

## **ACTIVITIES REPORT JUNE QUARTER 2017**

Significant progress on the maiden Ore Reserve and DFS for Karlawinda Gold Project during the June Quarter

## **HIGHLIGHTS**

- Material increase in gold recoveries from detailed metallurgical testwork
- Average gold recoveries increased to 92.6% from 90.4% in the 2016 Scoping Study
- High gravity recoverable gold of 45% achieved in fresh ore confirms the benefits of incorporating a gravity circuit in the Karlawinda flowsheet
- Improved comminution properties provide the opportunity to further optimise the Karlawinda DFS crushing, grinding and gravity circuits. An improvement in the project's economics is anticipated through a reduction in both capital and operating costs
- Karlawinda DFS and maiden Ore Reserve for the Bibra deposit remain on track for release in the September 2017 Quarter
- Near-mine exploration resumed during the Quarter with a total of 140 holes for 13,640m of RC drilling completed over priority targets
- Tranche 2 of \$10M share placement to Hawkes Point Holdings LP completed, ensuring Capricorn is fullyfunded to completion of DFS and decision to mine

## ASX ANNOUNCMENT 27 July 2017

Australian Securities Exchange Code: CMM

ABN: 84 121 700 105

#### **Board of Directors:**

Mr Heath Hellewell Non-Executive Director

Mr Guy LeClezio

Non-Executive Director

Mr Stuart Pether Non-Executive Director

#### **Issued Capital:**

Shares 541.8M Options 36.1M Share Price A\$0.09 Market Cap. A\$51.5M

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## JUNE QUARTER ACTIVITIES

The focus of activity in the June Quarter was principally on progressing a range of key activities associated with the Karlawinda Definitive Feasibility Study (DFS). These activities included:

- Detailed metallurgical testwork;
- Detailed review of alternative comminution circuit designs;
- · Open pit staged design and mine scheduling;
- Tailings dam design review;
- Borefield pump testing, hydrological and water balance studies;
- Review of various diesel and gas power generation opportunities including grid power supply;
- · Environmental baseline sampling.

Outcomes of the various studies were fed into the modifying factors for the maiden Karlawinda Ore Reserve Statement and the DFS, both of which are on schedule to be finalised in the September Ouarter.

## 1. KARLAWINDA DFS PROGRESS

Feasibility studies on the development of a standalone 3Mtpa CIP (carbon-in-pulp) process plant progressed on schedule during the June Quarter. Highlights from the Quarter are provided below.

#### **METALLURGICAL**

In total, two tonnes of drill core from 24 diamond drill holes were used to prepare 16 composites (13 variability composites and three master composites) for the DFS metallurgical testwork.

Following the completion of this program of work, a total of 27 metallurgical variability samples, and five master composite samples from the Bibra deposit were tested (see Table 3). A total of 51 diamond drill holes were used to produce these samples.

### **Gravity Recovery**

A significant proportion of the gold at the Bibra deposit is recoverable using gravity methods. Extensive testwork on all geological domains has resulted in greatly improved gravity-recoverable gold results, particularly in fresh ore, which accounts for 72% of the total Resource.

An average of 25% of gold from oxide ore and 45% from fresh ore is estimated to be recoverable by gravity methods. This significant improvement since scoping studies (which estimated 24% recovery by gravity) has impacted positively on the project's economics by reducing both capital and operating costs through:

- Improved overall metallurgical recovery;
- A material reduction in leach residence time which reduces the requirement for additional tankage; and
- A reduction in consumables including cyanide and lime consumption.

## CIL Recovery

Cyanide leaching will follow gravity recovery in the plant design with the overall recovery being the combined gold recovery from the two processes. Overall recoveries are shown in Table 3 below and indicate that gold recoveries in all ore types have improved from Scoping to DFS, notwithstanding a significantly coarser grind size for laterite, oxide and transitional material (150 microns versus 125 microns in Scoping studies).



