



## SEPTEMBER 2018 QUARTERLY REPORT

Sovereign Metals Limited (“the Company” or “Sovereign”) is pleased to present its quarterly report for the period ended 30 September 2018. The Company is focused on the **world-class Malingunde Saprolite Hosted Graphite Project in Malawi**.

### HIGHLIGHTS:

#### ***Finalisation of Pre-feasibility Study at Malingunde.***

- During the quarter the Company was engaged in the final phases of the pre-feasibility study (“PFS”) for Malingunde and expects to be in a position to announce the results in early to mid-November.
- The PFS builds on the outstanding results delivered in the 2017 Scoping Study and has been completed to a high technical standard based on well-validated inputs and low costs utilising the saprolite advantage.

#### ***Bulk Sample Drilling for Pilot Program***

- Bulk drilling program completed: 100 tonnes of ore extracted to be used for a pilot plant program to produce bulk graphite concentrates and for further validation of the flowsheet at scale.
- The Company is actively engaged in offtake discussions with a number of Tier 1 potential offtake partners. The pilot program has been driven by significant demand from these organisations as they seek greater quantities of product for continuation and upscaling of testing and qualification.

#### ***High Grade Rutile Recovered from Graphite Tailings***

- The Company identified the potential to produce rutile as a valuable co-product from the graphite tailings via a simple process flowsheet using traditional flotation for graphite and typical mineral sands separation methods for rutile.
- Rutile (TiO<sub>2</sub> 95%-97%) and leucoxene (TiO<sub>2</sub> 70%-92%) are high-value, premium natural titanium products normally produced from heavy mineral sands deposits which are commonly consumed in the pigment industry (paint, paper, cosmetics, plastics).

#### ***99.9995% purity graphite confirms suitability for multiple downstream applications***

- Sovereign demonstrated the ability to produce ultra-high purity levels of 99.9995 % C from Malingunde natural crystalline flake graphite.
- Ultra-high purity graphite is used in downstream applications such as lithium-ion batteries, aerospace, electronics and nuclear energy.

**ENQUIRIES**  
**+618 9322 6322**

***Dr Julian Stephens – Managing Director***  
***Sam Cordin – Business Development Manager***

## MALINGUNDE PFS UPDATE

Sovereign is completing the final stages of the pre-feasibility study (PFS) for the Malingunde saprolite-hosted graphite project and expects to announce the results in early to mid-November.

The PFS study examined a number of options in order to identify the optimal production scenario that meets the requirements for low upfront capital costs and very low life-of-mine operating costs whilst producing premium, coarse flake graphite products.

## BULK SAMPLE DRILLING FOR PILOT PROGRAM AT MALINGUNDE

The bulk drilling program was completed in September 2018 extracting over 100 tonnes of representative soft saprolite graphite ore from Malingunde.

The Company has shipped ~40 tonnes of the material to SGS Lakefield in Canada for production of high-quality flake graphite concentrates at a pilot plant scale. The pilot plant program is based on Malingunde's simple and robust process flowsheet that requires no primary crush or grind and no chemical or heat purification to produce high-quality graphite concentrates with over 60% greater than 150µm in size. The test-work will also serve to further validate the flowsheet for detailed plant design in the upcoming DFS.



*Figure 1. Bulk spiral auger drilling and sampling of the soft, saprolite ore at Malingunde*

The Company has engaged with a diverse range of potential off-takers across a number of industrial sectors and global locations. To date, concentrate samples have been provided to a significant number of potential partners for assessment. Larger quantities of sample are now being requested by a number of these groups in order to validate and qualify Sovereign's flake graphite concentrates for their particular requirements.

Industry participants confirm that the highest value graphite concentrates remain the large, jumbo and super-jumbo flake fractions, primarily used in industrial applications such as refractories, foundries and expandable products. These sectors currently make up the significant majority of total global natural flake graphite market by value.

