Locksley Resources

INVESTOR UPDATE

TRANSFORMATIVE PARTNERSHIP TO FAST TRACK ANTIMONY PROCESSING & UTILISATION IN THE USA

ASX RELEASE
25 August 2025

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Highlights

- **Locksley has formally initiated its U.S. focused downstream innovation strategy to maximise the potential of its high-grade antimony at the Mojave Project**
- **Strategic collaboration with world renowned, Rice University, a global leader in materials science, nanotechnology and energy innovation**
- **Rice University's proven capability in critical minerals programs, was most recently demonstrated through its collaboration with MTM Critical Minerals Ltd (ASX:MTM) on the Flash Joule Heating technology**
- **Dual initiative agreement focusing on antimony processing and utilisation to accelerate "mine-to-market" deployment of this transformative, American made technology, ensuring a U.S. sovereign and independent supply chain**
- **Antimony included as a critical material in President Trump's Executive Orders, focused on increasing domestic mineral production and reshaping supply chains, aligning our strategy to potential Government funding pathways**
- **Antimony is critical to the U.S. Defense sector, essential for producing ammunition, explosives & propellant, armoured vehicles, missile & electronic components and flame-retardant materials**
- **Locksley is positioning to establish the first domestic antimony processing capacity in the United States, addressing a critical gap where currently 90-95% of refined supply comes from countries outside the U.S. alliance network**
- **The integration of upstream development with downstream innovation provides a rare opportunity to build a domestic mine-to-materials supply**

chain aligned with U.S. strategic needs, while positioning the Company to access a wide range of Government funding opportunities

- **Majority of antimony processing occurs in China, resulting in 79% of U.S. antimony imports being sourced from China, similar to other critical minerals like REEs and cobalt**
- **China continues to further restrict exports to U.S. by tightening controls on transshipment of material via third-party countries**

Chairman Nathan Lude commented:

"This strategic collaboration with Rice University, which has been formalised in a legally binding Sponsored Research and Development Agreement ("Agreement") marks a pivotal step in executing Locksley's U.S. strategy (mine to market). As a first mover advantage strategy, we are not just rapidly advancing our upstream strategy, we are helping rebuild downstream capacity through materials innovation which America urgently requires. Fast-tracking these two research Thrusts allows us to unlock value from our Mojave asset and play a direct role in sovereign independence of the US defense, energy and AI infrastructure sectors."

Professor Pulickel M. Ajayan Rice University commented:

"Rice University has a long tradition of advancing materials science from the laboratory into real-world applications, and this partnership with Locksley represents an important step in that journey. Developing scalable, domestic pathways for antimony processing is not only a scientific and engineering challenge but also a national strategic priority. By combining Rice's expertise in advanced materials with Locksley's resources, we can address a critical supply chain gap, accelerate commercialization and build global collaborations that strengthen both U.S. energy resilience and the future of sustainable technologies."

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Locksley Resources Ltd (ASX: **LKY** / OTCQB: **LKYRF**) (**"Locksley"** or the **"Company"**) is pleased to announce it has formally initiated its U.S. Critical Minerals and Energy Resilience Strategy in partnership with Rice University. The initiative supports the Trump administration's executive orders to secure domestic supply chains for critical minerals.

The strategic collaboration with Rice University is centred around maximising the potential of the Company's Mojave Project. The program aims to develop pathways for domestic processing of U.S. sourced antimony to meet existing domestic demand in US Defense and other industries and advance its application in next generation energy storage systems, addressing a critical supply chain gap at a time when no commercial scale antimony processing exists in the United States.

Building on Rice University's proven capability in critical minerals programs, most recently demonstrated through its collaboration with MTM Critical Minerals (ASX:MTM), Locksley's project will advance antimony capabilities through a dual initiative agreement ("**Thrusts**") in a fast-tracked program pursuant to the Agreement:

- **Thrust 1: Green Hydrometallurgical Extraction of Antimony from Mining Feedstocks**
  Development and testing of low energy, environmentally benign solvent extraction processes for U.S. sourced antimony ores and concentrates from Locksley's Mojave Project and other sources. This work is aimed to support the re-establishment of U.S. based antimony processing capacity, which is currently non-existent in the U.S., despite rising strategic demand.
- **Thrust 2: Exploration of Antimony Based Materials for Energy Storage Applications**
  Applied research on advanced electrode materials and composite architectures for lithium-ion and sodium-ion batteries, supercapacitors, and hybrid power modules using antimony as a core component.

