

JUNE QUARTERLY ACTIVITIES REPORT

HIGHLIGHTS

CHINESE LMFP BATTERY STRATEGY

- **Battery Grade Manganese Sulphate Feasibility Studyⁱ**. Key results include:
 - **Projected CAPEX of US\$ 83.5 million**
 - **Projected Working Capital of US\$ 10.6 million**
 - Chinese circular industry and plant location within the Jinshi High-Tech Industrial Park provides localised key reagents and inputs that drive a highly competitive OPEX of approximately US\$609/mt for production of battery grade manganese sulphate
 - Plant Capacity for Battery Grade Manganese Sulphate (MnSO_4) of 50kt/a & Manganese Tetra Oxide (Mn_3O_4) 10kt/or equivalent MnSO_4 of 72.5kt/a
- Study incorporated conservative cost estimates and the lowest selling sulphate price compared with peers
- **Results demonstrated the opportunity for Firebird to become a highly competitive producer of high-purity manganese sulphate**
- **Combined indicative and non-binding financing agreements up to US\$56M well advanced, accounting for approximately 60% of the estimated construction and commissioning costsⁱⁱ**
- Critical safety permit received for the construction and operation of the battery grade manganese sulphate plantⁱⁱⁱ
- Agreement signed with Zhongji Sunward Technology Co, Ltd (**Sunward**), a leading producer of rotary tunnel kilns used in many chemical plants across China^{iv}
 - Sunward to fund 50% of the cost of a pilot plant which has a total cost estimate of US\$200,000 and is responsible for the detailed engineering design and manufacturing of the pilot plant
 - The new calcining unit has broad industrial applications. Sunward has agreed to pay Firebird a 5% royalty on future sales revenue
- Following a Final Investment Decision (**FID**), Firebird will be ready to commence construction of the sulphate plant, projected to take ~12-15 months

OAKOVER PROJECT (E52/3577)

- Oakover's underlying value and importance as a key future operation continue to be underscored by significant manganese supply disruptions

NON-CORE MANGANESE TENEMENTS

- Execution of farm-out agreement with Macro Metals Ltd on non-core manganese tenements (E46/1456, E46/1457, E46/1389 and E45/5906) post quarter end^v

CORPORATE

- **Cash position at end of June 2024 of \$5.1m**

Cautionary Statement

The Feasibility Study referred to in this announcement is a Technical Feasibility of the establishment of the Battery Grade Manganese Sulphate Project Stage 1 Processing Plant in China (the **Plant**).

The Feasibility Study is based on the material assumptions contained in the Feasibility Study document released to the ASX on 7 May 2024. These include assumptions about the availability of funding. While the Company considers all of the material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated by the Feasibility Study will be achieved.

Notwithstanding the developments set out in this quarterly report, Investors should note that there is no certainty that the Company will be able to raise the amount of funding to develop the Plant when needed. It is also possible that such funding may only be available on terms that may be dilutive to or otherwise affect the value of Company's existing shares.

It is also possible that the Company could pursue other 'value realisation' strategies such as a sale, partial sale or joint venture of the Plant. If it does, this could materially reduce the Company's proportionate ownership of the Plant. Given the uncertainties involved, investors should not make any investment decisions based solely on the results of the Feasibility Study.

Firebird Metals Limited (ASX: FRB, "Firebird" or "the Company") is pleased to provide an update on its activities during the June 2024 Quarter.

CHINESE LMFP BATTERY STRATEGY

Battery Grade Feasibility Study

The Company completed its Battery Grade Manganese Sulphate Feasibility Study (**Feasibility Study**) in May 2024 for stage one of production in China, utilising third-party manganese ore to produce high-purity manganese sulphate (MnSO_4) highlighting excellent outcomes.

The completion of the Feasibility Study followed Firebird's announcement in September 2023 of its China-based Lithium Manganese Iron Phosphate (**LMFP**) growth strategy, aimed at establishing the Company as a highly competitive producer of battery-grade MnSO_4 and Mn_3O_4 (high-purity manganese tetraoxide). Both products are key cathode materials in LMFP batteries for electric vehicles.

In China, a Feasibility Study is completed first and forms the basis of engineering design, government permitting and financing activities. The Feasibility Study contained a large portion of compliance and project economics assessment.

