

## LOCKSLEY ADVANCES RARE EARTH PROCESSING PATHWAYS FOR MOJAVE PROJECT, USA

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### HIGHLIGHTS

- Collaboration with Columbia University advancing rare earth recovery, separation and metallisation pathways for the Mojave Project in California, USA
- Evaluation of alternative processing routes aimed at simplifying downstream flowsheets and supporting future development studies
- Conceptual processing pathways developed for bastnaesite-style mineralisation, including leaching, concentration and metallisation options
- Progress in selective recovery techniques and functional materials for targeted rare earth separation
- Advancement of rapid detection technologies to support on-site analysis of rare earth mineralisation
- Molten salt electrolysis pathways progressed as a potential alternative to conventional thermal reduction
- Program designed to inform potential development pathways and support future technical and economic studies at Locksley's Mojave Project

**Locksley Resources Limited (ASX: LKY, OTCQX: LKYRF, FSE: X5L) (“Locksley” or “the Company”)** provides an update on its research collaboration with Columbia University, led by Professor Greeshma Gadikota within the Department of Earth and Environmental Engineering and Columbia Climate School.

The collaboration is focused on developing potential processing pathways for the recovery, separation and metallisation of rare earth elements (**REEs**) and associated critical metals from carbonatite and bastnasite style mineral systems, including the mineralisation style relevant to Locksley's El Campo REE project within its Mojave Project in the Mountain Pass region.

#### **Kerrie Matthews Managing Directors & CEO commented:**

*“Locksley's collaboration with Columbia University is providing us with access to advanced research into rare earth recovery, separation and metallisation pathways. The work completed to date is supporting our understanding of potential processing routes for our carbonatite-related mineral systems. We look forward to the next phase of optimisation using Locksley samples and to assessing the implications of these results for future development studies. Importantly, this*

*work is being progressed in parallel with maiden exploration at El Campo, positioning Locksley to better understand potential development pathways as the project advances."*

### Program Overview

Columbia University's research program is structured around three key workstreams:

1. Ore characterisation – of mineralogy, composition and morphology
2. Processing development – technologies for REE and critical metal recovery
3. Deployment and assessment – evaluation of economic and environmental considerations.

Recent work has established experimental protocols for selective rare earth recovery and progressed the development of materials and techniques aimed at improving separation efficiency.

In parallel, rapid detection technologies are being advanced to support real-time identification and analysis of rare earth mineralisation, with optimisation underway using Locksley samples.

### Strategic Relevance

The collaboration remains at a research and development stage, with outcomes intended to support Locksley's understanding of potential processing pathways applicable to the Mojave Project.

Importantly, this work is being progressed in parallel with exploration activities, allowing the Company to assess potential development pathways earlier in the project lifecycle. This integrated approach is designed to inform future technical studies and evaluate opportunities to simplify processing and enhance project economics.

### Ore Characterisation

Columbia has developed a spectroscopic approach for rapid detection and spatial determination of REEs in carbonatite material. This method is now being refined using samples provided from Locksley.

### Processing Pathways

The program has progressed investigation of pre-concentration to increase REE concentrates in the leachate and to selectively leach REEs, simplifying downstream processing. Experimental protocols are being established independently and will now be optimised using Locksley's carbonatite ores from the El Campo site.

### Flowsheet Development

Conceptual flow sheets for bastnasite-rich ores from the El Campo site at Mojave have been proposed, including various leaching modes, co-recovery of other metals, REE separations, and electrified metallisation. These pathways are being evaluated to assess potential reduction in processing complexity and improvements in recovery outcomes for REEs and associated critical metals.

## Downstream Processing

Advances have been reported in molten salt electrolysis for REE metallisation coupled with salt recovery within the process loop. This work is aimed at providing an alternative to conventional carbon-based thermal reduction pathways.

Locksley notes that the collaboration remains at a research and development stage. The outcome of this work is expected to support Locksley's understanding of potential processing pathways applicable to mineralisation at its Mojave Project.

In particular, this program is aimed at assessing whether alternative recovery and separation approaches may offer opportunities to simplify downstream processing and inform future development studies, including potential pilot-scale evaluation pathways. Early-stage evaluation of processing pathways alongside exploration drilling provides Locksley with the ability to assess potential development scenarios earlier in the project lifecycle, should exploration outcomes prove successful.

The Company will continue to evaluate the outcomes of this collaboration and will update shareholders as material milestones are achieved.

