

## ASX Announcement

28 July 2020

### Hexagon advances rare earths business and exploration projects in June quarter

#### Highlights:

- Continued focus on securing a strategic partner for the development of Hexagon's rare earth downstream processing business
- Ongoing development with RapidSX™ for rare earth separation for which Hexagon holds an Option to acquire a 49% interest, including;
  - ✓ Provisional patent application lodged
  - ✓ Proposed joint venture company incorporated
  - ✓ Site selected to host the demonstration plant for RapidSX™
- Halls Creek Gold Project – exploration work commenced to test gold targets
- Independent review of McIntosh project identifies nickel-copper and Platinum Group Element (PGE) targets

**Hexagon Energy Materials** (Hexagon or the Company) (ASX: HXG) is pleased to provide a report on its activities and cash flows for the quarter ended 30 June 2020.

Hexagon's primary aim is to develop a downstream rare earths and graphite processing business to service the high-growth e-mobility and renewable energy sectors. The Company is also advancing two highly prospective gold and base metals projects in Australia.

#### Commentary:

Managing Director Mike Rosenstreich commented, *"Hexagon continues to pursue its interests in developing a rare earth metals downstream processing business in concert with an appropriate strategic partner, while at the same time advancing its highly prospective Australian gold and base metals projects."*

*The core focus has been on moving forward with potential strategic partners to develop our rare earths strategy, which incorporates the innovative RapidSX™ technology for rare earth separation. We are pleased that with Ucore's acquisition of*

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*IMC, development and commercialisation work is progressing and serves to further de-risk the technology until we are in a position to exercise the Option, some time before 10 October 2020.*

*It is our intention to exercise our Option and then to work with IMC/Ucore within the joint venture to commercialise and to utilise RapidSX for rare earths. Funding must be obtained from the ‘right’ partner who can add more than just financial support. The search has taken longer than planned, in significant part due to the COVID-19 pandemic, nevertheless we remain confident of being able to finalise a deal with a suitable partner soon.*

*At the same time, we continue to advance our two Australian exploration projects; gold at Halls Creek and added base metals at McIntosh, with the aim of delineating mineralised zones and preparing targets for follow up investigation and drilling.”*

## **Rare earths business**

Hexagon remains focussed on the development of a Rare Earth Element (REE) downstream processing business, utilising the RapidSX approach to rare earth separation developed by Innovation Metals Corporation (IMC).

As reported by Hexagon, IMC was acquired by Ucore Rare Metals Inc. (Ucore) in April 2020. Ucore owns the Bokan Mountain heavy REE project in Alaska and, as a long-term REE industry player in the USA, through this acquisition has endorsed Hexagon’s strategy to pursue opportunities for downstream processing of REE into high-purity Rare Earth Oxides (REOs).

Ucore has acknowledged Hexagon’s Option to acquire a 49% equity interest in American Innovation Metals LLC (AIM), the prospective incorporated joint venture vehicle that will own an exclusive global licence for RapidSX for REE separation. To exercise the Option, Hexagon must make a US\$2.0 million payment to IMC before 10 October 2020 resulting in a 51% and 49% equity split of AIM by IMC and Hexagon respectively. There is also a deferred consideration component payable to IMC out of Hexagon’s share of AIM profits at a maximum rate of 50% of any such disbursements with no interest payable, to a total of US\$4.0 million. On exercise of the Option the AIM board representation will be split equally, and strategic company decisions will require a unanimous consent – effectively giving Hexagon an equal voice.

Recent developments in respect of the commercialisation of RapidSX for REEs, as reported by Hexagon and Ucore include:

- IMC has filed a provisional patent application for RapidSX in the US Patent and Trademark Office;

- AIM was incorporated in Delaware, USA;
- IMC has provided Hexagon with additional capital and operating cost estimates, based on previous work, to support Hexagon's commercial assessments and financial modelling and is providing ongoing assistance; and
- A host location for the commercial demonstration plant, referred to as the RapidSX Commercialisation and Development Facility (CDF), has been secured at a pilot facility owned and operated by Kingston Process Metallurgy Inc (KPM) in Kingston, Ontario, Canada.

These are important steps to advance the commercialisation of RapidSX. Hexagon's Managing Director met with KPM principal Dr Boyd Davis and was given a tour of the KPM facilities in October last year in relation to the potential hosting of the demonstration plant and other testwork matters. From Hexagon's perspective, Ucore's funding contribution to IMC and the ongoing activities further de-risks the RapidSX opportunity.