The Feasibility Study was completed by Hunan Chemical Engineering Design Institute Co., Ltd (**HCEDI**) and in accordance with stringent Chinese regulations. The Feasibility Study assessed the operational capabilities of producing 50 kt of high-purity MnSO_4 and 10 kt of battery-grade Mn_3O_4 (equivalent to 75 kt of MnSO_4 capacity), with results demonstrating a strong opportunity for Firebird to become a near-term, highly competitive battery-grade MnSO_4 producer. The Feasibility Study also demonstrated significant cost, development, and operational advantages gained by building a plant and establishing operations in China.

The Feasibility Study outlined a projected CAPEX of US\$83.5 million and a highly competitive OPEX of approximately US\$609 per metric tonne (mt) for battery-grade manganese sulphate, underpinned by the major competitive advantage of its strategic location within the Chinese industrial ecosystem, which provided significant cost-saving and operational synergies.

Results from the Feasibility Study validated Firebird's LMFP battery strategy to produce battery grade manganese sulphate in China.

Financial Support

Robust support has been received from the Jinshi Government, China Construction Bank (Jinshi division), and the leading chemical engineering contractor, China National Chemistry Southern Construction and Investment Co Ltd (**China Chemical**), for the development and construction of the Company's Battery-Grade Manganese Sulphate Plant (**Plant**).

Combined indicative and non-binding financing agreements, advanced throughout the quarter, cover approximately 60% (up to US\$56 million) of the estimated construction and commissioning costs. These costs are made up of a CAPEX of US\$83.5M and working capital of US\$10.7M.

A non-binding indicative offer from China Construction Bank (Jinshi Division) was received to provide up to 50% of the estimated plant CAPEX requirements (subject to conditions precedents), at very attractive terms, plus 70% of the required estimated working capital.

A non-binding agreement with China Chemical was secured to provide up to 20% of construction and installation costs (approximately US\$35 million) on a deferred payment basis, interest-free and repayable 12 months after the commencement of commercial production.

A binding agreement with the Jinshi local Government was established to receive a 62.5% rebate (totalling approximately US\$4.2 million) on the US\$6.8 million land purchase. This rebate was accounted for within the total CAPEX requirements.

Key Permits

The permitting process remains well advanced, with the safety permit for Stage One of the Battery Grade Manganese Sulphate Plant in China received in May. The safety permit is one of three critical permits required to commence construction, with the other two being environmental and energy permits.

The Environmental Impact Permit Report has been completed and has undergone initial Expert Panel review, with full approval expected imminently.

The Energy Consumption Report was completed and lodged with the local Jinshi Government, with approval expected during August 2024.

The efficient receipt of the Safety Permit and the advanced status of the remaining key permits highlighted the strong in-country support Firebird has to establish the Company as a key high-purity manganese sulphate producer.

Once all permits are obtained and following a Final Investment Decision (**FID**), construction of the sulphate plant is projected to take approximately 12-15 months with operations expected to commence in late 2025 / early 2026.

	PERMIT	STATUS
1	Project Initiation Permit by the NDRC (National Development and Reform Committee)	Received
2	Project Environmental Permit via the Environmental Impact Assessment (EIA) Document	EIA report complete and has undergone initial Expert Panel review; full approval expected imminently
3	Project Safety Permit	Received
4	Project Energy Permit via Energy Technology Evaluation Document	Energy consumption complete , has been lodged with Government and is expected to be approved during August 2024
5	Water and Soil Monitoring Permit	30% Complete, awaiting detailed design
6	Workplace Health and Safety Permit	30% Complete, awaiting detailed design
7	Social Stability Permit	TBC
8	Building and Construction Permit	TBC

Sunward Agreement

In June 2024, Firebird's subsidiary Hunan Firebird Battery Technologies Co Ltd (**HFBT**) entered into an agreement with Zhongji Sunward Technology Co, Ltd (**Sunward**), a leading engineering and large-scale comprehensive design research company in China. This agreement granted Sunward the rights to use HFBT's unique energy recycling calcining system (patent pending) in Sunward kilns.

