy of base metals and critical minerals, with expertise in leaching, ion exchange, precipitation, and related separation processes, and has been involved in a number of industrial research collaborations focused on new process routes for complex ores and tailings. This background is directly relevant to evaluating and optimising ion-exchange based separation schemes such as those described in the Yttrium Upgrade Patent.

Rare Earth Feedstock for the Phase 1 Research Program

Rare earth feedstock for the Phase 1 Program is planned to be sourced from mine tailings at UQ's Mary Kathleen project in Queensland.

Mary Kathleen uranium tailings are recognised as containing very high total rare earth element concentrations and is currently the focus of remediation and resource development assessment work by the Queensland Government and research partners.

Figure 2: Mary Kathleen Uranium Mine, QLD, Australia

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Yttrium Market and Broader Western Defence Context

Yttrium is a niche but strategically important heavy rare earth element used in defence-related applications including radar and sonar systems, guidance and control electronics, lasers, high-temperature alloys and thermal barrier coatings.

The U.S. Geological Survey reports that yttrium is utilised in metallic alloy components, garnet crystals, optical and camera lenses, protective ceramic layers in jet engines, heat-resistant superalloys for jet engines, and YAG/YIG laser applications, underscoring its relevance to advanced defence and aerospace systems. Nearly all U.S. imports of yttrium metal and compounds are sourced from mineral concentrates processed offshore, with China estimated to account for approximately 70% of these import sources (refer to Table 1).

Yttrium oxide has emerged as one of the most significantly repriced rare earth elements following China's imposition of export licensing controls on heavy rare earths in April 2025, with ex-China prices rising to approximately 140 to 150 times domestic Chinese levels as of mid-2026, reaching nearly US$1,100 per kilogram by May 2026, up from single digits prior to the control[1].

This concentration of yttrium supply is strategically significant for western defence supply chains and underpins the need to develop western-aligned yttrium production and processing. Reliance on a single dominant supplier exposes aerospace engines, military electronics, advanced ceramics and other high-reliability systems to potential export controls, pricing shocks and supply disruption, whereas establishing alternative sources supports secure, predictable supply for long-life defence and advanced manufacturing programs.

[1]Source: https://theoregongroup.com/commodities/rare-earths/rare-earth-prices-surge-as-china-keeps-export-restrictions/

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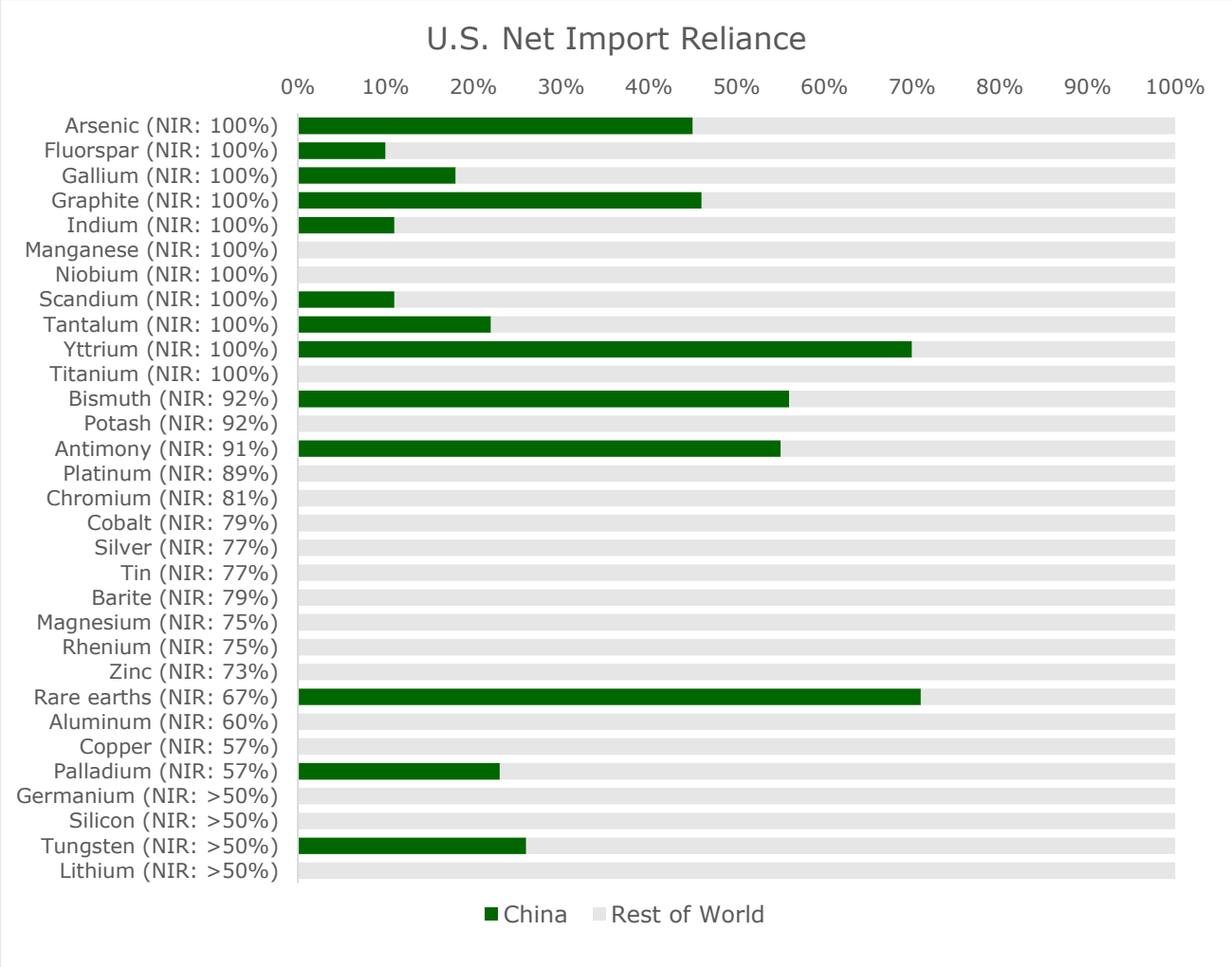