The integration of upstream development with downstream innovation provides a rare opportunity to build a domestic mine-to-materials supply chain aligned with U.S. strategic needs, while positioning the Company to access a wide range of Government funding opportunities.

The two Thrusts in the Locksley-Rice University collaboration Agreement aim to address two major systemic challenges in the U.S. critical minerals and energy sectors, specifically related to antimony.

Other key material terms of the Agreement are:

- All intellectual property developed jointly by Rice University and Locksley shall be jointly owned.
- Locksley will advance project funding of US$550,000 over the next 12 months to support the development of the intellectual property under the Agreement.

Rice University, Department of Materials Science & Nanoengineering, Rice Advanced Materials Institute and Professor Pulickel M. Ajayan

Rice University in Houston, Texas is a global leader in materials science, nanotechnology and energy innovation. The **George R. Brown School of Engineering and Computing, the Department of Materials Science and NanoEngineering (MSNE) and the Rice Advanced Materials Institute (RAMI)** have pioneered transformative research in solid-state batteries, green chemistry, and advanced energy and defense materials.

Rice translates cutting-edge research into real-world solutions through collaborations with the U.S. Department of Energy, Department of Defense and industry partners. Its commitment to sustainability and innovation positions Rice as a key contributor to the development of advanced antimony based energy technologies that align with national priorities.

The MSNE department is internationally recognized for its multidisciplinary research in energy, defense and sustainability. Its strengths include solid-state batteries, nanomaterials, supercapacitors and eco-friendly extraction technologies. With state-of-the-art laboratories and strong partnerships with national labs, government agencies and industry, MSNE drives progress in U.S. manufacturing, clean energy and critical materials.

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RAMI serves as a hub for collaborative innovation, integrating expertise across disciplines to accelerate the development of next generation materials. Rice's partnership with Locksley Resources focuses on scalable antimony processing and advanced power systems, supporting the transition to sustainable and secure energy solutions.

Professor Pulickel M. Ajayan, a distinguished professor at Rice, is a pioneer in nanotechnology and advanced materials, with more than 1,200 publications and 230,000 citations. His expertise includes energy storage, batteries, solid electrolytes, nanocomposites and green extraction. A fellow of the Royal Society of

Chemistry, the American Association for the Advancement of Science and the National Academy of Inventors, Ajayan has a strong record of translating research into industry applications, making him an invaluable partner for Locksley's antimony based materials platform.

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Next Steps

- Appointment of U.S. Advisory Board
- U.S. Government Engagement
- Commercial Licensing Pathways
- Industry Engagement and Strategic Partnerships
- Technical Milestone Delivery
- Pilot Project Development

For further information, please contact:

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This announcement has been authorised for release by the Board of Directors of Locksley Resources.

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About Locksley Resources Limited

Locksley Resources Limited is an ASX listed explorer focused on critical minerals in the United States of America. The Company is actively advancing exploration across two key assets: the Mojave Project in California, targeting rare earth elements (REEs) and antimony. Locksley Resources aims to generate shareholder value through strategic exploration, discovery and development in this highly prospective mineral region.

Mojave Project

Located in the Mojave Desert, California, the Mojave Project comprises over 250 claims across two contiguous prospect areas, namely, the North Block/Northeast Block and the El Campo Prospect. The North Block directly abuts claims held by MP Materials, while El Campo lies along strike of the Mountain Pass Mine and is enveloped by MP Materials' claims, highlighting the strong geological continuity and exploration potential of the project area.

In addition to rare earths, the Mojave Project hosts the historic "Desert Antimony Mine", which last operated in 1937. Despite the United States currently having no domestic antimony production, demand for the metal remains high due to its essential role in defense systems, semiconductors, and metal alloys. With significant surface sample results, the Desert Mine prospect represents one of the highest-grade known antimony occurrences in the U.S.

Locksley's North American position is further strengthened by rising geopolitical urgency to diversify supply chains away from China, the global leader in both REE & antimony production. With its maiden drilling program planned, the Mojave Project is uniquely positioned to align with U.S. strategic objectives around critical mineral independence and economic security.

