

ASX Release

Release Date: 29 April 2021

Quarterly Activities Report to 31 March 2021

HIGHLIGHTS

ASM Metals Business

- Successful production of pre-sintered permanent magnets, with properties and quality confirmed by the Korean Institute of Rare Metals (KIRAM).
- A 75kg/day run of titanium (Ti) metal powder was successfully produced by Ziron Tech at a pilot scale (metal purity 99.918%, O₂ < 300ppm).
- Quality and significant environmental benefits of high purity titanium powders confirmed by independent 3D-printed metal part producer HANA AMT.
- Completion of the 5,200tpa Korean Metals Plant (**KMP**)¹ study confirming strong economics
 - Estimated capital: approximately US\$35-45 million
 - Estimated annual revenue: approximately US\$180-190 million
 - Estimated annual EBITDA: approximately US\$45-\$50 million
- Signing of a Memorandum of Understanding (MoU) with the Chungcheongbuk-do (Chungbuk) Provincial Government and Cheongju-si (Cheongju), City Government to locate ASM's first metals plant (KMP) within the Ochang Foreign Investment Zone in South Korea.



Figure 1: MoU Signing Ceremony with Chungcheongbuk-do Provincial Government and ASM's David Woodall.

¹ Refer ASX announcement 2 March 2021. The material assumptions underpinning the scoping study continue to apply and have not materially changed.

Contact Information

Contact

David Woodall, Managing Director, ASM Ltd, +61 8 9227 5677

Investors and Media

John Gardner, Citadel-MAGNUS, +61 413 355 997

Dubbo Project Optimisation

- South Korean companies identified to progress a build, own, operate (BOO) development for the provision of renewable power, chlor-alkali plant, directly for the Dubbo Project.
- Progressing opportunities to leverage the full breadth and depth of South Korean manufacturing capabilities to provide valuable support in the development of the Dubbo Project.

Corporate

- Announced an equity raising to primarily fund the final engineering and construction of the proposed 100% owned KMP, and accelerate the Dubbo Project's detailed construction design.
- Executed non-disclosure agreements and advanced discussions with several large Korean corporations as prospective partners.
- Continued discussions with potential strategic, and engineering and construction, partners in Korea to present the potential economic benefits of ASM's "mine to manufacturing" strategy.
- Progressing discussions with Korean Government and financial groups regarding the financing the Dubbo Project.
- Advanced discussions and negotiations with Korean metals manufacturers about titanium, NdFeB, dysprosium and zirconium offtake arrangements.
- Strategic engagement with key South Korean Government departments (Korean Institute of Technology, KORES and Ministry of Trade and Industry) on the development of the Dubbo Project.

ASM METALS BUSINESS

ASM has continued its progress during the March Quarter to establish its Korean Metals Plant within the Ochang Foreign Investment Zone in South Korea, following the signing of a Memorandum of Understanding (MoU) with the Chungcheongbuk-do (Chungbuk) Provincial Government and Cheongju-si (Cheongju), City Government.

The proposed KMP will produce and supply titanium and key rare earth metal alloys to the South Korean market. The MoU covers the supply of utilities, administrative licenses and permit procedures, including the South Korean Standard Industrial Classification code for rare metals and rare earth metals.

The ASM Board has approved the progression of the KMP with the initial phase estimated to cost US\$9.9 million. This capital outlay, which is fully funded, includes the acquisition of the selected facility and its renovation, development of ASM's corporate office in Korea, a new research and development facility, the ordering of long lead items and a warehouse facility.

On completion of the renovation, ASM will relocate the two research and development pilot plant furnaces to the new facility, where small scale production metals will commence in the second half of calendar year 2021. The 5,200t plant is planned to come into production from mid-2022 onwards. ASM's targeted production over 2021 and 2022 is set out in Table 1.

Metal Products	Targeted Production	
	2021	2022
Titanium Powder	500t	2,200t
NdFeB Alloy	40t	1,900t
Dyprosium	42t	72t
Zirconium	0t	110t
Total Metal Production	582t	4282t

Table 1: 2021 and 2022 Planned Production from KSM Metal Plant.

Metals output during the pilot plant phase will be sold directly to targeted users, demonstrating to South Korean manufacturing offtakers the consistency and quality of the metals produced by ASM.