Table 3: Bibra Deposit Gold Recovery Testwork Results Summary, June 2017

				Recovery (Based on DFS Resource Grade)		
Test	Ore Type	Units	Grade (g/t)	Scoping Study Recovery (%) (P80 grind size)	DFS Recovery (%) (P80 grind size)	
	Laterite	%	1.4	-	< 10	
Crovity	Oxide	%	1.0	-	25	
Gravity	Transition	%	1.0	-	45	
	Fresh	%	1.1	24	45	
	Laterite	%	1.4	92.1 (125 μ)	94.1 (150 µ)	
Overell	Oxide	%	1.0	89.0 (125 µ)	92.8 (150 μ)	
Overall	Transition	%	1.0	90.0 (125 μ)	91.8 (150 μ)	
	Fresh	%	1.1	91.4 (106 µ)	92.5 (106 µ)	
Average		%	1.09	90.4	92.6	

#### COMMINUTION

Comminution (the reduction of particle size by crushing and grinding) results have improved in all areas, and this will have a positive impact on the design of the comminution circuit and associated capital and operating costs in the DFS. Results from each testwork area are summarised in Table 4 below.

The SMC value provides a measure of the resistance to breakage of rock particles in a SAG mill, with higher values associated with more easily broken particles. This testwork was undertaken on both oxide and fresh ore and indicates small improvements on the previous results from the Scoping Study.

The Bond Ball Mill Work Index ("BBWI") provides a measure of the energy required to grind particles to a given size at the finer end of the ball mill grinding spectrum, and is an indicator of the hardness of the ore type. BBWI values have reduced for both oxide and fresh ores in testwork and significant improvements have been achieved, without gold recovery losses, at coarser grind sizes (refer Table 3 above).

UCS is Unconfined Compressive Strength and is a measure of the compressive strength of the rock, and provides guidance on ore competency. A reduction from 150Mpa to 54Mpa has been observed in recent testwork, which is expected to impact positively on the size of crusher required, throughput rates and power usage – reducing both capital and operating costs.

The Abrasion Index measures how abrasive the ore materials are, which impacts on wear rates and equipment selection in the grinding circuit. In testwork on both oxide and fresh ores, the abrasion rates are reduced, resulting in lower expected wear rates during crushing and grinding. In light of these positive metallurgical results, Capricorn undertook further modelling and optimisation of the crushing and grinding requirements of the project during the quarter.

Table 4: Bibra Deposit Comminution Testwork Results Summary, June 2017

Test	Ore	Units	Scoping	DFS	Comment
SMC (A*b)	Oxide Fresh		87 28	89 30	Improved Improved
BBWI	Oxide Fresh	kWh/t kWh/t	16.7 15.8	13.0 14.5	Improved Improved
UCS	Fresh	Мра	150	54	Improved
Abrasion Index	Oxide Fresh	g g	0.08 0.25	0.07 0.23	Improved Improved



#### **OPEN PIT MINING STUDIES**

Detailed design and evaluation of staged open pit mining including scheduling and evaluation of equipment sizing and requirements were undertaken during the Quarter. Capricorn commenced an independent study to generate a zero-based mining cost estimate to support the DFS. The study will also be used to review, evaluate and benchmark mining contractor submissions.

#### TAILINGS STORAGE FACILITY

Detailed design and evaluation of the proposed Integrated Waste Landform (IWL) tailings storage facility along with site evaluations for sources of material suitable for construction of the facility continued throughout the quarter.

### **BOREFIELD AND HYDROLOGY**

A 48-hour pump test of 5 wells in the proposed bore field water supply was completed during the quarter, with strong flow results returned. Aquifer modelling and water balance studies were completed which concluded that an adequate high-quality water supply for the life of mine has been delineated. It was confirmed that, due to the water quality in the aquifer, a water softening unit rather than a reverse osmosis unit is required to meet the potable water requirements for the project.

#### SITE POWER

A study into the potential use of grid power supplied from Newman to site versus on-site gas or diesel power generation continued during the Quarter.

