

## June 2023 Quarterly Activities Report

## Highlights:

- Significant levels of REEs identified at the Ema project.
- Impressive results from successful bioleaching pilot plant test.
- Application for three exploration tenements within Apuí region.
- Purchase agreement executed to secure two additional exploration permits.
- Auger drilling programme commenced at Ema.
- Beginning of environmental study for the Três Estados project, Apuí, Amazonas, Brazil

BBX Minerals Limited (ASX: BBX) ("BBX" or the "Company") is pleased to provide details of its activities during the quarter ended 30 June 2023.

## **Ema REEs assay results**

Following up indications of the presence of anomalous levels of REEs in recently completed multi-element fresh rock assays, selected portions of 13 holes drilled in the felsic volcanics and pyroclastics at Ema were submitted for whole rock analysis at SGS. Significant levels of TREO were returned from within the clay-rich lateritic weathered profile in seven holes (Table 1). The multi-element fresh rock assays were conducted only recently as part of the work required to complete the Ema final exploration report lodged with the local relevant department.

These results indicate the presence of a lateritic regolith at Ema with REE-enriched horizons potentially at economic grades. Ongoing follow-up will include leaching tests to determine the recoverable ionic rare earth component using simple and low-cost leaching technology.

Ongoing exploration and follow-up of the Ema REE results will proceed concurrently and independently with the high-priority activities at Três Estados, BBX's flagship project. Brazil is home to a number of REE projects, including operating mines. These results reflect the significant REE exploration potential at Ema and in the adjacent Ema East tenement. The work to advance the REE discovery is relatively low cost and will continue in parallel with our primary focus, advancing the Três Estados project.

Hole ID	Depth From (meters)	Length (meters)	TREO ppm	TREO - Ce2O3 ppm	HREO ppm	CREO ppm	MREO ppm
EMD-013	11.00	10.00	458	278	85	130	107
EMD-017	10.00	9.00	890	679	207	342	292
EMD-019	4.00	6.33	394	250	102	127	85
EMD-022	4.00	7.80	776	613	246	320	233
EMD-025	2.00	12.06	633	292	95	132	104
EMRC-002	0.00	8.00	1607	1265	133	477	591
EMRC-011	6.00	6.00	376	235	82	112	82

## Table 1: EMA project drilling results above 200ppm TREO-CeO2



These results demonstrate both extensive areal distribution, with holes spaced up to 3 km apart, and preserved regolith with a near-surface REE enriched horizon containing potentially economic grades. These are the key characteristics of ionic adsorbed clay REE deposits.

The REE distribution from the relevant intersections shows that 29.1% comprise the high cost magnetic REE's (MREO) (Table 1 and Table 2) compatible with other ionic adsorbed clay deposits.

Classification	Element	Element	REE ppm	Factor	Oxide	REO ppm	REO/TREO %
	Lanthanum	La	154.4	1.1728	La2O3	181.1	24.8
	Cerium	Ce	176.9	1.2284	CeO2	217.3	29.7
LREE	Praseodymium	Pr	38.9	1.2082	Pr6011	47.0	6.4
	Neodymium	Nd	130.7	1.1664	Nd2O3	152.5	20.8
	Samarim	Sm	18.7	1.1596	Sm2O3	21.7	3.0
	Europium	Eu	3.6	1.1579	Eu2O3	4.2	0.6
	Gadolium	Gd	13.9	1.1526	Gd2O3	16.1	2.2
	Terbium	Tb	1.8	1.1762	Tb407	2.1	0.3
	Dysprosium	Dy	10.1	1.1477	Dy2O3	11.6	1.6
HREE	Holmium	Но	2.0	1.1455	Ho2O3	2.2	0.3
	Erbium	Er	5.2	1.1435	Er2O3	6.0	0.8
	Thulium	Tm	0.8	1.1421	Tm2O3	0.9	0.1
	Ytterbium	Yb	5.0	1.1387	Yb2O3	5.7	0.8
	Lutetium	Lu	0.7	1.1371	Lu2O3	0.8	0.1
	Ytrium	Y	48.9	1.2699	Y2O3	62.1	8.5
	Totals		612			731	100

Table 2: REE elements distribution from the relevant intersections from the Ema project

Refer to ASX release below for relevant announcement.