Hexagon is continuing discussions with a number of potential funding partners in Australia and overseas, examining a range of funding options.

## **Exploration projects**

Hexagon has two exploration stage projects in the Kimberley region of Western Australia; the Halls Creek (gold and base metals) and McIntosh (graphite, nickel and PGE) projects. The Company continued to advance both projects during the quarter.

### ***Halls Creek Gold and Base Metals Project (HCP)***

The Company is undertaking a staged field-based exploration program leveraging off the detailed aeromagnetic survey data flown in September 2019. The interpretation of this data has provided high-quality 'geological context' for the numerous high priority targets prospective for gold and base metal mineralisation (Refer Figure 1).

The HCP comprises thirteen granted tenements spanning 657 km<sup>2</sup> which host known gold and base metal surface mineralisation.

The planned exploration program will follow-up several outstanding high-grade gold targets such as:

- Lady Helen – historical drill intercept of 4 metres at 22.6 g/t gold and 17.3 g/t silver from surface and a rock chip result of 36 g/t gold;
- Townsite Prospect – with a surface rock chip sample result of 26 g/t gold; and
- Granite Prospect with a rock chip result of 11.5 g/t.

Gold targets have also been identified at:

- Bent Ridge Prospect with 1.3 g/t gold from rock chip sample of veined and altered lode, within an extensive arsenic-in-soil anomaly; and
- Golden Crown South – which is considered to be prospective for extensions and parallel structures to those previously drilled and mined at the adjacent Palm Springs Gold Project as reported by Meteoric Resources Ltd (ASX:MEI) on 15 June 2020, “*Proposed acquisition of High-Grade Western Australian Gold Project*”.

A staged program, conducted over a period of several months, is planned to comprise:

1. **Geochemical** - sampling to identify new targets and better define existing targets along the Lady Helen to Bent Ridge gold trend and new targets identified from the aeromagnetic data.
2. **Geophysics** – a review of historical data and, where relevant, apply new processing techniques or geological models to identify untested targets.
3. **Geological Mapping** – at a detailed prospect-scale along the Lady Helen-Bent Ridge trend and at a broader regional scale to identify structural controls on lode-gold mineralisation, the main regional structural and lithological units as reconciled to the aeromag interpretation and mapping of other anomalies identified from the aeromagnetic and historical data.
4. **Drilling** – a reverse-circulation with possible some diamond core drilling program to better define regional scale mineralised structures which host some of the gold targets referred to previously, subject to the geochemical and geophysical results.

Hexagon has engaged SRK Consulting to undertake the mapping and Integrated Geological Mining Services (IGMS) to efficiently target the geochemical sampling and drilling programs.

A budget of approximately \$450k is allocated to this program, which includes pre-requisite heritage surveys as required and site works.

