

16 January 2020

# MAJOR NEW RUTILE SOIL ANOMALY IDENTIFIED

Sovereign Metals Limited ("**the Company**" or "**Sovereign**") is pleased to announce that it has identified a major new soil anomaly over ~2.4km in width with observed rutile significantly higher than any previous anomaly identified.

Substantial shallow hand-auger and deeper (10m-30m) air-core drilling was completed in late 2019 and early 2020 on four priority prospects, with a significant number of results near completion and expected to be announced progressively over the coming weeks.

### **HIGHLIGHTS**

### KASIYA RUTILE SOIL ANOMALY

- Wide and very high tenor rutile soil anomaly identified at the Kasiya Prospect with the following characteristics;
  - ~2.4km width with potential strike length currently undefined, though surface mineral assemblages and airborne magnetics suggest it could be in excess of several kilometres
  - The observed rutile content of the soil anomaly is significantly higher than any anomaly previously tested
  - Shallow hand-auger program completed over the anomaly in early 2020 with results pending

### STRONG INDICATION OF SCALE POTENTIAL

- The Kasiya anomaly is within regional proximity to the previously announced Railroad and Railroad West saprolite-hosted rutile prospects suggesting the potential for large to very large tonnages of mineralisation within a modest radius
- Shallow hand-auger drilling is ongoing on numerous near-by targets in this highly prospective area

#### **2019 DRILLING RESULTS IMMINENT**

- Significant drilling programs completed in late 2019 over three high-priority rutile prospects comprised 101 hand-auger holes for 800m and 68 deeper air-core holes for 830m
- A steady stream of drilling results from multiple sample batches across these prospects is expected to start being received shortly and will be reported to market progressively as received

Following the discovery of the new high tenor, wide soil anomaly at Kasiya, **Sovereign's Managing Director Dr Julian Stephens commented**:

"The team is really excited at the number, size and tenor of rutile prospects that continue to emerge across our large ground holding in Malawi. The Company's refined geological targeting model has met with immediate success at Kasiya and we are now confident more high-class prospects will emerge as we work through the numerous targets identified to date. We are now looking forward to the substantial batches of results from our late 2019 and early 2020 drilling programs."

#### Enquiries

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16 January 2020

### **KASIYA RUTILE SOIL ANOMALY**

Results of soil sampling in late 2019 over a new, geologically defined target at Kasila show a ~2.4km width with observed rutile significantly higher than any previous anomaly identified.

The potential strike length is currently undefined, though mapping of surface mineral assemblages and assessment of airborne magnetics signatures suggest it could be in excess of several kilometres.

This high-tenor, large soil anomaly was tested with 19 shallow hand-auger holes drilled in early 2020 with results pending. Shallow hand-auger drilling is ongoing on numerous near-by targets in this highly prospective area.

### **SCALE POTENTIAL**

The Kasiya anomaly is within regional proximity to the previously announced Railroad and Railroad West saprolite-hosted rutile prospects and suggests the potential for cumulatively large to very large tonnages of mineralisation within a small radius across a number of prospects.

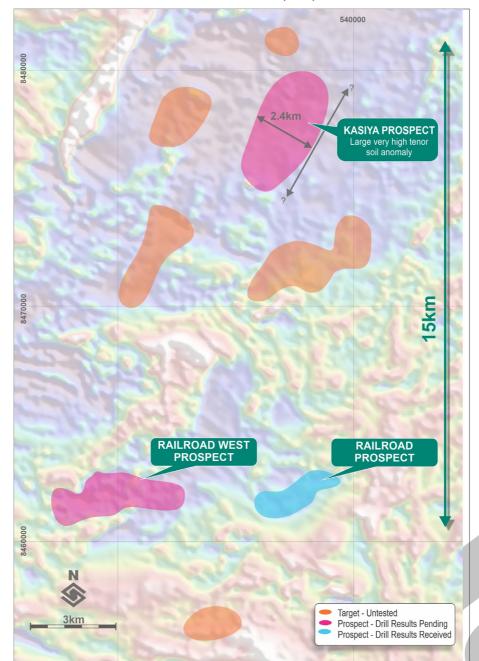


Figure 1. Map of rutile prospects and targets over airborne magnetics in the Kasiya-Railroad area