#### Date Title

22 May 2023 Significant REE levels at Ema and new tenements applications

## **Bioleaching pilot plant testing**

On 27 June the Company announced the results obtained from a from a highly successful bioleaching pilot plant test utilising a sample from the Três Estados project, TED 020, conducted by EcoBiome.

- Assay results: Fire assays conducted by ALS Metallurgy returned a combined total of 16.52 g/t of Pd and Au (15.90 g/t Pd and 0.62 g/ Au), potentially underscoring the abundance of precious metals within the mineral resource.
- **Significant increase in precious metals**: Bioleaching of drill hole TED 020 from Três Estados showed a **significant increase in gold and palladium** compared with the untreated sample. The findings indicate a substantial enhancement in metal recovery through the bioleaching process.

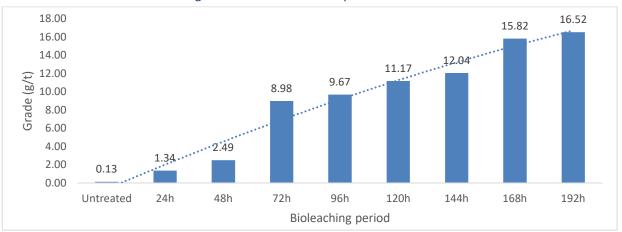
The pilot plant adhered to a clearly defined control philosophy, resulting in consistently stable operating conditions throughout its operation. The plant achieved an operational availability rate of 100%, indicating uninterrupted functionality during the operational period.

In addition to the samples collected at the end of the 192 hours bioleaching period, samples were also collected every 24 hours for assays (Figure 1). Sample preparation consisted of completely drying the pulp to a dry solid. The results demonstrate a strong increase in recovered grade over time. During the 192



hours, the total grade increased significantly, from 0.13 g/t to 16.52 g/t, as illustrated in Figure 1. Importantly, the results increased consistently every 24 hours. The results indicate that there could be a potential increase in recovered grade following a longer bioleaching period beyond the 192 hours adopted for this test. Therefore, the subsequent pilot plant tests will be conducted for an extended period.

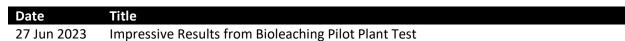
These exceptional results from the pilot plant test provide valuable insights for BBX. As such, the company intends to review and refine its process strategy, aiming for continuous improvements and maximising recoveries in the upcoming pilot plant testing.





These results are intended for pilot plant test work purposes only and may not be indicative of the overall Três Estados mineralisation.

Refer to ASX release below for relevant announcement.



## **Additional Tenements**

The Company has applied for three exploration tenements (Figure 2) in the vicinity of Apui, with potential for multi-element mineralisation. These areas were strategically selected given their potential for multi-element mineralisation. Reconnaissance soil sampling and auger drilling will be conducted once the exploration leases are granted.

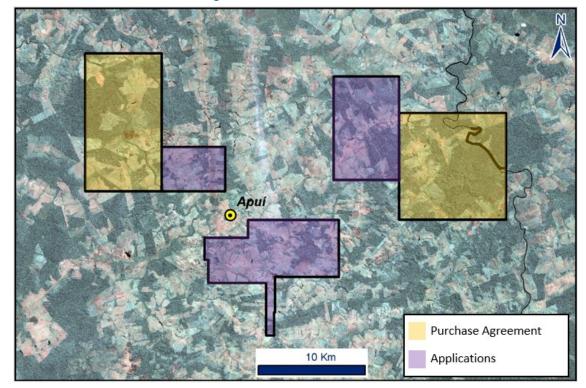
Furthermore, the Company executed a purchase agreement to secure two additional exploration permits (Figure 2) within the Apui region in Brazil. The process of transferring the exploration licenses for these two tenements to BBX is currently underway.

The addition of these five tenements to BBX's portfolio follows the announcement of significant REE results obtained from the Ema project on 22 May 2023. The Company has identified a specific sedimentary unit consisting of siltstones, fine sandstones, and claystone which shares the same ternary radiometric signature, and geological, climatic, and topographic characteristics with the Makuutu iREE project in Uganda.

The pale blue area depicted in Figure 3 represents the region with the highest potential for hosting an enriched ionic rare earths (iREE) horizon. The Apui project, comprising these five tenements, encompasses an extension of approximately 35 km, as indicated by ternary radiometry in Figure 3, a similar extension to Makuutu.