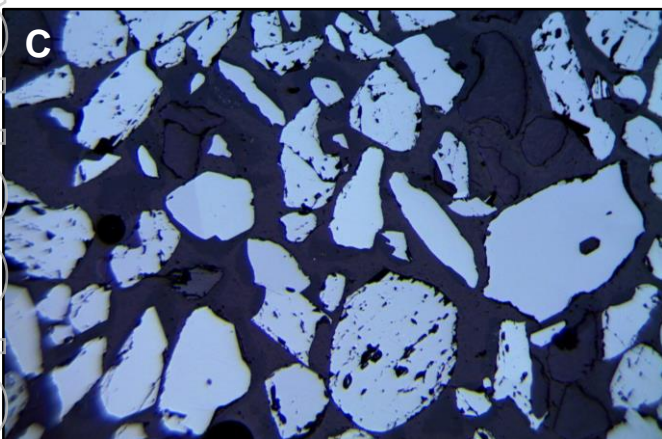
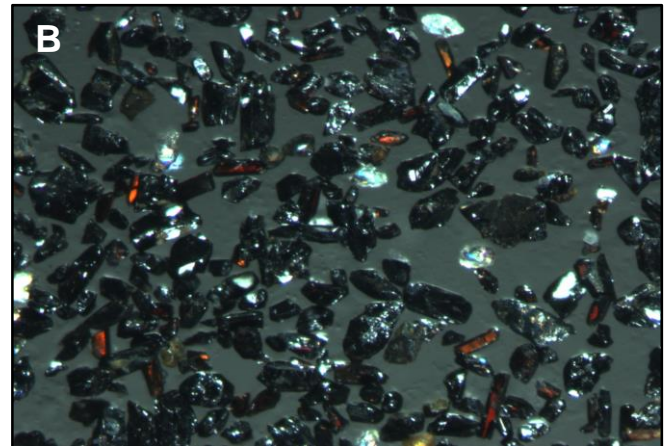
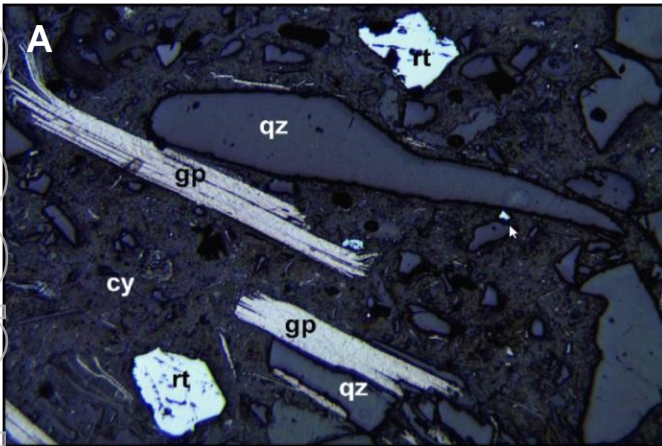
The Malingunde Project's bias to large, jumbo and super-jumbo flake concentrates has resulted in the Company receiving significant interest from potential purchasers of these high-value graphite products. Sovereign is pursuing credible sales agreements with these respected organisations to support the project's development.



**HIGH GRADE RUTILE RECOVERED FROM GRAPHITE TAILINGS**

During recent chemical analyses of bulk graphite metallurgical samples for flotation test-work from Malingunde it was noted that TiO<sub>2</sub> levels were significantly elevated. It was hypothesised that the elevated TiO<sub>2</sub> may be due to the presence of rutile and/or leucoxene, as the Company had previously identified rutile within its Duwi graphite deposit, some 30km to the north-east of Malingunde.

The Company undertook a program to test the hypothesis that elevated TiO<sub>2</sub> levels at Malingunde were due to the presence of rutile and /or leucoxene, and if so, whether it may be recoverable as a saleable co-product to the graphite operation.



*Figure 2(A). Coarse rutile grains in thin section of graphitic saprolite ore. Each rutile grain is approximately 100µm across. rt – rutile, cy – clay, qz – quartz, gp – graphite. Field of view is about 800µm (0.8mm) across.*

*Figure 2(B). Rutile concentrate 89.93% TiO<sub>2</sub>. Field of view is about 2,000µm (2.0mm) across.*

*Figure 2(C). Rutile concentrate showing clean and liberated, rounded to sub-rounded rutile grains. Field of view is about 1,200µm (1.2mm) across.*

The test-work program has shown that overall recovered grades of TiO<sub>2</sub> from raw ore into rutile-leucoxene concentrates, was 0.86% (South Composite).