Current designs for the full-scale KMP includes planned production levels of 5,200t per annum, which is based on the proven capacity at the pilot plant level.

The second phase of capital expenditure will see the procurement, installation and commissioning of the second titanium line, as well as the second and third neodymium lines, upon the execution of targeted offtake agreements with the South Korean manufacturing sector.

The Company's engineering effort remains focused on the rapid delivery of the Korean Metals Plant (KMP).

DUBBO PROJECT OPTIMISATION

ASM continued to progress the current optimisation study for the Dubbo Project with both engineering and test work during the March Quarter. Engagement with Korean industry during a trip to South Korea during the quarter by the Managing Director has presented several significant opportunities that make it prudent to rescope some areas of the Dubbo Project optimisation study.

Meetings with several key engineering and construction organisations highlighted an appetite for South Korean companies to become involved in the engineering and equipment manufacture for the Dubbo Project. Furthermore, several South Korean companies have expressed interest in participating in a build, own, operate (BOO) development that could see the provision of renewable power, chlor-alkali plant (for onsite production of hydrochloric acid and caustic soda) directly for the Project.

The optimisation study is now expected to be completed in Q3 2021, which will allow time for re-scoping, and for further discussions with the South Korean parties with an interest in the BOO development.

OFFTAKE AGREEMENTS

During the quarter the Company has maintained its focus on the delivery of metal offtake agreements with titanium product consumers and permanent magnet producers in South Korea. Discussions continue with various parties to address the supply of these metals that are critical to the South Korean manufacturing sector.

ASM is also in discussions with several global suppliers in relation to the sourcing of key raw materials for its metal production strategy. These discussions are progressing well with the focus of obtaining binding and committed agreements with various potential suppliers, the details of which will be announced once completed.

FINANCING

ASM launched a successful equity raising in the March Quarter that will enable the financing of the KMP. Fast-tracking the development of the KMP to production will generate earnings for ASM in 2021 and 2022, strengthening the Company's financial position. However, the Company will also continue discussions with other potential financing sources.

The equity raising comprised a placement and a pro rata Entitlement Offer to eligible shareholders. The equity raising was successfully concluded subsequent to Quarter end, with gross proceeds amounting to A\$91,919,096.

Through the equity raising, the Company received applications from eligible shareholders for 5,608,145 shares at the issue price of A\$4.80 per share, representing an approximate 65.23% take-up. The placement of approximately 13.5 million shares to institutional and sophisticated investors raised A\$65,000,000 (refer ASX release 26 March 2021) and completed on 6 April 2021.

One investor participating in the placement settled directly with the Company prior to the end of the Quarter, resulting in A\$8 million being added to the Company's cash balances as at 31 March 2021 (refer Appendix 5B, section 3.1)

During the Quarter, Managing Director David Woodall spent some 13 weeks in Korea, meeting key Government, industry groups and financial institutions to educate them on ASM's "mine to manufacturing" strategy and the potential it could deliver to the Korean economy and, more specifically, its manufacturing sector.

It is increasingly well-understood that ASM is in a unique position to provide certainty to the supply of critical metals to South Korea. Financing for the Dubbo Project will include a strategic partnership underpinned by offtake agreements, construction and engineering, and, ultimately, project financing. It is increasingly likely that that strategic partner will be from Korea.

Discussions with South Korean Government departments are progressing with the understanding that ASM delivers significant benefit to Korea with the supply of titanium metal, titanium alloys, titanium powder, zirconium powders and strip metal alloy for permanent magnets, as well as hafnium essential in the development of semi-conductors and other specialty alloys.

The Company continues to progress detailed discussions with engineering and construction companies in Korea that have the capacity to build the Dubbo Project, as well as a renewable power facility and plant to produce hydrochloric acid and caustic soda, which are key reagents with the Dubbo Project flowsheet.

During the March Quarter the Company signed non-disclosure agreements with Korean industry groups to progress these matters. The Company will announce progress on these discussions as and when definitive agreements are completed.

CORPORATE

Cash

ASM’s cash position as at 31 March 2021 was A\$16.9 million. The following waterfall chart highlights the quarterly movement in cash held.