#### Figure 2: BBX's new tenements



Refer to ASX releases below for relevant announcement.

Date	Title
22 May 2023	Significant REE levels at Ema and new tenements applications
13 Jun 2023	BBX Broadens REE Focused Exploration Footprint

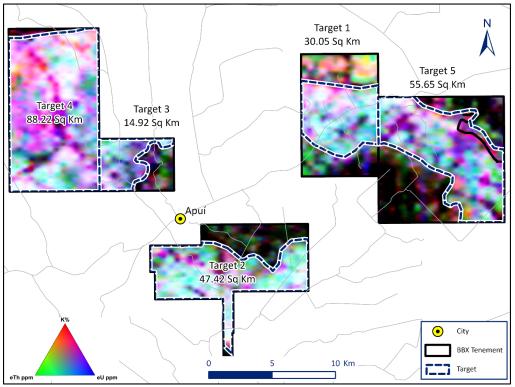
## Auger drilling programme

During the quarter, BBX's exploration team commenced an auger drilling programme at the Ema project. As announced on 17 July, the Company is currently drilling with two auger drilling crews, with a third crew expected to join the existing team within one week. The drilling crews operate from the Ema field camp. Additional technical support will be gradually incorporated over the course of the coming months.

Drilling activities focused initially on plateau 9, with drill holes placed at intervals of 200m along a cross section. Subsequently, drilling efforts changed to a 400m square grid surrounding EMD017 (Figure 4). This exploration programme aims to identify and delineate high-grade zones (> 800 ppm TREO) within the 189 km<sup>2</sup> area, which may potentially contain rare earth mineralisation of the Ionic Adsorbed Clay (IAC) type REE. The objective is to gather sufficient data to support the estimation of a potential inferred Mineral Resource Estimate (MRE) by the end of 2023.

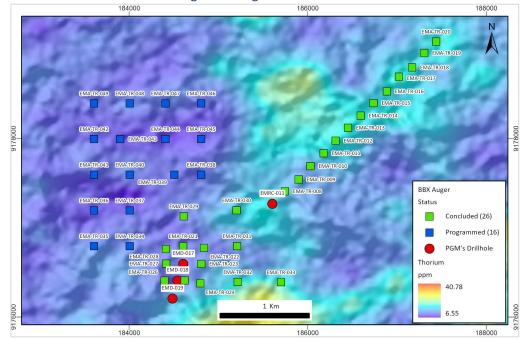
The first batch of samples from the initial 13 auger holes was delivered to SGS on 7 July, with results expected to be received within six weeks. Results for the remaining DD and RC drill samples sent to SGS last month are expected by the end of July. Due to the high demand the average turnaround time for assay results for REEs in Brazil is currently approximately 6 weeks, which may extend further in certain cases.





## Figure 3: Apui Project after acquisitions, over ternary radiometric image.

Figure 4: Auger drill location



Refer to ASX release below for relevant announcement.

Date	Title
17 Jul 2023	Ema and Ema East REE Exploration Update



## **Environmental Study**

The Company executed an agreement with Brandt Meio Ambiente Ltda (**Brandt**) to conduct an Environmental Impact Study and Environmental Impact Report (**EIA/RIMA**) (**study**) for the Três Estados project, Apuí, Amazonas, Brazil.

The study is an important step towards developing BBX's flagship project. Importantly, it is one of the steps needed to advance from an exploration to a mining licence and is mandatory for all activities that may cause considerable environmental impact.

The study will address the project's potential physical and social/community impacts and proposed mitigating measures. Once completed, it will be filed with the State environmental authority, IPAAM in the state of Amazonas.

The environmental impact study is expected to be completed in 12 months.

Refer to ASX release below for relevant announcement.

Date	Title
04 May 2023	Beginning of Environmental Study for Tres Estados Project

## Financial position and funding

#### **Financial position**

The Company ended the quarter with a cash balance of \$1.65m.

## Lind Share Subscription Agreement

During the quarter, Lind submitted two subscription notices for \$170,000 each. Shares were issue according to the terms of the agreement.

#### Corporate

#### **General Meeting**

A General Meeting was held on 29 June 2023. All resolutions were passed on a poll.