#### **ENVIRONMENTAL**

Environmental surveys by 360 Environmental in and around the project area augment previous surveys and continue to de-risk the project and the mine permitting process. A second seasonal survey for terrestrial invertebrates was completed during the June Quarter.

Final surveys of road and potential powerline access routes are expected to be completed during the September Quarter prior to lodgement of formal permits with final environmental approvals expected in early 2018.

#### 2. EXPLORATION

During the June Quarter, a program comprising 140 holes for a total of 13,460m of RC drilling was completed over priority targets in vicinity of the proposed Bibra open pit. Final assays are yet to be received and interpretation of results is ongoing.

A detailed aeromagnetic survey was completed on 50m spaced lines over the Karlawinda Project area including the Bibra and Francopan deposits. Final modelling and interpretation of this key dataset is ongoing.

## SEPTEMBER QUARTER - PLANNED ACTIVITIES

During the September 2017 Quarter, the following activities are planned for Karlawinda:

- Calculation of a maiden Ore Reserve for the Bibra deposit;
- Completion of the Karlawinda DFS; and
- Interpretation and assessment of exploration results (including the recently received high-resolution aero-magnetics).



## **CORPORATE**

## FINANCIAL POSITION

On the 6<sup>th</sup> of February 2017, Capricorn announced the execution of a binding agreement with Hawke's Point Holdings L.P. to raise a total of A\$10 million in new equity through the issue of two tranches of shares at a price of 11.7c per share.

The investment by Hawke's Point, which followed an extensive due diligence process, is a strong endorsement for the Karlawinda Project and means that Capricorn is fully-funded through to a formal decision to mine and enables Capricorn to maintain resource growth and discovery exploration programs at Karlawinda.

On the 28<sup>th</sup> April, Tranche One shares were ratified and Tranche Two shares were approved for issue at a General Meeting of shareholders. The Company received the final portion of the placement totaling A\$3.6 million during the quarter.

The Company's cash position at 30th June was A\$5.5 million.

## **TENEMENTS**

A full listing of the Company's current tenement holdings, as at the date of this release, is included as Appendix 1.

During the quarter, the following changes have occurred:

- Tenement Applications E52/3541, E52/3543, E52/3554 and E52/3562 were lodged.
- Tenement Application E52/3554 was withdrawn.

Subsequent to the end of the quarter, Tenement Application E52/3474 has been converted to a Granted Tenement.

### KARLAWINDA GOLD PROJECT

The Karlawinda Gold Project is located in the Pilbara region of Western Australia, 65km south-east of the town of Newman. Karlawinda is an advanced gold project which includes the Bibra deposit and numerous outstanding exploration targets including the Francopan prospect. The Project covers a total area of approximately 1,353km².

Capricorn completed a positive Scoping Study in July 2016, which was based on a single large open pit mine at Bibra feeding a 3Mtpa standalone CIL (carbon-in-leach) processing facility on site. Annual gold production is forecast to average around 100,000oz/pa over an initial mine life of approximately 7.5 years.

In the second half of 2016, Capricorn commenced a Definitive Feasibility Study (DFS) on the development of the Karlawinda Gold Project. This study is underpinned by a major 75,000m in-fill drilling program completed in December 2016. The program upgraded the confidence level in the previous Inferred Mineral Resource at Bibra to the Indicated category. The drilling program was one of the largest drilling campaigns undertaken within the Australian gold sector in 2016.

The upgraded resource estimate at Bibra currently stands at:

#### 31 million tonnes @ 1.1g/t Au for 1,114,000 ounces of gold.

It represented a 22% increase (200,000oz) from Capricorn's July 2016 resource and a 70% increase (463,200oz) from the February 2016 resource. Refer to the ASX announcement released by the Company on the  $10^{th}$  of April 2017<sup>1</sup> for further details on this resource estimation.

<sup>&</sup>lt;sup>1</sup> Capricorn report that it is not aware of any new information or data that materially affects the information included in the resource announcement dated 10<sup>th</sup> April 2017 and, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed.



