



## ASX ANNOUNCEMENT | 31 January 2024

# **DECEMBER 2023 QUARTERLY REPORT**

Sovereign Metals Limited (**Company** or **Sovereign**) (**ASX:SVM & AIM:SVML**) is pleased to provide its quarterly report for the period ended 31 December 2023.

## HIGHLIGHTS

### **Project Optimisation**

- During the quarter, Sovereign advanced optimisation test work and technical studies for the Kasiya rutilegraphite project (Kasiya or the Project) with the Company's strategic investor, Rio Tinto
- Significant field activities and a number of test work programs have commenced in order to provide data for the Project optimisation phase
- The Company aims to become the world's largest, lowest cost and lowest-emissions producer of two critical minerals titanium (rutile) and graphite

### Key Management Appointments to Drive Project Optimisation and Development at Kasiya

- Appointment of experienced Africa-based mining executive, Mr Frank Eagar, as the new Managing Director and CEO
- Previous Managing Director Dr Julian Stephens has transitioned to Non-Executive Director
- Key technical appointments of experienced African engineering, social and environmental teams to work on advancing the Kasiya project

### Lithium-Ion battery graphite program upscaled

- Over 60 tonnes of ore was extracted targeting production of an initial 600kg of natural graphite for lithiumion battery anode test work and product qualification
- The upscaled graphite qualification program will support ongoing Project studies
- Sovereign and Rio Tinto have agreed to collaborate to qualify graphite from Kasiya, with a particular focus on supplying the spherical purified graphite (SPG) segment of the lithium-ion battery anode market
- This graphite qualification program coincides with China's announced curbs on exports of natural graphite, a critical mineral for the US, EU, Japan and Australia

### Highly-experienced social specialist appointed

- Africa-based social specialist consultancy, SocialEssence were appointed to lead social and community development programs for Sovereign in Malawi
- SocialEssence joins Sovereign's Owners Team and will design, implement, and manage several social and community initiatives which will feed into Project studies and permitting
- SocialEssence has a strong and successful track record of implementing social responsibility programs across southern Africa, including at First Quantum Minerals' Zambian project

#### ENQUIRIES

Mr Frank Eagar (South Africa/Malawi) Managing Director and CEO +27 76 753 5377 Sam Cordin (Perth) +61 (0)422 799 087 Sapan Ghai (London) +44 207 478 3900

#### Sovereign Metals Limited | ASX : SVM AIM: SVML

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## **KASIYA PROJECT OPTIMISATION**

The Pre-Feasibility Study (**PFS**) confirmed Kasiya as a potential major critical minerals project with an extremely low CO<sub>2</sub>-footprint delivering substantial volumes of natural rutile and graphite to global markets while generating significant economic returns.

At the completion of the PFS, the Company commenced an optimisation study phase prior to advancing to the Definitive Feasibility Study (**DFS**). During the quarter, significant field activities and test work commenced.

The optimisation phase will be conducted in collaboration with the Company's strategic partner, Rio Tinto, following their investment into the Company in July 2023.

## **KEY MANAGEMENT APPOINTMENTS TO DRIVE PROJECT OPTIMISATION**

Effective from 20 October 2023, the Company appointed Mr Frank Eagar as Managing Director and Chief Executive Officer (**CEO**). Dr Julian Stephens, transitioned to a Non-Executive Director of Sovereign, remaining as a consultant assisting and supporting the incoming technical and management team.

Mr Eagar has over 20 years' experience in the financing, permitting, development and operation of mining projects with a strong focus in southern Africa.

Mr Eagar is a Chartered Accountant who has gained extensive corporate, commercial and technical experience in the mining sector throughout his career. Mr Eagar has previously held a number of senior executive positions in the resources sector, more recently with African mining focused private equity firm AMED Funds, which included acting as Chief Financial Officer (CFO) for AMED's controlled company, Central Copper Resources PLC (Central Copper).