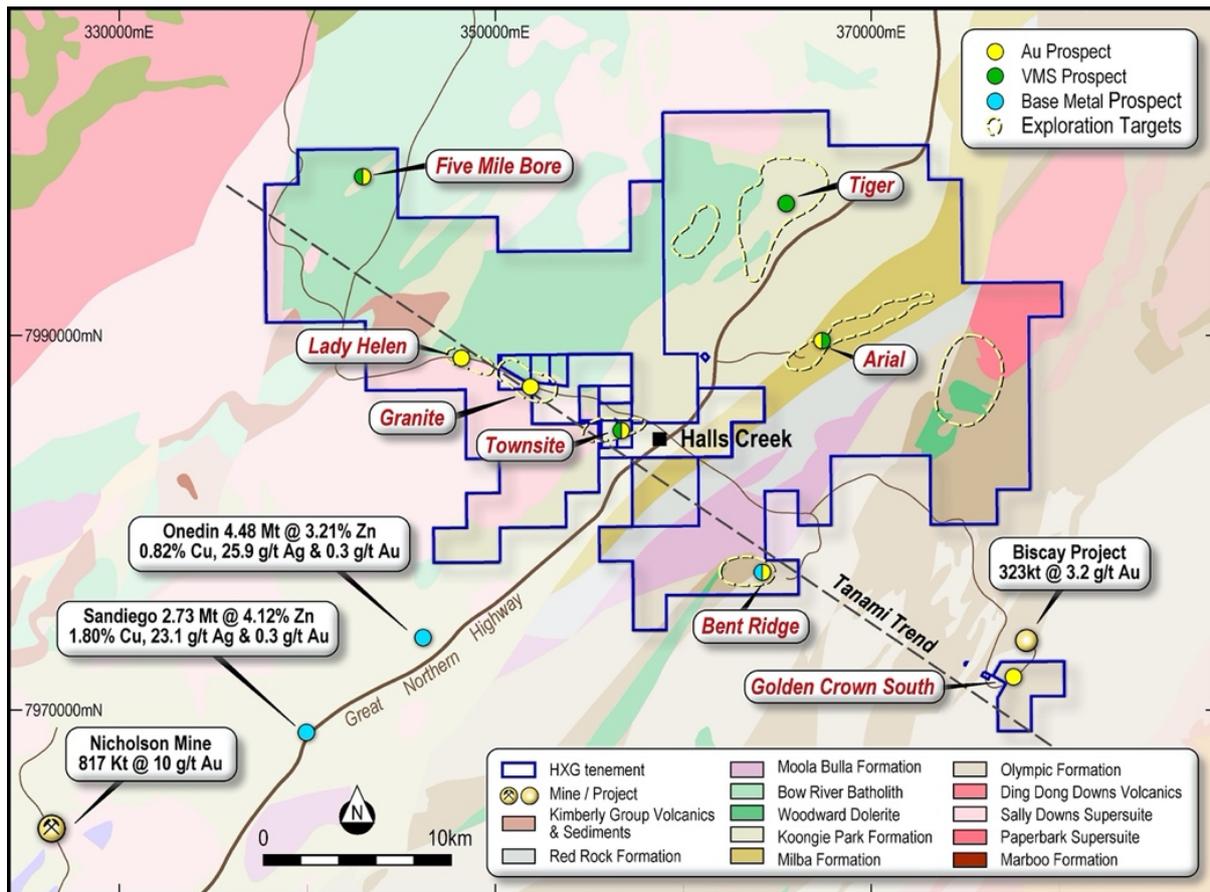


Figure 1: Halls Creek Project Summary Geology and Target Locations

## McIntosh Project – graphite and base metals

Until recently, Hexagon had focussed on purely graphite exploration at the McIntosh Project and was successful in defining a JORC-compliant graphite resource within its tenements. Due to the depressed market for flake graphite concentrates, Hexagon engaged independent consulting group, NV Resources, early in 2020 to review the project’s potential to host other base and precious metal deposits in addition to the existing graphite Mineral Resources.

The NV Resources team sourced, and appraised high-quality historical data relating to the project and have identified a suite of compelling nickel-copper targets, which warrant further investigation. The geological setting of the McIntosh area is also highly prospective for PGE mineralisation which remains largely unexplored.

### McIntosh exploration review summary findings

The East Kimberley region has been the subject of base metal exploration since the 1970s. The work undertaken was generally of a very high quality by experienced and successful exploration groups. There was a hiatus of base metal exploration on the McIntosh tenements from approximately 2005. Since that time there have been

several significant and potentially analogous discoveries such as magmatic nickel-copper deposits in the Fraser Range of WA (Nova – IGO), the West Kimberley (Merlin – BUX/IGO) and possibly, Julimar (CHN),– which highlight the potential for new geological models and major advances in exploration technology to yield new discoveries.

Historical explorers have compared the region known as the Halls Creek Orogen (HCO) to global fertile terrains including the Bushveld Complex of South Africa, the Tornio-Narankavaara intrusive in North Finland, Voisey Bay of Canada, Santa Rita in Brazil, and Stillwater in Montana USA.

With so many prospects and mineral occurrences over such an extensive strike length, the McIntosh tenements are highly prospective.

Based on the recent review of the historical geochemical data, eight (8) high priority base and/or precious metal targets have been identified. A further fifteen (15) geophysical targets have been identified after reprocessing historical electromagnetic (EM) data. The 8 geochemical targets and 15 EM anomalies are depicted in Figure 2.

Recent work on the McIntosh project highlights the rare combination of a consolidated large land package covering highly prospective geology with abundant mineralised surface occurrences which warrant further investigation. Furthermore, the project boasts a significant existing dataset which would cost tens of millions to reproduce. Given the known fertility of the nearby district (Savannah nickel mine and Panton Sill PGE deposit) modern exploration is warranted to investigate a suite of geochemical and geophysical anomalies within the McIntosh Project. The Company considers that the East Kimberley province boasts the right criteria to host world class deposits.