The DFS is scheduled for completion in the September Quarter 2017. Capricorn has a prioritized exploration program at Karlawinda which is aimed at expanding its gold inventory.

## **RESOURCE SUMMARY**

Table 1: Bibra Gold Deposit JORC Open Pit Resource Estimate (as of 10 April 2017)

	INDICATED		INFERRED			TOTAL			
DATE	Tonnes (Mt)	Grade (g/t Au)	Ounces (Moz)	Tonnes (Mt)	Grade (g/t Au)	Ounces (Moz)	Tonnes (Mt)	Grade (g/t Au)	Ounces (Moz)
April 2017	28.9	1.10	1.03	2.4	1.06	0.084	31.3	1.10	1.114
July 2016				25.5	1.10	0.914	25.5	1.10	0.914

Table 2: Bibra Gold Deposit JORC Open Pit Resource Estimate by Domain (as of 10 April 2017)

DOMAIN	Tonnes	Grade (g/t Au)	Ounces
Laterite	1,544,000	1.4	67,600
Oxide – upper saprolite	2,318,000	1.0	73,000
Lower saprolite	3,075,000	1.0	99,850
Transitional	2,071,600	1.0	65,270
Fresh	22,322,500	1.1	808,380
TOTAL	31,331,100	1.1	1,114,000

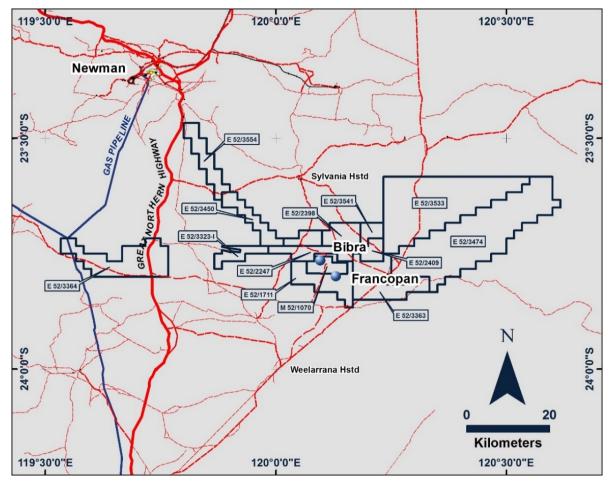


Figure 1: Location Map: Karlawinda Gold Project



#### For and on behalf of the Board

Heath Hellewell Executive Chairman

## For further information, please contact:

Mr Heath Hellewell, Executive Chairman

Email: enquiries@capmet.com.au

Phone: (08) 9212 4600

#### **Competent Persons Statement**

The information in this report that relates to Exploration Results or Mineral Resources is based on information compiled or reviewed by Mr. Michael Martin who is Chief Geologist and a full-time employee of the Company. Mr. Michael Martin is a current Member of the Australian Institute of Geoscientists and has sufficient experience, which is relevant to the style of mineralisation and types of deposit under consideration and to the activities undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code of Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr. Martin consents to the inclusion in the report of the matters based on the information in the form and context in which it appears.

The information in this report that relates to Exploration Results or Mineral Resources is based on information reviewed by Mr. Peter Langworthy who is Executive General Manager Geology, and a full-time employee of the Company. Mr. Peter Langworthy is a current Member of the Australian Institute of Mining and Metallurgy and has sufficient experience, which is relevant to the style of mineralisation and types of deposit under consideration and to the activities undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code of Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr. Langworthy consents to the inclusion in the report of the matters based on the information in the form and context in which it appears.