Concentrates produced to date from these initial sighter tests (78% to 90% TiO<sub>2</sub>) highlight the potential for the commercial production of leucoxene/rutile concentrate as a co-product produced from the graphite tailings. Further work needs to be undertaken to determine if high grade +95% TiO<sub>2</sub> rutile concentrates can be produced from the Malingunde tailings material.

Thin section petrography shows that the rutile grains are well-liberated and internally clean with only rare inclusions. Gangue minerals observed in the concentrate included well-liberated grains of quartz, plagioclase and kyanite. These observations indicate that further, focussed metallurgical test-work would have a good chance of being able to achieve higher recoveries and TiO<sub>2</sub> grades in concentrates.

Recovery of rutile-leucoxene from Malingunde tails will be further investigated as a possible, future extension to the proposed graphite operation at Malingunde. The Company intends to undertake further studies to determine whether sufficient additional project value could be added by incorporating a small plant to recover rutile-leucoxene from the graphite tails.

**MALINGUNDE HIGH PURITY TEST WORK RESULTS**

Downstream application test work at Malingunde has produced ultra-high purity levels of 99.9995 % C from Malingunde natural crystalline flake graphite. The purification process utilises a simple high temperature process, which as a result of inherent uniqueness of the Malingunde flake graphite, requires low energy input to efficiently achieve some of the highest purity graphite in the world.

Initial weight – concentrate (g)	Final weight – ash (g)	C lost as CO <sub>2</sub> (g)	Ash (wt %)	LOI (wt %C)
20.0774	0.00010	20.0773	0.000498	<b>99.999502</b>

**Table 1. LOI950-Platinum crucible data with thermally purified graphite from Malingunde.**

The exceptionally high carbon purity and very low levels of critical impurities indicate that this material meets prerequisites for commercialization in the value-added marketplace. One of the targeted market uses of the flake is the advanced Li-ion battery sector. Standard Li-ion battery anodes are currently >99.95 %C, so Sovereign's purified material could lead to superior electrochemical performance. Another major market for ultra-high purity graphite is in nuclear science, namely for pebble bed modular reactors.

The next steps in the downstream processing test work program will focus on milling and classification of the purified flake into spheronised graphite products for Li-ion battery anodes and other high-end electrical and electrochemical applications. This will be followed by electrochemical cell testing to examine the purified, spheronised material's performance (i.e. reversible, irreversible capacity and irreversible capacity loss, etc.).

**CARPENTARIA JOINT VENTURE**

Mount Isa Mines (MIM), a Glencore Company, continues to manage and sole fund exploration on all tenements comprising the Carpentaria Joint Venture ("CJV"). Sovereign currently holds a 25.65% diluting interest in the tenements.

**CHANGE OF COMPANY SECRETARY**

Mr Lachlan Lynch has been appointed Company Secretary of the Company following the resignation of Mr Clint McGhie effective today. Mr Lynch is a Chartered Accountant, who commenced his career at a large international accounting firm and is currently a Financial Controller for the Apollo Group.

The board would like to thank Mr McGhie for his excellent service to the Company.

**Competent Person Statements**

The information in this report that relates to Exploration Results is extracted from an announcement on 14 August 2018. This announcement is available to view on [www.sovereignmetals.com.au](http://www.sovereignmetals.com.au). The information in the original announcement that related to Exploration Results was based on, and fairly represents, 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 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 Resources and Ore 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 announcement.

The information in this report that relates to Metallurgical Results is extracted from an announcement on 14 August 2018. This announcement is available to view on [www.sovereignmetals.com.au](http://www.sovereignmetals.com.au). The information in the original announcement that related to Metallurgical Results was based on, and fairly represents, information 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 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 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 announcement.