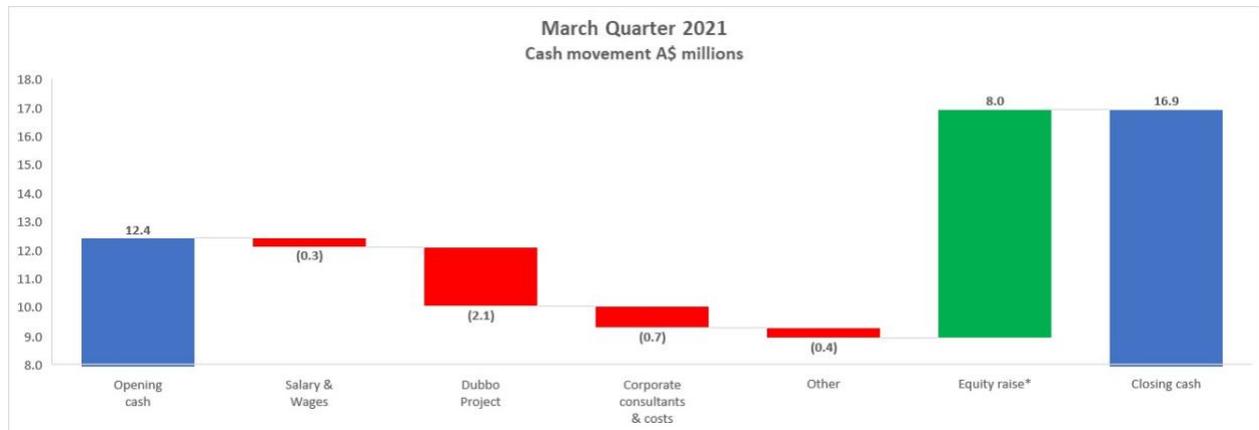


Figure 2: March Quarterly Cash Movement.

PRODUCT OUTLOOK AND MARKETING

The impact of COVID-19, and associated disruption on the world economy, appears to be reducing as the roll-out of vaccinations continue, even though the effects vary widely between countries. As at the time of this Quarterly Report there are positive signs of a continued improvement in the economy worldwide.

President Biden’s US\$2 trillion infrastructure plan is predicted to deliver growth in US GDP, as reported in the Washington Post: *“By April, the consensus estimate had jumped to 6.3 percent. Many Wall Street economists predict an even faster rate of growth. Goldman Sachs now forecasts a stunning 8 percent, which would be the U.S. economy’s strongest year since 1951.”*

Fitch Ratings forecasts: *“US GDP growth at 6.2% in 2021 (revised up from 4.5%), China at 8.4% (from 8.0%) and the eurozone at 4.7% (unchanged). Growth in EM excluding China is forecast at 6.0% (up from 5.0%).”*

President Biden has further committed to supporting the electrical vehicle (EV) market in the US with a \$174 billion strategy that includes the boosting of charging infrastructure, electrifying public and school transit, and support for domestic EV production and sales.

Globally, passenger electric vehicles sales increased 63% year on year as estimated from Adamas Intelligence. This has seen 243,030 EVs being produced in the Asia-Pacific region, 146,202 EVs in Europe and 94,014 EVs in the Americas, driving the demand for rare earth metal alloys for permanent magnets used in the electric vehicles.

Adamas Intelligence note that rare earth exports from China during January and February increased year on year from 2020 to 2021 by 28% (from 5,489 tonnes to 7,068 tonnes of rare earth oxides and oxide equivalents). The expected continual demand has seen the NdPr oxide price increase in the quarter from US\$64.16 per kilogram to US\$89.15 per kilogram, an increase of 38.9% from the December 2020 Quarter to the March 2021 Quarter.



Figure 3: Rare Earth Oxide Prices. Source: Adamas Intelligence April 2021

Figure 3 shows the increase in prices of key oxides required to convert these into metals, and the key alloys, that can be used in permanent magnets. Adamas Intelligence suggests that the increased production of NdPr and Nd oxide will see the price of these oxides stabilize as increased production from China, Australia, US and elsewhere increases.

The key oxides (terbium and dysprosium) for high temperature permanent magnets used in electric vehicles and wind turbines continue to increase in price. This is because of lower production from Myanmar, a globally significant producer, where instability continues following the military coup.

Importantly, for the planned production of metal from the Company’s KMP, Adamas Intelligence has forecast a slight reduction in prices following a drop in the Chinese RMB to USD exchange rate.