## **APPENDIX 1 – TENEMENT SCHEDULE**

## <u>Australia</u>

Tenement	Project	Company	Blocks <sup>1</sup>	Status	Date of Grant/ Application	Expiry
E52/1711	Karlawinda	Greenmount	35	Granted	05/08/2004	04/08/2017
E52/2247	Karlawinda	Greenmount	16	Granted	21/07/2009	20/07/2019
E52/2398	Karlawinda	Greenmount	15	Granted	28/04/2010	27/04/2020
E52/2409	Karlawinda	Greenmount	8	Granted	16/06/2010	16/06/2020
E52/3323	Karlawinda	Greenmount	11	Granted	11/03/2016	10/03/2021
E52/3363	Karlawinda	Greenmount	36	Granted	13/01/2017	12/01/2022
E52/3450	Karlawinda	Greenmount	16	Granted	13/01/2017	12/01/2022
E52/3474	Karlawinda	Greenmount	128	Granted	03/07/2017	02/07/2022
E52/3533	Karlawinda	Greenmount	109	Application	23/03/2017	-
E52/3541	Karlawinda	Greenmount	7	Application	19/04/2017	-
E52/3543	Karlawinda	Greenmount	8	Application	20/04/2017	-
E52/3562	Karlawinda	Greenmount	20	Application	16/06/2017	-
Total Blocks			409			
M52/1070	Karlawinda	Greenmount	2975 ha	Granted	23/11/2016	22/11/2037

#### Note:

1. The area measurement for one block can vary between  $2.8-3.2\ km^2$ 

#### **Madagascar**

Title Number	Permit Type	Grant Date	Expiry Date	Term (Years)	Project Name	Total Carres (New - 0.391km2)	Interest %	Notes
3432	PR	21-Sep-15	20-Sep-18	3	Ampanihy - Central (Big 'S')	48	100%	
5391	PE	20-Nov-02	19-Nov-42	40	Ampanihy - Ianapera	16	100%	
5392	PE	20-Nov-02	19-Nov-42	40	Ampanihy - Ianapera	16	100%	4
5393	PE	20-Nov-02	19-Nov-42	40	Ampanihy - Ianapera	16	100%	
5394	PE	20-Nov-02	19-Nov-42	40	Ampanihy - Maniry	48	100%	3
19932	PE	10-Mar-06	09-Mar-46	40	Ampanihy - Maniry	112	100%	
25093	PE	18-Jan-07	17-Jan-47	40	Ampanihy - Ianapera	16	100%	
25094	PE	18-Jan-07	17-Jan-47	40	Ampanihy - Ianapera	16	100%	
25095	PE	18-Jan-07	17-Jan-47	40	Ampanihy - Maniry	48	100%	2
25605	PR	18-Jun-01	17-Jun-11	10	Ampanihy - Maniry	80	100%	1
25606	PR	18-Jun-01	17-Jun-11	10	Ampanihy - Maniry	16	100%	1
39750	PR	21-Sep-15	20-Sep-18	03	Ampanihy - Central (Big 'S')	16	100%	
39751	PR	21-Sep-15	20-Sep-18	03	Ampanihy - Central (Big 'S')	160	100%	
Total Carres 608						608		

#### **NOTES**

- Renewal awaiting confirmation from BCMM. All annual fees have been paid up to 31 December 2017. 1.
- Leased to SQNY Royalty and partial tenement fees payable to subsidiary Mada-Aust SARL. Leased to Jupiter Mines and Minerals Royalty and annual tenement fees payable to MDA. 2.
- 3.
- Leased to Hery Lala Alain Raharinavio Royalty on small blocks



+Rule 5.5

## **Appendix 5B**

# Mining exploration entity and oil and gas exploration entity quarterly report

Introduced 01/07/96 Origin Appendix 8 Amended 01/07/97, 01/07/98, 30/09/01, 01/06/10, 17/12/10, 01/05/13, 01/09/16

### Name of entity

CAPRICORN METALS LTD

ABN

Quarter ended ("current quarter")