#### Subsequent events

## **Results of Ammonium Sulphate Tests**

On 19 July 2023, the Company announced the outcome of an ammonium sulphate leach conducted at SGS Geosol Laboratories in Brazil. Select intervals from the drill holes announced on 22 May were subjected to an assay for Rare Earth Elements (REEs) via an ammonium sulphate leach to determine their ionic adsorption REE content.

#### Management Changes

On 28 July 2023, the Company announced that Mr Ramon Soares had resigned from his position as Finance Director and Company Secretary, effective 31 July 2023. The Company has appointed Mr Ben Donovan as Company Secretary effective form 1 August 2023. Mr Donovan is the Principal of Argus Corporate Partners Pty which provides corporate advisory, IPO, and consultancy services.



## Shareholder Information

The Company's capital structure as of 30 June was as follows:

Capital Structure	Number
Fully paid ordinary shares (BBX)	508,297,233
Listed options (Dec 2025, \$0.12)	48,142,857
Unlisted performance rights (various terms)	10,700,000
Top 20 Shareholders (31 Dec 2022)	72.46%

## Listing Rule 5.3 Information

- 1. ASX Listing Rule 5.3.1: Exploration and Evaluation Expenditure during the Quarter was \$923k. This amount was expensed.
- 2. ASX Listing Rule 5.3.2: There were no mining production and development activities during the Quarter.
- 3. ASX Listing Rule 5.3.5: Payments to related parties of the Company and their associates during the Quarter totalled \$156k. These payments relate to directors' fees and salaries.

## Additional Information required by Listing Rule 5.3.3

Tenements held at the end of the quarter	Area (Ha)	Percentage ownership
DNPM Permit Number 880.107/08 Location Brazil (Ema)	9,839.91	100% Exploration Licence
DNPM Permit 880.184/16 Location Brazil (Ema)	9,034.00	100% Exploration Licence
DNPM Permit Number 880.090.08 Location Brazil (Três Estados)	8,172.25	100% Exploration Licence
Application number 880.025/2023 Location Brazil (Apuí iREE)	2,417	100% Application for Exploration Licence
Application number 880.026/2023 Location Brazil (Apuí iREE)	6,591.9	100% Application for Exploration Licence
Application number 880.027/2023 Location Brazil (Apuí iREE)	5,856	100% Application for Exploration Licence
Application number 880.259/2020 Owner: COOPERATIVA EXTRATIVISTA MINERAL DOS GARIMPEIROS DE APUI Location Brazil (Apuí iREE)	9,092.01	100% Application for Exploration Licence
Application number 880.149/2017 Owner: COOPERATIVA EXTRATIVISTA MINERAL DOS GARIMPEIROS DE APUI Location Brazil (Apuí iREE)	9,815.15	100% Application for Exploration Licence

The Activity Report for the June quarter 2023 has been authorized for release by the Board of Directors.



For more information:

André Douchane Chief Executive Officer adouchane@bbxminerals.com

#### **Competent Person Statement**

The information in this announcement relates to an update on the Inferred MRE for the Adelar target previously reported by the Company to ASX on 25 October 2022 based on exploration results for the Adelar target, Três Estados project, released by the Company to ASX on 26 May 2022, 1 June 2022, 9 June 2022, 5 July 2022, 7 July 2022, 14 July 2022, 21 July, 29 July 2022 and 5 August 2022 and for a maiden Inferred MRE for the Tabocal target, Três Estados based on exploration results released by the Company to ASX on 30 May 2022, 19 August 2022, 23 September 2022 and 14 October 2022 and the total Inferred MRE for the Três Estados Project. The Company confirms that is not aware of any new information or data that materially affects the information included in the above-mentioned releases.

The information in this announcement that relates to the Adelar target Mineral Resource update and to the Tabocal target Mineral Resource is based on and fairly represents information compiled by Mr. Antonio de Castro (acts as BBX's Senior Consulting Geologist through the consultancy firm, ADC Geologia Ltda) and Mr. Leonardo Soares, (employee of GE21 Consultoria Mineral Ltda). Mr. de Castro is a member of the Australasian Institute of Mining and Metallurgy, and Mr. Soares is a member of Australasian Institute of Geoscientists. Both have sufficient experience of relevance to the styles of mineralisation and types of deposits under consideration, and to activities undertaken to qualify as Competent Persons as defined in the 2012 Edition of the Joint Ore Reserve Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Specially, Mr. de Castro is the Competent Person for the database (including all drilling information), the geological and mineralisation model plus completed the site visits with Mr. Soares. Mr. Soares is the Competent Person for the construction of the 3D geology/mineralisation model plus the estimation. Mr. de Castro and Mr. Soares consent to the inclusion in this report of the matters on their information in the form and context in which they appear.

