

PREMIUM NATURAL FLAKE GRAPHITE FROM MALAWI

A WORLD-CLASS GRAPHITE OPPORTUNITY

> AFRICA DOWNUNDER SEPTEMBER 2016



MALAWI FLAKE GRAPHITE OPPORTUNITY.

- Very strong outlook driven by Li-ion battery demand for electric/hybrid vehicles, & traditional uses for expanded graphite foils (gaskets, fuel pumps, automotive etc). New battery technologies are transforming demand for natural flake graphite.
- The Malawi Flake Graphite Project is located in the heart of the East African Graphite Province which is renowned for producing the world's best quality flake graphite concentrates.
- Access to enviable infrastructure is available with Malingunde located within 20km of Malawi's capital Lilongwe.



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NEW, HIGH-GRADE, SOFT SAPROLITE-HOSTED DEPOSIT AT MALINGUNDE HAS THE POTENTIAL TO HAVE SIGNIFICANTLY LOWER CAPITAL AND OPERATIONAL COSTS THAN HARD ROCK GRAPHITE DEPOSITS.

MANAGEMENT TEAM WITH A PROVEN TRACK RECORD OF SUCCESS.

IAN MIDDLEMAS Chairman

DR JULIAN STEPHENS *Managing Director*

MATTHEW WHEELER Technical Manager

Mr Middlemas is a Chartered Accountant and was a Senior Group Executive for Normandy Mining for more than ten years, which was Australia's largest gold miner (+2m ounces per annum) before merging with Newmont Mining. He is currently Chairman of Salt Lake Potash Limited, **Berkeley Energia Limited** and a number of other listed resource companies. Mr Middlemas was also previously Chairman of Papillon Resources Limited and Mantra Resources l imited

Dr Stephens is a Geologist with over 20 years experience in mineral exploration across many commodity types who has spent 10 years working on minerals projects in Malawi. Julian identified and secured the Malawi flake graphite projects. He led the team that discovered the Malawi Flake Graphite Projects. Mr Wheeler is a Geologist with over 20 years experience in mineral exploration. He has held various exploration and resource development roles on gold and uranium projects within Western Australia and the Philippines. Mr Wheeler was a co-discoverer of the Malawi Flake Graphite Project. **COLLIN DAVY** Exploration Manager -Malawi

Mr Davy is a Geologist with over 13 years experience in mineral exploration. He has managed exploration projects for polymetalic deposits, copper sulphide and oxide, nickel sulphide, iron, graphite, and heavy mineral sands in Australia and in multiple overseas jurisdictions including Eastern Europe, Canada and various parts of Africa.

THE GROWING IMPORTANCE OF NATURAL GRAPHITE.

GRAPHITE IS A KEY COMPONENT OF LITHIUM-ION BATTERIES. NATURAL GRAPHITE IS CHEAPER TO USE THAN SYNTHETIC GRAPHITE.

- Natural graphite has been the strongest growing input for anodes in lithium batteries.
- Strong shift away from synthetic (artificial) graphite as a result of cost, environment issues and supply.
- General trend away from lower quality Chinese graphite to better quality natural flake graphite products from outside China

UP TO **15 TIMES MORE GRAPHITE** THAN LITHIUM IS NEEDED TO MAKE EACH BATTERY





AMOUNT OF GRAPHITE IN EACH BATTERY

DOMINANT GROUND POSITION IN THE WORLD-CLASS EAST AFRICAN FLAKE GRAPHITE PROVINCE.

EXPLORATION TO DATE HAS ONLY "SCRATCHED THE SURFACE" AND THERE IS IMMENSE UPSIDE ACROSS THE VERY LARGE (3,788KM²) AND 100%-OWNED TENEMENT PACKAGE.



ENVIABLE INFRASTRUCTURE

MALINGUNDE IS LOCATED WITHIN 20KM OF MALAWI'S CAPITAL, LILONGWE. RAIL, POWER & PLENTIFUL FRESH WATER ARE ALL AVAILABLE.

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MALINGUNDE SAPROLITE-HOSTED GRAPHITE DEPOSIT.