Prior to Central Copper, Mr Eagar was the CEO (and prior to that the CFO) of Baobab Steel Limited (**Baobab**) another AMED controlled company, where he managed the completion of a DFS and a joint venture with the World Bank's IFC to procure strategic investors and raise project finance for Baobab's US\$1 Billion, fully permitted, integrated 500ktpa Steel and Vanadium Project in Mozambique.

Mr Eagar joined Sovereign in December 2022 as General Manager in Malawi, where he has already expanded the team with a focus on Malawian nationals, developed strong relationships with Government and developed a clear understanding of the Kasiya Project and its development landscape.

Sovereign has also made several key technical appointments as the Company transitions into project optimisation and development of the Kasiya Project and is poised to become a significant supplier of natural rutile and graphite. These key appointments bring a strong track record of successful large-scale project development and operations management, as well as extensive experience in southern Africa.

These management changes come at an important time for the Company as it transitions from the PFS into the next study phases including optimisation, community and stakeholder engagements and project permitting.



## LITHIUM-ION BATTERY GRAPHITE PROGRAM UPSCALED

During the quarter, Sovereign completed the extraction of a 60 tonne bulk sample of ore from Kasiya to produce an initial 600kg of natural flake graphite. This sampling program is part of the Company's graphite qualification, product development and downstream battery anode test work phase. A major component to graphite sales agreements is customer qualification with graphite produced from this program to be shared with prospective end-users in addition to being used for upscaled downstream test work.

The mechanised drill program used a bespoke 300mm diameter spiral auger to extract the material from across Kasiya's planned future pits with sampling to a maximum 20m depth.



Figures 1 & 2: Bulk sample mechanised spiral drilling and sampling at Kasiya in November 2023

The bulk sample is undergoing pre-processing at the Company's laboratory in Lilongwe, Malawi. The sample is being processed utilising the newly installed Kwatani 30-inch single and double-deck vibrating separators for sizing and de-sliming (Figure 3). The sand fraction is then processed over the new Holman Wilfley 2000 wet shaking table to produce a graphite pre-concentrate and a separate heavy mineral concentrate (**HMC**) containing the rutile (Figure 4). The graphite pre-concentrate is expected to grade 4-5% C<sup>t</sup>.





Figure 3. Installation of the new Kwatani 30-inch single-deck and double-deck vibrating separators for sizing and de-sliming bulk samples at the Company's Malawi laboratory and metallurgical facility



Figure 4: Holman-Wilfley 2000 Series shaking table operating at Sovereign's Lilongwe laboratory in Malawi.



Final processing will then be completed at international commercial laboratories. The graphite pre-concentrate will undergo traditional flotation and polishing processes to target >96% C<sup>t</sup> product suitable as a lithium-ion battery anode feedstock.

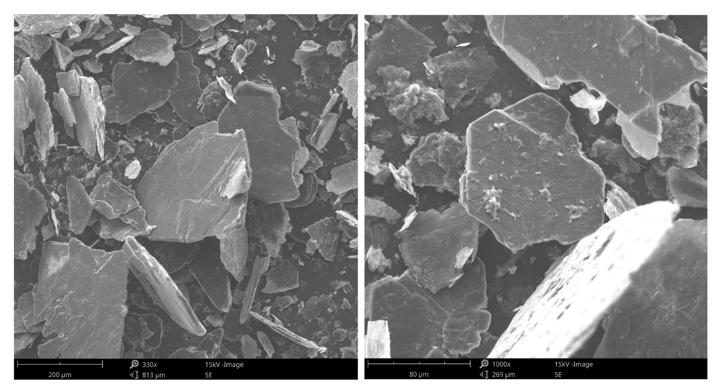
### Downstream Test work

The initial ~600kg of flake graphite product produced will be used for downstream test-work and product qualification targeting the battery anode sector. Previously reported initial characterisation test work on Kasiya's graphite has indicated excellent suitability for use in lithium-ion batteries with very high purity and very high crystallinity being the key features (refer to ASX Announcement dated 8 June 2023).