#### *Next steps at McIntosh*

Hexagon's next step is to compile the historical data into an 'accessible' database and apply modern exploration principles, leveraging off recent advances in reprocessing technology and ore deposit modelling to prioritise targets. This will include structural-stratigraphic interpretation and a package wide geochemical and geophysical compilation and data reprocessing for selected areas.

The work program planned comprises:

- Phase 1 desktop review of the McIntosh Project has identified and compiled an enviable historical database spanning circa 50 years of historical exploration. The database contains tens of millions of dollars' worth of data.
- Phase 2 will consist of digitally converting the historical hard copy data into modern GIS to allow interrogation and modern targeting from a comprehensive data compilation. It is highly likely that by taking a consolidated approach in

conjunction with advances in geochemistry and geophysics that additional drill targets will emerge.

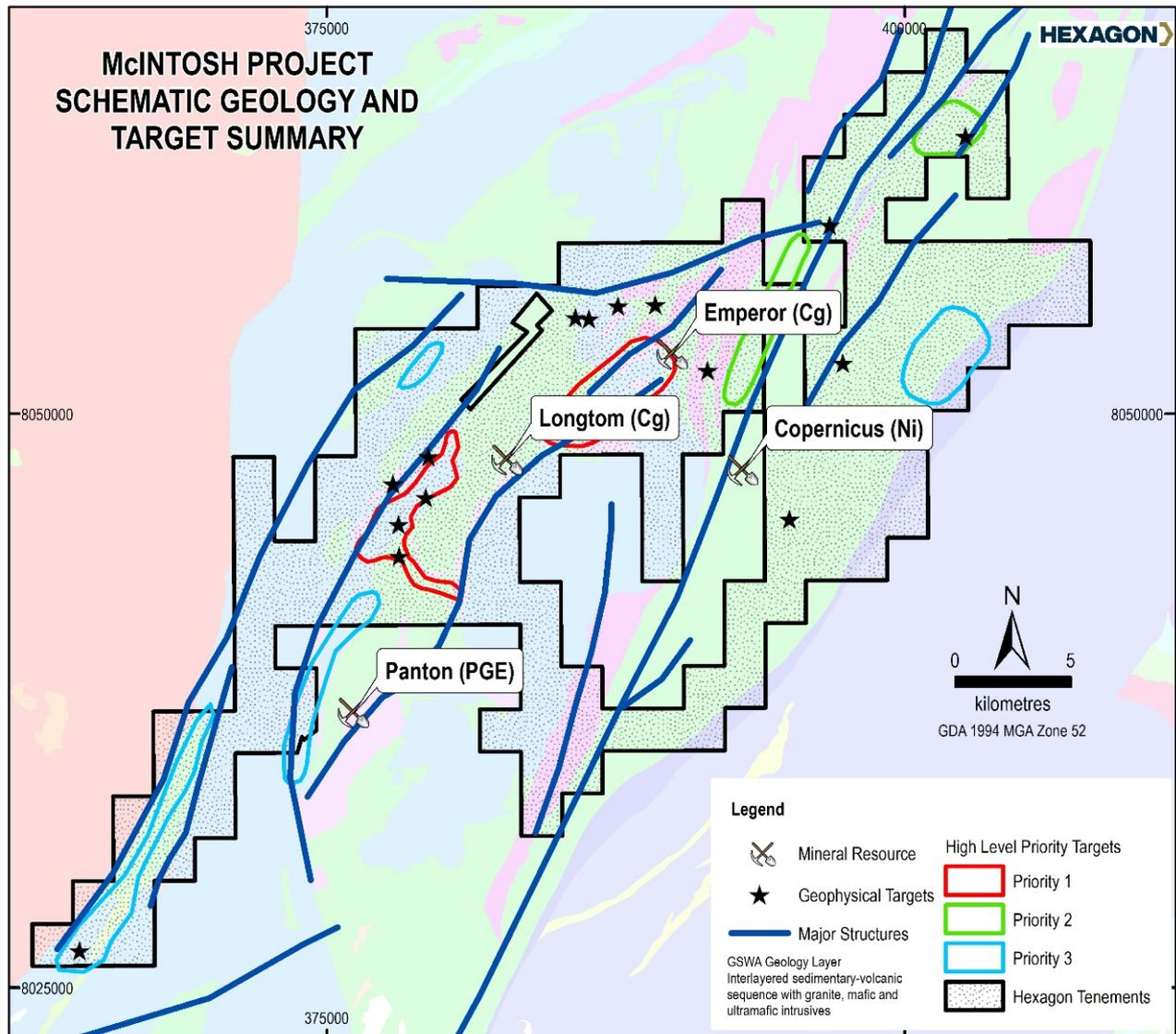


Figure 2: McIntosh Project – New target summary map

## Corporate

Hexagon has already taken prudent steps to preserve its cash and minimise expenditure. This includes directors, staff and key service providers volunteering to accept significant reductions in fees and wages.

Given that the economic impacts of COVID-19 are likely to persist for a protracted period and access to capital markets is erratic and uncertain, the Company is doing everything possible to preserve its cash and to reduce expenditure. As stated above, it continues to progress discussions on securing a strategic partner to develop its REE

business. The REE business strategy, incorporating the RapidSX approach to REE separation remains the Company's primary objective.

The Company recently launched a new website with updated content to better portray its current activities, assets and strategy. This is particularly relevant as the Company engages with offshore investor groups, new to the story and keen to gain a broader understanding of the business.

### ***Financial position***

Hexagon's quarterly cash flow is summarised in the attached Appendix 5B. The Company finished the period with a cash balance of \$1.21 million.

In accordance with ASX Listing Rule 5.3.5, the Company confirms that payments made to directors during the quarter were comprised of salaries and fees.

### ***Capital structure***

On 30 June 2020, 950,000 performance rights lapsed. The Company now has on issue the following securities:

- 292,433,397 Fully Paid Ordinary Shares
- 8,032,500 Options exercisable at 15 cents expiring 16 October 2020
- 8,032,500 Options exercisable at 17 cents expiring 16 October 2020
- 8,032,500 Options exercisable at 20 cents expiring 16 October 2020