16 January 2020

### SUBSTANTIAL 2019 DRILLING RESULTS IMMINENT

A substantial number of shallow hand-auger and deeper air-core drill holes were completed in late 2019 and early 2020 with a significant number of results near completion. The programs in late 2019 over three high-priority rutile prospects comprised a total of 101 hand-auger holes for 800m and 68 deeper air-core holes for 830m. So far in 2020, 19 hand-auger holes have been completed at Kasiya.

A steady stream of drilling results from these multiple sample batches across the numerous prospects is expected to start being received shortly and will be reported to market progressively as received.

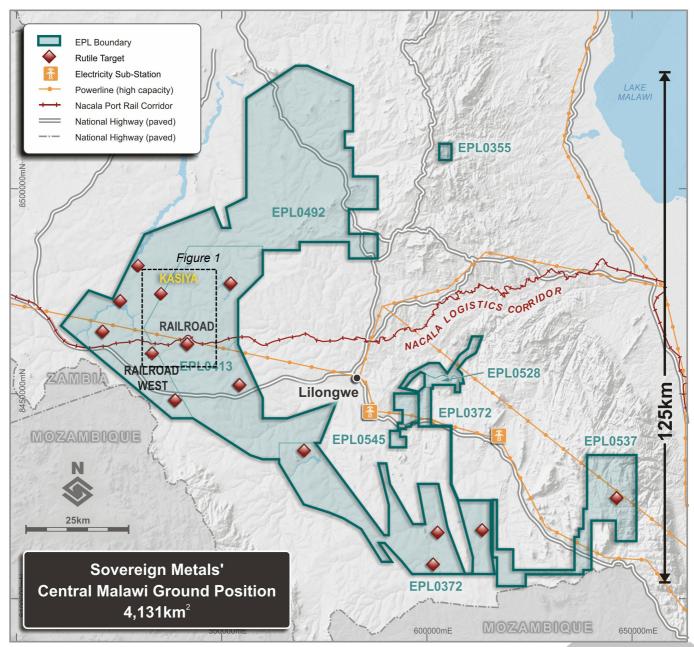
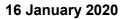


Figure 2. Project map showing the large ground package and multiple prospects



### **ONGOING WORK PROGRAM**

Sovereign's ongoing rutile work program includes;

• Ongoing laboratory processing of the large number of hand-auger and air-core drill samples from the late 2019 and very early 2020 drilling programs

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- Initial hand-auger drilling on a number of new saprolite-hosted prospects identified by the Company's ongoing soil sampling program and mapping programs
- Additional air-core drilling during the current wet season (December to March) to extend rutile mineralisation at depth and along strike on a number of prospects (subject to weather conditions allowing safe access)
- Continuation of desktop studies on mining and tailings disposal methods in advance of potential future Scoping Studies



Figure 3. Air-core drilling at Railroad Prospect in December 2019.

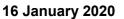






Figure 4. Malawi field operations and on-site laboratory

This ASX Announcement has been approved in accordance with the Company's published continuous disclosure policy and authorised for release by the Company's Managing Director, Dr Julian Stephens.