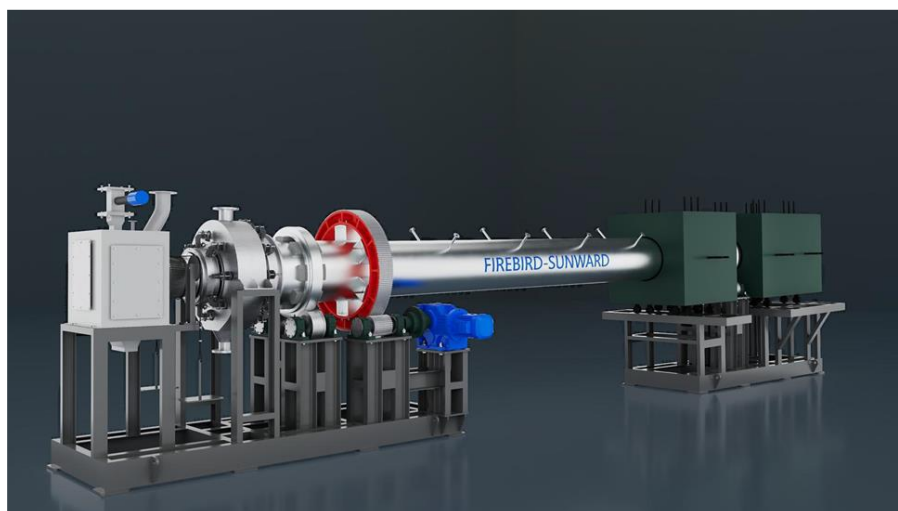
Firebird and Sunward signed a development agreement, with Sunward co-funding and evaluating the commercialisation of HFBT's unique energy-saving rotary kiln system. Sunward, a leading producer of rotary tunnel kilns used in many chemical plants across China, is well-positioned to bring this innovative technology to market.

Firebird designed a patent-pending calcining unit that reduces energy usage by 80%, significantly enhancing the cost-efficiency of the Company's Battery Grade MnSO₄ Plant.

The new calcining unit has broad industrial applications, and Sunward has agreed to pay Firebird a 5% royalty on future sales revenue from all calciners sold that incorporate HFBT's energy-saving rotary system. Importantly, Firebird retains the right to collaborate with other manufacturers, ensuring flexibility and broader market penetration for this technology.

Sunward has committed to funding 50% of the pilot plant's cost, estimated at US\$200,000, with Firebird funding the remaining 50%. Sunward is responsible for the detailed engineering design and manufacturing of the pilot plant.

Firebird has continued to focus on delivering energy efficiency improvements through its proprietary technologies. The energy-saving calcining technology and 5th generation crystallisation technology further strengthen the Company's compelling opportunity to rapidly develop into a highly competitive producer of high-purity manganese sulphate. This agreement underscores Firebird's commitment to innovation and its strategic goal of becoming a key producer in the manganese industry.



***Image 1:** Detailed 3D Design of Firebird's Rotary Kiln*

OAKOVER

The ongoing development of the flagship Oakover Project, located in Western Australia, remains a critical pillar of Firebird's manganese battery materials strategy. Since listing in 2021, Firebird has delivered significant and rapid progress at Oakover, with key development and environment studies progressing as planned.

It is intended that, once Oakover is in production, ore from the Project will be used to feed the Company's Battery Grade Manganese Sulphate plant in China.

NON-CORE MANGANESE TENEMENTS

Subsequent to the quarter end, Firebird signed an agreement with Macro Metals Ltd (**Macro**) regarding the development of Firebird's Wandanya, Disraeli and Midgengadge tenements (E46/1456, E46/1457, E46/1389 and E45/5906) (the **Tenements**).

The agreement will see Macro invest \$150,000 in exploration and development expenditure on the Tenements within 12 months to earn an 80% interest (**Agreement**). This expenditure must include at least 10 RC holes, for a minimum total of 100 metres drilled on each of the four tenements. Macro will assume full responsibility for the Tenements over this earn-in period.

Firebird's 20% interest will be free carried until such time Macro makes a decision to mine, at which point Macro and Firebird will enter into an incorporated joint venture. Firebird retains the ability to transfer its 20% interest in the Tenements into a 1% royalty. The Agreement also allows for Firebird to earn 1% sales commission (based on Free on Board (FOB) revenue).

Full details are set out in the announcement dated 23 July 2024.

