

# **INVESTOR UPDATE**

# LOCKSLEY PRODUCES HIGH-GRADE ANTIMONY CONCENTRATE, ADVANCING 100% MADE IN AMERICA ANTIMONY

# **Highlights**

- Excellent high grade final flotation concentrate of 68.1% achieved from first pass rougher / regrind / cleaner flotation tests
- Concentrate is 95% of technical maximum stibnite grade of 71.68% showing minimal impurities
- Concentrate grade significantly exceeds marketable sales requirement of minimum 55%
- High-grade antimony (Sb) concentrate was achieved with only two preliminary tests, indicating minimal flowsheet development required to maximise both grade and recovery
- Flotation cleaning process involves recycling of tails with total antimony recoveries expected to exceed 80% based on flotation testwork results
- Work commencing to collect a bulk sample from the underground workings for further testwork and production of antimony ingot

**Locksley Resources Ltd** (ASX: **LKY**, OTCQB: **LKYRF**, FSE: **X5L**) ("**Locksley**" or the "**Company**") is pleased to provide an update on the rapidly advancing metallurgical test work program being conducted on surface samples collected from the Desert Antimony Mine (DAM) Prospect.

Second stage cleaner flotation testwork has **delivered a high-grade concentrate containing up to 68.1% antimony**, substantiating that the Mojave Project has the potential to deliver feedstock superior to current market supply streams & prospects.

Grades at this level of purity advance the pathway to a high quality 100% Made in America antimony product aligned with US government priorities for a fully integrated antimony supply chain for defence and industrial base resilience particularly munitions, semiconductors and energy systems.



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#### **Metallurgical test work Program**

Locksley metallurgical consultants, Independent Metallurgical Operations Pty Ltd (IMO) (subsidiary of SGS Australia) and Base Metallurgical Laboratories have advanced metallurgical testwork on samples from Locksley's Desert Antimony Mine (DAM) Prospect at the Mojave Project.

Locksley's rougher flotation products have undergone further metallurgical test work, including regrind and cleaner flotation stages, part of a standard antimony flowsheet. The results of this testwork have significantly exceeded the target objective, with a high-grade concentrate product of 68.1% Sb attained during cleaner stage test work (Figure 1, Table 1). This is a material increase in grade from what was delivered in the initial test work, which produced a concentrate exceeding 30% in 5 out of 6 tests.

The updated metallurgical program has produced a concentrate grade far in excess of the minimum marketable grade of >55% Sb. Locksley's concentrate is approaching the theoretical maximum stibnite grade of 71.68% Sb.



Figure 1; Photos of cleaner flotation test C08 for cleaning stage 1 (A), stage 2 (B), stage 3 (C) and stage 4 (D). Note silvery grey colour of the bubbles is due to stibnite collecting in



Product	Mass Dist'n %	Antimony Grade %	Antimony Recovery %	
Cleaner Test C07				
TOTAL Cleaner 1 Con	8.9	61.3	60.5	

Cleaner Test C08			
TOTAL Cleaner 2 Con	7.7	68.1	58.7

Table 1; Results from the cleaner tests conducted on composite samples collected from the Desert Antimony Mine Prospect.

Antimony recovery in the cleaner flotation testwork achieved 60.5% (test C07 total stage 1-4, Table 1, **Error! Reference source not found.**). It is important to note that this is the level of antimony recovered in the cleaner flotation stage whilst the rougher flotation stage attained 81.9% (test C07 Rougher Flotation Stage, Table 1, Appendix 1). The balance of antimony recovery (21.4%) reports to the cleaner flotation tail which will undergo recirculation in a closed circuit with further regrinding and re-flotation expected. In this process, most of the remaining antimony metal is expected to be recovered. It was also observed in the results that a longer residence time in the cleaning stages would have improved the antimony recovery.

Further testwork and optimisation of the flotation process will be undertaken to improve the recovery to the cleaner concentrate with overall total recoveries expected to exceed 80% as demonstrated by the rougher flotation testwork.