#### **Competent Person's Statement**

The information in this report that relates to Exploration Results is based on information compiled by Dr Julian Stephens, a Competent Person who is a member of the Australian Institute of Geoscientists (AIG). Dr Stephens is the Managing Director of Sovereign Metals Limited and a holder of ordinary shares and unlisted options in Sovereign Metals Limited. Dr Stephens has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Dr Stephens consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

#### 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.



16 January 2020



## Appendix 1: JORC Code, 2012 Edition – Table 1

## SECTION 1 - SAMPLING TECHNIQUES AND DATA

Criteria	JORC Code explanation	Soil Sampling 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 down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. 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.	Six soil samples were taken at notionally 400m spacing across the area previously mapped as exhibiting favourable surface mineralogy and geophysical features. ~2 kg of raw material was collected between 20-40cm below surface targeting the B-horizon. Raw samples were analysed by hand-held XRF with all results recorded to the Company's geological database. The selected samples were passed through a standard Jones 50:50 riffle splitter for retention of a library sample of approximately 1.0kg mass and generation of a main sample of 1.0kg. The main sample and library samples are considered representative for this style of rutile mineralisation. Mineralogical information and chemical data obtained from handheld XRF were used to determine samples for rutile processing.
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).	No drilling is reported.
Drill Sample Recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	No drilling is reported.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	No drilling is reported.
	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.	No drilling is reported.
Logging	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.	A brief field description was recorded including colour, density, moisture, soil type, mineralogy and depth.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	Logging is generally qualitative.
	The total length and percentage of the relevant intersection logged	100% of samples are geologically logged.
Sub- sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.	Not applicable – No core drilling completed.
	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	The samples were passed through a standard Jones 50:50 riffle splitter for generation of a 1kg sample for rutile processing. The remaining sample was retained for potential future processing. All samples were recorded as dry.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Use of the Jones splitter is deemed appropriate given the generally dry nature of the soil samples.

# 16 January 2020



Criteria	JORC Code explanation	Soil Sampling Commentary
	Quality control procedures adopted for all sub- sampling stages to maximise representivity of samples.	The splitter was cleaned after each sample.
	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.	Duplicate samples have not been taken at this early stage of exploration.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	The sample size is considered appropriate for the material sampled.
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	<ul> <li>The Malawi onsite laboratory results are considered to be semi-quantitative only and not suitable for reporting quantitative rutile grades.</li> <li>The following workflow for the samples was undertaken on-site;</li> <li>Dry sample in oven for 1 hour at 105°C</li> <li>Soak in water and lightly agitate</li> <li>Wet screen at 5mm, 600mm and 45µm to remove oversize and slimes material</li> <li>Dry +5mm, +600m and +45µm fractions in oven for 1 hour at 105°C</li> <li>Pass 45µm -600mm fraction across wet table twice to generate a heavy mineral concentrate (HMC)</li> <li>Dry all fractions in oven for 1 hour at 105°C</li> <li>Multi stage manual magnetic separation to produce a non-magnetic and magnetic fraction</li> <li>XRF analysis of the non-magnetic fraction by a portable hand-held instrument</li> <li>Weights are recorded at each stage.</li> </ul>
	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. Nature of quality control procedures adopted (e.g. standards, blanks, duplicate, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	Acceptable levels of accuracy and precision have been established to consider the results semi-quantitative. A Thermo Fisher Niton™ XL3t XRF Analyzer calibrated specifically to the site material is used. Internal standards are used. The overall quality of QA/QC is considered to be good.
Verification of sampling & assaying	The verification of significant intersections by either independent or alternative company personnel.	Significant rutile results were verified by alternative company personnel.
	The use of twinned holes.	No drilling is reported and no duplicate soil samples were taken.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	All data was collected initially on paper logging sheets and codified to the Company's templates. This data was hand entered to spreadsheets and validated by Company geologists. This data was then imported to a Microsoft Access Database then validated automatically and manually.
	Discuss any adjustment to assay data.	No assay adjustment has occurred.
Location of data points	Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.	A Garmin 64s hand held GPS was used to locate and record all of the soil locations.
	Specification of the grid system used.	WGS84 UTM Zone 36 South.
	Quality and adequacy of topographic control.	A hand-held GPS Device was considered adequate for the program.
Data spacing & distribution	Data spacing for reporting of Exploration Results. Whether the data spacing and distribution is sufficient to establish the degree of geological	Soils were collected on a notional 400m spacing. Not applicable, no Mineral Resource or Ore Reserve estimations are covered by new data in this report.
	and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	
	Whether sample compositing has been applied.	No sample compositing has been applied.