84 121 700 105

30 JUNE 2017

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	24	109
1.2	Payments for		
	(a) exploration & evaluation	(2,244)	(12,496)
	(b) development	-	-
	(c) production	-	-
	(d) staff costs	(555)	(1,150)
	(e) administration and corporate costs	(81)	(756)
1.3	Dividends received (see note 3)	-	-
1.4	Interest received	21	95
1.5	Interest and other costs of finance paid	-	-
1.6	Income taxes paid	-	-
1.7	Research and development refunds	-	-
1.8	Other: GST (Paid)/ Refunded	83	(15)
1.9	Net cash from / (used in) operating activities	(2,752)	(14,213)

2.	Cash flows from investing activities		
2.1	Payments to acquire:		
	(a) property, plant and equipment	(160)	(181)
	(b) tenements (see item 10)	-	(1,500)
	(c) investments	-	(26)
	(d) other non-current assets	-	-

<sup>+</sup> See chapter 19 for defined terms

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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) property, plant and equipment	-	1
	(b) tenements (see item 10)	-	-
	(c) investments	-	96
	(d) 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	(160)	(1,610)

3.	Cash flows from financing activities		
3.1	Proceeds from issues of shares	3,582	10,000
3.2	Proceeds from issue of convertible notes	-	-
3.3	Proceeds from exercise of share options	-	150
3.4	Transaction costs related to issues of shares, convertible notes or options	(316)	(538)
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	3,266	9,612

4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	5,190	11,755
4.2	Net cash used in operating activities (item 1.9 above)	(2,752)	(14,213)
4.3	Net cash from/ (used) in investing activities (item 2.6 above)	(160)	(1,610)
4.4	Net cash from financing activities (item 3.10 above)	3,266	9,612
4.5	Effect of movement in exchange rates on cash held	-	-
4.6	Cash and cash equivalents at end of period	5,544	5,544

<sup>+</sup> See chapter 19 for defined terms 1 September 2016

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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	5,544	5,190
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)	5,544	5,190

6.	Payments to directors of the entity and their associates	Current quarter \$A'000
6.1	Aggregate amount of payments to these parties included in item 1.2	86
6.2	Aggregate amount of cash flow from loans to these parties included in item 2.3	-
6.3	Include below any explanation necessary to understand the transaction items 6.1 and 6.2	ns included in

7.	Payments to related entities of the entity and their associates	Current quarter \$A'000
7.1	Aggregate amount of payments to these parties included in item 1.2	-
7.2	Aggregate amount of cash flow from loans to these parties included in item 2.3	-
7.3	Include below any explanation necessary to understand the transactions included in items 7.1 and 7.2	

8.	Financing facilities available Add notes as necessary for an understanding of the position	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000	
8.1	Loan facilities	-	-	
8.2	Credit standby arrangements	-	-	
8.3	Other (please specify)	-	-	
8.4	Include below a description of each facility above, including the lender, interest rate and whether it is secured or unsecured. If any additional facilities have been entered into or are proposed to be entered into after quarter end, include details of those facilities as well.			

+ See chapter 19 for defined terms 1 September 2016 Page 3

9.	Estimated cash outflows for next quarter	\$A'000
9.1	Exploration and evaluation	1,000
9.2	Development	-
9.3	Production	-
9.4	Staff costs	560
9.5	Administration and corporate costs	555
9.6	Other (provide details if material)	-
9.7	Total estimated cash outflows	2,115

10.	Changes in tenements (items 2.1(b) and 2.2(b) above)	Tenement reference and location	Nature of interest	Interest at beginning of quarter	Interest at end of quarter
10.1	Interests in mining tenements and petroleum tenements lapsed, relinquished or reduced		Refer to Covering Quarterly Activity Report attached hereto		
10.2	Interests in mining tenements and petroleum tenements acquired or increased		Refer to Covering Quarterly Activity Report attached hereto		

### **Compliance statement**

- 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.

Sign here: Date: 27<sup>th</sup> July 2017

(Company secretary)

Print name: Natasha Santi.

#### **Notes**

- The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity that wishes to disclose additional information is encouraged to do so, in a note or notes included in or attached to this report.
- 2. If this quarterly 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 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.

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<sup>+</sup> See chapter 19 for defined terms