#### **Next Steps:**

- Mineralogical testwork using QEMScan on the head, concentrate and tail to determine stibnite deportment to develop an understanding of the ore characteristics for the Mojave ore
- Collection of a larger sample from the underground working at the DAM Prospect to expand the metallurgical testwork program to include flotation optimisation, gravity separation testwork and ore sorting
- Production of a larger volume of antimony concentrate for use in a pilot test to produce antimony metal ingot, antimony oxide and antimony trisulphide
- Provide a sample of concentrate to Rice University to commence with Deep Eutectic Solvent extraction testwork using DeepSolv™ methodology
- Collection and metallurgical testing of mined samples from the Los Lirios deposit in Mexico



#### **Competent Persons Statement:**

Information in this release that relates to Exploration Results is based on information compiled by Mr Julian Woodcock, who is a geologist and a Member of the Australian Institute of Mining and Metallurgy (MAusIMM(CP) 305446). Mr Woodcock is a Technical Consultant to Locksley Resources Limited and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration. Mr Woodcock consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

Information in this document that relates to metallurgical test work is based on, and fairly represents, information and supporting documentation reviewed by Mr Peter Adamini, BSc (Mineral Science and Chemistry), who is a Member of The Australasian Institute of Mining and Metallurgy (AusIMM). Mr Adamini is a full-time employee of SGS Australia owned Independent Metallurgical Operations Pty Ltd, a wholly owned subsidiary of SGS Australia Holdings Pty Ltd. Mr. Adamini is an independent consultant engaged by Locksley Resources Limited for metallurgical representation.

### 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 491 claims across 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.

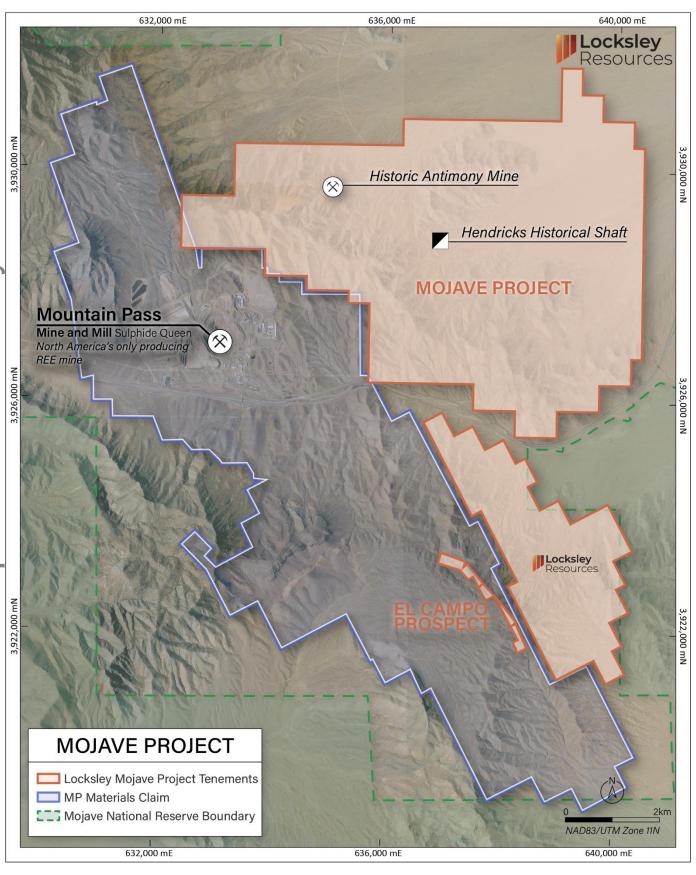
Locksley's North American position is further strengthened by rising geopolitical urgency to diversify supply chains away from China, the global leader in both REE & antimony production. With its maiden drilling program planned, the Mojave Project is uniquely positioned to align with U.S. strategic objectives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