Downstream test-work and qualification on the flake graphite product will involve the following stages to be completed at recognised international battery sector laboratories;

- Purification to >99.95% Ct
- Micronisation
- Spheronisation
- Carbon coating
- Anode production
- Electrochemical characterisation

Raw flake graphite products plus final CSPG (coated spheronised graphite product) will be provided to potential offtakers for assessment and pre-qualification. Through Sovereign's long-term experience in graphite, the Company has built a strong understanding of the graphite market and developed well-established relationships with offtakers and customers.



Figures 5 & 6: SEM micrograph of Kasiya graphite flotation concentrate from previous test work



### **Industry Developments**

The upscaled graphite program comes as China implements curbs on exports of natural graphite under "national security" concerns. Effective 1 December 2023, China requires export permits for some graphite products including natural graphite and natural graphite products critical to EV production. China is the world's top graphite producer and exporter and also refines more than 90% of the world's graphite into the material that is used in virtually all EV battery anodes.

China's commerce ministry said the move on graphite was "conducive to ensuring the security and stability of the global supply chain and industrial chain, and conducive to better safeguarding national security and interests".

Since the restrictions, total exports of flake graphite dropped by 94% on a monthly basis in December, while exports of spherical graphite slumped by 92% (China customs data). Exports to major destinations also slowed notably in December. Flake graphite volumes to Japan fell from 6,138 tonnes in November to zero in December, while exports to the United States fell from 511 tonnes in November to zero in December (Fastmarkets). It was reported by Japan News, that, Japan, which depends on China for 90% of its graphite imports, likely needs to urgently diversify its procurement sources.

Kasiya is one of the world's largest natural flake graphite deposits and has the potential to become a key source of long term strategic supply to the US, UK, EU, Japan and South Korea.

## HIGHLY-EXPERIENCED SOCIAL SPECIALIST APPOINTED

Subsequent to the quarter, Sovereign appointed SocialEssence (Pty) Ltd (**SocialEssence**), an Africa-based specialist social performance consultancy, who will assist in the continued development of the Company's stakeholder relations, social performance objectives and its Community and Social Responsibility (**CSR**) framework.

Sovereign has engaged SocialEssence to design and execute social performance activities during the DFS phase. Founder, Mr Garth Lappeman, has over 16 years of on the ground social performance planning and implementation experience in accordance with IFC Performance Standards and World Bank Environmental, Health and Safety Guidelines. SocialEssence has been active in a number of countries working on projects in Angola, Botswana, Democratic Republic of Congo, Kenya, Kyrgyzstan, Liberia, Malawi, Mozambique, Namibia, Panama, Uganda, Sierra Leone, South Africa, Northern Sudan, Tanzania, Uzbekistan, and Zambia.

Most notably, in Zambia, SocialEssence's Director was involved from early exploration through to steady state production of First Quantum Minerals Ltd's (**First Quantum Minerals**) Trident operations, which includes the Sentinel Copper Mine which is of similar scale to Sovereign's Kasiya project. Mr Lappeman was responsible for implementing and managing social and community initiatives for First Quantum Minerals as it established its large-scale commercial operations

SocialEssence will:

- prepare Kasiya's Social Impact Assessment and Management Plan for the DFS and permitting;
- design, implement and manage social performance activities including stakeholder engagement, development of key relationships;
- prove the feasibility of critical social performance measures (including early local content, and piloting of livelihood restoration programs, and piloting of rehabilitation activities to restore land for agricultural use); and
- align with the Company's ESG Framework.



## **NEXT STEPS**

Sovereign is currently conducting an optimisation study prior to advancing to the DFS. The Company aims to become the world's largest, lowest cost and lowest-emissions producer of two critical minerals – titanium (rutile) and graphite. The Company plans to update the market on the progress of the following in coming months:

- Further appointments to owner's team to build on the Company's execution capabilities;
- Results of graphite product development, downstream and qualification test work;
- Regional hand-auger drilling on mineralisation extensions;
- Progress on the optimisation work streams alongside Rio Tinto via the project Technical Committee; and
- Community and social engagements across Malawi and the Kasiya area.