The information that relates to previous Downstream Testwork Results is extracted from an announcement on 19 July 2018. This announcement is available to view on [www.sovereignmetals.com.au](http://www.sovereignmetals.com.au). The information in the original announcement that related to Downstream Testwork Results was based on, and fairly represents, information provided to Mr Oliver Peters, M.Sc., P.Eng., MBA, who is a Member of the Professional Engineers of Ontario (PEO), a 'Recognised Professional Organisation' (RPO) included in a list promulgated by the ASX from time to time. Mr Peters is the President of Metpro Management Inc and 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 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 announcement.

**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.

## Appendix 1: Summary of mining tenements

As at 30 September 2018, the Company had an interest in the following tenements:

Project Name	Permit Number	Percentage Interest	Joint Venture Partner	Status
<b><u>Malawi</u></b>				
Central Malawi Graphite Project	EPL 0413	100%	-	Granted
	EPL 0372	100%	-	Granted
	EPL 0355	100%	-	Granted
	EPL 0492	100%	-	Granted
<b><u>Queensland, Australia:</u></b>				
Mt Marathon	EPM 8586	25.65%	Mount Isa Mines	Granted
Mt Avarice	EPM 8588	25.65%	Mount Isa Mines	Granted
Fountain Range	EPM 12561	25.65%	Mount Isa Mines	Granted
Corella River	EPM 12597	25.65%	Mount Isa Mines	Granted
Saint Andrews Extended	EPM 12180	25.65%	Mount Isa Mines	Granted

Beneficial percentage interests in Farm-out agreements disposed during the quarter ending 30 September 2018:

Project Name	Permit Number	Type of change	Interest at beginning of quarter	Interest disposed of during quarter	Interest at end of quarter
<b><u>Carpentaria JV:</u></b>					
Mt Marathon	EPM 8586	Farm out	26.05%	0.40%	25.65%
Mt Avarice	EPM 8588	Farm out	26.05%	0.40%	25.65%
Fountain Range	EPM 12561	Farm out	26.05%	0.40%	25.65%
Corella River	EPM 12597	Farm out	26.05%	0.40%	25.65%
Saint Andrews Ext.	EPM 12180	Farm out	26.05%	0.40%	25.65%



## Appendix 5B

### Mining exploration entity and oil and gas exploration entity quarterly report

Introduced 01/07/96 Origin Appendix 8 Amended 01/07/97, 01/07/98, 30/09/01, 01/06/10, 17/12/10, 01/05/13, 01/09/16

**Name of entity**

SOVEREIGN METALS LIMITED

**ABN**

71 120 833 427

**Quarter ended ("current quarter")**

30 September 2018

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (3 months) \$A'000
<b>1. Cash flows from operating activities</b>		
1.1 Receipts from customers	-	-
1.2 Payments for		
(a) exploration & evaluation	(1,478)	(1,478)
(b) development	-	-
(c) production	-	-
(d) staff costs	(177)	(177)
(e) administration and corporate costs	(259)	(259)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	19	19
1.5 Interest and other costs of finance paid	-	-
1.6 Income taxes paid	-	-
1.7 Research and development refunds	-	-
1.8 Other (provide details if material)	-	-
<b>1.9 Net cash from / (used in) operating activities</b>	<b>(1,895)</b>	<b>(1,895)</b>
<b>2. Cash flows from investing activities</b>		
2.1 Payments to acquire:		
(a) property, plant and equipment	-	-
(b) tenements (see item 10)	-	-
(c) investments	-	-
(d) other non-current assets	-	-

