PURE RESOURCES LIMITED | ASX:PR1

Pure Resources establishes Defence Materials Platform Strategy for Garnet Hills Project

A unified strategy aligned with United States and AUKUS defence supply chains, anchored by a hard rock garnet project on a mining lease, the Oak Ridge National Laboratory rare earth partnership and the Rice University thermal management IP collaboration.

HIGHLIGHTS

- PR1 has formalised a Defence Materials Platform Strategy aligned with United States and AUKUS defence supply chains.
- Downstream strategy integrates Garnet Hill abrasive garnet as a near term defence consumables entry point, graphite assets as a pathway into strategic defence materials and energy systems, and industrial garnet as a heavy rare earth feedstock.
- Strategic Partnership Projects (SPP) Agreement (No. NFE 25 10985) executed with UT Battelle, LLC, the facility management contractor operating Oak Ridge National Laboratory (ORNL) under United States Department of Energy (DoE) Prime Contract DE AC05 00OR22725, to develop an economical method for recovery of Heavy Rare Earth Elements plus Yttrium (HREE+Y) from Garnet Hill industrial garnet
- ORNL partnership complements the Rice University IP Research and Development Collaboration on carbon nanotube fibre (CNTF) thermal management systems for advanced electronics and defence applications.
- Structured United States Department of Defense engagement now commencing in parallel with the NAVSEA abrasive qualification pathway, including Defense Production Act Title III, Office of Strategic Capital and Industrial Base Analysis and Sustainment programs
- Engagement progressing with defence qualification frameworks including DARPA, NAVSEA and AUKUS Pillar 2 programs, supported by the US Australia Critical Minerals Framework across all pillars of the defence strategy.
- Pure Resources along with its thermal management initiatives is now positioned as a sovereign aligned multi material supplier rather than a standalone project developer with a strong global downstream strategy.
- Board of Advisor discussions with strong relevant experience in this sector are advanced and are progressing.

ANNOUNCEMENT

A unified platform strategy anchored by the ORNL and Rice University partnerships

Pure Resources Limited (ASX: PR1) ("Pure" or the "Company") is pleased to announce the establishment of a Defence Materials Platform Strategy for its 100% owned Garnet Hills Project, integrating abrasive garnet, large to jumbo flake graphite and heavy rare earth element streams into a unified approach targeting supply into United States and allied defence markets.

The Strategy is anchored by the Company's recently executed Strategic Partnership Projects Agreement with UT Battelle, LLC, the facility management contractor operating Oak Ridge National Laboratory (ORNL) under United States Department of Energy Prime Contract, and by the Thermal Management IP Collaboration with Rice University. Together, these partnerships position Garnet Hills inside the US Department of Energy critical materials ecosystem and establish a clear downstream pathway into defence, AI and advanced manufacturing supply chains aligned with AUKUS and the broader United States critical minerals agenda.

COMMENTARY

> *"We no longer think of Garnet Hills as a single commodity garnet asset on a granted mining lease. We are building it into a multi critical minerals platform that captures value across premium andradite garnet, large to jumbo flake graphite and heavy rare earth element streams from the same orebody, with a clear line of sight to the United States market.*
>
> *"Executing a Strategic Partnership Projects Agreement with Oak Ridge National Laboratory places Pure Resources inside the US Department of Energy critical materials ecosystem and establishes a second, government aligned value pathway for Garnet Hill. We are stacking heavy rare earth recovery on top of our MIL SPEC abrasive program and our Rice University thermal management collaboration, building a complete US downstream strategy from a single Australian hard rock source.*
>
> *"Each of these end markets, being defence grade abrasives, thermal management for AI hardware and weapons cooling systems, and heavy rare earths, sits squarely on the United States critical minerals priority list. By aligning the project with US demand side policy and customer pull, we are diversifying revenue away from the conventional dig and ship model, materially de risking the development pathway and future proofing Garnet Hills against single commodity price cycles. The objective is unambiguous: maximise long term value for our shareholders by owning more of the downstream value chain, not less."*
>
> **— Rocco Tassone, CEO** Pure Resources Limited

