



KASIYA OPTIMISATION ADVANCES TO PILOT PHASE

- Sovereign to immediately commence a pilot mining and land rehabilitation program (“Pilot Phase”) at Kasiya as part of the ongoing Optimisation Study
- Empirical data generated from the Pilot Phase will assist towards determining optimal excavation, material handling, processing, backfilling and rehabilitation approaches
- Sovereign will excavate approximately 150,000 bench cubic metres of ore from a test pit over a three-month period using a combination of dry and hydraulic mining techniques
- Excavated material will be processed on-site and at Sovereign’s laboratory in Malawi and will also provide additional bulk samples for graphite product qualification
- The test pit will be backfilled, and multiple rehabilitation strategies will be implemented to demonstrate successful restoration of agricultural land
- Demonstrates strong support for mining projects in Malawi with all required approvals and community permissions for the Pilot Phase obtained within three months



Figure 1: Natural concentration of heavy minerals at surface at Kasiya (Source: C12 Consultants)

Managing Director Frank Eagar commented: *“Advancing to a Pilot Phase is an important milestone for Kasiya. This covers the full spectrum of engineering and design, logistics, materials handling, water and environmental approvals, stakeholder engagement, livelihood restoration, tailings management and land rehabilitation. The successful permitting is a testament to the strong owner’s team we have assembled. We are progressing Kasiya into a totally new phase of development. The scale and results from this phase will significantly enhance our knowledge base from the previous laboratory-based studies. I want to thank the Malawi Government for an efficient approvals process, demonstrating just how important Kasiya is to all stakeholders.”*

Sovereign Metals Limited (ASX:SVM; AIM:SVML) (**the Company or Sovereign**) is pleased to announce that the Company has initiated a Pilot Mining and Land Rehabilitation Program at its Kasiya Rutile-Graphite Project (**Kasiya or Project**) in Malawi.

The results will allow Sovereign to determine optimal excavation, backfill and land rehabilitation approaches. The Pilot Phase will be a demonstration to local communities of the successful rehabilitation of land for agricultural use post-mining. Results will also provide critical information for the upcoming Definitive Feasibility Study (**DFS**) and once commenced, it will shorten the time to its completion.

The objectives of the Pilot Phase include:

- Optimisation of mining methods by construction of a pilot-scale open pit close to the maximum depth of the current reserves at 20m;
- Scale-up of existing in-country processing capability by installation of commercial scale spirals to produce additional bulk samples for graphite product qualification;
- Optimising the tailings management and storage designs; and
- Optimising land rehabilitation, soil restoration and selection of revegetation species.

The commencement of the Pilot Phase follows the receipt within three months of all relevant approvals and permissions from the Malawi Environment Protection Authority (**MEPA**), National Water Resources Authority (**NWRA**), the Ministry of Mines, and the local community.

The Pilot Phase will be undertaken on a 9.9-hectare site and will include the following activities:

1. **Test Pit:** A test pit of 120m by 110m will be excavated to a depth of 20m, allowing optimisation of hydraulic and dry mining excavation methods.
2. **Stockpiles:** The excavated material will be temporarily stored in 4 stockpiles, namely all dry mining material, wet slimes (in a pond) and two sizes of sand fractions from the hydraulic mining.
3. **Backfilling and Grading:** The material will be placed back into the pit, and all areas will be graded.
4. **Rehabilitation Demonstration:** Sovereign will construct eight small rehabilitation demonstration pits covering a combined area of 100m by 130m. These will be used for water storage, excavated material storage, and demonstration of multiple rehabilitation approaches.
5. **Temporary Laydown Areas:** Four areas will be used as temporary laydown areas, offices, and associated infrastructure.
6. **Communication:** The Pilot Phase will be an educational opportunity for Project stakeholders. Sovereign will undertake a series of stakeholder visits and consultations for this purpose.

Kasiya is the world's largest natural rutile deposit and the second-largest flake graphite deposit. Sovereign aims to develop a low-CO₂ and sustainable operation to supply highly sought-after natural rutile and graphite to global markets.

Results of the PFS, released in late 2023, demonstrated Kasiya's potential to become the world's largest rutile producer at 222kt per annum and one of the world's largest natural graphite producers (ex-China) at 244kt per annum.