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





# APPENDIX 1 – Cleaner Test Results on samples collected from the DAM prospect

Product	Mass Dist'n %	Antimony Grade %	Antimony Recovery %	
Cleaner Test C07				
Cleaner 1 Con 1	1.4	65.3	10.4	
Cleaner 1 Con 2	3.9	63.4	27.2	
Cleaner 1 Con 3	3.6	57.5	22.9	
TOTAL Cleaner 1	8.9	61.3	60.5	
Cleaner 1 Tail	20.2	9.6	21.4	
TOTAL Cleaner Tails (to be recirculated)	20.2	9.6	21.4	
Rougher Flotation Stage	29.2	25.4	81.9	
Rougher tail	70.8	2.3	18.1	
Head Sample (pre-flotation)	100.0	9.1	100.0	
Cleaner Test C08				
Cleaner 2 Con 1	2.6	68.5	20.2	
Cleaner 2 Con 2	2.0	68.6	15.1	
Cleaner 2 Con 3	1.7	67.8	13.1	
Cleaner 2 Con 4	1.4	67.2	10.3	
TOTAL Cleaner 2	7.7	68.1	58.7	
Cleaner 2 tail	1.7	27.1	5.2	
Cleaner 1 tail	15.3	9.5	16.3	
TOTAL Cleaner Tails (to be recirculated)	17.0	11.3	21.6	
Rougher Flotation Stage	24.7	29.0	80.2	
Rougher tail	75.3	2.3	19.8	
Head Sample (pre-flotation)	100.0	8.9	100.0	



# **APPENDIX 2 - JORC Code, 2012 edition - TABLE 1**

JORC Table 1, Section 1 - Sampling Techniques and Data

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	Criteria	JORC Code explanation	Commentary
	Sampling techniques	Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.	Composite surface sample was collected from loose rock piles found at the entrance to adits at the Desert Antimony Prospect. Sample was visually inspected by Locksley Geologists to best determine to be stibnite hosting (antimony mineral) and representative of the vein material seen in the underground adits. 23.1kg of sample was collected.
		Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	No specific measures were undertaken other than the visual inspection of the samples.
lai use omy		Aspects of the determination of mineralisation that are Material to the Public Report.	Visual inspection of the mineralisation undertaken to ensure that stibnite (antimony hosting mineral) was present in the sample and that the mineral composition represented that seen in the underground workings.
		In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information	Samples were collected at surface from loose rock piles, visually inspected and broken with a hammer and collected into a container. Objective was to obtain a >20kg composite sample for preliminary metallurgical testwork.
	Drilling techniques	Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).	Not applicable, no drilling reported.
5	Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	Not applicable, no drilling reported.
<b>7</b>		Measures taken to maximise sample recovery and ensure representative nature of the samples.	Not applicable, no drilling reported.
りつ		Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	Not applicable, no drilling reported.
1		Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.	Not geologically logged. Visually inspected to ensure sample represented insitu mineralisation seen underground and presence of stibnite verified.
	Logging	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	Photographs taken of the rock samples. No detailed logging completed.
		The total length and percentage of the relevant intersections logged.	Not applicable, sample not collected from a drillhole, trench or costean.
		If core, whether cut or sawn and whether quarter, half or all core taken.	Not applicable, as diamond drilling methods were not used.
		If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	Not applicable, as reverse circulation (RC) drilling methods were not used.
	Subsampling techniques and sample preparation	For all sample types, the nature, quality and appropriateness of the sample preparation technique.  Quality control procedures adopted for all subsampling stages to maximise	1 sample collected weighing 23.1kg. Sample was initially prepared by braking using a rock hammer into smaller pieces (<10cm) and collected into a calico bag. At the metallurgical laboratory, the sample was dried, crushed and split in to 2kg sub-samples for flotation testwork. The 2kg sub-samples were pulverised for different durations to produce 2 grind sizes (106 μm K80 and 75 μm K80) to be tested for flotation testwork. The sample preparation technique is deemed suitable for the nature, quality and appropriateness for the material being evaluated.
		representivity of samples.	no specific quality control procedures adopted.



