

# Locksley Resources Limited: Advances Toward U.S. Antimony Production

12.11.2025 | [ABN Newswire](#)

Perth, Australia - [Locksley Resources Ltd.](#) (ASX:LKY) (FRA:X5L) (OTCMKTS:LKYRF) announced advancements with its U.S. Mine-to-Market strategy. The Company has delivered numerous key technical milestones including a LiDAR underground survey, metallurgical processing updates, a Bulk Sample, underground workings assessment and maiden Exploration Target (JORC 2012). These milestones have provided Locksley with the confidence to fast track the redevelopment plans and initiate extraction studies of mineralisation at the Desert Antimony Mine (DAM) Prospect.

## From Target Validation to Extraction

The Company has advanced planning for a targeted, integrated work plan designed to fast-track extraction of mineralisation for Locksley's Phase 1 pilot processing facility, planned for 2026. These results have collectively provided the Company sufficient confidence to progress plans towards re-development of the historical mine. With enhanced knowledge of the geology, metallurgy, and underground access now in place and continually developing, Locksley has commenced early-stage small scale production planning.

## Geological Targeting at DAM

Underground LiDAR surveying has mapped ~236m of historical workings and spatially defined areas of mined mineralisation which has supported 3D geological modelling.

Combined with surface structural and geological mapping and sampling, this has enabled the Company to establish an Exploration Target (JORC 2012) at DAM containing between 19,400 to 67,700 tonnes of antimony metal (see basis for the exploration target below). This provides a framework to establish a conceptual development plan to provide feed for a pilot plant which is envisaged in 2026. This initial work provides a basis for the scale of operation which would be required and allows conceptual planning and design to be undertaken.

## Metallurgy (Bulk Sample)

The recently completed 325 kg bulk sampling has delivered a head grade ranging from 7.6% to 7.8% Sb. Flotation has commenced using the same parameters determined in the initial sighter testwork campaign which successfully demonstrated the ability to produce a premium antimony concentrate grading 68.1% Sb (see ASX Announcement 22 September 2025). This metallurgical success provides the foundation for the MoU signed with Hazen and validates the Company's processing pathway, significantly establishing the technical pathway for the downstream supply chain. The results have established the potential and quality of concentrates that can be produced from the mineralisation encountered at DAM, which is another key step towards a potentially viable production operation.

## Underground Assessment

With an increasing and developing understanding in the geology and metallurgy, Locksley liaised with a specialist U.S. based underground development consultant to provide an opinion of the historical DAM workings. The initial assessment indicates the structural stability and accessibility of the workings, providing a potential plan for future re-entry and development of the mineralisation exposed in the underground faces (Figure 1\*).

## Downstream Capability (Processing & Refining)

The restart pathway complements Locksley's downstream strategy, including its collaboration with Rice University to develop advanced antimony extraction technology using DeepSolv™. Together with the MoU signed with Hazen Research for U.S. based processing capability, Locksley is building a fully integrated mine-to-market platform aligned with American industrial, defence, and energy sectors.

The advancement of the Desert Antimony Mine Prospect comes at a pivotal time for the United States, with antimony confirmed as a priority under federal supply chain resilience frameworks. Locksley's progress directly supports U.S. objectives to rebuild domestic sources of defence-essential materials.

Kerrie Matthews, Managing Director CEO, commented:

"This is a pivotal moment for Locksley, marking the rapid advancement towards the Company becoming a Developer, with an end-to-end supply chain strategy from Mine-to-Metal. All technical steps, from establishing the exploration target, to achieving the 68.1% concentrate grade and to evaluating the underground workings aligns with this strategy.

The successful execution of these three integrated phases has significantly advanced the Company towards mitigating the key uncertainties associated with planning for recommencing operations. We are focused on further enhancing our understanding of DAM and working in parallel with US government on permitting, finance, and ultimately physically delivering antimony product into the U.S. market."

#### Desert Antimony Mine Underground Mine Assessment

LKY has completed an evaluation of the underground workings at DAM. The purpose of this process was twofold:

1. Assess the stability of the underground workings to ensure ongoing activity can be completed in a safe working environment
2. Determine options and solutions to facilitate extraction of mineralisation from the underground workings for use in Locksley's pilot plant

The initial assessment has indicated that the existing workings are in good condition and that the ground is competent. Minor areas are anticipated to require some limited rehabilitation and scaling (removal of loose rocks), but overall insignificant work is expected for the current ongoing activities.

In terms of mineralisation extraction activities, 2 options are being progressed in parallel.

1. Utilise jack leg mining crews to selectively mine from the existing faces accessible from underground workings (Figure 1\*). The benefit of jack leg mining in this scenario allows a higher degree of selectivity and minimises mining dilution as a narrow face can be advanced. Miners would manually drill holes for blasting and ground support using a compressed air jack leg drill. Mineralised vein material would then be removed utilising a scraper system installed in the access adit. This process would be slower than mechanised mining.
2. Enlargement of the existing development to approximately 10' x 15' to allow access for small scale mechanised equipment. The benefit of this approach would be to allow a greater scale of mining activity and higher productivity resulting in a larger amount of mineralised material to be extracted in a shorter period. However, the larger access drives required would result in a higher level of dilution to any mineralisation extracted from the development drives.

The Company will progress with technical planning and design and subsequently seek expressions of interest from 3rd party contractors. Suitable contractors will be sourced and asked to tender in the process. In parallel, the Company is assessing the permitting requirements, with the intention of submitting an application for an initial ~2,000t under the existing Plan of Operations for DAM.

#### Bulk Metallurgical Sample

Due to the successful results obtained in the initial round of metallurgical testwork which resulted in the production of a full USA sourced and made Antimony ingot (see ASX Announcement 20 October 2025), the Company collected a 325kg bulk sample from mineralisation remaining in the underground workings at DAM. The sample has been collected to further advance the Company's metallurgical testwork program to rapidly advance towards pilot plant development.

Sample preparation has been completed with the sample undergoing crushing testwork, grind establishment testwork and homogenisation. Two assays have been completed on the homogenised sample and returned grades of 7.6% and 7.8% Antimony. These results further support the high-grade nature of mineralisation seen at the DAM Prospect.

Initial rougher flotation testwork has commenced which will be followed by cleaner flotation testwork with the objective of delivering a larger volume of concentrate and developing a flotation process flowsheet suitable for generating a saleable final concentrate at an optimum recovery. It is anticipated that ~20kg of stibnite concentrate may be produced which will be utilised for ongoing testwork.

\*To view tables and figures, please visit:  
<https://abnnewswire.net/lnk/D131M0FM>

#### About Locksley Resources Limited:

Locksley Resources Limited (ASX:LKY) (FRA:X5L) (OTCMKTS:LKYRF) 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

Source:  
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Die URL für diesen Artikel lautet:

<https://www.rohstoff-welt.de/news/712144--Locksley-Resources-Limited--Advances-Toward-U.S.-Antimony-Production.html>

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