

## WORLD CLASS OPPORTUNITY

LOWEST OPERATING COST COARSE FLAKE GRAPHITE PROJECT GLOBALLY



**FEBRUARY 2019** 



### **SOVEREIGN METALS:** INVESTMENT HIGHLIGHTS

#### **ONE OF A KIND**

HIGH GRADE, SOFT, FREE-DIG SAPROLITE DEPOSIT

### **LOW COST**

AN EXCEPTIONALLY LOW COST, COARSE FLAKE GRAPHITE PROJECT

### **HIGH QUALITY CONCENTRATES**

OPEN TO TRADITIONAL REFRACTORY AND EMERGING LI-ION SECTORS

#### SUBSTANTIAL UPSIDE

HUGE SCALABILITY AND EXPANSION OPPORTUNITIES

#### **RUTILE POTENTIAL**

HIGH-GRADE, BROAD & WIDESPREAD RUTILE DEMONSTRATED

#### **POTENTIAL FOR A SIMPLE & HIGHLY PROFITABLE FLAKE GRAPHITE OPERATION**

MALINGUNDE SOFT SAPROLITE-HOSTED DEPOSIT TO DELIVER VERY LOW COST PRODUCTION, WITH HIGH VALUE CONCENTRATES.

#### - OPERATING COST -BOTTOM OF THE COST CURVE

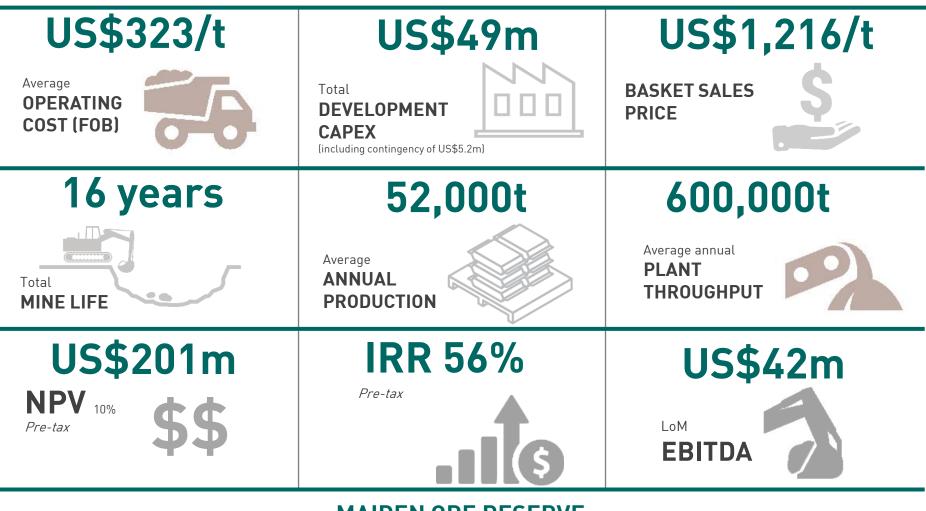
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# EXISTING MARKETS + BATTERY SUPPLY CHAIN





#### **PFS CONFIRMS EXTREMELY ROBUST PROJECT**

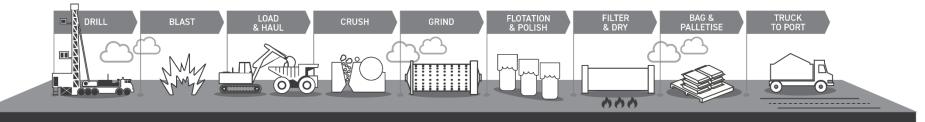


MAIDEN ORE RESERVE 9.5Mt at 9.5% TGC (32% PROVED & 68% PROBABLE)

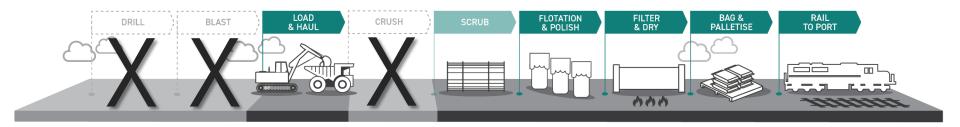
#### **SAPROLITE ADVANTAGE:** VERY SIMPLE OPERATIONS WITH SIGNIFICANT OPERATING COST ADVANTAGES VERSUS HARD ROCK PEERS