## **About BBX Minerals Ltd**

BBX Minerals Limited is a unique mineral exploration and mineral processing technology company listed on the Australian Securities Exchange.

Its major exploration focus is Brazil, mainly in the southern Amazon, a region BBX believes is vastly underexplored with high potential for the discovery of world class gold and precious metal deposits. BBX's key assets are the Três Estados and Ema Gold Projects. The company has 270.5km<sup>2</sup> of exploration tenements within the Colider Group, a prospective geological environment for gold, PGM and base metal deposits.

BBX is also developing an environment compatible and sustainable beneficiation process that extracts precious metals using a unique bio leach process. This leading-edge process, that extracts precious metals naturally, is being developed initially for the primary purpose of economically extracting Platinum Group metals from the Tres Estados mineral deposit. It is expected that such technology will be transferable and relevant to many other PGM projects. BBX believes that this processing technology is critical in the environmentally timely PGM space and supports a societal need to move toward a carbon neutral economy.

## +Appendix 5B

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

Name of entity	
BBX MINERALS LIMITED	
ABN	Quarter ended ("current quarter")
82 089 221 634	30 JUNE 2023

Con	solidated 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	(923)	(2,061)
	(b) development	-	-
	(c) production	-	-
	(d) staff costs	(156)	(570)
	(e) administration and corporate costs	(175)	(854)
1.3	Dividends received (see note 3)	-	-
1.4	Interest received	6	9
1.5	Interest and other costs of finance paid	-	-
1.6	Income taxes paid	-	-
1.7	Government grants and tax incentives	-	-
1.8	Other (Project Royalty)	-	(687)
1.9	Net cash from / (used in) operating activities	(1,248)	(4,163)

2.	Cash flows from investing activities		
2.1	Payments to acquire or for:		
	(a) entities	-	-
	(b) tenements	(6)	(6)
	(c) property, plant and equipment	-	(45)
	(d) exploration & evaluation	-	-
	(e) investments	-	-
	(f) other non-current assets	-	-

Con	solidated 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	(6)	(51)

3.	Cash flows from financing activities		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	-	2,132
3.2	Proceeds from issue of convertible debt securities	3,000	3,000
3.3	Proceeds from exercise of options	-	-
3.4	Transaction costs related to issues of equity securities or convertible debt securities	(117)	(289)
3.5	Proceeds from borrowings	-	750
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	2,883	5,593

4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	47	354
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(1,248)	(4,163)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(6)	(51)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	2,883	5,593

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

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	(21)	(78)
4.6	Cash and cash equivalents at end of period	1,655	1,655

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	1,655	47
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)	1,655	47

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	(156)
6.2	Aggregate amount of payments to related parties and their associates included in item 2	-
	f any amounts are shown in items 6.1 or 6.2, your quarterly activity report must includ ation for, such payments.	le a 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	6,600	2,250	
7.3	Other (please specify)	-	-	
7.4	Total financing facilities	6,640	2,250	
7.5	Unused financing facilities available at quarter end 4,		4,390	
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.			
	Drake Facility Converting Ioan Facility of up to \$6.6m with Drake Special Solutions LLC at 8%. The facility is repayable by cash or via issue of fully paid ordinary shares subject to shareholder approval. The facility was extended to 17 December 2024.			

8.	Estim	ated cash available for future operating activities	\$A'000
8.1	Net cash from / (used in) operating activities (item 1.9)		(1,248)
8.2	(Payments for exploration & evaluation classified as investing activities) (item 2.1(d))		-
8.3	Total r	elevant outgoings (item 8.1 + item 8.2)	(1,248)
8.4	Cash a	and cash equivalents at quarter end (item 4.6)	1,655
8.5	Unuse	d finance facilities available at quarter end (item 7.5)	4,390
8.6	Total available funding (item 8.4 + item 8.5)		6,045
8.7	Estimated quarters of funding available (item 8.6 divided by item 8.3)		4.8
	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?		
	Answe	er: N/A	
	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?		
	Answe	er: N/A	

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: N/A

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 July 2023

Authorised by: The Board of Directors (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 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.