#### **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 <u>www.sovereignmetals.com.au</u> 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 <u>www.sovereignmetals.com.au</u>. 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.

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

### **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.



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### **APPENDIX 1: RELATED PARTY PAYMENTS**

During the quarter ended 31 December 2023, the Company made payments of \$461,000 to related parties and their associates. These payments relate to existing remuneration arrangements (executive salaries, director fees, superannuation and bonuses (\$273,000)), business development services (\$35,000) and provision of serviced office facilities, company secretarial services and administration services (\$153,000).

### **APPENDIX 2: SUMMARY OF MINING TENEMENTS**

As at 31 December 2023, the Company had an interest in the following tenements:

Licence	Holding Entity	Interest	Туре	Licence Renewal Date	Expiry Term Date <sup>1</sup>	Licence Area (km²)	Status
EL0609	MML	100%	Exploration	25/09/2024	25/09/2028	440.5	Granted
EL0582	SSL	100%	Exploration	15/09/2023 <sup>2</sup>	15/09/2027	285.0	Granted
EL0492	SSL	100%	Exploration	29/01/2025	29/01/2025	935.4	Granted
EL0528	SSL	100%	Exploration	27/11/2023	27/11/2025	16.2	Granted
EL0545	SSL	100%	Exploration	12/05/2024	12/05/2026	53.2	Granted
EL0561	SSL	100%	Exploration	15/09/2023 <sup>2</sup>	15/09/2027	124.0	Granted
EL0657	SSL	100%	Exploration	3/10/2025	3/10/2029	2.3	Granted

#### Notes:

SSL: Sovereign Services Limited, MML &McCourt Mining Limited

<sup>1</sup> An exploration licence (EL) covering a preliminary period in accordance with the Malawi Mines and Minerals Act (No 8. Of 2019) (Mines Act) is granted for a period not exceeding three (3) years. Thereafter two successive periods of renewal may be granted, but each must not exceed two (2) years. This means that an EL has a potential life span of seven (7) years. ELs that have come to the end of their term can be converted by the EL holder into a retention licence (RL) for a term of up to 5 years subject to meeting certain criteria.

<sup>2</sup> The Company submitted an extension application for EL0582 and EL0561 prior to the renewal date in accordance with the Mines Act .



## **APPENDIX 3: MINING EXPLORATION EXPENDITURES**

During the quarter, the Company made the following payments in relation to mining exploration activities:

Activity	A\$'000
Drilling	(291)
Assaying and Metallurgical Test-work	(162)
Studies, Reserve/Resource Estimation, Programs	(986)
Malawi Operations - Site Office, Personnel, Field Supplies, Equipment, Vehicles and Travel	(984)
Total as reported in Appendix 5B	(2,423)

There were no mining or production activities and expenses incurred during the quarter ended 31 December 2023.

# Appendix 5B

# Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Name of entity	
Sovereign Metals Limited	
ABN	Quarter ended ("current quarter")
71 120 833 427	31 December 2023

Cons	solidated statement of cash flows	Current quarter \$A'000	Year to date (6 months) \$A'000
1.	Cash flows from operating activities		
1.1	Receipts from customers	-	-
1.2	Payments for		
	(a) exploration & evaluation	(2,423)	(4,296)
	(b) development	-	-
	(c) production	-	-
	(d) staff costs	(780)	(1,107)
	(e) administration and corporate costs	(414)	(928)
1.3	Dividends received (see note 3)	-	-
1.4	Interest received	673	745
1.5	Interest and other costs of finance paid	-	-
1.6	Income taxes paid	-	-
1.7	Government grants and tax incentives	-	-
1.8.1	Other – Demerger Costs	(41)	(67)
1.8	Other – Business Development	(325)	(595)
1.9	Net cash from / (used in) operating activities	(3,310)	(6,248)