	Criteria	JORC Code explanation	Commentary
		Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.	No duplicate samples collected.
		Whether sample sizes are appropriate to the grain size of the material being sampled.	Sample size of 23.1kg is deemed appropriate for to the grain size of the material being sampled.
	Quality of assay data	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	No duplicate samples collected. Master composite sample was split into 2kg sub samples for flotation testwork. Results of metallurgical balance from flotation testwork has delivered consistently repeatable Sb grades indicating sample homogeneity and assay method repeatability. Analytical assaying technique was via aqua regia digest followed by ICP-OES. This technique would be considered partial, but industry standard for sulphide bearing minerals.
X	and laboratory tests	For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	No geophysical tools were used in the determination of assay results regarding the samples highlighted in the release.
		Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	No QAQC samples were submitted by Locksley in the sample testwork. The metallurgical laboratory used internal QAQC with analytical methods involving the use of Certified Reference Materials (CRMs), blanks and duplicate checks. No issues were reported, indicating a suitable level of accuracy and precision was attained.
5		The verification of significant intersections by either independent or alternative company personnel.	Not applicable.
	V:::::	The use of twinned holes.	Not applicable.
3	Verification of sampling and assaying	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Metallurgical laboratory provides results in digital form to metallurgical consultant for review. Excel worksheets stored on Locksley's SharePoint file management system.
		Discuss any adjustment to assay data.	Not applicable.
5	Location of data points	Accuracy and quality of surveys used to locate drillholes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.	Sample location recorded using handheld GPS with +/- 5m accuracy. Samples were collected from surface stocks and not from insitu locations.
2		Specification of the grid system used.  Quality and adequacy of topographic control.	Universal Transverse Mercator NAD83 Zone11 format.  Topographic control is high. The company uses the USGS LiDAR dataset for the area with a vertical accuracy of +/- 1m.
		Data spacing for reporting of Exploration Results.	Not applicable.
-	Data spacing and	Whether the data spacing, and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	Sampling is not sufficient to calculate a mineral resource estimate.
	distribution	Whether sample compositing has been applied.	Rock samples collected from surface spoils at adit entrances were combined to produce a master composite sample for metallurgical testwork.
	Orientation of data in	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	Unknown, samples were not insitu.
	relation to geological structure	If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	Unknown, samples were not insitu.
	Sample security	The measures taken to ensure sample security.	Sample security protocols are high. Sample was collected by Locksley geologist into calico bags and plastic containers. Sample was stored at Locksley premises and then delivered by Locksley staff personally to the metallurgical laboratory in Tucson Arizona.
	Audits or reviews	The results of any audits or reviews of sampling techniques and data.	Data and sampling techniques have not been reviewed or audited.



Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.	The Mojave Project combines to a total area of ~40 km² and is a Rare Earth Element (REE) and antimony project located to the east and southeast of the Mountain Pass Mine in San Bernardino Country, California. The project area lies to the north and south of and adjacent to Interstate-15 (I-15), approximately 24 km southwest of the California-Nevada state line and approximately 48 km northeast of Baker, California USA. This area is part of the historic Clark Mining District established in 1865 and Mountain Pass is the only operating REE deposit identified within this district. The project is accessed via the Baily Road Interchange (Exit 281 of I-15) and the southern extensions of the project area can be accessed via Zinc Mine Road.
<u>&gt;</u>	The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	Locksley has staked a total of 491 claims in the project area. 249 claims are in process of being lodged with the Bureau of Land Management (BLM). The remaining 242 claims are registered and active. Locksley has worked with the BLM and secured drill permitting for the El Campo Prospect and is awaiting approval of a permit for the Desert Antimony Mine Prospect for an expanded drilling program.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	Surface sampling has been completed by Locksley Resources staff in conjunction with MINEX staff, who assisted Locksley with site familiarisation, sampling, and logistical aspects of the surface sampling program.  Mapping has been completed by Locksley across the claims.
Exploration done by other parties  Geology	Deposit type, geological setting and style of mineralisation	The Mojave Project is located in the southern part of the Clark Range in the northern Mojave Desert. The Mojave Desert is situated in the southwestern part of the Great Basin province, a region extending from central Utah to eastern California. The region is characterised by intense Tertiary regional extension deformation. This deformational event has resulted in broad north-south trending mountain ranges separated by gently sloping valleys, a characteristic of Basin and Range tectonic activity. The Mountain Pass Rare Earth deposit is located within an uplift block of Precambrian metamorphic and igneous rocks that are bounded on the southern and eastern margins by basin-fill formations in the Ivanpah Valley. The block is separated from Palaeozoic and Mesozoic rocks to the west by the Clark Mountain fault, which strikes north-northwest and dips steeply to the west.  Mountain Pass, located within 1.4 km to the west of the Mojave Project, is a carbonatite hosted rare earth deposit. The mineralisation is hosted principally in carbonatite igneous rock and Mountain Pass is the only known example of rare earth deposit in which bastnasite is mined in the primary magmatic economic mineral.  The Desert Antimony Mine Prospect is a narrow vein (<1m) with stibnite-carbonate-quartz mineral assemblage which has been emplaced in a structural setting. Limited understanding has been determined about the genesis or deposit type at this time and is currently being developed by Locksley.  The El Campo Prospect is breccia hosted REE mineralisation located within a distinct 1m wide shear zone at surface.
Drill hole Information	A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:  • easting and northing of the drill hole collar  • elevation or RL (Reduced Level - elevation above sea level in metres) of the drill hole collar  • dip and azimuth of the hole  • down hole length and interception depth  • hole length.  If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding	Not applicable, no drilling reported.