FREE DIG, NO DRILL & BLAST, NO PRIMARY CRUSH OR GRIND REQUIRED

#### Peers – Hard rock material



#### Sovereign – Soft saprolite (clay) material

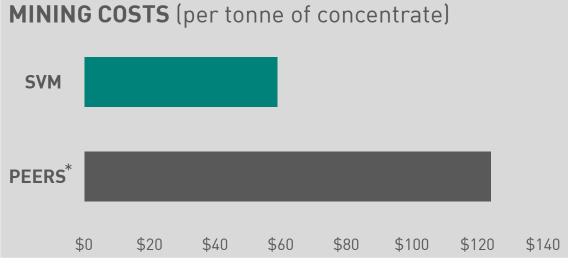


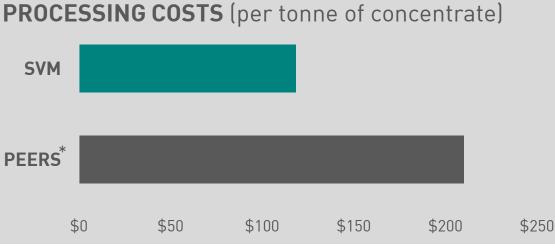
SAPROLITE + HIGH GRADE + COARSE FLAKE = LOW COST & HIGH REVENUE



### **OPERATING COSTS:** AT THE BOTTOM OF THE CURVE

#### MASSIVE OPERATIONAL ADVANTAGE OVER HARD ROCK PEERS.





- ✓ Free-dig (no drill and blast)
- ✓ Near surface
- ✓ Low strip ratio 1:1
- Conventional truck and shovel operation
- ✓ Simple process
- ✓ High grade
- ✓ Soft, friable material with no primary crush or grind
- ✓ Grid power from 2024



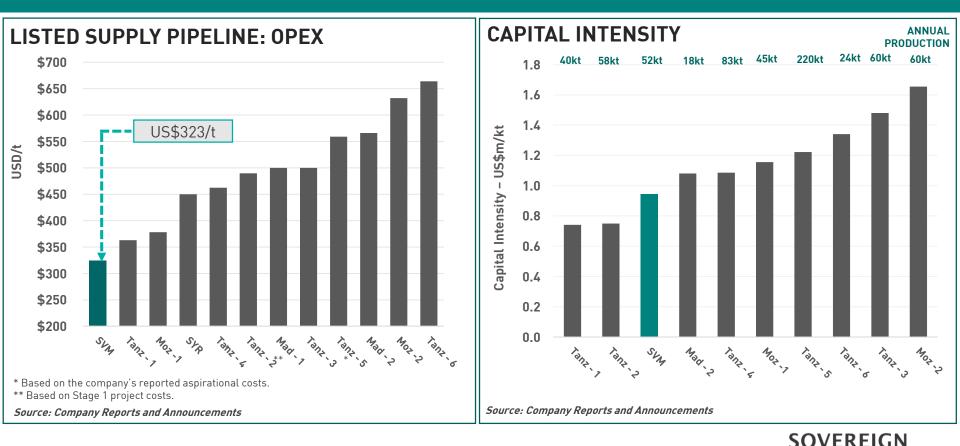
\*Peers - based on average costs disclosed by other ASX listed graphite companies.

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### LOW COSTS: AT THE BOTTOM OF THE CURVE

MALINGUNDE HAS THE **LOWEST ESTIMATED UNIT OPERATING COST** OF THE CURRENT AND FUTURE LISTED GRAPHITE DEVELOPMENT PIPELINE.

CAPITAL COSTS ARE AT THE LOW END OF THE FUTURE SUPPLY PIPELINE IN TERMS OF BOTH ABSOLUTE CAPITAL AND CAPITAL INTENSITY.



#### **LOGISTICS:** ACCESS TO OPERATING RAIL PROVIDES MATERIAL TRANSPORT COST ADVANTAGE

- Operating rail = low transport costs; below or comparable to regional peers utilising trucks.
- Transport MoU signed with Vale & Mitsui. Drafting of formal agreement in progress.
- Rail delivers product directly to the deep water port at Nacala.