2.	Cas	h flows from investing activities		
2.1	Payr	ments to acquire or for:		
	(a)	entities	-	-
	(b)	tenements	-	-
	(c)	property, plant and equipment	(243)	(243)
	(d)	exploration & evaluation	-	-
	(e)	investments	-	-
	(f)	other non-current assets	-	-

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (6 months) \$A'000
2.2	Proceeds from the disposal of:		
	(a) entities	-	-
	(b) tenements	-	-
	(c) property, plant and equipment	-	-
	(d) investments	-	-
	(e) other non-current assets	-	-
2.3	Cash flows from loans to other entities	-	34
2.4	Dividends received (see note 3)	-	-
2.5	Other (provide details if material)	-	-
2.6	Net cash from / (used in) investing activities	(243)	(209)

3.	Cash flows from financing activities		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	-	40,598
3.2	Proceeds from issue of convertible debt securities	-	-
3.3	Proceeds from exercise of options	-	-
3.4	Transaction costs related to issues of equity securities or convertible debt securities	(13)	(252)
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)	-	-
3.10	Net cash from / (used in) financing activities	(13)	40,346

4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	43,021	5,564
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(3,310)	(6,248)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(243)	(209)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	(13)	40,346

## Appendix 5B Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Con	solidated statement of cash flows	Current quarter \$A'000	Year to date (6 months) \$A'000
4.5	Effect of movement in exchange rates on cash held	(18)	(16)
4.6	Cash and cash equivalents at end of period	39,437	39,437

5.	Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1	Bank balances	129	189
5.2	Call deposits	39,308	42,832
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
5.5	Cash and cash equivalents at end of quarter (should equal item 4.6 above)	39,437	43,021

6.	Payments to related parties of the entity and their associates	Current quarter \$A'000
6.1	Aggregate amount of payments to related parties and their associates included in item 1	461
6.2	Aggregate amount of payments to related parties and their associates included in item 2	-
	if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include a ation for, such payments.	description of, and an

## Appendix 5B Mining exploration entity or oil and gas exploration entity quarterly cash flow report

7.	<b>Financing facilities</b> Note: the term "facility" includes all forms of financing arrangements available to the entity. Add notes as necessary for an understanding of the sources of finance available to the entity.	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000	
7.1	Loan facilities -		-	
7.2	Credit standby arrangements	-	-	
7.3	Other (please specify)	-	-	
7.4	Total financing facilities	-	-	
7.5	Unused financing facilities available at quarter end			
7.6	Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.			

8.	Estimated cash available for future operating activities		\$A'000
8.1	Net cash from / (used in) operating activities (item 1.9) (3		(3,310)
8.2	(Payments for exploration & evaluation classified as investing activities) (item 2.1(d))		-
8.3	Total relevant outgoings (item 8.1 + item 8.2) (3,3		(3,310)
8.4	Cash and cash equivalents at quarter end (item 4.6) 39,		39,437
8.5	Unused finance facilities available at quarter end (item 7.5)		-
8.6	Total available funding (item 8.4 + item 8.5) 39,4		39,437
8.7	Estimated quarters of funding available (item 8.6 divided by item 8.3)		12
	Note: if the entity has reported positive relevant outgoings (ie a net cash inflow) in item 8.3, answer item 8.7 as "N/A". Otherwise, a figure for the estimated quarters of funding available must be included in item 8.7.		
8.8	If item 8.7 is less than 2 quarters, please provide answers to the following questions:		
	8.8.1 Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?		
	Answer: Not applicable		
	8.8.2 Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?		
	Answer: Not applicable		
	8.8.3 Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?		
	Answer: Not applicable		
	Note: where item 8.7 is less than 2 quarters, all of questions 8.8.1, 8.8.2 and 8.8.3 above must be answered.		

### **Compliance statement**

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

Date: 31 January 2024

Authorised by: Company Secretary (Name of body or officer authorising release – see note 4)

#### Notes

- This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.
- 2. If this quarterly cash flow 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 cash flow 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.
- 3. 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.
- 4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [name of board committee – eg Audit and Risk Committee]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".
- 5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.