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		of the report, the Competent Person should clearly	
		explain why this is the case.	
		In reporting Exploration Results, weighting	
		averaging techniques, maximum and/or minimum	
		grade truncations (e.g., cutting of high grades) and	
		cut-off grades are usually Material and should be	
		stated.	
	Data	Where aggregate intercepts incorporate short	
	aggregation	lengths of high-grade results and longer lengths of	Metallurgical results reported as individual stage results or as aggregate
	methods	low-grade results, the procedure used for such	weighted averages. All results disclosed in the report.
	methods	aggregation should be stated and some typical	
		examples of such aggregations should be shown in	
		detail.	
		The assumptions used for any reporting of metal	
		equivalent values should be clearly stated.	
l		These relationships are particularly	
		important in the reporting of Exploration Results.	
	Relationship	If the geometry of the mineralisation with	
	between	respect to the drill hole angle is known, its nature	Not applicable, composite sample collected from surface spoils and insitu
	mineralisation	should be reported.	sample unknown. Underground workings show vin width of approximately
	widths and	If it is not known and only the down hole	1m.
	intercept	lengths are reported, there should be a clear	
43	lengths	statement to this effect (eg 'down hole length, true	
$\Box$		width not known').	
		Appropriate maps and sections (with scales) and	
US	, I	tabulations of intercepts should be included for any	
	Diagrams	significant discovery being reported These should	Not applicable, no drilling reported.
		include, but not be limited to a plan view of drill	
		hole collar locations and appropriate sectional views	
מ		Where comprehensive reporting of all Exploration	
		Results is not practicable, representative reporting	
	Balanced	of both low and high grades and/or widths should	All results disclosed in the report.
U	reporting	be practiced to avoid misleading reporting of	·
	)	Exploration Results.	
		Other exploration data, if meaningful and material,	
		should be reported including (but not limited to):	
$\mathbf{\Psi}$	Other	geological observations; geophysical survey results;	
	substantive	geochemical survey results; bulk samples - size and	All relevant information disclosed in the report.
	exploration	method of treatment; metallurgical test results; bulk	
	data	density, groundwater, geotechnical and rock	
		characteristics; potential deleterious or	
	1	contaminating substances	
111		The nature and scale of planned further work (eg	
	Further work	tests for lateral extensions or depth extensions or	Further metallurgical testwork planned and underway as disclosed in the
		large-scale step-out drilling).	report. Drilling at the DAM and El Campo Prospects planned as previously
		Diagrams clearly highlighting the areas of possible	reported in prior ASX announcements. Field mapping, surface sampling and
		extensions, including the main geological	geophysical surveys all in planning stages and intend to be undertaken.
		interpretations and future drilling areas, provided	
		this information is not commercially sensitive.	