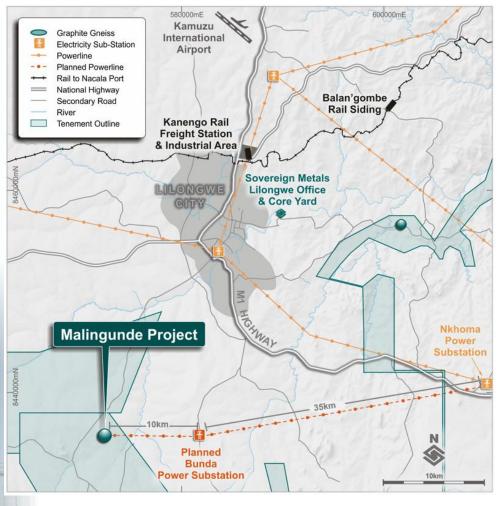


### MALAWI: MINING FRIENDLY JURISDICTION

## A STABLE, TRANSPARENT JURISDICTION, INCREASINGLY ATTRACTING INTERNATIONAL INVESTMENT.

#### **EXCELLENT EXISTING INFRASTRUCTURE**

- ✓ Grid power from 2024.
- ✓ Established Rail
- ✓ Road network.
- ✓ Established labour pool and other industrial services.





Recently commissioned (on time and budget) Nkhoma power substation

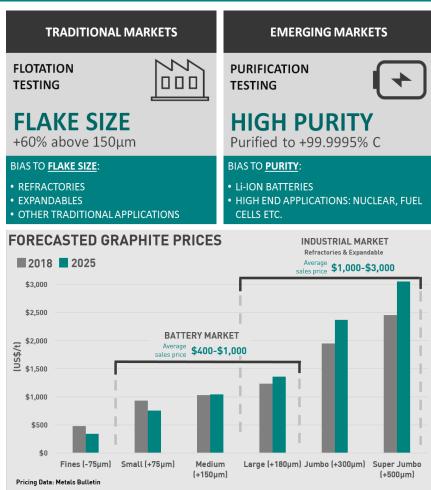
# **MARKETING STRATEGY:** SOVEREIGN HAS THE ABILITY TO SELL INTO MULTIPLE MARKET SECTORS

## TARGETING SALES INTO EXISTING TRADITIONAL MARKETS AND EMERGING LI-ION BATTERY MARKETS.

- Premium quality product with ~60%
  +150µm, 96-98% TGC commanding high revenues.
- Realistic basket pricing assumption of US\$1,216 per tonne of concentrate.

MALINGUNDE FLOTATION RESULTS – PFS INPUTS					
PARTICLE SIZE		C (9/)	Distribution	Elaka Catagory	
Tyler Mesh	(µm)	C (%)	(wt. %)	Flake Category	
+32	+500	98%	5%	Super Jumbo	
-32 +48	-500 +297	97%	19%	Jumbo	
-48 +80	-297 +177	97%	26%	Large	
-80 +100	-177 +149	97%	9%	Medium	
-100 +200	-149 +74	97%	25%	Small	
-200	-74	94%	16%	Amorphous	
TOTAL		<b>97</b> %	100%		

Well advanced discussions with Tier 1 and quality offtake parties across a number of industrial sectors and global locations.



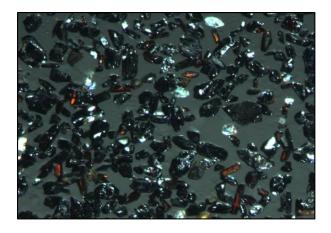
# **RUTILE POTENTIAL:** BROAD & WIDESPREAD RUTILE POTENTIAL

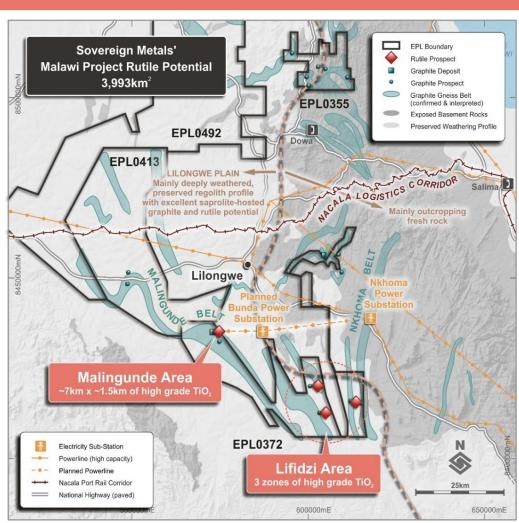
## HIGH-GRADE TiO<sub>2</sub> AS RUTILE IDENTIFIED OVER LARGE AREAS WITHIN SOVEREIGN'S GROUND HOLDINGS

Natural rutile is a highly sought after, high grade titanium feed source.