FINANCIAL OVERVIEW

The Appendix 5B for the quarter ended 30 June 2024 provides an overview of the Company's financial activities.

Exploration and evaluation expenditure for the quarter was \$240,000 and primarily related to metallurgical test work, environmental studies and consulting fees.

The total amount paid to Directors of the Company, their associated and other related parties was \$256,000 comprising salary and Director's fees.

Cash and cash equivalents at quarter end were \$5,067,000.

This announcement has been approved for release by the Board.

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About Firebird Metals Limited

Firebird Metals is an advanced manganese developer focused on combining mining and downstream processing with a dedication to the advancement of the EV battery sector.

The Company is currently progressing its unique China-focused lithium manganese iron phosphate (**LMFP**) battery strategy, which will develop Firebird into a near-term producer of high-purity, battery-grade manganese sulphate, a key cathode material in LMFP batteries for electric vehicles.

Execution of this strategy will place Firebird at the forefront of manganese sulphate production, at a time when the use and demand for manganese in batteries continues to rapidly grow. Due to the low number of ASX-manganese developers and increasing use of LMFP by car manufacturers, Firebird is in a strong position to benefit from this growing market and deliver significant value to its shareholder base.

The Company also owns 100% of its project portfolio, located in the renowned East Pilbara manganese province of Western Australia, which boasts a total Resource of 234Mt^{1,2}, with exciting exploration and development growth upside. The portfolio is led by the flagship Oakover Project, which holds a Mineral Resource Estimate¹ of 176.7 Mt at 9.9% Mn, with 105.8 Mt at 10.1% Mn in an Indicated category.

The Company is committed to generating sustainable long-term value and growth for stakeholders, through the implementation of best practice exploration methods while prioritising the well-being, health and environmental protection of its employees and communities it operates in.

JORC Compliance Statement

This announcement contains references to Mineral Resource Estimates, which have been reported in compliance with Listing Rule 5.8 and extracted from previous ASX announcements as referenced. The Company confirms that it is not aware of any new information or data that materially affects the information previously reported and that all material assumptions and technical parameters underpinning the Mineral Resource Estimates continue to apply and have not materially changed.

Forward-looking statements

This announcement may contain certain “forward-looking statements”. Forward looking statements can generally be identified by the use of forward-looking words such as, “expect”, “should”, “could”, “may”, “predict”, “plan”, “will”, “believe”, “forecast”, “estimate”, “target” and other similar expressions. Indications of, and guidance on, future earnings and financial position and performance are also forward-looking statements. Forward-looking statements, opinions and estimates provided in this presentation are based on assumptions and contingencies which are subject to change without notice, as are statements about market and industry trends, which are based on interpretations of current market conditions. Forward-looking statements including projections, guidance on future earnings and estimates are provided as a general guide only and should not be relied upon as an indication or guarantee of future performance.

¹ See ASX announcement dated 23 March 2023: Indicated Resource of 105.8Mt at 10.1%; Inferred Resource of 70.9Mt at 9.6% for global Resource of 176.7 Mt at 9.9% Mn.

² See ASX announcement dated 1 December 2021: Inferred Resource of 57.5 Mt at 12.2% Mn.

Additional Listing Rule Information

The Company advises the following information in accordance with Listing Rule 5.3.3 Tenement Schedule as at 30 June 2024:

Project	Tenement	Ownership at the Start of quarter	Ownership at end of Quarter
Oakover	E 52/3577	100%	100%
Oakover	E 46/1392	100%	100%
Oakover	E 52/3948	100%	100%
Hill 616	E 52/3633	100%	100%
Raggard Hills	E45/5905	100%	100%
Midgengadge Manganese*	E45/5906	100%	100%
Disraeli*	E 46/1389	100%	100%
Wandanya*	E 46/1456	100%	100%
Wandanya*	E 46/1457	100%	100%

The Company advises that no interests were acquired or disposed of during the quarter. Subsequent to the end of the quarter, the Company entered into a farm-out agreement with respect to the projects marked with * which is expected to complete by 30 September 2024.

Ownership may relate to either direct or contractual rights.

References

ⁱ ASX announcement 7 May 2024: *Feasibility Study confirms potential for low-cost, high purity manganese production*. The Company confirms the material assumptions and technical parameters underpinning the production target disclosed on 7 May 2024 continue to apply and have not materially changed.