THE NEW, SOFT SAPROLITE-HOSTED DEPOSIT AT MALINGUNDE HAS THE POTENTIAL TO HAVE SIGNIFICANTLY LOWER CAPITAL AND OPERATIONAL COSTS THAN HARD ROCK GRAPHITE DEPOSITS.

- Just received initial metallurgical results show premium quality flake graphite concentrates can be produce from a simple flowsheet
- High-grade flake graphite has now been defined by hand auger drilling over 3.4km strike length with cumulative across strike widths averaging about 140m.
- Recent results include:

MGHA0869	8m @ 13.8% TGC
MGHA0870	7m
MGHA0871	9m
MGHA0876	9m
MGHA0887	6m
MGHA0889	7m
MGHA0894	10m
MGHA0895	8m @ 17.9% TGC



↑Plan of Malingunde saprolite-hosted flake graphite deposit

MALINGUNDE SAPROLITE-HOSTED GRAPHITE DEPOSIT.

- Recent PQ diamond drilling shows saprolite depths averaging 20-30m.
- Thickness & consistency of saprolite substantially increases the overall tonnage potential.
- The Malingunde deposit is large and high grade, averaging about ~ 8% TGC in hand auger drilling with a number of discrete, high grade zones averaging well over 10% TGC.





MALINGUNDE – HAND AUGER DRILLING INTO SOFT SAPROLITE-HOSTED GRAPHITE MINERALISATION.









INITIAL METALLURGY RESULTS.

HIGH GRADE CONCENTRATES WITH EXCELLENT FLAKE DISTRIBUTION CAN BE PRODUCED

- Results from the first flotation test on this material showed:
 - Combined concentrate across all flake size fractions grading 97.3% C(t).
 - ~50% of the concentrate in the jumbo and coarse size fractions (i.e. +149μm).
- The process flowsheet is very simple and uses a scrubber (similar to a trommel) to wash & disaggregate the graphite flakes from the host material.
- Potential for significant capital and operational cost benefits over traditional hard-rock crushing and milling equipment.

AN INCLINE 2014 ELOTATION DECHITE

PARTICL	E SIZE	C Distribution	Flake	
Tyler Mesh	(µm)	(%)	(wt. %)	Category
+ 48	+ 297	96.8	20.4	Extra Large (Jumbo)
-48 + 100	- 297 + 149	97.8	28.3	Large-Medium
-100 + 200	- 149 + 74	97.6	27.6	Small
-200	- 74	96.4	23.7	Amorphous
тот	AL	97.3	100.0	





MALINGUNDE – A UNIQUE FLAKE GRAPHITE DEPOSIT.

TARGETING A LOW CAPITAL AND LOW OPERATIONAL COST MODEL

- Excellent quality concentrate produced by a simple flowsheet in the very first laboratory flotation test is exceptional.
- Thick and consistent preserved saprolite profile large tonnage potential.
- Free-dig mining and very low strip ratios with mineralised material at or near surface.
- Simple processing using a ceramic media attrition scrubber with no primary crushing and grinding – potential for substantial capital and operating cost advantages.



Attrition scrubber of the type that could be used for a saprolite-hosted graphite operation



↑ Mining of saprolite-hosted graphite deposits in Madagascar. Source Stratmin/Bass Metals (ASX:BSM)



DUWI – ONE OF THE WORLD'S LARGEST FLAKE GRAPHITE RESOURCES.



- Total JORC Resource of 86Mt @ 7.1% TGC for 6.13MT contained graphite (5% lower cut-off).
- Open along strike and at depth in all areas
 only 2.2km of 24km strike length drilled.
- Open-pitable , very low strip ratio



CATEGORY	TONNES (MT)	GRADE (% TGC)	CONTAINED GRAPHITE (MT)
Indicated	35.2	7.2	2.52
Inferred	50.7	7.1	3.61
<u>Total</u>	<u>85.9</u>	<u>7.1</u>	<u>6.13</u>
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DUWI - METALLURGY

Bench Scale Testwork Results

- Excellent, high-purity concentrates produced in latest test-work conducted at SGS Lakefield.
- Spherical graphite test-work underway to test suitability for Li-Ion battery use. First results expected September October 2016.
- Jumbo and large flake samples from Duwi showed excellent expandability characteristics and very low contaminant levels, supporting suitability for a large range of applications. Duwi jumbo flake concentrate grading 98.7% C(t) showed:
 - * expansion ratios of 345 ml/g (2.9 g/l) in line with and exceeding typical expansion ratios for quality grades of many marketed jumbo flake products.
 - * extremely low content of undesirable halogens at just 5ppm F and 6ppm Cl, very small size of ash particles max. 0.8mmall other specifications met or exceeded.