- Current sales price ~US\$1,000/t
- Long term pricing of US\$1,250/t\*

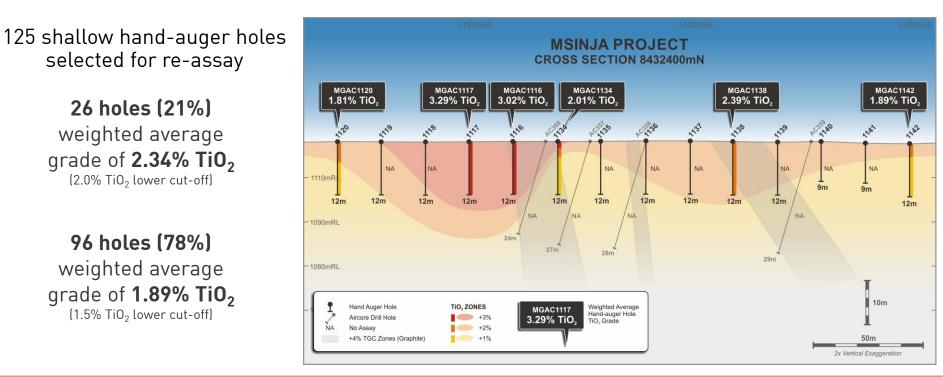
Sovereign has recovered rutile from soft saprolite into concentrates using a standard mineral sands processing flowsheet





### **RUTILE POTENTIAL:** HIGHLY ENRICHED NEAR SURFACE

- Rutile occurs in soft, free-dig saprolite down to at least 12m and is particularly enriched in the upper 2-3m of the weathering profile.
- Rutile mineralisation shows no discernible relationship to graphite.



Additional mineralogical and metallurgical test-work and further exploration is underway to test the regional rutile potential



### **NEXT STEPS:** RAPID PATHWAY TO PRODUCTION

## **GRAPHITE**: ACCELERATED PROJECT DEVELOPMENT BASED ON EXCEPTIONAL PFS OUTCOMES:

- Commenced definitive feasibility study (DFS).
- Pilot plant to start in coming weeks for product marketing and qualification.
- Development of product sales agreements.
- Permitting process now commenced environmental, social & mining license.
- Community development agreement consultation to commence shortly.
- Project finance.

## **RUTILE**: FURTHER EXPLORATION AND METALLURGICAL STUDIES TO ADVANCE THIS PROPOSITION

- Detailed mineralogical and metallurgical test-work.
- Regional work program to further assess the scale, grade and rutile recoverability across the substantial
- <sup>12</sup> landholding.

### MALINGUNDE: WORLD CLASS OPPORTUNITIES



US\$49m Total DEVELOPMENT CAPEX 52kt Average ANNUAL PRODUCTION

16	yea	rs
Total		_
MINE L	IFE	~~~

US\$201m

Pre-tax **NPV** 

### GRAPHITE

#### TECHNICAL

- ✓ World's largest, soft saprolite graphite resource
- ✓ High-grade, low strip ratio
- No requirement for drill & blast
- No requirement for crush or primary grind
- ✓ Marketable production volume

#### FINANCIAL

- Best in class opex strong cash generation
- ✓ Low capex
- ✓ Access to low cost infrastructure
- Ability to enter existing & future markets
- Low capex will facilitate ease of funding

#### RUTILE

#### **TECHNICAL & MARKET**

- ✓ Huge potential
- ✓ High-grade
- ✓ Near surface
- Strong market fundamentals



## APPENDICES

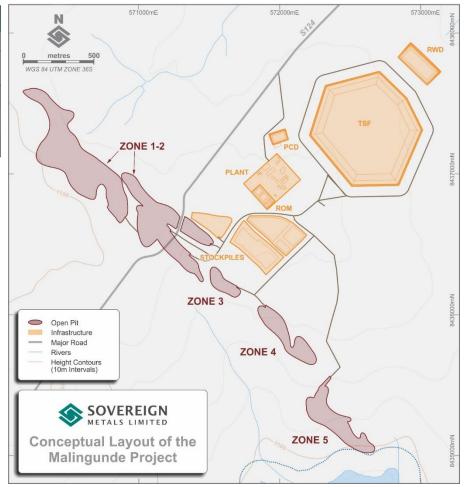


#### **MAIDEN ORE RESERVE**

## HIGH GRADE RESERVE WITH 32% IN THE PROVED AND 68% IN THE PROBABLE CATEGORY. PFS BASED 100% ON RESERVES.

MALINGUNDE ORE RESERVE							
	Pro	ved	Prob	able	Total		
	Tonnes (Mt)	Grade (% C)	Tonnes Grade (Mt) (% C)		Tonnes Grad (Mt) (% C		
Saprolite	3.1	9.5%	5.3	8.9%	8.4	9.1%	
Saprock	-	-	1.2	12.3%	1.2	12.3%	
Total	3.1	9.5%	6.4	9.5%	9.5	9.5%	