Table 1: U.S. Net Import Reliance ("NIR") Source: USGS Mineral Commodity Summaries 2026

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Next steps

Planned next steps under the research agreement include:

- UQ, with Bayan's assistance, obtaining representative rare earth feedstock (including, where available, material from the Mary Kathleen site) for use in laboratory test work.
- Execution of bench-scale ion-exchange test work at UQ to validate the patented process adopts a selective exclusion approach, which differs from conventional ion-exchange methodologies by targeting differential resin affinity between yttrium and other rare earth elements. The Company intends to assess the practical implications of this approach through the UQ test work program.
- Integration of test results into a conceptual flowsheet and preliminary design criteria for a pilot-scale circuit, including identification of key operating parameters, scale-up risks and data gaps to be addressed in subsequent work programs.

For further information, please contact:

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Authorised for release by the Board of Bayan Mining and Minerals Limited

-ENDS-

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Forward-looking Statements

Certain statements included in this release constitute forward-looking information. Statements regarding BMM's plans with respect to its mineral properties and programs are forward-looking statements. There can be no assurance that BMM's plans for development of its mineral properties will proceed as currently expected. There can also be no assurance that BMM will be able to confirm the presence of additional mineral resources, that any mineralisation will prove to be economic or that a mine will successfully be developed on any of BMM's mineral properties. The performance of BMM may be influenced by a number of factors which are outside the control of the Company and its Directors, staff, and contractors.

These statements include, but are not limited to statements regarding future production, resources or reserves and exploration results. All such statements are subject to certain risks and uncertainties, many of which are difficult to predict and generally beyond the control of the Company, that could cause actual results to differ materially from those expressed in, or implied or projected by, the forward-looking information and statements.

There is no certainty that the research program will achieve its technical objectives, result in pilot-scale development, or ultimately support a commercially viable processing operation.

The Company confirms that is it not currently aware of any environmental restrictions or requirements that would impede the continuation of planned activities.

Except for statutory liability which cannot be excluded, each of BMM, its officers, employees and advisors expressly disclaim any responsibility for the accuracy or completeness of the material contained in these forward-looking statements and excludes all liability whatsoever (including in negligence) for any loss or damage which may be suffered by any person as a consequence of any information in forward-looking statements or any error or omission. BMM undertakes no obligation to update publicly or release any revisions to these forward-looking statements to reflect events or circumstances after today's date or to reflect the occurrence of unanticipated events other than required by the Corporations Act and ASX Listing Rules. Accordingly, you should not place undue reliance on any forward-looking statement.

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