The PFS delivered compelling economics with a post-tax NPV₈ of US\$1.6 Billion and a post-tax IRR of 28%. This long-life, multi-generational operation generates over US\$16 Billion of revenue based on an initial 25-year life-of-mine and delivers an average annual EBITDA of US\$415 Million per annum.

Pilot Phase Program Design

Activities have been designed to establish a 9.9-hectare site over the current Ore Reserve defined in the Kasiya PFS, covering a mineralised zone with soil conditions deemed representative of the overall Mineral Resource Estimate (MRE). Over approximately three months, Sovereign will excavate several test pits and collect geological and geotechnical samples. The main pit will be backfilled with dry material, while material from hydraulic mining will be used to fill the remaining pits as part of the rehabilitation phase.

Land rehabilitation will form an integral component of the DFS. Sovereign's objective is to restore land after mining to conditions that achieve the same or better agricultural yields than existing land uses and crop yields. For this reason, the Company will undertake field-based demonstrations of rehabilitation showcasing drying times, soil recoveries, soil nutrients, growth variants, and including different soil inputs and revegetation methods.

Site Construction

Prior to the establishment of site infrastructure, eight boreholes have been permitted and drilled using a locally appointed drilling contractor. These boreholes will supply water to the site, which will be stored in a temporary water storage pond.

A perimeter fence will be erected around the site to maintain the necessary health and safety standards. Existing roads will be used for access to the site and, if required, improved through grading.

Temporary buildings such as offices and stores will be brought to the site on flatbed lorries and erected. To support pilot mining, two 1MW mobile diesel-powered electricity generators will be installed to provide the electricity required for high-pressure water monitors.

Pilot Mining

The main pit will be excavated using conventional load and haul to 20m depth to develop a sump to test hydraulic mining to the full depth of the current Ore Reserves. The excavated material will be temporarily stored in stockpiles.

On-Site Processing Facility

Material mined from the test pit will be processed on-site and at the Company's laboratory facility in Lilongwe. As previously announced (Please refer to announcement dated 1 May 2024 entitled "Sovereign to Increase Bulk Sample Preparation Capacity"), as part of the Pilot Phase, a commercial-scale spiral plant will be installed at site in Malawi.

Rutile and graphite concentrate samples generated from the Pilot Phase will be shared with potential off-takers and end-users, and used for further testwork as part of the Company's graphite commercialisation strategy.

Rehabilitation Phase

This phase will consist of establishing a strong soils baseline, backfilling of the test pit with different soil compositions, rehabilitation tests, revegetation with plants, and the improvement of soil conditions post-mining.

Regular monitoring and evaluation of the rehabilitation activities will be undertaken to assess the progress of vegetation growth and soil stabilisation. Following the conclusion of the rehabilitation, the proposed project site will be returned to farmland.