### **Competent persons' attributions**

The information within this report that relates to exploration results, Exploration Target estimates and geological data at the McIntosh and Halls Creek Projects is based on information compiled by Ms Cherie Leeden who is a Consultant to the Company and reviewed by Mr Mike Rosenstreich, a full-time employee of the Company. Ms Leeden is a Member of the Australian Institute of Geoscientists and Mr Rosenstreich is a Fellow of the Australian Institute of Mining and Metallurgy. Both, have sufficient experience relevant to the styles of mineralisation and types of deposits under consideration and to the activities currently being undertaken to qualify as a Competent Person(s) as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and they both consent to the inclusion of this information in the form and context in which it appears in this report.

## About Hexagon Energy Materials Limited

Hexagon Energy Materials (Hexagon) (ASX:HXG) is an Australian-listed company which is seeking to commercialise an innovative, new rare-earth elements (REEs) processing technology called RapidSX™, which has the potential to disrupt China's monopoly on the production of REE oxides (REOs) and thus the entire REE supply chain.

REOs are the primary materials for the manufacturing of REE permanent magnets which are essential for electric-vehicle motors, consumer electronic products, renewable-energy generation, and a number of military applications.

Innovation Metals Corp. (IMC) is developing a Commercialisation and Development Facility (CDF) to commercialise its RapidSX separation technology. RapidSX offers potential capital and operating cost savings compared to existing conventional solvent extraction processes currently utilised by REE producers. The technology was developed and successfully piloted by IMC with US\$1.8 million in assistance from the U.S. Department of Defense. Hexagon has an option to acquire a 49% interest in American Innovation Metals LLC (AIM), a prospective corporate joint venture with IMC that will have an exclusive worldwide license for RapidSX for REE separation. The exercise price of the option is US\$2.0 million with an additional US\$4.0 million in payments to IMC recourse only to Hexagon's profits from AIM. AIM will be jointly managed and controlled by Hexagon and IMC in accordance with the agreed terms of the AIM Shareholders Deed.

Hexagon's focus is on the downstream processing and transformation of REEs into commercial-grade REOs, with the objective of AIM licensing the RapidSX REE-separation technology to end users around the world or developing its own REE refining capabilities. Additionally, Hexagon has several exploration holdings including the Halls Creek gold project and the McIntosh project which hosts the Company's graphite resources and is also prospective for nickel-copper and PGE deposits.

## Authorisation

This announcement has been authorised by the Board of Directors.