Platform Strategy

The Defence Materials Platform Strategy is structured around three progressive revenue streams sourced from a single orebody at Garnet Hills: specification driven abrasive garnet for defence consumables, large to jumbo flake graphite for advanced thermal management and strategic materials, and heavy rare earth elements plus yttrium (HREE+Y) now being progressed under an executed Strategic Partnership Projects Agreement with Oak Ridge National Laboratory. Each stream is being advanced with a direct line of sight to United States and AUKUS aligned demand, qualification pathways and customer pull.

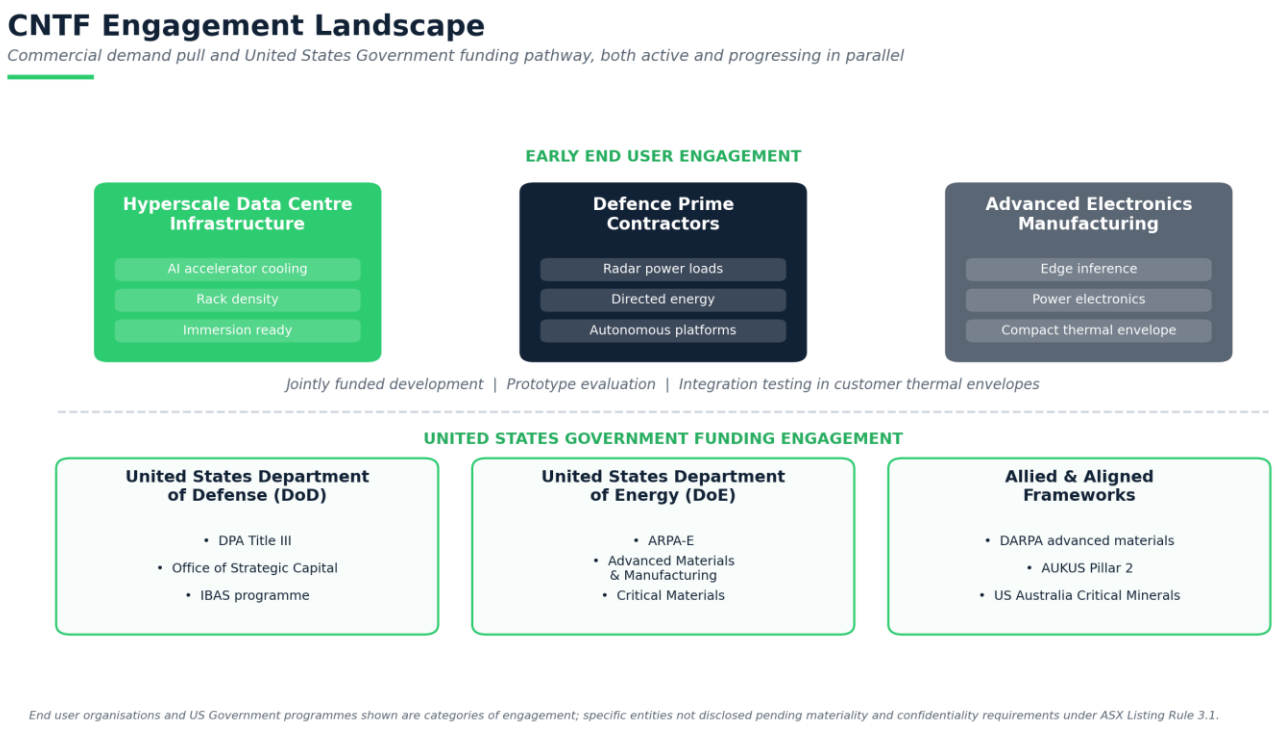

Figure 1: CNTF Engagement Landscape

- **Stream 1: Defence consumables entry (garnet).** Near term opportunity to supply premium andradite abrasive garnet into high specification jet cutting, precision abrasive, and naval shipbuilding and maintenance programs, including aircraft carrier and submarine hull preparation and surface treatment prior to coating application. Qualification pathways are being progressed against US Navy specifications administered by NAVSEA, providing direct exposure to defence shipbuilding contractors including Huntington Ingalls Industries and General Dynamics Electric Boat.
- **Stream 2: Strategic materials expansion (graphite).** Garnet Hills large to jumbo flake graphite (confirmed in the 200 to 300 µm category) is the feedstock class sought for advanced thermal management applications, including AI hardware and weapons cooling systems. The graphite stream is the feedstock focus of the

Company's Thermal Management IP Collaboration with Rice University, which is assessing large to jumbo flake graphite as a precursor for next generation carbon nanotube fibre (CNTF) technology.

- **Stream 3: Heavy rare earth recovery (ORNL SPP Agreement).** Executed Strategic Partnership Projects Agreement (No. NFE 25 10985) with UT Battelle, LLC, operating Oak Ridge National Laboratory under US Department of Energy Prime Contract DE AC05 00OR22725, to develop an economical method for recovery of Heavy Rare Earth Elements plus Yttrium (HREE+Y) from Garnet Hill industrial garnet. If validated, HREE+Y represents a third revenue stream from the same mined tonne, aligned to the United States critical minerals priority list and allied supply chain security objectives.

Qualification framework and US Department of Defense engagement

