

## HYDRAULIC MINING TRIAL COMMENCES

- Hydraulic mining trial has now commenced at Kasiya Pilot Site as part of ongoing Optimisation Study
- Trial is being conducted by Fraser Alexander, a global industry leader in hydraulic mining, following successful completion of dry mining trial in July 2024
- Hydraulic mining trial is expected to take approximately three months to complete and includes backfilling of main trial pit, deposition and rehabilitation testwork
- Previous testwork suggests soft, friable nature of Kasiya orebody should be suitable for hydraulic mining
- Pilot Phase continues to progress with oversight from Sovereign-Rio Tinto Technical Committee
- Rio Tinto has elected to increase its shareholding to 19.9% via an additional investment of A\$0.7 million in Sovereign



Figure 1: Hydraulic mined material (slurry) flows freely to the collection point in the bottom of the sump.

Sovereign Metals Limited (ASX: SVM; AIM: SVML; OTCQX: SVMLF) (**Sovereign** or the **Company**) is pleased to announce the commencement of a hydraulic mining trial at its Kasiya Rutile-Graphite Project (**Kasiya** or **Project**) in Malawi as part of the ongoing Pilot Mining and Land Rehabilitation Program (**Pilot Phase**). The hydraulic mining trial aims to further develop previous testwork as part of the Kasiya Optimisation Study.

**Managing Director and CEO, Frank Eagar commented:** *"With valuable insights gained from the dry-mining approach at Kasiya, we are now entering the next phase, which includes the commencement of the hydraulic mining tests, processing and backfilling material, and progressing towards the rehabilitation phase, which we expect to take three months to complete. Results from the Pilot Phase, in particular the analysis of dry-mining versus hydraulic mining, will be fundamental for the ongoing Optimisation Study."*



## RIO TINTO TO INCREASE ITS SHAREHOLDING TO 19.9%

On 17 July 2023, the Company announced that Rio Tinto Mining and Exploration Limited (**Rio Tinto**) had made an investment of \$40.4 million in the Company through the issue of 83,095,592 fully paid ordinary shares (**Shares**) and 34,549,598 unlisted Options (**Rio Tinto Options**).

On 3 July 2024, the Company announced that Rio Tinto had exercised the Rio Tinto Options and the Company subsequently issued 34,549,598 Shares to Rio Tinto to raise an additional \$18.5 million (before costs).

Rio Tinto has advised the Company that it has elected to make an additional investment of A\$690,360 in Sovereign through the issue of 1,290,392 Shares (**Additional Shares**) to Rio Tinto pursuant to Rio Tinto's first right of refusal on equity issues in accordance with the Investment Agreement between Rio Tinto and the Company dated 16 July 2023. Subject to the issue of Additional Shares, Rio Tinto will increase its shareholding in Sovereign to 19.9%.

## HYDRAULIC MINING TRIAL

The saprolite-hosted mineralisation at Kasiya is predominantly homogenous, with consistent physical properties across the 1.8 billion tonne Mineral Resource Estimate. Pilot Phase data from the dry-mining trial has confirmed that no drilling, blasting, crushing, grinding, or milling is needed before stockpiling material for processing into rutile and graphite products.

The temporary water storage pond, constructed and sealed with natural clay from excavated material, has been filled with six million litres of ground water, predominantly from eight water boreholes on site. This water will be used during the hydraulic mining trial and continuously recycled from the constructed holding cells where sand and fines fractions will be stored respectively prior to the planned deposition and rehabilitation testwork.



Figure 2: Overview of the hydraulic mining trial.

All hydraulic mining equipment is skid-mounted for ease of operation and mobility. A barge-mounted pump, transports the slurry from the sump to a vibrating screen.





**Figure 3: A pump, mounted to a barge, pumps the slurry to a vibrating screen.**

Screen underflow is collected in a screen underpan and pumped through a stacker cyclone. The cyclone generates a -45 micron slurry on the overflow and a +45 micron sand on the underflow. This process is designed to replicate plant conditions where these fractions are produced as tailings, and will be used in subsequent in-pit deposition test work.

The overflow slurry is transferred to a settling pond, where it will settle, allowing for the recovery of approximately 34% of the water, which will be returned to the water storage pond. The concentrated slurry, along with the sand discharge from the cyclone underflow, will be used for the next set of tests in the in-pit deposition phase.

Land rehabilitation will be a key part of the ongoing Optimisation Study. Sovereign's objective is to restore land post mining to conditions that match or surpass existing agricultural yields. The Pilot Phase will showcase to local communities the successful rehabilitation of land for agriculture post-mining. These efforts will also help Sovereign refine excavation and backfill techniques.

Blending test work will commence after the completion of the hydraulic mining tests. This phase will involve backfilling the seven individual test pits using various ratios of fines and sand to be followed by soil remediation and rehabilitation testwork.





Figure 4: The train of high-pressure pumps used to drive the water monitor are skid-mounted.



Figure 5: +2mm oversize is screened out using a vibrating screen.

#### ENQUIRIES

Frank Eagar (South Africa/Malawi)  
Managing Director  
+27 21 065 1890

Sam Cordin (Perth)  
Business Development  
+61(8) 9322 6322

Sapan Ghai (London)  
CCO  
+44 207 478 3900

## Competent Person Statement

The information in this announcement that relates to the Mineral Resource Estimate is extracted from an announcement dated 5 April 2023 entitled 'Kasiya Indicated Resource Increased by over 80%' which is available to view at [www.sovereignmetals.com.au](http://www.sovereignmetals.com.au) and is based on, and fairly represents information compiled by Mr Richard Stockwell, a Competent Person, who is a fellow of the Australian Institute of Geoscientists (AIG). Mr Stockwell is a principal of Placer Consulting Pty Ltd, an independent consulting company. Sovereign confirms that a) it is not aware of any new information or data that materially affects the information included in the original announcement; b) all material assumptions included in the original announcement continue to apply and have not materially changed; and c) the form and context in which the relevant Competent Persons' findings are presented in this announcement have not been materially changed from the original announcement.

Kasiya Total Indicated + Inferred Mineral Resource Estimate at 0.7% rutile cut-off grade					
Classification	Resource (Mt)	Rutile Grade (%)	Contained Rutile (Mt)	Graphite Grade (TGC) (%)	Contained Graphite (Mt)
Indicated	1,200	1.0%	12.2	1.5%	18.0
Inferred	609	0.9%	5.7	1.1%	6.5
<b>Total</b>	<b>1,809</b>	<b>1.0%</b>	<b>17.9</b>	<b>1.4%</b>	<b>24.4</b>

## Forward Looking Statement

This release may include forward-looking statements, which may be identified by words such as "expects", "anticipates", "believes", "projects", "plans", and similar expressions. These forward-looking statements are based on Sovereign's expectations and beliefs concerning future events. Forward looking statements are necessarily subject to risks, uncertainties and other factors, many of which are outside the control of Sovereign, which could cause actual results to differ materially from such statements. There can be no assurance that forward-looking statements will prove to be correct. Sovereign makes no undertaking to subsequently update or revise the forward-looking statements made in this release, to reflect the circumstances or events after the date of that release.

This announcement has been approved and authorised for release by the Company's Managing Director & CEO, Frank Eagar.