The various NdFeB alloys that ASM will produced by the KMP will meet the criteria of permanent magnets that have varying requirements related to temperature and magnetic properties of the permanent magnet producers.

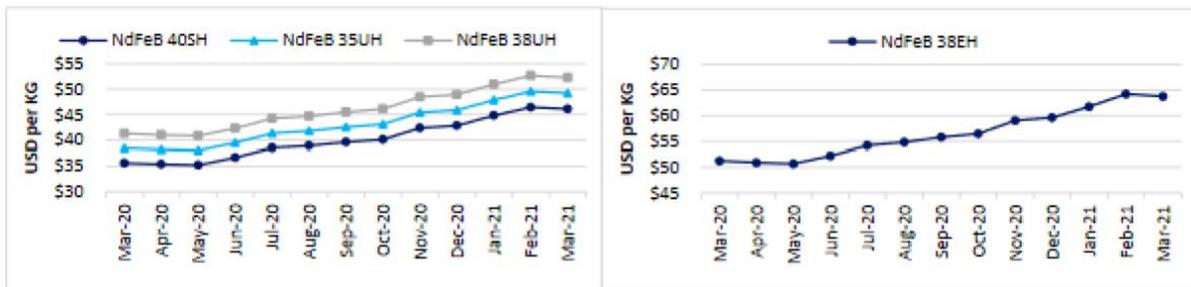


Figure 4: NdFeB Alloy Prices. Source: Adamas Intelligence April 2021.

The table below shows indicative prices for ASM’s rare earth metals used in permanent magnets (neodymium, praseodymium, dysprosium, terbium), plus other key Dubbo Project elements (which include zirconium, hafnium, and niobium), as well as titanium alloy used in aerospace. Prices for value-added metals and alloys have been provided on a downstream basis, given most Dubbo Project elements are ultimately consumed as metals or alloys.

Material ¹		Mar 2020	Jun 2020	Sep 2020	Dec 2020	Mar 2021
Neodymium-Praseodymium Metal (min 99%)	US\$/kg	\$49.8	\$50.6	\$61.6	\$78.6	\$105.5
Dysprosium Metal (min 99%)	US\$/kg	\$375.0	\$342.0	\$337.0	\$375.7	\$535
Terbium Metal (min 99.9%)	US\$/kg	\$769.0	\$787.0	\$920.0	\$1,311.3	\$1,635
Zirconium Sponge (min 99.4% Zr) ⁴	US\$/kg	\$34.2	\$24.5	\$20.8	\$20.8	\$21.54
Fused Zirconia (98.5% ZrO ₂) ⁴	US\$/t	\$3,790	\$3,750	\$3,680	\$3,472	\$4,153
Zirconium Oxychloride (36.0% ZrO ₂) ⁴	US\$/t	\$2,130	\$2,060	\$1,950	\$1,820	\$2,154
Hafnium Metal (<1% Zr)	US\$/kg	\$785.0	\$775.0	\$775.0	\$750.0	\$775.0
Ferro Niobium (65% Nb) ²	US\$/kg	\$37.3	\$35.0	\$34.8	\$39.5	\$42.70
Titanium Ingot (Ti 6Al 4V) ³	US\$/kg	\$22.7	\$17.4	\$18.2	\$18.1	\$17.64

Table 2: Critical Metals Pricing – Q1 2021.

Sources: Argus Metals and Asian Metal. 1. All prices are FOB China unless otherwise noted, 2. Du Rotterdam, Netherlands, 3. FOB United States, 4. US\$1.00=Yuan 6.50.

Sales for zirconium chemicals and oxides were slightly up in the March Quarter. Some changes in the market indicate that the Dubbo zirconia products may attract a premium due to having no radio-nuclide associated with planned production from the Project. Hafnium metal prices continue to remain relatively stable.

MINING TENEMENTS

Australian Strategic Materials Limited confirms the following information as of 31 March 2021 (as required by ASX Listing Rule 5.3.3).

Tenements	Mining tenements acquired during the quarter	Mining tenements disposed of during the quarter	Mining tenements held at the end of the quarter	Tenement location
EL 5548			100%	Dubbo NSW
EL 7631			100%	Dubbo NSW
ML 1724			100%	Dubbo NSW



--- ENDS ---

This document has been authorised for release to the market by David Woodall, Managing Director.