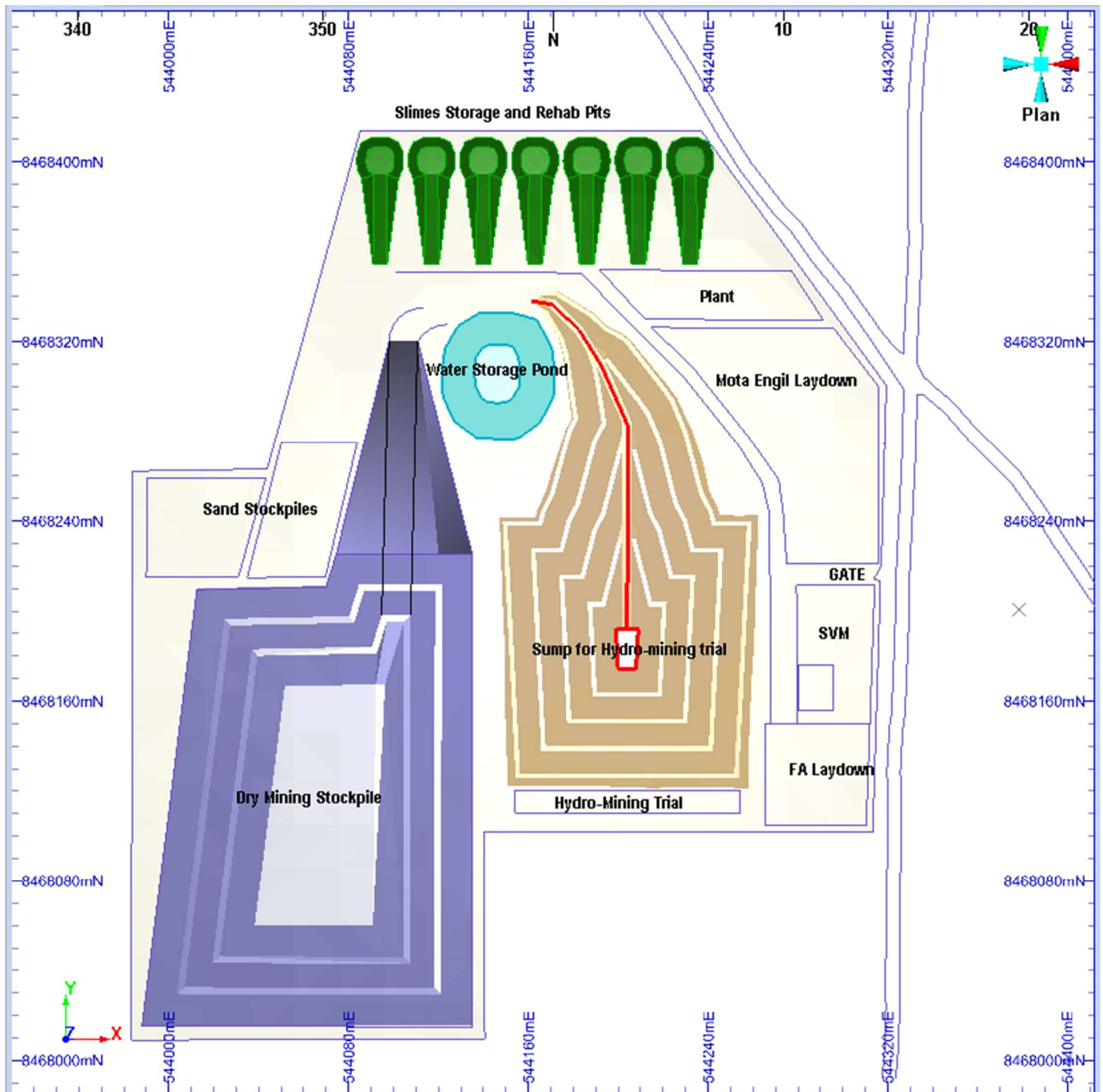


Figure 2: Site layout

Permitting

Permissions for the Pilot Phase were received following the successful submission of an Environmental and Social Management Plan to MEPA. Sovereign is committed to the responsible development of Kasiya. The Pilot Phase will be undertaken in accordance with Malawian Law and IFC Performance Standards, which will include protecting local communities and the natural environment.

ENQUIRIES

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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 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.

The information in this announcement that relates to Production Targets, Ore Reserves, Processing, Infrastructure and Capital Operating Costs, Metallurgy (rutile and graphite) is extracted from an announcement dated 28 September 2023 entitled 'Kasiya Pre-Feasibility Study Results' which is available to view at www.sovereignmetals.com.au. 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 and technical parameters underpinning the Production Target, and related forecast financial information derived from the Production Target 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 presentation have not been materially modified from the Announcement.

The information in this announcement that relates to the Exploration Results is extracted from an announcement dated 1 February 2024 entitled 'Extensions to Rutile & Graphite Mineralisation at Kasiya' which is available to view at www.sovereignmetals.com.au. 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 report have not been materially changed from the announcement.

| Ore Reserve for the Kasiya Deposit | | | | | | |
|------------------------------------|-------------|------------------|-----------------------|--------------------------|-------------------------|-------------------|
| Classification | Tonnes (Mt) | Rutile Grade (%) | Contained Rutile (Mt) | Graphite Grade (TGC) (%) | Contained Graphite (Mt) | RutEq. Grade* (%) |
| Proved | - | - | - | - | - | - |
| Probable | 538 | 1.03% | 5.5 | 1.66% | 8.9 | 2.00% |
| Total | 538 | 1.03% | 5.5 | 1.66% | 8.9 | 2.00% |

* RutEq. Formula: Rutile Grade x Recovery (100%) x Rutile Price (US\$1,484/t) + Graphite Grade x Recovery (67.5%) x Graphite Price (US\$1,290/t) / Rutile Price (US\$1,484/t). All assumptions are from the Kasiya PFS ** Any minor summation inconsistencies are due to rounding

| 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 |
| Total | 1,809 | 1.0% | 17.9 | 1.4% | 24.4 |

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.

Authorisation Statement

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