ⁱⁱ ASX announcement 14 May 2024: *Substantial low-cost financial support for batter grade manganese sulphate plant*

ⁱⁱⁱ ASX announcement 28 May 2024: *Key safety permit received for China battery grade manganese sulphate plant*

^{iv} ASX announcement 5 June 2024: *Sunward to co-fund Firebird's energy-saving calcining technology, Firebird to earn 5% future sales royalty*

^v ASX announcement 23 July 2024: *Firebird executes farm-out agreement with Macro Metals on non-core manganese tenements*

Appendix 5B

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

Name of entity

Firebird Metals Limited

ABN

24 610 035 535

Quarter ended ("current quarter")

30 June 2024

Consolidated statement of cash flows		Current quarter \$A '000	Year to date (12 months) \$A '000
1.	Cash flows from operating activities		
1.1	Receipts from customers		
1.2	Payments for		
	(a) exploration & evaluation	(32)	(175)
	(b) development	-	-
	(c) production	-	-
	(d) staff costs	(340)	(1,064)
	(e) administration and corporate costs	(417)	(1,367)
1.3	Dividends received (see note 3)	-	-
1.4	Interest received	-	-
1.5	Interest and other costs of finance paid	-	-
1.6	Income taxes paid	-	-
1.7	Government grants and tax incentives	-	-
1.8	Other (GST refunds)	55	515
1.9	Net cash from / (used in) operating activities	(734)	(2,091)
2.	Cash flows from investing activities		
2.1	Payments to acquire or for:		
	(a) entities	-	-
	(b) tenements	-	-
	(c) property, plant and equipment	-	(75)
	(d) exploration & evaluation	(208)	(868)
	(e) investments – MnSO ₄ +Mn ₃ O ₄ plant China	(118)	(877)
	(f) other non-current assets	-	-

Consolidated statement of cash flows		Current quarter \$A '000	Year to date (12 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	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Other (provide details if material)	-	-
2.6	Net cash from / (used in) investing activities	(326)	(1,820)

3.	Cash flows from financing activities		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	-	8,000
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	-	(325)
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	-	7,675

4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	6,127	1,303
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(734)	(2,091)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(326)	(1,820)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	-	7,675

Consolidated statement of cash flows		Current quarter \$A '000	Year to date (12 months) \$A '000
4.5	Effect of movement in exchange rates on cash held	-	-
4.6	Cash and cash equivalents at end of period	5,067	5,067

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	5,067	6,127
5.2	Call deposits	-	-
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)	5,067	6,127

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	256
6.2	Aggregate amount of payments to related parties and their associates included in item 2	-
<i>Note: if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include a description of, and an explanation for, such payments.</i>		

7.	Financing facilities <i>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.</i>	Total facility amount at quarter end \$A '000	Amount drawn at quarter end \$A '000
7.1	Loan facilities	n/a	n/a
7.2	Credit standby arrangements	n/a	n/a
7.3	Other (please specify)	n/a	n/a
7.4	Total financing facilities		
7.5	Unused financing facilities available at quarter end		n/a
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.		
	n/a		

8.	Estimated cash available for future operating activities	\$A '000
8.1	Net cash from / (used in) operating activities (item 1.9)	(734)
8.2	(Payments for exploration & evaluation classified as investing activities) (item 2.1(d))	(326)
8.3	Total relevant outgoings (item 8.1 + item 8.2)	(1,060)
8.4	Cash and cash equivalents at quarter end (item 4.6)	5,067
8.5	Unused finance facilities available at quarter end (item 7.5)	-
8.6	Total available funding (item 8.4 + item 8.5)	5,067
8.7	Estimated quarters of funding available (item 8.6 divided by item 8.3)	4.78
<i>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.</i>		
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?	
	<div style="border: 1px solid black; padding: 5px; min-height: 30px;"> Answer: n/a </div>	
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?	
	<div style="border: 1px solid black; padding: 5px; min-height: 30px;"> Answer: n/a </div>	
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?	
	<div style="border: 1px solid black; padding: 5px; min-height: 30px;"> Answer: n/a </div>	
<i>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.</i>		

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: 30 July 2024

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

Notes

1. 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*

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

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.