About Australian Strategic Materials – www.asm-au.com

Australian Strategic Materials Ltd (ASM) is an integrated materials business and emerging “mine to manufacturer” producer of [critical metals](#). The company’s cornerstone [Dubbo Project](#) (100% owned) is a proven long-term resource of [rare earths](#), [zirconium](#), [niobium](#) and [hafnium](#) located in central western NSW, Australia. It represents an alternative, sustainable and secure source of these metals, which are critical for a diverse range of advanced and clean technologies.

ASM’s metals business is founded on a novel [metallisation process](#) that converts oxides into high-purity metals, alloys and powders using less energy than conventional methods. The pilot plant in South Korea has proven the commercial scalability of the process and successfully produced a range of high-purity metals and alloys, including titanium, neodymium, praseodymium, dysprosium and zirconium. Following this success, ASM’s first metallisation plant will be constructed in South Korea to supply a range of critical metals including rare earths, zirconium and titanium.

A Dubbo Project optimisation study will be completed in the Q3 2021, targeting improved capital and operating costs, along with increased revenue stream. Elements of this optimisation study include simplifying the flowsheet, increasing recoveries of rare earths, and potentially including a front-end flotation circuit.

Appendix 5B

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

Name of entity

Australian Strategic Materials Ltd

ABN

90 168 368 401

Quarter ended ("current quarter")

31 March 2021

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (9 months) \$A'000
1. Cash flows from operating activities		
1.1 Receipts from customers	-	-
1.2 Payments for		
(a) exploration & evaluation	-	-
(b) development	-	-
(c) production	-	-
(d) staff costs	(464)	(822)
(e) administration and corporate costs	(934)	(2,165)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	9	68
1.5 Interest and other costs of finance paid	-	(1)
1.6 Income taxes paid	-	-
1.7 Government grants and tax incentives	-	-
1.8 Other (provide details if material)		
- Transaction costs relating to acquisition of subsidiary	-	(536)
- Pastoral company operating cashflows	41	(241)
- Other	37	120
1.9 Net cash from / (used in) operating activities	(1,311)	(3,577)
2. Cash flows from investing activities		
2.1 Payments to acquire or for:		
(a) entities	-	-
(b) tenements	-	-
(c) property, plant and equipment	(126)	(1,928)

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 (9 months) \$A'000
	(d) exploration & evaluation (Dubbo Project)	(2,065)	(4,033)
	(e) investments	-	-
	(f) other non-current assets	-	(196)
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)		
	Net cash acquired with subsidiary	-	114
2.6	Net cash from / (used in) investing activities	(2,191)	(6,043)

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

* An investor under the equity raising announced on 26 March 2021 settled directly with the Company prior to the end of the Quarter. For further details refer to Quarterly Activities Report – Corporate section.

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 (9 months) \$A'000
4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	12,426	18,544
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(1,311)	(3,577)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(2,191)	(6,043)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	8,000	8,000
4.5	Effect of movement in exchange rates on cash held	-	-
4.6	Cash and cash equivalents at end of period	16,924	16,924

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	9,803	1,313
5.2	Call deposits	7,121	11,113
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)	16,924	12,426

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	271
6.2	Aggregate amount of payments to related parties and their associates included in item 2	-

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.

During the quarter ended 31 December 2020, the cash payments of \$ 271,000, listed at item 6.1 above, were payments to Directors, including salary, Directors' fees, consulting fees and superannuation.

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

7. Financing facilities	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
<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>		
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)	(1,311)
8.2 (Payments for exploration & evaluation classified as investing activities) (item 2.1(d))	(2,065)
8.3 Total relevant outgoings (item 8.1 + item 8.2)	(3,376)
8.4 Cash and cash equivalents at quarter end (item 4.6)	16,924
8.5 Unused finance facilities available at quarter end (item 7.5)	-
8.6 Total available funding (item 8.4 + item 8.5)	16,924
8.7 Estimated quarters of funding available (item 8.6 divided by item 8.3)	5.0
<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?	
Answer: N/A	

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

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:

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: 29 April 2021.

Authorised by: .Dennis Wilkins – Joint Company Secretary
(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.