With the ORNL partnership now executed, the Company is commencing a structured US Department of Defense engagement program, running in parallel with the NAVSEA abrasive qualification pathway. The program will pursue grant, co investment, offtake and qualification pathways across the Department of Defense (including Defense Production Act Title III, the Office of Strategic Capital, and the Industrial Base Analysis and Sustainment program), the Department of Energy, and via the US Australia Critical Minerals Framework and AUKUS Pillar 2, the Australian Department of Defence and the Department of Industry, Science and Resources. Broader engagement with DARPA aligned advanced materials programs is also being progressed.

AUKUS and defence supply chain alignment

The Defence Materials Platform Strategy is aligned with structural changes in allied defence supply chains, including expansion of submarine and naval fleets, integration of defence industrial bases, and increasing prioritisation of sovereign and allied materials supply. The Board considers that AUKUS, combined with United States demand side policy on critical minerals, provides a multi decade, policy supported window for qualified allied suppliers.

Execution pathway

- **Phase 1:** Garnet qualification and testing programs, mobilisation of representative Garnet Hill feedstock to ORNL for Task 1 characterisation and Task 2 digestion, and initial graphite market engagement under the Rice University collaboration.
- **Phase 2:** Completion of ORNL Tasks 3 and 4 (separation and purification protocols, and final reporting), development of downstream processing capability, progression of the Rice University thermal management collaboration and expansion of supply and offtake relationships.
- **Phase 3:** Establishment of integrated multi material supply (garnet, graphite and, if validated, HREE+Y) into United States and AUKUS aligned defence, energy and advanced manufacturing markets.

DETAIL – SECTION B

ORNL partnership, Rice University collaboration and strategic positioning

Pure Resources is progressing the development of internal and partnered capability across advanced materials processing, supporting the Company's strategy to participate in higher value downstream segments of the defence, AI and advanced manufacturing supply chain.

ORNL Strategic Partnership Projects Agreement

Oak Ridge National Laboratory is the US Department of Energy's largest multi program science and energy laboratory, operated on behalf of the DOE by UT Battelle, LLC, and is a central node in the DOE critical materials agenda, co hosting the Critical Materials Innovation Hub. The Strategic Partnership Projects framework is the formal mechanism under which US DOE laboratories partner with non DOE sponsors where the work complements the DOE mission and leverages specialist laboratory capability not available in the domestic private sector. The ORNL Statement of Work expressly confirms that this project does not compete with the US private sector, as no domestic companies are currently pursuing garnet as a REE+Y resource.