- Saprolite is the very soft, graphitebearing, clay-rich oxide material that is formed from intense weathering of the original bedrock.
- Significant opportunity to increase the mine life beyond 16 years by the processing of lower grade or discovery of additional high-grade resources.
- Ore Reserve only ~21% of total saprolite + saprock Mineral Resource (refer to Appendices).



METALS LIMITED

#### **MINERAL RESOURCE ESTIMATE – JUNE 2018**

Malingunde is the world's largest reported saprolite-hosted graphite resource.

MALINGUNDE MINERAL RESOURCE ESTIMATE 4.0% cut-off grade								
	Meas	sured	Indicated		Inferred		Total	
	Tonnes (Mt)	Grade (% C)			Grade (% C)	Tonnes (Mt)	Grade (% C)	
Saprolite	4.8	8.5%	18.7	7.1%	5.4	6.3%	28.8	7.2%
Saprock	-	-	13.6	7.4%	3.3	6.3%	16.9	7.2%
Total	4.8	8.5%	32.3	7.2%	8.6	6.3%	45.7	7.2%
Fresh rock	-	-	-	-	19.3	7.3%	19.3	7.3%
Total resource	4.8	8.5%	32.3	7.2%	27.9	7.0%	65.0	7.2%

MALINGUNDE MINERAL RESOURCE ESTIMATE 7.5% cut-off arade								
	Meas	sured	Indicated		Inferred		Total	
	Tonnes (Mt)	Grade (% C)						
Saprolite	2.7	10.0%	5.4	9.6%	1.1	9.0%	9.2	9.7%
Saprock	-	-	4.7	10.0%	0.6	9.1%	5.3	9.9%
Total	2.7	10.0%	10.1	9.8%	1.7	9.0%	14.5	9.7%
Fresh rock	-	-	-	-	6.5	9.9%	6.5	9.9%
Total resource	2.7	10.0%	10.1	9.8%	8.3	9.7%	21.0	9.8%







#### **MARKET INFORMATION**

#### **OPPORTUNITY FOR MATERIAL RE-RATE:** DELIVERY OF WORLD CLASS PFS & RUTILE POTENTIAL WITH A CLEAR & SIMPLE STRATEGY.



#### **CAPITAL STRUCTURE<sup>1</sup>**

Shares on Issue <sup>1</sup>	343,496,073
Unlisted Options <sup>1</sup> (\$0.10 to \$0.18)	43,325,000
Un-Diluted Market Capitalisation @A\$0.079 <sup>1</sup>	A\$27.4 m
Cash <sup>1,2</sup>	~A\$5.4 m

 Share on issue, unlisted options, market capitalisation and cash all updated to represent the placement announced 1 February 2019 (excluding the Share Purchase Plan).

2. Cash is calculated based on the 31 December 2018 closing balance (\$1.1) plus the gross placement (\$4.3m).



# MANAGEMENT TEAM WITH A PROVEN TRACK RECORD OF SUCCESS

## RAISED OVER \$1 BILLION TO FUND NATURAL RESOURCE PROJECTS, INCLUDING TWO PROJECTS CURRENTLY IN CONSTRUCTION.

IAN MIDDLEMAS Chairman	Mr Middlemas was a Senior Group Executive for Normandy Mining for more than ten years, which was Australia's largest gold miner before merging with Newmont Mining. He is currently Chairman of Salt Lake Potash, Berkeley Energia, Paringa Resources, Prairie Mining & a number of other listed resource companies. Mr Middlemas was also previously Chairman of Papillon Resources Limited and Mantra Resources Limited.					
JULIAN STEPHENS Managing Director	Dr Stephens is a Geologist with over 20 years experience in mineral exploration across many commodity types, and has spent 10 years working on minerals projects in Malawi.					
	Julian identified, secured and led the team that discovered the Malawi Flake Graphite Project. an					
<b>SAM CORDIN</b> <i>Business Development</i> <i>Manager</i>	Mr Cordin is an experienced Chartered Accountant who commenced his career at a large international accounting firm and has since been involved with a number of ASX and AIM listed exploration and development companies operating in the resources sector, including most recently Salt Lake Potash Limited.					
<b>ANDRIES KRUGER</b> <i>Country Manager</i>	Mr Kruger is a Geologist with over 20 years experience in mineral exploration. Mr Kruger has spent 10 years working on major Malawian minerals projects for ASX listed companies, directing all in-country activities relating to project development.					