## Next Steps

- Continue optimisation of processing pathways using Locksley samples
- Further evaluate recovery, separation and metallisation techniques
- Assess implications for future development studies and potential pilot scale pathways
- Integrate processing insights with ongoing exploration results

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

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### *Forward-Looking Statements*

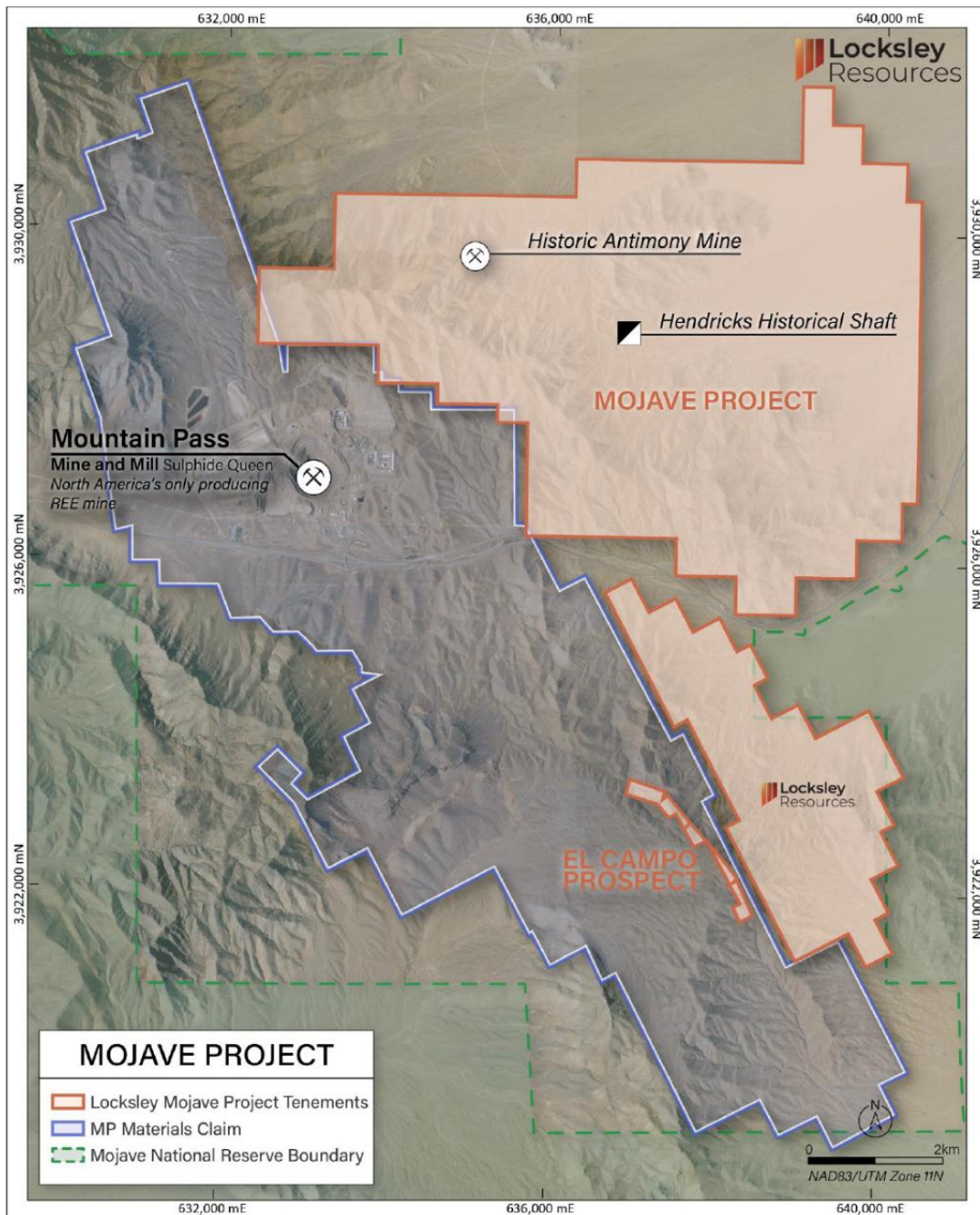
*This document may include forward-looking statements. Forward-looking statements include, but are not limited to, statements concerning Locksley Resources planned activities and other statements that are not historical facts. When used in this document, the words such as "could," "plan," "estimate," "expect," "intend," "may", "potential," "should," and similar expressions are forward-looking statements. Although Locksley Resources Limited believes that its expectations reflected in these forward-looking statements are reasonable, such statements involve risks and uncertainties and no assurance can be given that actual results will be consistent with these forward-looking statements.*

### *Competent Persons Statement*

*Information in this release that relates to exploration targets, exploration results, mineral resources or ore reserves is based on information compiled by Ian Stockton, a Competent Person who is a Fellow of the Australian Institute of Geosciences (FAIG), Registered Professional Geologist (RPGEO) (member number 10214) and a Member of AusIMM (Member #112426). He has sufficient experience that is relevant to varying mineralisation styles and deposits under consideration and to the activity being undertaken to qualify as a 'Competent Person' as defined under the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. Stockton consents to the inclusion of the matters based on his information in the form and context in which it appears. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original announcements.*

## ABOUT LOCKSLEY RESOURCES LIMITED

Locksley Resources Limited is focused on critical minerals in the United States of America. The Company is actively advancing the Mojave Project in California, targeting rare earth elements (REEs) and antimony. Locksley is executing a mine-to-market strategy for antimony, aimed at re-establishing domestic supply chains for critical materials, underpinned by strategic downstream technology partnerships with leading U.S. research institutions and industry partners. This integrated approach combines resource development with innovative processing and separation technologies, positioning Locksley to play a key role in advancing U.S. critical minerals independence.



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