CONC #1 +48 Mesh (note: well rounded "potato-shaped" flakes)

PARTICLE SIZE		С	Distribution	Flake
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DUWI 2015 FLOTATION RESULTS – SGS 2015 FLOWSHEET

Duwi Final Concentrates Produced with SGS 2015 Flowsheet

FORWARD PLAN AND NEWS FLOW FOR MALINGUNDE

AUG-SEPT 2016	MALINGUNDE – DIAMOND DRILLING	Diamond drilling has commenced in order to test vertical thicknesses of saprolite-hosted graphite mineralisation, as well as to provide material for ongoing metallurgical test-work
AUG 2016 → ONGOING	MALINGUNDE - METALLURGY	Continue to optimise flowsheet, followed by production of bulk concentrates for testing by potential offtake partners
0CT-NOV 2016	MALINGUNDE – RESOURCE DRILLING	Approximately 6,000m of aircore drilling to delineate initial saprolite- hosted flake graphite resource at Malingunde
JAN-MAR 2017	MALINGUNDE – DOWNSTREAM TEST-WORK	Spherical graphite test-work program to test suitability of concentrate for use in Li-Ion battery anodes. Development of expandable graphite products.
ONGOING	OFFTAKE	Securing binding offtake through Volinco and other customers

MARKET INFORMATION.

CAPITAL STRUCTURE	
Current Shares on Issue *	207,199,082
Unlisted Options (\$0.10 to \$0.47)	9,916,667
Performance Rights (Feasibility and Commercial Transaction vesting milestones)	1,400,000
Un-Diluted Market Capitalisation *	A\$20.7 m
Cash (31 August 2016)	~A\$3.9 m
* As at 5 September 2016	



HOLDING STRUCTURE



MASSIVE VALUATION UPSIDE.

SOVEREIGN HAS LARGE VALUATION UPSIDE AGAINST IT PEERS



WHAT DIFFERENTIATES SOVEREIGN?

- ENVIABLE INFRASTRUCTURE
- SOFT, FRIABLE SAPROLITE
- HIGH-GRADE DEPOSIT
- FREE DIG WITH LOW STRIP RATIOS
- PREMIUM QUALITY FLAKE GRAPHITE CONCENTRATES
- SIMPLE PROCESS FLOWSHEET
- POTENTIAL FOR SIGNIFICANTLY LOWER CAPEX AND OPEX THAN HARD ROCK OPERATIONS

Jon Hykaway, Stormcrow Capital (investingnews.com 22 June 2016) said,

"There are preferred sources, there are preferred supplies, but really it's a game that's going to go to the inexpensive producer. To be able to compete in this space, you have to be able to compete with the Chinese producers on a cost-per-tonne basis."

"What we're going to be looking for are fairly high-grade deposits, hosted in friable rock or in sediments, in clays, so that the mining required is very inexpensive...."

COMPETENT PERSONS STATEMENT & DISCLAIMER

COMPETENT PERSONS STATEMENT

The information in this report that relates to Malingunde Exploration Results is extracted from the reports dated 29 August 2016 and 5 September 2016. These reports are available to view on www.sovereignmetals.com.au. The information in the original ASX Announcements that related to Malingunde 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 is also a substantial holder of shares 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 announcements.

The information in this presentation that relates to Metallurgical Testwork Results is extracted from reports dated 16 September 2015 and 7 September 2016. These reports are 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 Mineral Resources is extracted from the report dated 17 October 2014. The 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 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 announcement and, in the case of Mineral Resources, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. 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.

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Sovereign Metals Limited | ASX : SVM T: +61 8 9322 6322 | F: +61 8 9322 6558 E: info@sovereignmetals.com.au | www.sovereignmetals.com.au Level 9, BGC Centre, 28 The Esplanade, PERTH WA 6000 | ABN: 71 120 833 427

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