#### **DISCLAIMERS & DISCLOSURES.**

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#### COMPETENT PERSONS STATEMENT

The information in this presentation that relates to Production Targets and Ore Reserves is extracted from an announcement dated 7 November 2018. This announcement is available to view on www.sovereignmetals.com.au. The information in the original ASX Announcements that related to Production Targets and Ore Reserves is based on and fairly represent information provided by Mr Ryan Locke, a Competent Person, who is a Member of The Australasian Institute of Mining and Metallurgy. Mr Locke is employed by Orelogy Group Pty Ltd, an independent consulting company. Mr Locke has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration, and to the activity he is undertaking, 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'. The Company confirms that it is not aware of any new information or data that materially affects the information including in the original market announcements. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.

The information in this presentation that relates to Processing, Infrastructure and Capital and Operating Costs is extracted from an announcement dated 7 November 2018. This announcement is available to view on www.sovereignmetals.com.au. The information in the original ASX Announcements that related to Processing, Infrastructure and Capital and Operating Costs are based on and fairly represent information compiled or reviewed by Mr Matthew Langridge, a Competent Person, who is a Fellow Member of The Australasian Institute of Mining and Metallurgy. Mr Langridge is employed by Minnovo Pty Ltd, an independent consulting company. Mr Langridge has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activities undertaken. The Company confirms that it is not aware of any new information or data that materially affects the information including in the original market announcements. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.

The information in this presentation that relates to Metallurgical Testwork Results (Graphite) is extracted from an announcement dated 7 November 2018. This announcement is available to view on www.sovereignmetals.com.au. The information in the original ASX Announcements that related to Metallurgical Testwork Results was based on, and fairly represents, information compiled by Mr Oliver Peters, M.Sc., P.Eng., MBA, who is a Member of the Professional Engineers of Ontario ('PEO'), a 'Recognised Professional Organisation' ('RPO'). Mr Peters is a consultant of SGS Canada Inc. ('SGS'). SGS is engaged as a consultant by Sovereign Metals Limited. Mr Peters has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking, 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'. The Company confirms that it is not aware of any new information or data that materially affects the information including in the original market announcements. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.

The information in this presentation that relates to Metallurgical Testwork Results (Rutile) is extracted from an announcement dated 14 August 2018. This announcement is available to view on www.sovereignmetals.com.au. The information in the original ASX Announcements that related to Metallurgical Testwork Results was based on, and fairly represents, information compiled by compiled by Mr Gavin Diener, a Competent Person who is a member of the AusIMM. Mr Diener is the Chief Operating Officer of TZMI, an independent mineral sands consulting company and is not a holder of any equity type in Sovereign Metals Limited. Mr Diener 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 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. The Company confirms that it is not aware of any new information or data that materially affects the information including in the original market announcements. The Company confirms that the presented have not been materially modified from the original market announcements.

The information in this presentation that relates to Mineral Resources is extracted from an announcement dated 12 June 2018. This announcement is available to view on www.sovereignmetals.com.au. The information in the original ASX Announcement that related to Mineral Resources was based on, and fairly represents, information compiled by Mr David Williams, a Competent Person, who is a Member of The Australasian Institute of Mining and Metallurgy. Mr Williams is employed by CSA Global Pty Ltd, an independent consulting company. Mr Williams has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration, and to the activity he is undertaking, to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources, that all materially affects the information included in the original market announcement and, in the case of estimates of Mineral Resources, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement.

The information in this presentation that relates to Malingunde graphite Exploration Results and rutile Exploration Results is extracted from announcements on 29 August 2016, 12 October 2016, 26 November 2016, 18 January 2017, 21 February 2017, 15 March 2017, 17 January 2018, 18 February 2018, 19 March 2018, 3 April 2018 and 24 January 2019. These announcements are available to view on www.sovereignmetals.com.au. The information in the original announcements that related to Exploration Results were based on, and fairly represents, information compiled by Dr Julian Stephens, a Competent Person who is a member of the Australasian Institute of Geoscientists (AIG). Dr Stephens is the Managing Director of Sovereign Metals Limited and a holder of shares, options and performance rights 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 Reserves'. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.



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