The program, titled "Development of an Economical Method for the Recovery of REE Values from Industrial Garnet", will be delivered under four research tasks over a term concluding 31 March 2027:

- **Task 1:** Identification of garnet deposit(s) with elevated REE+Y suitable for extraction experiments, delivering high precision REE+Y concentration data.
- **Task 2:** Digestion experiments to assess the economics of REE+Y liberation into aqueous solution, delivering cost estimates and effectiveness evaluation.
- **Task 3:** Application of selected existing REE+Y separation and purification protocols to digested garnet solutions.
- **Task 4:** Final project report and industrial design pathway suitable for patent and commercialisation.

The program is led by Dr N. Alex Zirakparvar of ORNL's Chemical Science Division, a published specialist in garnet geochemistry whose prior research independently identified the HREE+Y endowment of certain garnet populations.

The DOE 2023 Critical Materials Assessment and the USGS 2022 Critical Minerals List both classify the Heavy Rare Earth Elements (Dysprosium, Terbium, Erbium, Thulium, Ytterbium and Lutetium) together with Yttrium as high supply risk critical materials across both near and long-term horizons. HREE+Y are essential inputs to the neodymium iron boron (NdFeB) permanent magnets that underpin electric vehicle traction motors, offshore wind turbines, precision guided munitions, radar, sonar and submarine main propulsion drives. Dysprosium and Terbium in particular confer the high temperature coercivity required in defence and aerospace magnet applications. Global HREE+Y production is heavily concentrated in a single foreign jurisdiction, with the United States currently importing substantially all of its HREE+Y requirement.

For Pure Resources the material point is geological and commercial. Andradite ($Ca_3Fe_2(SiO_4)_3$) is structurally receptive to the substitution of HREE into its dodecahedral site and, in skarn hosted settings such as Garnet Hills, may carry anomalous HREE+Y grades reflecting the calc silicate host geochemistry and the fluid pathways associated with skarn mineralisation. Economically viable HREE+Y recovery, if achieved under the ORNL program, would transform Garnet Hills from a single commodity industrial minerals asset into a dual pathway industrial and critical minerals asset, without reallocating resource between end markets. The HREE+Y targeted under the program are mission critical inputs to US DoD platforms and munitions including the F 35 Lightning II, Virginia class and Columbia class nuclear powered submarines, precision guided munitions, AESA phased array radar, electronic warfare suites and directed energy weapons.

Rice University Thermal Management IP Collaboration

The ORNL partnership complements the Company's funded research and development collaboration with Rice University, which is assessing Garnet Hills large to jumbo flake graphite as a feedstock for next generation carbon nanotube fibre (CNTF) thermal management systems. CNTF represents a step change in materials capability, unlocking lighter, stronger and more conductive systems with applications across defence, AI data centre infrastructure, energy and advanced manufacturing. Together, the ORNL and Rice University partnerships establish two independent, policy aligned downstream pathways from a single Australian hard rock source.

Capability development and technical expertise

In parallel with its asset development activities, the Company is building capability across materials characterisation, product specification, processing pathway development and downstream product optimisation aligned to end user requirements. This capability is being developed through a combination of internal technical expertise, engagement with specialist advisors and research groups, and ongoing evaluation of emerging metallurgical and materials processing technologies, including advanced solvent based systems and materials engineering.

Strategic positioning

The Board considers that combining resource ownership with two flagship United States research partnerships, qualification driven market entry and advanced materials capability positions Pure Resources to transition from a project developer to a defence aligned materials platform with downstream relevance. By aligning Garnet Hills with US demand side policy and customer pull, the Company is diversifying revenue away from a conventional single commodity model, materially de-risking the development pathway, and future proofing the project against single commodity price cycles.