## FOR FURTHER INFORMATION, please contact:

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## Appendix 5B

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

Name of entity

<b>HEXAGON ENERGY MATERIALS LIMITED</b>
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ABN

<b>27 099 098 192</b>
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Quarter ended ("current quarter")

<b>30 June 2020</b>
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<b>Consolidated statement of cash flows</b>	<b>Current quarter \$A'000</b>	<b>Year to date (12 months) \$A'000</b>
<b>1. Cash flows from operating activities</b>		
1.1 Receipts from customers	-	-
1.2 Payments for		
(a) exploration & evaluation (if expensed)	(133)	(889)
(b) development	(98)	(754)
(c) production	-	-
(d) staff costs	(73)	(368)
(e) administration and corporate costs	(138)	(953)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	4	33
1.5 Interest and other costs of finance paid	-	-
1.6 Income taxes paid	-	-
1.7 Government grants and tax incentives	-	439
1.8 Other (ATO Covid-19 Grant)	50	50
<b>1.9 Net cash from / (used in) operating activities</b>	<b>(388)</b>	<b>(2,442)</b>
<b>2. Cash flows from investing activities</b>		
2.1 Payments to acquire:		
(a) entities	-	-
(b) tenements	-	-
(c) property, plant and equipment	-	-
(d) exploration & evaluation (if capitalised)	(28)	(394)
(e) investments	-	-
(f) other non-current assets	-	(170)

<b>Consolidated statement of cash flows</b>		<b>Current quarter \$A'000</b>	<b>Year to date (12 months) \$A'000</b>
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)	-	-
<b>2.6</b>	<b>Net cash from / (used in) investing activities</b>	<b>(28)</b>	<b>(564)</b>

<b>3.</b>	<b>Cash flows from financing activities</b>		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	-	-
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 (Office Rental Lease Liability)	(9)	(36)
<b>3.10</b>	<b>Net cash from / (used in) financing activities</b>	<b>(9)</b>	<b>(36)</b>

<b>4.</b>	<b>Net increase / (decrease) in cash and cash equivalents for the period</b>		
4.1	Cash and cash equivalents at beginning of period	1,691	4,203
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(388)	(2,442)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(28)	(564)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	(9)	(36)

<b>Consolidated statement of cash flows</b>		<b>Current quarter \$A'000</b>	<b>Year to date (12 months) \$A'000</b>
4.5	Effect of movement in exchange rates on cash held	(60)	45
<b>4.6</b>	<b>Cash and cash equivalents at end of period</b>	<b>1,206</b>	<b>1,206</b>

<b>5.</b>	<b>Reconciliation of cash and cash equivalents</b> at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	<b>Current quarter \$A'000</b>	<b>Previous quarter \$A'000</b>
5.1	Bank balances	759	942
5.2	Call deposits	447	749
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
<b>5.5</b>	<b>Cash and cash equivalents at end of quarter (should equal item 4.6 above)</b>	<b>1,206</b>	<b>1,691</b>

**6. Payments to related parties of the entity and their associates**

- 6.1 Aggregate amount of payments to related parties and their associates included in item 1
- 6.2 Aggregate amount of payments to related parties and their associates included in item 2

<b>Current quarter \$A'000</b>
112
-

6.1 – Includes payments to Managing Director.

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

<b>7. Financing facilities</b>	<b>Total facility amount at quarter end \$A'000</b>	<b>Amount drawn at quarter end \$A'000</b>
<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 <b>Total financing facilities</b>	-	-
7.5 <b>Unused financing facilities available at quarter end</b>		-
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.	-	

<b>8. Estimated cash available for future operating activities</b>	<b>\$A'000</b>
8.1 Net cash from / (used in) operating activities (Item 1.9)	(388)
8.2 Capitalised exploration & evaluation (Item 2.1(d))	(28)
8.3 Total relevant outgoings (Item 8.1 + Item 8.2)	(416)
8.4 Cash and cash equivalents at quarter end (Item 4.6)	1,206
8.5 Unused finance facilities available at quarter end (Item 7.5)	-
8.6 Total available funding (Item 8.4 + Item 8.5)	1,206
8.7 <b>Estimated quarters of funding available (Item 8.6 divided by Item 8.3)</b>	<b>3</b>
8.8 If Item 8.7 is less than 2 quarters, please provide answers to the following questions:	
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	
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	
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	

## 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: .....27 July 2020.....

Authorised by: .....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 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.