### 16 January 2020

Criteria	JORC Code explanation	Soil Sampling Commentary
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known considering the deposit type	No bias attributable to orientation of sampling has been identified.
	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.	No drilling is reported. Airborne magnetics indicate the soil line appears to be near-orthogonal to regional strike.
Sample security	The measures taken to ensure sample security	Samples were stored in secure storage from the time of collection, through to gathering for processing.
Audits or reviews	The results of any audits or reviews of sampling techniques and data	It is considered by the Company that industry best practice methods have been employed at all stages of the exploration.

### **SECTION 2 - REPORTING OF EXPLORATION RESULTS**

Criteria	Explanation	Commentary
Mineral tenement & 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 environment settings.	The Company owns 100% of 7 Exclusive Prospecting Licences (EPLs) in Malawi. EPL0355 renewed in 2019 for 2 years, EPL0372 renewed in 2018 for 2 years and EPL0413 renewed in 2019 for 2 years. EPL0492 and EPL0528 were granted in 2018 for an initial period of three years (renewable). EPL0537 and EPL0545 were granted in 2019 for an initial period of three years (renewable).
	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.	The tenements are in good standing and no known impediments to exploration or mining exist.
Exploration done by other parties	Acknowledgement and appraisal of exploration by other parties.	No other parties were involved in exploration.
Geology	Deposit type, geological setting and style of mineralisation	The rutile deposit type could be termed a residual placer formed by the intense weathering of rutile-rich basement paragneisses. Rutile occurs in a mostly topographically flat area west of Malawi's capital known as the Lilongwe Plain where a deep tropical weathering profile is preserved. A typical profile from top to base is generally soil ("SOIL" 0-1m) ferruginous pedolith ("FERP", 1-4m), mottled zone ("MOTT", 4-7m), pallid saprolite ("PSAP", 7-9m), saprolite ("SAPR", 25-35m) and fresh rock ("FRESH" >35m).
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 northings 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; and hole length	No drilling is reported. Soil observations are considered indicative and semi-quantitative only, and hence individual results are not reported.
	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 of the report, the Competent Person should clearly explain why this is the case	The actual results are excluded because they are semi-quantitative only.

# 16 January 2020



Criteria	Explanation	Commentary
Data aggregation methods	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.	No averages or cut-offs were applied.
	Where aggregate intercepts incorporate short lengths of high- grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.	No drilling is reported.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalents are applied
Relationship between mineralisation widths &	These relationships are particularly important in the reporting of Exploration Results.	Airborne magnetics indicate the soil line appears to be near-orthogonal to regional strike.
intercept lengths	If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.	The exact geometry of the mineralisation is unknown at this stage.
	If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known'.	No drilling is reported hence this is not applicable.
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of the drill collar locations and appropriate sectional views.	Refer to figures in the body of this report.
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high-grades and/or widths should be practiced to avoid misleading reporting of exploration results.	The soil observations are semi-quantitative and used internally for drill-hole targeting hence grades as such are not reported.
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to: geological observations; geophysical survey results; geochemical survey results; bulk samples - size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	No additional exploration data is available at this stage.
Further work	The nature and scale of planned further work (e.g. test for lateral extensions or depth extensions or large-scale step-out drilling).	Sovereign's ongoing rutile work program includes; Ongoing laboratory processing of the large number of hand-auger and air-core drill samples from the late 2019 and very early 2020 drilling programs. Initial hand-auger drilling on a number of new saprolite-hosted prospects identified by the Company's ongoing soil sampling program and mapping programs. Additional air-core drilling during the current wet season (December to March) to extend rutile mineralisation at depth and along strike on a number of prospects (subject to
		weather conditions allowing safe access). Continuation of desktop studies on mining and tailings disposal methods in advance of potential future Scoping Studies.





## 16 January 2020

Criteria	Explanation	Commentary
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Refer to diagrams in the body of this report.