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<b>Consolidated statement of cash flows</b>		<b>Current quarter \$A'000</b>	<b>Year to date (3 months) \$A'000</b>
2.2	Proceeds from the disposal of:		
	(a) property, plant and equipment	-	-
	(b) tenements (see item 10)	-	-
	(c) investments	-	-
	(d) other non-current assets	-	-
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Other (provide details if material)	-	-
<b>2.6</b>	<b>Net cash from / (used in) investing activities</b>	<b>-</b>	<b>-</b>
<b>3. Cash flows from financing activities</b>			
3.1	Proceeds from issues of shares	-	-
3.2	Proceeds from issue of convertible notes	-	-
3.3	Proceeds from exercise of share options	-	-
3.4	Transaction costs related to issues of shares, convertible notes or options	-	-
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	-	-
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other (provide details if material)	-	-
<b>3.10</b>	<b>Net cash from / (used in) financing activities</b>	<b>-</b>	<b>-</b>
<b>4. Net increase / (decrease) in cash and cash equivalents for the period</b>			
4.1	Cash and cash equivalents at beginning of period	<b>3,945</b>	<b>3,945</b>
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(1,895)	(1,895)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	-	-
4.4	Net cash from / (used in) financing activities (item 3.10 above)	-	-
4.5	Effect of movement in exchange rates on cash held	-	-
<b>4.6</b>	<b>Cash and cash equivalents at end of period</b>	<b>2,050</b>	<b>2,050</b>

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## Mining exploration entity and oil and gas exploration entity quarterly report

<b>5. Reconciliation of cash and cash equivalents</b> at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	<b>Current quarter \$A'000</b>	<b>Previous quarter \$A'000</b>
5.1 Bank balances	55	49
5.2 Call deposits	1,995	3,896
5.3 Bank overdrafts	-	-
5.4 Other (provide details)	-	-
<b>5.5 Cash and cash equivalents at end of quarter (should equal item 4.6 above)</b>	<b>2,050</b>	<b>3,945</b>

<b>6. Payments to directors of the entity and their associates</b>	<b>Current quarter \$A'000</b>
6.1 Aggregate amount of payments to these parties included in item 1.2	145
6.2 Aggregate amount of cash flow from loans to these parties included in item 2.3	-
6.3 Include below any explanation necessary to understand the transactions included in items 6.1 and 6.2	

Payments include director fees and salaries, superannuation and provision of a fully serviced office.

<b>7. Payments to related entities of the entity and their associates</b>	<b>Current quarter \$A'000</b>
7.1 Aggregate amount of payments to these parties included in item 1.2	-
7.2 Aggregate amount of cash flow from loans to these parties included in item 2.3	-
7.3 Include below any explanation necessary to understand the transactions included in items 7.1 and 7.2	

Not applicable

<b>8. Financing facilities available</b> <i>Add notes as necessary for an understanding of the position</i>	<b>Total facility amount at quarter end \$A'000</b>	<b>Amount drawn at quarter end \$A'000</b>
8.1 Loan facilities	-	-
8.2 Credit standby arrangements	-	-
8.3 Other (please specify)	-	-
8.4 Include below a description of each facility above, including the lender, interest rate and whether it is secured or unsecured. If any additional facilities have been entered into or are proposed to be entered into after quarter end, include details of those facilities as well.		

Not applicable

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## Mining exploration entity and oil and gas exploration entity quarterly report

9. Estimated cash outflows for next quarter		\$A'000
9.1	Exploration and evaluation	600
9.2	Development	-
9.3	Production	-
9.4	Staff costs	110
9.5	Administration and corporate costs	160
9.6	Other (provide details if material)	-
<b>9.7</b>	<b>Total estimated cash outflows</b>	<b>870</b>

10.	Changes in tenements (items 2.1(b) and 2.2(b) above)	Tenement reference and location	Nature of interest	Interest at beginning of quarter	Interest at end of quarter
10.1	Interests in mining tenements and petroleum tenements lapsed, relinquished or reduced	EPM 8586 EPM 8588 EPM 12561 EPM 12597 EPM 12180	Reduction of interest in accordance with terms of joint venture agreement.	26.05%	25.65%
10.2	Interests in mining tenements and petroleum tenements acquired or increased				

**Compliance statement**

- This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- This statement gives a true and fair view of the matters disclosed.

*[lodged electronically without signature]*

Sign here: .....  
(Company secretary)

Date: 31 October 2018

Print name: Lachlan Lynch.....

**Notes**

- The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity that wishes to disclose additional information is encouraged to do so, in a note or notes included in or attached to this report.
- If this quarterly report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, AASB 6: Exploration for and Evaluation of Mineral Resources and AASB 107: Statement of Cash Flows apply to this report. If this quarterly report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.
- Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.

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