Tottenham Project

Locksley's Australian portfolio comprises the advanced Tottenham Copper-Gold Project in New South Wales, focused on VMS-style mineralisation in a well established mining region.

Locksley is committed to delivering value through discovery, development, and strategic partnerships, with a focus on securing access to U.S. aligned funding and downstream collaborations.

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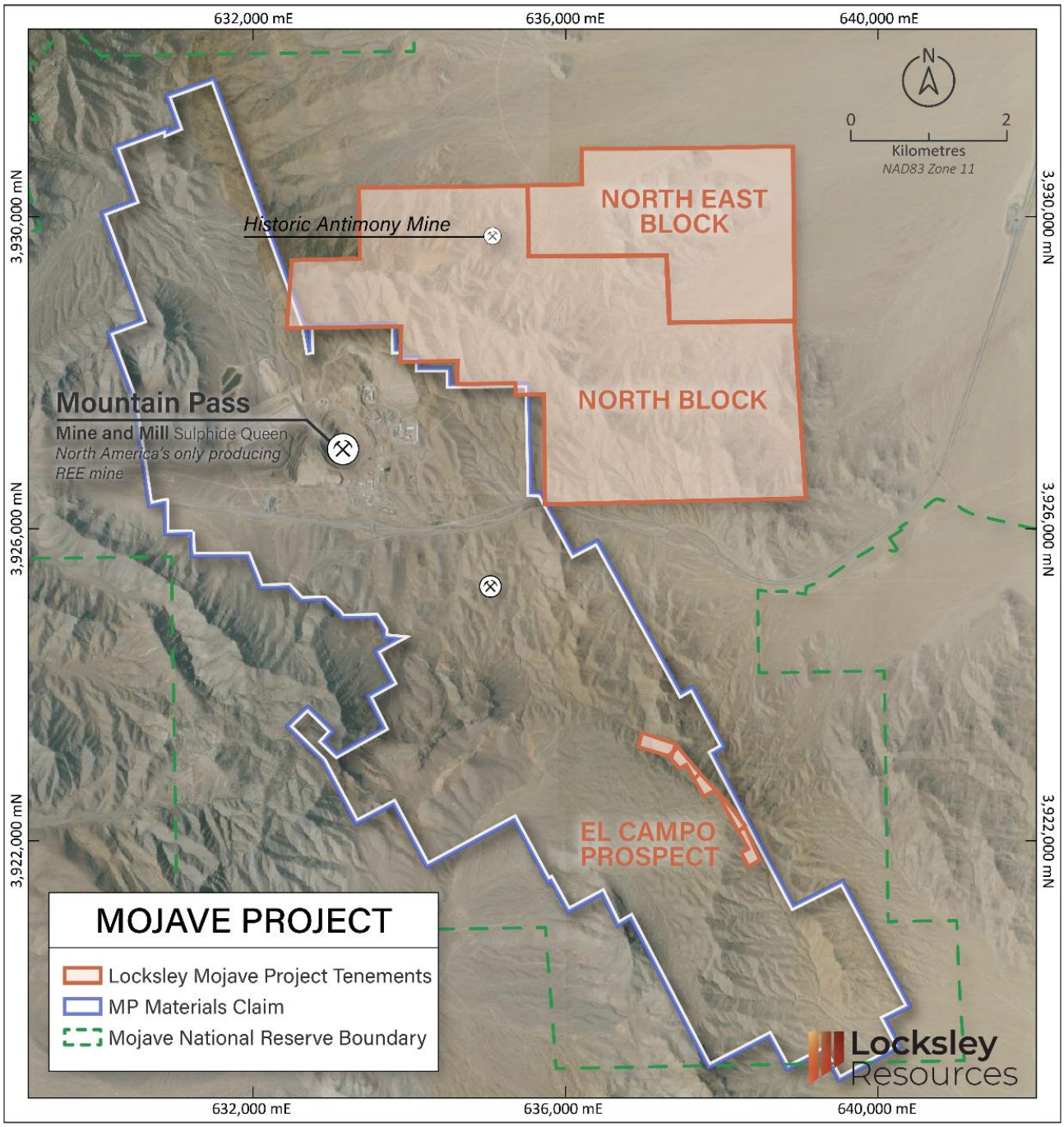

MOJAVE PROJECT *– Location of the Mojave Project Blocks in south-eastern California, USA*