Next steps

The Company will mobilise representative Garnet Hills feedstock to ORNL for Task 1 characterisation and Task 2 digestion, initiate formal US Department of Defense engagement leveraging the ORNL relationship as the technical anchor, progress parallel engagement with the US Australia Critical Minerals Framework working group and Austrade, advance garnet qualification activities, continue the Rice University thermal management collaboration, and provide further updates as material milestones are achieved.

AUTHORISATION

Approval & Release

This announcement is approved for release by the Board of Pure Resources Limited.

Rocco Tassone
Chief Executive Officer
Pure Resources Limited

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DISCLAIMER

Forward-Looking Statements

*This announcement contains forward-looking statements concerning Pure Resources Limited (ASX: PR1) (**"Pure"** or the **"Company"**) and its current expectations, intentions and projections regarding the Company's future operating and financial performance, business plans, projects, strategies, prospects and the markets in which it operates. Forward-looking statements can generally be identified by the use of words such as "anticipate", "believe", "expect", "intend", "may", "plan", "project", "potential", "estimate", "target", "forecast", "guidance", "should", "will" and similar expressions.*

ABOUT

Pure Resources Limited (ASX: PR1) is an ASX-listed advanced materials and critical minerals company pursuing an integrated mine-to-market strategy — from 100% ownership of an upstream graphite and garnet asset in Western Australia, through a US DoE Strategic Partnership for heavy rare earths, to a funded downstream R&D collaboration with Rice University (Houston) in high-performance carbon nanotube fibre.

THE MATERIAL OF THE INTELLIGENCE AGE

"CNTFs are not just an incremental improvement — they represent a step change in materials capability. Through advanced materials science, they unlock lighter, stronger and more conductive systems that redefine performance across defence, energy and advanced manufacturing. This is not evolution; it is a fundamental revolution in what materials can do."

01 UPSTREAM

Garnet Hills Project
Graphite & Garnet

The Company's 100% owned **Garnet Hills Project** provides upstream exposure to graphite and garnet under a granted mining lease in Western Australia.

02 STRATEGIC PARTNERSHIP

Oak Ridge National Laboratory
HREEs & Yttrium

The deposit has attracted a **Strategic Partnership Projects Agreement with the US Department of Energy (DoE) Oak Ridge National Laboratory**, targeting the recovery of **Heavy Rare Earth Elements and Yttrium** for United States critical materials supply chains.

03 IP COLLABORATION

Rice University
Carbon Nanotube Fibre (CNTF)

Pure is executing a downstream strategy anchored by a funded R&D collaboration with **Rice University**, focused on **Carbon Nanotube Fibre thermal management technology** for AI data centre infrastructure and defence applications.

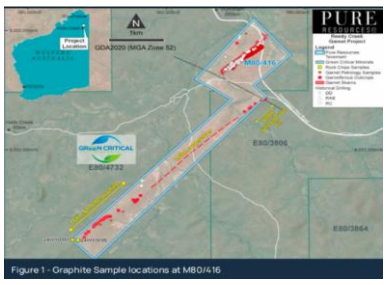

Fig. 1 Graphite sample locations at M80/416, Reedy Creek Garnet Project (GDA2020, MGA Zone 52).

• WESTERN AUSTRALIA · GRANTED MINING LEASE

Fig. 2 US DoE Oak Ridge National Laboratory — HREE & Yttrium recovery programme.

• US DEPARTMENT OF ENERGY · ORNL PARTNERSHIP

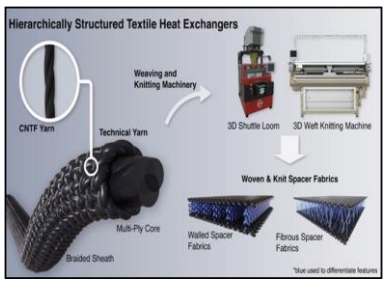

Fig. 3 Hierarchically structured textile heat exchangers — CNTF yarn to woven & knit spacer fabrics.

• RICE UNIVERSITY · FUNDED R&D COLLABORATION